

# CLI Reference

FortiManager 8.0.0



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Email: [techdoc@fortinet.com](mailto:techdoc@fortinet.com)



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FortiManager 8.0.0 CLI Reference

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# Change Log

Date	Change Description
2026-04-21	Initial release.

# Introduction

FortiManager Centralized Security Management provides a single-pane-of-glass for visibility across the entire Fortinet Security Fabric, as well as to manage Fortinet's security and networking devices to speed the identification of, and response to, security incidents. It allows easy control of the deployment of security policies, FortiGuard content security updates, firmware revisions, and individual configurations for thousands of Fortinet devices.

FortiManager includes:

- Enterprise-class centralized management with single pane-of-glass
- Full control of your network with the Fortinet security fabric
- Common security baseline enforcement for multi-tenancy environments
- Multi-tier management for administrative and virtual domain policy management
- Scalable centralized device & policy management

## FortiManager documentation

The following FortiManager product documentation is available:

- *FortiManager Administration Guide*  
This document describes how to set up the FortiManager system and use it to manage supported Fortinet units. It includes information on how to configure multiple Fortinet units, configuring and managing the FortiGate VPN policies, monitoring the status of the managed devices, viewing and analyzing the FortiGate logs, updating the virus and attack signatures, providing web filtering and email filter service to the licensed FortiGate units as a local FDS, firmware revision control and updating the firmware images of the managed units.
- *FortiManager device QuickStart Guides*  
These documents are included with your FortiManager system package. Use this document to install and begin working with the FortiManager system and FortiManager GUI.
- *FortiManager Online Help*  
You can get online help from the FortiManager GUI. FortiManager online help contains detailed procedures for using the FortiManager GUI to configure and manage FortiGate units.
- *FortiManager CLI Reference*  
This document describes how to use the FortiManager Command Line Interface (CLI) and contains references for all FortiManager CLI commands.
- *FortiManager Release Notes*  
This document describes new features and enhancements in the FortiManager system for the release, and lists resolved and known issues. This document also defines supported platforms and firmware versions.
- *FortiManager VM Install Guide*  
This document describes installing FortiManager VM in your virtual environment.

# What's New in FortiManager 8.0

The following tables list the commands and variables that have changed in the CLI.

## FortiManager 8.0.0

The table below lists commands which have changed in version 8.0.0.

Command	Change
<code>config fmupdate fds-setting</code>	Variable added: <ul style="list-style-type: none"><li>• controller-contract-download</li></ul>
<code>config fmupdate service</code>	Variable added: <ul style="list-style-type: none"><li>• geoip</li></ul>
<code>config system admin profile</code>	Variables added: <ul style="list-style-type: none"><li>• device-fabric</li><li>• device-interface</li><li>• device-log</li><li>• device-route</li><li>• fgd-center-extres</li><li>• protected-objects</li><li>• read-passwd</li></ul>
<code>config system admin setting</code>	Variables added: <ul style="list-style-type: none"><li>• admin-httpd-keep-alive-timeout</li><li>• custom-session-label</li><li>• custom-session-label-mode</li></ul>
<code>config system certificate ssh</code>	Variable added: <ul style="list-style-type: none"><li>• password</li></ul>
<code>config system csf</code> <code>config trusted-list</code>	Variables added: <ul style="list-style-type: none"><li>• adom</li><li>• adom-access</li></ul>
<code>config system global</code>	Variables added: <ul style="list-style-type: none"><li>• ai-mode</li><li>• gui-max-objects-per-row</li><li>• gui-object-protect</li><li>• gui-object-search</li><li>• http-extended-log</li></ul>

Command	Change
	<ul style="list-style-type: none"> <li>workspace-task-min-device-size</li> </ul>
<code>config system interface</code>	Variables added: <ul style="list-style-type: none"> <li>lldp-reception</li> <li>lldp-transmission</li> </ul> Variable removed: <ul style="list-style-type: none"> <li>lldp</li> </ul>
<code>config system locallog [disk   memory   fortianalyzer   fortianalyzer2   fortianalyzer3   syslogd   syslogd2   syslogd3] filter</code>	Variables added: <ul style="list-style-type: none"> <li>fazfabric</li> <li>fortism</li> <li>http</li> </ul>
<code>config system locallog disk setting</code>	Variables added: <ul style="list-style-type: none"> <li>log-rate-limit</li> <li>log-max-days</li> </ul>
<code>config system ntp</code> <code>config ntpserver</code>	Variables added: <ul style="list-style-type: none"> <li>key-type</li> <li>key-fmt</li> </ul>
<code>config system saml</code>	Variables added: <ul style="list-style-type: none"> <li>digest-method</li> <li>idp-digest-method</li> <li>idp-signature-algorithm</li> <li>signature-algorithm</li> </ul>
<code>diagnose debug application pgsvr</code>	Command added.
<code>diagnose debug logfile</code>	Command added.
<code>diagnose dvm device token-list</code>	Command added.
<code>diagnose dvm psirt</code>	Command updated.
<code>diagnose lldp</code>	Command added.
<code>diagnose sql config dump</code>	Command added.
<code>diagnose sql config soc-fabric-max-fv-row</code>	Command added.
<code>diagnose sql config soc-fabric-max-rpt-row</code>	Command added.
<code>diagnose sql hcache status</code>	Command updated.
<code>diagnose sql hcache test</code>	Command added.
<code>diagnose system export umlog</code>	Command updated.
<code>diagnose system filesystem hash</code>	Command updated.
<code>diagnose system print ip6tables</code>	Command added.

Command	Change
<code>diagnose system print iptables</code>	Command added.
<code>diagnose test application faztunnel</code>	Command added.
<code>diagnose test application pgsvr</code>	Command added.
<code>diagnose test connection server</code>	Command added.
<code>execute benchmark stress</code>	Command added.
<code>execute fabric-config-sync</code>	Command added.
<code>execute fmscript delete</code>	Command updated.
<code>execute fmupdate</code>	Command updated.
<code>execute gui-db</code>	Command added.
<code>execute nslookup</code>	Command added.
<code>get system tablesizes</code>	Command added.

# Using the Command Line Interface

This chapter explains how to connect to the CLI and describes the basics of using the CLI. You can use CLI commands to view all system information and to change all system configuration settings.

This chapter describes:

- [CLI command syntax](#)
- [Connecting to the CLI](#)
- [CLI objects](#)
- [CLI command branches](#)
- [CLI basics](#)

## CLI command syntax

This guide uses the following conventions to describe command syntax.

- Angle brackets `< >` indicate variables.
- Vertical bar and curly brackets `{ | }` separate alternative, mutually exclusive required keywords.

For example:

```
set protocol {ftp | sftp}
```

You can enter `set protocol ftp` or `set protocol sftp`.

- Square brackets `[ ]` indicate that a variable is optional.

For example:

```
show system interface [<name_str>]
```

To show the settings for all interfaces, you can enter `show system interface`. To show the settings for the Port1 interface, you can enter `show system interface port1`.

- A space separates options that can be entered in any combination and must be separated by spaces.

For example:

```
set allowaccess {http https ping snmp soc-fabric ssh}
```

You can enter any of the following:

```
set allowaccess ping
set allowaccess https ping
set allowaccess http https ping snmp soc-fabric ssh
```

In most cases to make changes to lists that contain options separated by spaces, you need to retype the whole list including all the options you want to apply and excluding all the options you want to remove.

- Special characters:
  - The `\` is supported to escape spaces or as a line continuation character.
  - The single quotation mark `'` and the double quotation mark `"` are supported, but must be used in pairs.
  - If there are spaces in a string, you must precede the spaces with the `\` escape character or put the string in a pair of quotation marks.

# Connecting to the CLI

You can use a direct console connection, SSH, or the CLI console widget in the GUI to connect to the FortiManager CLI. For more information, see the [FortiManager Administration Guide](#) and your device's [QuickStart Guide](#).

- [Connecting to the FortiManager console](#)
- [Setting administrative access on an interface](#)
- [Connecting to the FortiManager CLI using SSH](#)
- [Connecting to the FortiManager CLI using the GUI](#)

## Connecting to the FortiManager console

To connect to the FortiManager console, you need:

- a computer with an available communications port
- a console cable, provided with your FortiManager unit, to connect the FortiManager console port and a communications port on your computer
- terminal emulation software, such as HyperTerminal for Windows.



The following procedure describes how to connect to the FortiManager CLI using Windows HyperTerminal software. You can use any terminal emulation program.

### To connect to the CLI:

1. Connect the FortiManager console port to the available communications port on your computer.
2. Make sure that the FortiManager unit is powered on.
3. Start a terminal emulation program on the management computer, select the COM port, and use the following settings:

COM port	<b>COM1</b>
Baud rate	<b>9600</b>
Data bits	<b>8</b>
Parity	<b>None</b>
Stop bits	<b>1</b>
Flow control	<b>None</b>

4. Press Enter to connect to the FortiManager CLI.
5. In the log in prompt, enter the username and password.  
The default log in is username: `admin`, and no password.

A password policy is enabled by default in FortiManager 7.6.4 and later. The new password must be at least 8 characters and must contain uppercase letter(s), lowercase letter(s), number(s), and special character(s). Once you have accessed the CLI, you can update configuration for the password policy as needed using `config system password-policy`. For more information, see [password-policy on page 131](#).

You have connected to the FortiManager CLI, and you can enter CLI commands.

## Setting administrative access on an interface

To perform administrative functions through a FortiManager network interface, you must enable the required types of administrative access on the interface to which your management computer connects. Access to the CLI requires Secure Shell (SSH) access. If you want to use the GUI, you need HTTPS access.

To use the GUI to configure FortiManager interfaces for SSH access, see the [FortiManager Administration Guide](#).

### To use the CLI to configure SSH access:

1. Connect and log into the CLI using the FortiManager console port and your terminal emulation software.
2. Use the following command to configure an interface to accept SSH connections:

```
config system interface
  edit <interface_name>
    set allowaccess <access_types>
  end
```

Where `<interface_name>` is the name of the FortiManager interface to be configured to allow administrative access, and `<access_types>` is a whitespace-separated list of access types to enable.

For example, to configure port1 to accept HTTPS and SSH connections, enter:

```
config system interface
  edit port1
    set allowaccess https ssh
  end
```



Remember to press Enter at the end of each line in the command example. Also, type end and press Enter to commit the changes to the FortiManager configuration.

---

3. To confirm that you have configured SSH access correctly, enter the following command to view the access settings for the interface:

```
get system interface <interface_name>
```

The CLI displays the settings, including the management access settings, for the named interface.

## Connecting to the FortiManager CLI using SSH

SSH provides strong secure authentication and secure communications to the FortiManager CLI from your internal network or the internet. Once the FortiManager unit is configured to accept SSH connections, you can run an SSH client on your management computer and use this client to connect to the FortiManager CLI.

### To connect to the CLI using SSH:

1. Install and start an SSH client.
2. Connect to a FortiManager interface that is configured for SSH connections.
3. Enter a valid administrator name and press Enter.
4. Enter the password for this administrator and press Enter.  
The FortiManager model name followed by a # is displayed.  
You have connected to the FortiManager CLI, and you can enter CLI commands.

## Connecting to the FortiManager CLI using the GUI

The GUI also provides a CLI console widget.

### To connect to the CLI using the GUI:

1. Connect to the GUI and log in.  
For information about how to do this, see the [FortiManager Administration Guide](#).
2. In the banner, click >\_.  
The *CLI Console* widget opens.

## CLI objects

The FortiManager CLI is based on configurable objects. The top-level objects are the basic components of FortiManager functionality. Each has its own chapter in this guide.

<b>fmupdate</b>	Configures settings related to FortiGuard service updates and the FortiManager unit's built-in FDS. See <a href="#">fmupdate on page 154</a> .
<b>system</b>	Configures options related to the overall operation of the FortiManager unit, such as interfaces, virtual domains, and administrators. See <a href="#">system on page 38</a> .

There is a chapter in this manual for each of these top-level objects. Each of these objects contains more specific lower level objects. For example, the system object contains objects for administrators, dns, interfaces, and so on.

## CLI command branches

The FortiManager CLI consists of the following command branches:

<a href="#">config branch</a>	<a href="#">execute branch</a>
-------------------------------	--------------------------------

get branch  
show branch

diagnose branch

Examples showing how to enter command sequences within each branch are provided in the following sections.

## config branch

The `config` commands configure objects of FortiManager functionality. Top-level objects are not configurable, they are containers for more specific lower level objects. For example, the `system` object contains administrators, DNS addresses, interfaces, routes, and so on. When these objects have multiple sub-objects, such as administrators or routes, they are organized in the form of a table. You can add, delete, or edit the entries in the table. Table entries each consist of keywords that you can set to particular values. Simpler objects, such as system DNS, are a single set of keywords.

To configure an object, you use the `config` command to navigate to the object's command "shell". For example, to configure administrators, you enter the command

```
config system admin user
```

The command prompt changes to show that you are in the admin shell.

```
(user)#
```

This is a table shell. You can use any of the following commands:

<b>delete</b>	Remove an entry from the FortiManager configuration. For example in the <code>config system admin shell</code> , type <code>delete newadmin</code> and press Enter to delete the administrator account named <code>newadmin</code> .
<b>edit</b>	Add an entry to the FortiManager configuration or edit an existing entry. For example in the <code>config system admin shell</code> : <ul style="list-style-type: none"> <li>type <code>edit admin</code> and press Enter to edit the settings for the default admin administrator account.</li> <li>type <code>edit newadmin</code> and press Enter to create a new administrator account with the name <code>newadmin</code> and to edit the default settings for the new administrator account.</li> </ul>
<b>end</b>	Save the changes you have made in the current shell and leave the shell. Every <code>config</code> command must be paired with an <code>end</code> command. You return to the root FortiManager CLI prompt. The <code>end</code> command is also used to save set command changes and leave the shell.
<b>get</b>	List the configuration. In a table shell, <code>get</code> lists the table members. In an edit shell, <code>get</code> lists the keywords and their values.
<b>purge</b>	Remove all entries configured in the current shell. For example in the <code>config user local shell</code> : <ul style="list-style-type: none"> <li>type <code>get</code> to see the list of user names added to the FortiManager configuration,</li> <li>type <code>purge</code> and then <code>y</code> to confirm that you want to purge all the user names,</li> </ul>

- type `get` again to confirm that no user names are displayed.

**show** Show changes to the default configuration as configuration commands.

If you enter the `get` command, you see a list of the entries in the table of administrators. To add a new administrator, you enter the `edit` command with a new administrator name:

```
edit admin_1
```

The FortiManager unit acknowledges the new table entry and changes the command prompt to show that you are now editing the new entry:

```
new entry 'admin_1' added
(admin_1)#
```

From this prompt, you can use any of the following commands:

<b>abort</b>	Exit an edit shell without saving the configuration.
<b>config</b>	In a few cases, there are subcommands that you access using a second config command while editing a table entry. An example of this is the command to add host definitions to an SNMP community.
<b>end</b>	Save the changes you have made in the current shell and leave the shell. Every config command must be paired with an end command. The end command is also used to save set command changes and leave the shell.
<b>get</b>	List the configuration. In a table shell, get lists the table members. In an edit shell, get lists the keywords and their values.
<b>next</b>	Save the changes you have made in the current shell and continue working in the shell. For example if you want to add several new admin user accounts enter the <code>config system admin user</code> shell. <ol style="list-style-type: none"> <li>1. Enter <code>edit User1</code> and press Enter.</li> <li>2. Use the set commands to configure the values for the new admin account.</li> <li>3. Enter <code>next</code> to save the configuration for User1 without leaving the <code>config system admin user</code> shell.</li> <li>4. Continue using the <code>edit</code>, <code>set</code>, and <code>next</code> commands to continue adding admin user accounts.</li> <li>5. Type <code>end</code> then press Enter to save the last configuration and leave the shell.</li> </ol>
<b>set</b>	Assign values. For example from the <code>edit admin</code> command shell, typing <code>set passwd newpass</code> changes the password of the admin administrator account to <code>newpass</code> . <b>Note:</b> When using a set command to make changes to lists that contain options separated by spaces, you need to retype the whole list including all the options you want to apply and excluding all the options you want to remove.
<b>show</b>	Show changes to the default configuration in the form of configuration commands.
<b>unset</b>	Reset values to defaults. For example from the <code>edit admin</code> command shell, typing <code>unset passwd</code> resets the password of the admin administrator account to the default of no password.

The config branch is organized into configuration shells. You can complete and save the configuration within each shell for that shell, or you can leave the shell without saving the configuration. You can only use the

configuration commands for the shell that you are working in. To use the configuration commands for another shell you must leave the shell you are working in and enter the other shell.

The root prompt is the FortiManager host or model name followed by a #.

## get branch

Use `get` to display settings. You can use `get` within a config shell to display the settings for that shell, or you can use `get` with a full path to display the settings for the specified shell.

To use `get` from the root prompt, you must include a path to a shell.

### Example

When you type `get` in the `config system admin user` shell, the list of administrators is displayed.

At the `(user)#` prompt, type:

```
get
```

The screen displays:

```
== [ admin ]
userid: admin
== [ admin2 ]
userid: admin2
== [ admin3 ]
userid: admin3
```

### Example

When you type `get` in the `admin user` shell, the configuration values for the `admin` administrator account are displayed.

```
edit admin
```

At the `(admin)#` prompt, type:

```
get
```

The screen displays:

```
userid : admin
login-max : 32
password : *
change-password : enable
trusthost1 : 0.0.0.0 0.0.0.0
trusthost2 : 255.255.255.255 255.255.255.255
trusthost3 : 255.255.255.255 255.255.255.255
trusthost4 : 255.255.255.255 255.255.255.255
trusthost5 : 255.255.255.255 255.255.255.255
trusthost6 : 255.255.255.255 255.255.255.255
trusthost7 : 255.255.255.255 255.255.255.255
trusthost8 : 255.255.255.255 255.255.255.255
trusthost9 : 255.255.255.255 255.255.255.255
trusthost10 : 255.255.255.255 255.255.255.255
ipv6_trusthost1 : ::/0
ipv6_trusthost2 : ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff/128
```

```
ipv6_trusthost3 : ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff/128
ipv6_trusthost4 : ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff/128
ipv6_trusthost5 : ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff/128
ipv6_trusthost6 : ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff/128
ipv6_trusthost7 : ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff/128
ipv6_trusthost8 : ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff/128
ipv6_trusthost9 : ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff/128
ipv6_trusthost10 : ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff/128
profileid : Super_User
dev-group : (null)
description : (null)
user_type : local
ssh-public-key1 :
ssh-public-key2 :
ssh-public-key3 :
avatar : (null)
meta-data:
  == [ Contact Email ]
  fieldname: Contact Email
  == [ Contact Phone ]
  fieldname: Contact Phone
password-expire : 0000-00-00 00:00:00
force-password-change: disable
rpc-permit : none
use-global-theme : enable
last-name : (null)
first-name : (null)
email-address : (null)
phone-number : (null)
mobile-number : (null)
pager-number : (null)
hidden : 0
dashboard-tabs:
dashboard:
```

## Example

You want to confirm the IPv4 address and netmask of the port1 interface from the root prompt.

At the # prompt, type:

```
get system interface port1
```

The screen displays:

```
name : port1
status : enable
mode : static
ip : 10.10.10.10 255.255.255.0
allowaccess : ping https ssh snmp http webservice fgfm https-logging
serviceaccess :
lldp : disable
speed : auto
description : (null)
alias : (null)
mtu : 1500
type : physical
ipv6:
```

```
ip6-address: ::/0 ip6-allowaccess: ip6-autoconf: enable
```

## show branch

Use `show` to display the FortiManager unit configuration. Only changes to the default configuration are displayed. You can use `show` within a `config` shell to display the configuration of that shell, or you can use `show` with a full path to display the configuration of the specified shell.

To display the configuration of all `config` shells, you can use `show` from the root prompt.

### Example

When you type `show` and press Enter within the `port1` interface shell, the changes to the default interface configuration are displayed.

At the `(port1)#` prompt, type:

```
show
```

The screen displays:

```
config system interface
  edit "port1"
    set ip *.*.*.*.* 255.255.255.0
    set allowaccess https ssh
    set type physical
  next
end
```

### Example

You are working in the `port1` interface shell and want to see the `system dns` configuration. At the `(port1)#` prompt, type:

```
show system dns
```

The screen displays:

```
config system dns
  set primary 172.39.139.53
  set secondary 172.39.139.63
end
```

## execute branch

Use `execute` to run static commands, to reset the FortiManager unit to factory defaults, or to back up or restore the FortiManager configuration. The `execute` commands are available only from the root prompt.

### Example

At the root prompt, type:

```
execute reboot
```

and press Enter to restart the FortiManager unit.

## diagnose branch

Commands in the `diagnose` branch are used for debugging the operation of the FortiManager unit and to set parameters for displaying different levels of diagnostic information. The `diagnose` commands are not documented in this CLI Reference.



`diagnose` commands are intended for advanced users only. Contact Fortinet Customer Support before using these commands.

---

## Example command sequences



The command prompt changes for each shell.

---

### To configure the primary and secondary DNS server addresses:

1. Starting at the root prompt, type:  
`config system dns`  
and press Enter. The prompt changes to `(dns)#`.
2. At the `(dns)#` prompt, type `?`  
The following options are displayed:  
`set`  
`unset`  
`get`  
`show`  
`abort`  
`end`
3. Enter `set ?`  
The following options are displayed:  
`primary`  
`secondary`  
`ip6-primary`  
`ip6-secondary`
4. To set the primary DNS server address to `172.16.100.100`, type:  
`set primary 172.16.100.100`  
and press Enter.
5. To set the secondary DNS server address to `207.104.200.1`, type:  
`set secondary 207.104.200.1`  
and press Enter.

6. To restore the primary DNS server address to the default address, type `unset primary` and press Enter. If you want to leave the `config system dns` shell without saving your changes, type `abort` and press Enter.
7. To save your changes and exit the `dns` sub-shell, type `end` and press Enter.
8. To confirm your changes have taken effect after leaving the `dns` sub-shell, type `get system dns` and press Enter.

## CLI basics

This section covers command line interface basic information.

## Command help

You can press the question mark (?) key to display command help.

- Press the question mark (?) key at the command prompt to display a list of the commands available and a description of each command.
- Enter a command followed by a space and press the question mark (?) key to display a list of the options available for that command and a description of each option.
- Enter a command followed by an option and press the question mark (?) key to display a list of additional options available for that command option combination and a description of each option.

## Command tree

Enter `tree` to display the FortiManager CLI command tree. To capture the full output, connect to your device using a terminal emulation program, such as PuTTY, and capture the output to a log file. For `config` commands, use the `tree` command to view all available variables and sub-commands.

## Command completion

You can use the tab key or the question mark (?) key to complete commands.

- You can press the tab key at any prompt to scroll through the options available for that prompt.
- You can type the first characters of any command and press the tab key or the question mark (?) key to complete the command or to scroll through the options that are available at the current cursor position.
- After completing the first word of a command, you can press the space bar and then the tab key to scroll through the options available at the current cursor position.

## Recalling commands

You can recall previously entered commands by using the Up and Down arrow keys to scroll through commands you have entered.

## Editing commands

Use the left and right arrow keys to move the cursor back and forth in a recalled command. You can also use Backspace and Delete keys, and the control keys listed in the following table to edit the command.

Function	Key combination
Beginning of line	Control key + A
End of line	Control key + E
Back one word	Control key + B
Forward one word	Control key + F
Delete current character	Control key + D
Previous command	Control key + P
Next command	Control key + N
Abort the command	Control key + C
If used at the root prompt, exit the CLI	Control key + C

## Line continuation

To break a long command over multiple lines, use a `\` at the end of each line.

## Command abbreviation

You can abbreviate commands and command options to the smallest number of non-ambiguous characters. For example, the command `get system status` can be abbreviated to `g sy st`.

## Environment variables

The FortiManager CLI supports several environment variables.

**\$USERFROM**

The management access type (SSH, Telnet and so on) and the IPv4 address of the logged in administrator.

<b>\$USERNAME</b>	The user account name of the logged in administrator.
<b>\$SerialNum</b>	The serial number of the FortiManager unit.

Variable names are case sensitive. In the following example, when entering the variable, you can type \$ followed by a tab to auto-complete the variable to ensure that you have the exact spelling and case. Continue pressing tab until the variable you want to use is displayed.

```
config system global
  set hostname $SerialNum
end
```

## Encrypted password support

After you enter a clear text password using the CLI, the FortiManager unit encrypts the password and stores it in the configuration file with the prefix ENC. For example:

```
show system admin user user1
config system admin user
  edit "user1"
    set password ENC
      UAGUDZ1yEaG30620s6afD3Gac1Fn0T0BC1rVJmMfc9ubLlW4wEvHcqGVq+ZnrgbudK7aryyf1scXcXdnQxskR
      cU3E9Xq0it82PgScwzGzGuJ5a9f
    set profileid "Standard_User"
  next
end
```

It is also possible to enter an already encrypted password. For example, type:

```
config system admin
```

then press Enter.

Enter:

```
edit user1
```

then press Enter.

Enter:

```
set password ENC
  UAGUDZ1yEaG30620s6afD3Gac1Fn0T0BC1rVJmMfc9ubLlW4wEvHcqGVq+ZnrgbudK7aryyf1scXcXdnQxskRcU3E9X
  q0it82PgScwzGzGuJ5a9f
```

then press Enter.

Enter:

```
end
```

then press Enter.

## Entering spaces in strings

When a string value contains a space, do one of the following:

- Enclose the string in quotation marks, "Security Administrator", for example.
- Enclose the string in single quotes, 'Security Administrator', for example.
- Use a backslash ("") preceding the space, Security\ Administrator, for example.

## Entering quotation marks in strings

If you want to include a quotation mark, single quote, or apostrophe in a string, you must precede the character with a backslash character. To include a backslash, enter two backslashes.

## Entering a question mark (?) in a string

If you want to include a question mark (?) in a string, you must precede the question mark with CTRL-V. Entering a question mark without first entering CTRL-V causes the CLI to display possible command completions, terminating the string.

## International characters

The CLI supports international characters in strings.

## Special characters

The characters <, >, (, ), #, ', and " are not permitted in most CLI fields, but you can use them in passwords. If you use the apostrophe (') or quote (") character, you must precede it with a backslash (\) character when entering it in the CLI set command.

## IPv4 address formats

You can enter an IPv4 address and subnet using either dotted decimal or slash-bit format. For example you can type either:

```
set ip 192.168.1.1 255.255.255.0
```

or

```
set ip 192.168.1.1/24
```

The IPv4 address is displayed in the configuration file in dotted decimal format.

## Changing the baud rate

Using `execute console baudrate`, you can change the default console connection baud rate.



Changing the default baud rate is not available on all models.

## Debug log levels

The following table lists available debug log levels on your FortiManager.

0	Emergency	The system has become unusable.
1	Alert	Immediate action is required.
2	Critical	Functionality is affected.
3	Error	An erroneous condition exists and functionality is probably affected.
4	Warning	Function might be affected.
5	Notice	Notification of normal events.
6	Information	General information about system operations.
7	Debug	Detailed information useful for debugging purposes.
8	Maximum	Maximum log level.

## Using grep to filter command output

The `get`, `show`, `diagnose`, and `execute` commands can produce large amounts of output. The `grep` command can be used to filter the output so that it only shows the required information.

The `grep` command is based on the standard UNIX `grep`, used for searching text output based on regular expressions.

For example, the following command displays only the config for the "admin-lockout-threshold" setting:

```
get system global | grep admin-lockout-threshold
admin-lockout-threshold: 3
```

The following options can be used:

- `-n`: prefix each match with its line number
- `-i`: perform a case-insensitive search
- `-A <num>`: include `<num>` lines of trailing context in the after each match
- `-B <num>`: include `<num>` lines of leading context before each match
- `-C <num>`: include `<num>` lines of leading and trailing context around each match
- `-f`: supports contextual output in order to show the complete configuration; see example below:

Without `-f`:

With `-f`:

```
execute fmpolicy print-adom-database root | grep FortiGate-VM64-AWS
edit "FortiGate-VM64-AWS"

execute fmpolicy print-adom-database root | grep
-f FortiGate-VM64-AWS
config vdom

edit FortiGate

config dynamic interface
edit "port1"
set description "added by creating adom"
set default-mapping disable
config platform_mapping
edit "FortiGate-VM64-AWS"
set intf-zone "port1"

next
end

next
end
set provision enable

next
end
```

# Administrative Domains

This chapter provides information about the ADOM functionality in FortiManager .

## ADOMs overview

FortiManager can manage a large number of Fortinet devices. ADOMs enable administrators to manage only those devices that are specific to their geographic location or business division. This also includes FortiGate units with multiple configured VDOMs.

If ADOMs are enabled, each administrator account is tied to an administrative domain. When a particular administrator logs in, they see only those devices or VDOMs that have been enabled for their account. The one exception is the `admin` administrator account which can see and maintain all administrative domains and the devices within those domains.

Administrative domains are not enabled by default, and enabling and configuring the domains can only be performed by the `admin` administrator. For more information, see [Configuring ADOMs on page 35](#).

The default and maximum number of administrative domains you can add depends on the FortiManager system model. The table below outlines these limits.

FortiManager Model	Administrative Domain / Network Devices
FMG-100C	30 / 30
FMG-200D	30 / 30
FMG-300D	300 / 300
FMG-400C	300 / 300
FMG-1000C	800 / 800
FMG-1000D	1000 / 1000
FMG-3000C	5000 / 5000
FMG-3900E	5000 / 5000
FMG-4000D	4000 / 4000
FMG-4000E	4000 / 4000
FMG-VM-Base	10 / 10
FMG-VM-10-UG	+10 / +10
FMG-VM-100-UG	+100 / +100
FMG-VM-1000-UG	+1000 / +1000

FortiManager Model	Administrative Domain / Network Devices
FMG-VM-5000-UG	+5000 / +5000
FMG-VM-U-UG	+10000 / +10000

## Configuring ADOMs

To use administrative domains, the admin administrator must first enable the feature, create ADOMs, and assign existing FortiManager administrators to ADOMs.



Enabling ADOMs moves non-global configuration items to the root ADOM. Back up the FortiManager unit configuration before enabling ADOMs.



ADOMs must be enabled before adding FortiMail, FortiWeb, and FortiCarrier devices to the FortiManager system. FortiMail and FortiWeb devices are added to their respective pre-configured ADOMs.



In FortiManager 5.0.3 and later, FortiGate and FortiCarrier devices can no longer be grouped into the same ADOM. FortiCarrier devices should be grouped into a dedicated FortiCarrier ADOM.

Within the CLI, you can enable ADOMs and set the administrator ADOM. To configure the ADOMs, you must use the GUI.

### To Enable/disable ADOMs:

Enter the following CLI command:

```
config system global
  set adom-status {enable | disable}
end
```

An administrative domain has two modes: normal and advanced. Normal mode is the default device mode. In normal mode, a FortiGate unit can only be added to a single administrative domain. In advanced mode, you can assign different VDOMs from the same FortiGate to multiple administrative domains.



Enabling the advanced mode option will result in more complicated management scenarios. It is recommended only for advanced users.

### To change ADOM device modes:

Enter the following CLI command:

```
config system global
  set adom-mode {advanced | normal}
end
```

### To assign an administrator to an ADOM:

Enter the following CLI command:

```
config system admin user
  edit <name>
    set adom <adom_name>
  next
end
```

where <name> is the administrator user name and <adom\_name> is the ADOM name.

## Concurrent ADOM Access

System administrators can enable/disable concurrent access to the same ADOM if multiple administrators are responsible for managing a single ADOM. When enabled, multiple administrators can log in to the same ADOM concurrently. When disabled, only a single administrator has read/write access to the ADOM, while all other administrators have read-only access.

Concurrent ADOM access can be enabled or disabled using the CLI or the GUI. The settings apply to all ADOMs, unless you set workspace-mode to per-ADOM. When per-ADOM is enabled, you can apply different settings to each ADOM by using the GUI.



Concurrent ADOM access is enabled by default. This can cause conflicts if two administrators attempt to make configuration changes to the same ADOM concurrently.

---

### To enable ADOM locking and disable concurrent ADOM access for all ADOMs:

```
config system global
  set workspace-mode normal
end
```

### To disable ADOM locking and enable concurrent ADOM access for all ADOMs:

```
config system global
  set workspace-mode disabled
  Warning: disabling workspaces may cause some logged in users to lose their unsaved data. Do
  you want to continue? (y/n) y
end
```

### To enable workspace workflow mode for all ADOMs:

```
config system global
  set workspace-mode workflow
end
```



When workflow mode is enabled, then the admin will have an extra option in the admin page under profile to allow the admin to approve or reject workflow requests.

---

### **To enable per-ADOM workspace mode settings:**

```
config system global
  set workspace-mode per-adom
end
```

---



When per-adom is enabled, then the admin can set the workspace mode for each ADOM by using the GUI.

---

# system

Use system commands to configure options related to the overall operation of the FortiManager unit.



FortiManager CLI commands and variables are case sensitive.

admin	dns	local-in-policy	report	syslog
alert-console	fips	local-in-policy6	route	web-proxy
alertemail	fmg-cluster	locallog	route6	workflow approval-matrix
auto-delete	fortiview	log	saml	
backup all-settings	global	mail	sniffer	
certificate	ha	metadata	snmp	
connector	ha-scheduled-check	ntp	soc-fabric	
dm	interface	password-policy	sql	



TCP port numbers cannot be used by multiple services at the same time with the same IP address. If a port is already in use, it cannot be assigned to another service. For example, HTTPS and HTTP cannot have the same port number.

## admin

Use the following commands to configure admin related settings.

### admin group

Use this command to add, edit, and delete admin user groups.

#### Syntax

```
config system admin group
edit <group>
```

```

    set member <string>
end

```

Variable	Description
<group>	Enter the name of the group you are editing or enter a new name to create an entry (character limit = 63).
member <string>	Add group members.

## admin ldap

Use this command to add, edit, and delete Lightweight Directory Access Protocol (LDAP) users.

### Syntax

```

config system admin ldap
edit <server>
    set adom-access {all | specify}
    set adom-attr <string>
    set adom <adom-name>
    set attributes <filter>
    set ca-cert <string>
    set cnid <string>
    set dn <string>
    set filter <string>
    set group <string>
    set memberof-attr <string>
    set password <passwd>
    set port <integer>
    set profile-attr <string>
    set secondary-server <string>
    set secure {disable | ldaps | starttls}
    set server <string>
    set ssl-protocol {follow-global-ssl-portocol | sslv3 | tlsv1.0 | tlsv1.1 | tlsv1.2 |
        tlsv1.3}
    set tertiary-server <string>
    set type {anonymous | regular | simple}
    set username <string>
end

```

Variable	Description
adom-access {all   specify}	Set all or specify the ADOM access type (default = all).
<server>	Enter the name of the LDAP server or enter a new name to create an entry (character limit = 63).
adom-attr <string>	The attribute used to retrieve ADOM.
adom <adom-name>	Set the ADOM name to link to the LDAP configuration.

Variable	Description
attributes <filter>	Attributes used for group searching (for multi-attributes, a use comma as a separator). For example: <ul style="list-style-type: none"> <li>• member</li> <li>• uniquemember</li> <li>• member,uniquemember</li> </ul>
ca-cert <string>	CA certificate name. This variable appears only when secure is set to ldaps or starttls.
cnid <string>	Enter the common name identifier (character limit = 20, default = cn).
dn <string>	Enter the distinguished name.
filter <string>	Enter content for group searching. For example: <pre>(&amp;(objectcategory=group)(member=*)) (&amp;(objectclass=groupofnames)(member=*)) (&amp;(objectclass=groupofuniquenames)(uniquemember=*)) (&amp;(objectclass=posixgroup)(memberuid=*))</pre>
group <string>	Enter an authorization group. The authentication user must be a member of this group (full DN) on the server.
memberof-attr <string>	The attribute used to retrieve memeberof.
password <passwd>	Enter a password for the username above. This variable appears only when type is set to regular.
port <integer>	Enter the port number for LDAP server communication (1 - 65535, default = 389).
profile-attr <string>	The attribute used to retrieve admin profile.
secondary-server <string>	Enter the secondary LDAP server domain name or IPv4 address. Enter a new name to create a new entry.
secure {disable   ldaps   starttls}	Set the SSL connection type: <ul style="list-style-type: none"> <li>• disable: no SSL (default).</li> <li>• ldaps: use LDAPS</li> <li>• starttls: use STARTTLS</li> </ul>
server <string>	Enter the LDAP server domain name or IPv4 address. Enter a new name to create a new entry.
ssl-protocol {follow-global-ssl-portocol   sslv3   tlsv1.0   tlsv1.1   tlsv1.2   tlsv1.3}	Set the lowest SSL protocol version for connection to LDAP server (default = follow-global-ssl-portocol). This option is not available when secure is set to disable. The follow-global-ssl-portocol setting follows the setting for: <pre>config system global   set global-ssl-protocol {sslv3   tlsv1.0   tlsv1.1   tlsv1.2       tlsv1.3}</pre>
tertiary-server <string>	Enter the tertiary LDAP server domain name or IPv4 address. Enter a new name to create a new entry.

Variable	Description
type {anonymous   regular   simple}	Set a binding type: <ul style="list-style-type: none"> <li>anonymous: Bind using anonymous user search</li> <li>regular: Bind using username/password and then search</li> <li>simple: Simple password authentication without search (default)</li> </ul>
username <string>	Enter a username. This variable appears only when type is set to regular.

## Example

This example shows how to add the LDAP user user1 at the IPv4 address 206.205.204.203.

```
config system admin ldap
edit user1
set server 206.205.204.203
set dn techdoc
set type regular
set username auth1
set password auth1_pwd
set group techdoc
end
```

## admin profile

Use this command to configure access profiles. In a newly-created access profile, no access is enabled. Setting an option to none hides it from administrators with that profile assigned.

## Syntax

```
config system admin profile
edit <profile>
set adom-admin {enable | disable}
set adom-lock {none | read | read-write}
set adom-policy-packages {none | read | read-write}
set adom-switch {none | read | read-write}
set allow-to-install {enable | disable}
set app-filter {enable | disable}
set assignment {none | read | read-write}
set change-password {enable | disable}
set config-retrieve {none | read | read-write}
set config-revert {none | read | read-write}
set consistency-check {none | read | read-write}
set datamask {enable | disable}
set datamask-custom-priority {enable | disable}
set datamask-fields <fields>
set datamask-key <passwd>
set datamask-unmasked-time <integer>
set deploy-management {none | read | read-write}
set description <string>
set device-assignment {none | read | read-write}
```

```
set device-ap {none | read | read-write}
set device-config {none | read | read-write}
set device-fabric {none | read | read-write}
set device-fortiextender {none | read | read-write}
set device-fortiswitch {none | read | read-write}
set device-fwm-profile {none | read | read-write}
set device-interface {none | read | read-write}
set device-log {none | read | read-write}
set device-manager {none | read | read-write}
set device-op {none | read | read-write}
set device-policy-package-lock {none | read | read-write}
set device-profile {none | read | read-write}
set device-revision-deletion {none | read | read-write}
set device-route {none | read | read-write}
set device-wan-link-load-balance {none | read | read-write}
set event-management {none | read | read-write}
set fabric-viewer {none | read | read-write}
set fgd_center {none | read | read-write}
set fgd-center-advanced {none | read | read-write}
set fgd-center-extres {none | read | read-write}
set fgd-center-fmw-mgmt {none | read | read-write}
set fgd-center-licensing {none | read | read-write}
set fgt-gui-proxy {enable | disable}
set global-policy-packages {none | read | read-write}
set import-policy-packages {none | read | read-write}
set intf-mapping {none | read | read-write}
set ips-filter {enable | disable}
set ips-lock {none | read | read-write}
set ips-objects {none | read | read-write}
set ipv6_trusthost1 <IPv6 prefix>
set ipv6_trusthost2 <IPv6 prefix>
set ipv6_trusthost3 <IPv6 prefix>
.
.
.
set ipv6_trusthost10 <IPv6 prefix>
set log-viewer {none | read | read-write}
set policy-ips-attrs {none | read | read-write}
set policy-objects {none | read | read-write}
set protected-objects {none | read | read-write}
set read-passwd {none | read | read-write}
set report-viewer {none | read | read-write}
set rpc-permit {none | read | read-write}
set run-report {none | read | read-write}
set scope (Not Applicable)
set script-access {none | read | read-write}
set script-run {none | read | read-write}
set set-install-targets {none | read | read-write}
set super-user-profile {enable | disable}
set system-setting {none | read | read-write}
set term-access {none | read | read-write}
set triage-events {none | read | read-write}
set trusthost1 <ip&netmask>
set trusthost2 <ip&netmask>
set trusthost3 <ip&netmask>
.
.
```

```

.
set trusthost10 <ip&netmask>
set type {restricted | system}
set update-incident {none | read | read-write}
set vpn-manager {none | read | read-write}
set web-filter {enable | disable}
set write-passwd-access {all | specify-by-profile | specify-by-user}
set write-passwd-profiles <profile list>
set write-passwd-user-list <user list>
config datamask-custom-fields
  edit <field>
    set field-category {alert | all | fortiview | log | euba}
    set field-status {enable | disable}
    set field-type {email | ip | mac | string}
  next
end

```



When creating a new admin profile, the default for all permissions is none.

Variable	Description
<profile>	Edit the access profile. Enter a new name to create a new profile (character limit = 35). The pre-defined access profiles are <i>No_Permission_User</i> , <i>Password_Change_User</i> , <i>Super_User</i> , <i>Standard_User</i> , <i>Restricted_User</i> , and <i>Package_User</i> .
adom-admin {enable   disable}	Enable/disable Adom Admin (default = disable). Users with an ADOM Admin profile can only manage administrators within their own ADOM. This admin profile can only be assigned to users with a single specified ADOM.
adom-lock {none   read   read-write}	Configure ADOM locking permissions for profile. Controlled functions: ADOM locking. Dependencies: type must be system
adom-policy-packages {none   read   read-write}	Enter the level of access to ADOM policy packages. This command corresponds to the Policy Packages & Objects option on the administrator profile settings page in the GUI. It is a sub-setting of policy-objects. Controlled functions: All the operations in ADOMs Dependencies: Install and re-install depends on Install to Devices in DVM settings, type must be system
adom-switch {none   read   read-write}	Configure administrative domain (ADOM) permissions for this profile. This command corresponds to the Administrative Domain option in the GUI. Controlled functions: ADOM settings in DVM, ADOM settings in All ADOMs page (under System Settings tab) Dependencies: If system-setting is none, the All ADOMs page is not accessible, type must be system

Variable	Description
allow-to-install {enable   disable}	Enable/disable allowing restricting users to install objects to the devices (default = enable).
app-filter {enable   disable}	Enable/disable IPS Sensor permission for the restricted admin profile (default = disable). Dependencies: type must be restricted.
assignment {none   read   read-write}	Configure assignment permissions for this profile. This command corresponds to the Assignment option in the GUI. It is a sub-setting of <code>policy-objects</code> . Controlled functions: Global assignment in Global ADOM Dependencies: type must be system
change-password {enable   disable}	Enable/disable allowing restricted users to change their password (default = disable).
config-retrieve {none   read   read-write}	Set the configuration retrieve settings for this profile. This command corresponds to the Retrieve Configuration from Devices option in the GUI. It is a sub-setting of <code>device-manager</code> . Controlled functions: Retrieve configuration from devices Dependencies: type must be system
config-revert {none   read   read-write}	Set the configuration revert settings for this profile. This command corresponds to the Revert Configuration from Revision History option in the GUI. It is a sub-setting of <code>device-manager</code> . Controlled functions: Revert configuration from revision history Dependencies: type must be system
consistency-check {none   read   read-write}	Configure Policy Check permissions for this profile. This command corresponds to the Policy Check option in the GUI. It is a sub-setting of <code>policy-objects</code> . Controlled functions: Policy check Dependencies: type must be system
datamask {enable   disable}	Enable/disable data masking (default = disable).
datamask-custom-priority {enable   disable}	Enable/disable custom field search priority.
datamask-fields <fields>	Enter that data masking fields, separated by spaces: <ul style="list-style-type: none"> <li>• <i>dstip</i>: Destination IP</li> <li>• <i>dstname</i>: Destination name</li> <li>• <i>email</i>: Email</li> <li>• <i>message</i>: Message</li> <li>• <i>srcip</i>: Source IP</li> <li>• <i>srcmac</i>: Source MAC</li> <li>• <i>srcname</i>: Source name</li> <li>• <i>user</i>: User name</li> </ul>

Variable	Description
datamask-key <passwd>	Enter the data masking encryption key.
datamask-unmasked-time <integer>	Enter the time without data masking, in days (default = 0).
deploy-management {none   read   read-write}	<p>Enter the level of access to the deployment management configuration settings for this profile.</p> <p>This command corresponds to the Install to Devices option in the GUI. It is a sub-setting of device-manager.</p> <p>Controlled functions: Install to devices</p> <p>Dependencies: type must be system</p>
description <string>	Enter a description for this access profile (character limit = 1023). Enclose the description in quotes if it contains spaces.
device-assignment {none   read   read-write}	<p>Set the provisioning template assignment permission.</p> <p>Controlled functions: Assign Templates to Devices</p> <p>Dependencies: type must be system</p>
device-ap {none   read   read-write}	<p>Enter the level of access to device AP settings for this profile.</p> <p>This command corresponds to the AP Manager option in the GUI.</p> <p>Controlled functions: AP Manager pane</p> <p>Dependencies: type must be system</p>
device-config {none   read   read-write}	<p>Enter the level of access to device configuration settings for this profile.</p> <p>This command corresponds to the Manage Device Configuration &gt; Others option in the GUI. It is a sub-setting of device-manager.</p> <p>Controlled functions: Edit devices, All settings under Menu in Dashboard</p> <p>Dependencies: type must be system</p>
device-fabric {none   read   read-write}	<p>Set the manage devie fabric permission.</p> <p>This command corresponds to the Security Fabric option in the GUI. It is a sub-setting of device-manager.</p>
device-fortiextender {none   read   read-write}	<p>Enter the level of access to FortiExtender settings for this profile.</p> <p>This command corresponds to the Extender Manager option in the GUI.</p> <p>Controlled functions: Extender Manager pane</p> <p>Dependencies: type must be system</p>
device-fortiswitch {none   read   read-write}	<p>Enter the level of access to the FortiSwitch Manager module for this profile.</p> <p>This command corresponds to the FortiSwitch Manager option in the GUI.</p> <p>Controlled functions: FortiSwitch Manager pane</p> <p>Dependencies: type must be system</p>
device-fwm-profile {none   read   read-write}	<p>Set the device firmware profile permission.</p> <p>Controlled functions: Firmware Upgrades</p> <p>Dependencies: type must be system</p>

Variable	Description
device-interface {none   read   read-write}	Set the device interface permission. This command corresponds to the Interface option in the GUI. It is a sub-setting of device-manager.
device-log {none   read   read-write}	Set the device logs permission. This command corresponds to the Log & Report option in the GUI. It is a sub-setting of device-manager.
device-manager {none   read   read-write}	Enter the level of access to Device Manager settings for this profile. This command corresponds to the Device Manager option in the GUI. Controlled functions: Device Manager pane Dependencies: type must be system
device-op {none   read   read-write}	Add the capability to add, delete, and edit devices to this profile. This command corresponds to the Add/Delete Devices/Groups option in the GUI. It is a sub-setting of device-manager. Controlled functions: Add or delete devices or groups Dependencies: type must be system
device-policy-package-lock {none   read   read-write}	Configure device policy package locking permissions for this profile. Controlled functions: Policy package locking. Dependencies: type must be system
device-profile {none   read   read-write}	Configure device profile permissions for this profile. This command corresponds to the Provisioning Templates option in the GUI. It is a sub-setting of device-manager. Controlled functions: Provisioning Templates Dependencies: type must be system
device-revision-deletion {none   read   read-write}	Configure device revision deletion permissions for this profile. This command corresponds to the Delete Device Revision option in the GUI. It is a sub-setting of device-manager. Controlled functions: Deleting device revisions Dependencies: type must be system
device-route {none   read   read-write}	Set the manage device routes permissions. This permission will control the following: <ul style="list-style-type: none"> <li>• Provisioning Templates <ul style="list-style-type: none"> <li>• BGP Template</li> <li>• Static Route Template</li> </ul> </li> <li>• Device Configurations <ul style="list-style-type: none"> <li>• Static Routes</li> <li>• Policy Routes</li> <li>• RIP</li> <li>• BGP</li> <li>• OSPF</li> </ul> </li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>• Routing Objects</li> <li>• Multicast</li> </ul> <p>This command corresponds to the Routing option in the GUI. It is a sub-setting of <code>device-manager</code>.</p>
<code>device-wan-link-load-balance</code> {none   read   read-write}	<p>Enter the level of access to <code>wan-link-load-balance</code> settings for this profile. This command corresponds to SD-WAN option in the GUI. It is a sub-setting of <code>device-manager</code>.</p> <p>Controlled functions: SD-WAN</p> <p>Dependencies: type must be system</p>
<code>event-management</code> {none   read   read-write}	<p>Set the Event Management permissions. This command corresponds to the Event Management option in the GUI. Controlled functions: Event Management pane and all its operations</p> <p>Dependencies: <code>faz-status</code> must be set to enable in system <code>global</code>, type must be system</p>
<code>fabric-viewer</code> {none   read   read-write}	<p>Configure Fabric Viewer permissions.</p> <p>Dependencies: type must be system</p>
<code>fgd_center</code> {none   read   read-write}	<p>Set the FortiGuard Center permissions. This command corresponds to the FortiGuard Center option in the GUI. Controlled functions: FortiGuard pane, all the settings under FortiGuard, and FortiGuard images in Firmware Templates</p> <p>Dependencies: type must be system</p>
<code>fgd-center-advanced</code> {none   read   read-write}	<p>Set the FortiGuard Center permissions. This command corresponds to the Advanced option in the GUI. It is a sub-setting of <code>fgd-center</code>.</p> <p>Controlled functions: FortiGuard pane Advanced Settings options</p> <p>Dependencies: type must be system</p>
<code>fgd-center-extres</code> {none   read   read-write}	<p>Set the FortiGuard External Resource permissions. This command corresponds to the External Resource option in the GUI. It is a sub-setting of <code>fgd-center</code>.</p>
<code>fgd-center-fmw-mgmt</code> {none   read   read-write}	<p>Set the FortiGuard Center permissions. This command corresponds to the Firmware Management option in the GUI. It is a sub-setting of <code>fgd-center</code>.</p> <p>Controlled functions: FortiGuard pane Firmware Images options</p> <p>Dependencies: type must be system</p>
<code>fgd-center-licensing</code> {none   read   read-write}	<p>Set the FortiGuard Center permissions. This command corresponds to the License Management option in the GUI. It is a sub-setting of <code>fgd-center</code>.</p> <p>Controlled functions: FortiGuard pane Licensing Status options</p> <p>Dependencies: type must be system</p>

Variable	Description
fgt-gui-proxy {enable   disable}	Enable/disable the FortiGate GUI proxy.
global-policy-packages {none   read   read-write}	Configure global policy package permissions for this profile. This command corresponds to the Global Policy Packages & Objects option in the GUI. It is a sub-setting of policy-objects. Controlled functions: All operations in Global ADOM Dependencies: type must be system
import-policy-packages {none   read   read-write}	Configure importing policy package permissions for this profile (default = none). This command corresponds to the Import Policy Package option in the GUI. Controlled functions: Importing policy packages Dependencies: type must be system
intf-mapping {none   read   read-write}	Configure interface mapping permissions for this profile. This command corresponds to the Interface Mapping option in the GUI. Controlled functions: Mapping interfaces Dependencies: type must be system
ips-filter {enable   disable}	Enable/disable Application Sensor permission for the restricted admin profile (default = disable). Dependencies: type must be restricted
ips-lock {none   read   read-write}	Set the IPS locking permission.
ips-objects {none   read   read-write}	Configure IPS signature permissions. Dependencies: type must be system
ipv6_trusthost1 <IPv6 prefix> ipv6_trusthost2 <IPv6 prefix> ipv6_trusthost3 <IPv6 prefix> ... ipv6_trusthost10 <IPv6 prefix>	The admin user trusted host IPv6 address. Defaults = ipv6_trusthost1: ::/0 for all others: ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff/128 for none
log-viewer {none   read   read-write}	Set the Log View permissions. This command corresponds to the Log View option in the GUI. Controlled functions: Log View and all its operations Dependencies: faz-status must be set to enable in system global, type must be system
policy-ips-attrs {none   read   read-write}	Set the Policy IPS attributes configuration.
policy-objects {none   read   read-write}	Set the Policy & Objects permissions. Controlled functions: Policy & Objects pane Dependencies: type must be system

Variable	Description
protected-objects {none   read   read-write}	Administrators with this profile permission will be able to create protected objects.
read-passwd {none   read   read-write}	Set permission to view ENC password in revision history and full device config.
report-viewer {none   read   read-write}	Set the Reports permissions. This command corresponds to the Reports option in the GUI. Controlled functions: Reports pane and all its operations Dependencies: faz-status must be set to enable in system global, type must be system
rpc-permit {none   read   read-write}	Set the rpc-permission.
run-report {none   read   read-write}	Configure run reports permission for this profile.
scope (Not Applicable)	CLI command is not in use.
script-access {none   read   read-write}	Configure script access. Controlled functions: Accessing scripts Dependencies: type must be system
script-run {none   read   read-write}	Set the script execution permission. Controlled functions: Executing scripts Dependencies: type must be system
set-install-targets {none   read   read-write}	Configure installation targets permissions. This command corresponds to the Installation Targets option in policy packages in the GUI. It is a sub-setting of policy-objects. Controlled functions: Installation targets Dependencies: type must be system
super-user-profile {enable   disable}	Enable/disable the super user profile.
system-setting {none   read   read-write}	Configure System Settings permissions for this profile. This command corresponds to the System Settings option in the GUI. Controlled functions: System Settings pane, all the settings under system setting, and CLI access Dependencies: type must be system
term-access {none   read   read-write}	Set the terminal access permissions for this profile. This command corresponds to the Terminal Access option in the GUI. It is a sub-setting of device-manager. Controlled functions: Connect to the CLI via Telnet or SSH Dependencies: Depends on device-config option, type must be system

Variable	Description
triage-events {none   read   read-write}	Set the triage events permissions for this profile.
trusthost1 <ip&netmask> trusthost2 <ip&netmask> trusthost2 <ip&netmask> ... trusthost10 <ip&netmask>	The admin user trusted host IP address. Defaults : trusthost1: 0.0.0.0.0.0.0.0 for all others: 255.255.255.255.255.255.255 for none
type {restricted   system}	Enter the admin profile type: <ul style="list-style-type: none"> <li>restricted: Restricted admin profile</li> <li>system: System admin profile (default)</li> </ul>
update-incidents {none   read   read-write}	Create/update incidents.
vpn-manager {none   read   read-write}	Enter the level of access to VPN console configuration settings for this profile (default = none). This command corresponds to the VPN Manager option in the GUI. It is a sub-setting of policy-objects. Controlled functions: VPN Console Dependencies: type must be system
web-filter {enable   disable}	Enable/disable Web Filter Profile permission for the restricted admin profile (default = disable). Dependencies: type must be restricted
write-passwd-access {all   specify-by-profile   specify-by-user}	Set the write password access mode. Only available for the default Password_Change_User profile. Admin users with this profile can only change admin password. <ul style="list-style-type: none"> <li>all: Can change password for all users (default).</li> <li>specify-by-profile: Can change password for users with a profile included in the write-passwd-profiles profile list.</li> <li>specify-by-user: Can change password for users included in the write-passwd-user-list user list.</li> </ul>
write-passwd-profiles <profile list>	Enter the profile list. Use a space between each entry in the list; for example, profile1profile2profile3. Only available for the Password_Change_User when write-passwd-access is specify-by-profile.
write-passwd-user-list <user list>	Enter the user list. Use a space between each entry in the list; for example, user1user2user3. Only available for the Password_Change_User when write-passwd-access is specify-by-profile.
<b>Variables for config datamask-custom-fields subcommand:</b>	

Variable	Description
<field>	Enter the custom field name.
field-category {alert   all   fortiview   log   euba}	Enter the field category (default = all).
field-status {enable   disable}	Enable/disable the field (default = enable).
field-type {email   ip   mac   string}	Enter the field type (default = string).

## admin radius

Use this command to add, edit, and delete administration RADIUS servers.

### Syntax

```

config system admin radius
  edit <server>
    set auth-type {any | chap | mschap2 | pap}
    set ca-cert <string>
    set client-cert <string>
    set message-authenticator {optional | require}
    set nas-ip <ipv4_address>
    set port <integer>
    set protocol {tls | udp}
    set secondary-secret <passwd>
    set secondary-server <string>
    set secret <passwd>
    set server <string>
  end

```

Variable	Description
<server>	Enter the name of the RADIUS server or enter a new name to create an entry (character limit = 63).
auth-type {any   chap   mschap2   pap}	The authentication protocol the RADIUS server will use. <ul style="list-style-type: none"> <li>any: Use any supported authentication protocol (default).</li> <li>mschap2: Microsoft Challenge Handshake Authentication Protocol version 2 (MS-CHAPv2).</li> <li>chap: Challenge Handshake Authentication Protocol (CHAP)</li> <li>pap: Password Authentication Protocol (PAP).</li> </ul>
ca-cert <string>	Enter the CA of server certificate. This option is only available when the protocol is tls.
client-cert <string>	Enter the Client certificate. This option is only available when the protocol is tls.

Variable	Description
message-authenticator {optional   require}	Set if the Message-Authenticator attribute is required or optional: <ul style="list-style-type: none"> <li>optional: Message-Authenticator attribute is optional (default).</li> <li>require: Message-Authenticator attribute is required.</li> </ul>
nas-ip <ipv4_address>	The network access server (NAS) IPv4 address and called station ID.
port <integer>	The RADIUS server port number (1 - 65535, default = 1812).
protocol {tls   udp}	Set the transport protocol, TLS over TCP (RadSec) or UDP (default = udp).
secondary-secret <passwd>	The password to access the RADIUS secondary-server (character limit = 64).
secondary-server <string>	The RADIUS secondary-server DNS resolvable domain name or IPv4 address.
secret <passwd>	The password to access the RADIUS server (character limit = 64).
server <string>	The RADIUS server DNS resolvable domain name or IPv4 address.

## Example

This example shows how to add the RADIUS server RAID1 at the IPv4 address 206.205.204.203 and set the shared secret as R1a2D3i4U5s.

```
config system admin radius
  edit RAID1
    set server 206.205.204.203
    set secret R1a2D3i4U5s
  end
```

## admin setting

Use this command to configure system administration settings, including web administration ports, timeout, and language.

## Syntax

```
config system admin setting
  set access-banner {enable | disable}
  set admin-httpd-keep-alive-timeout <integer>
  set admin-https-redirect {enable | disable}
  set admin-login-max <integer>
  set admin_server_cert <admin_server_cert>
  set allow_register {enable | disable}
  set auth-addr <string>
  set auth-port <integer>
  set auto-update {enable | disable}
  set banner-message <string>
  set central-ftgd-local-cat-id {enable | disable}
```

```


set chassis-mgmt {enable | disable}
set chassis-update-interval <integer>
set custom-session-label {enable | disable}
set custom-session-label-mode {changeable | unique-per-session}
set device_sync_status {enable | disable}
set fgt-gui-proxy {enable | disable}
set fgt-gui-proxy-port <integer>
set firmware-upgrade-check {enable | disable}
set fsw-ignore-platform-check {enable | disable}
set gui-theme <theme>
set http_port <integer>
set https_port <integer>
set idle_timeout <integer>
set idle_timeout_api <integer>
set idle_timeout_gui <integer>
set idle_timeout_sso <integer>
set install-ifpolicy-only {enable | disable}
set mgmt-addr <string>
set mgmt-fqdn <string>
set object-threshold-limit {enable | disable}
set object-threshold-limit-value <integer>
set objects-force-deletion {enable | disable}
set offline_mode {enable | disable}
set preferred-fgfm-intf <string>
set register_passwd <passwd>
set rtm-max-monitor-by-days <integer>
set rtm-max-monitor-by-size <integer>
set rtm-temp-file-limit <integer>
set sdwan-monitor-history {enable | disable}
set sdwan-skip-unmapped-input-device {enable | disable}
set show-add-multiple {enable | disable}
set show-adom-devman {enable | disable}
set show-checkbox-in-table {enable | disable}
set show-device-import-export {enable | disable}
set show_automatic_script {enable | disable}
set show-fct-manager {enable | disable}
set show_grouping_script {enable | disable}
set show_hostname {enable | disable}
set show_schedule_script {enable | disable}
set show-sdwan-manager {enable | disable}
set show_tcl_script {enable | disable}
set traffic-shaping-history {enable | disable}
set unreg_dev_opt {add_allow_service | add_no_service}
set webadmin_language {auto_detect | english | french | japanese | korean | simplified_
    chinese | spanish | traditional_chinese}
end

```

Variable	Description
access-banner {enable   disable}	Enable/disable the access banner (default= disable).
admin-httpd-keep-alive-timeout <integer>	Set the HTTP keep-alive timeout (5 - 120 seconds, default = 5).

Variable	Description
admin-https-redirect {enable   disable}	Enable/disable redirection of HTTP admin traffic to HTTPS (default= enable).
admin-login-max <integer>	Set the maximum number of admin users that be logged in at one time (1 - 256, default = 256).
admin_server_cert <admin_server_cert>	Enter the name of an https server certificate to use for secure connections (default = server.crt).
allow_register {enable   disable}	Enable/disable the ability for an unregistered device to be registered (default= disable).
auth-addr <string>	Enter the IP which is used by FortiGate to authorize FortiManager.
auth-port <integer>	Set the port which is used by FortiGate to authorize FortiManager (default = 443).
auto-update {enable   disable}	Enable/disable FortiGate automatic updates (default= enable).
banner-message <string>	Set the banner messages (character limit = 32768).
central-ftgd-local-cat-id {enable   disable}	Enable/disable central FortiGuard local category id management, and do not auto assign id during installation (default= disable).
chassis-mgmt {enable   disable}	Enable/disable chassis management (default= disable).
chassis-update-interval <integer>	Set the chassis background update interval, in minutes (4 - 1440, default = 15).
custom-session-label {enable   disable}	Enable/disable custom session label in FortiManager event logs (default = disable).
custom-session-label-mode {changeable   unique-per-session}	Select the custom session label mode. <ul style="list-style-type: none"> <li>changeable: Custom session label can be changed during an active session.</li> <li>unique-per-session: Custom session label,once is set, can not be changed during an active session.</li> </ul> This variable is only available when the custom-session-label is enable.
device_sync_status {enable   disable}	Enable/disable device synchronization status indication (default= enable).
fgt-gui-proxy {enable   disable}	Enable/disable FortiGate GUI proxy (default = enable).
fgt-gui-proxy-port <integer>	Enter the FortiGate GUI proxy port (default = 8082).
firmware-upgrade-check {enable   disable}	Enable/disable firmware upgrade check (default = enable).
fsw-ignore-platform-check {enable   disable}	Enable/disable FortiSwitch Manager switch platform support check (default = disable).

Variable	Description
gui-theme <theme>	Configure the GUI theme (default = jade).
http_port <integer>	Enter the HTTP port number for web administration (1 - 65535, default = 80).
https_port <integer>	Enter the HTTPS port number for web administration (1 - 65535, default = 443).
idle_timeout <integer>	Enter the idle timeout value, in seconds (60 - 28800, default = 900). The <code>idle_timeout_api</code> , <code>idle_timeout_gui</code> , and <code>idle_timeout_sso</code> settings control the idle timeout for API, GUI, and SSO. The <code>idle_timeout</code> setting controls all other idle timeout, including idle timeout for SSH and console.
idle_timeout_api <integer>	Enter the idle timeout for the API sessions, in seconds (1 - 28800, default = 900).
idle_timeout_gui <integer>	Enter the idle timeout for the GUI sessions, in seconds (60 - 28800, default = 900).
idle_timeout_sso <integer>	Enter the idle timeout for the SSO sessions, in seconds (60 - 28800, default = 900).
install-ifpolicy-only {enable   disable}	Enable/disable allowing only the interface policy to be installed (default = disable).
mgmt-addr <string>	FQDN/IPv4 of FortiManager used by FGFM. If the FortiManager is behind a NAT device, and a device is added in the FortiManager GUI, the FortiManager will not add its IP address to the FortiGate. Configure <code>mgmt-addr</code> with the fixed, public-facing IP address if you need FortiManager to configure the <code>set fmg &lt;ip&gt;</code> command on managed FortiGates.
mgmt-fqdn <string>	FQDN of FortiManager used by FGFM.
object-threshold-limit {enable   disable}	Enable/disable object limit threshold warning (default = disable).
object-threshold-limit-value <integer>	Set the threshold percentage for object limit before warning users (1-100, default = 80). This option is only available when the <code>object-threshold-limit</code> is enable.
objects-force-deletion {enable   disable}	Enable/disable forced deletion of used objects (default = enable). For more information, see the FortiManager Administration Guide on the <a href="#">Fortinet Document Library</a> .
offline_mode {enable   disable}	Enable/disable offline mode to shut down the protocol used to communicate with managed devices (default = disable).
preferred-fgfm-intf <string>	Preferred interface for FGFM connection.
register_passwd <passwd>	Enter the password to use when registering a device (character limit = 19).
rtm-max-monitor-by-days <integer>	Set the maximum real time monitor (sdwan, traffic shaping, etc) history by days (1 - 180, default = 180).

Variable	Description
	For more information, see the <a href="#">FortiManager Administration Guide</a> .
rtm-max-monitor-by-size <integer>	Set the maximum rtm monitor (sdwan, traffic shaping, etc) history by size in MB per device per data type (10 - 200000, default = 1000). For more information, see the <a href="#">FortiManager Administration Guide</a> .
rtm-temp-file-limit <integer>	Set the real time monitor temp file limit by hours. Lowering value will reduce disk usage, but may cause data loss (1 - 120, default = 48).
sdwan-monitor-history {enable   disable}	Enable/disable sdwan-monitor-history (default = disable).
sdwan-skip-unmapped-input-device {enable   disable}	Enable/disable skipping unmapped interface for SD-WAN/rule/input-device instead of report mapping error (default = disable).
show-add-multiple {enable   disable}	Enable/disable show the add multiple button in the GUI (default = disable).
show-adom-devman {enable   disable}	Enable/disable device manager tools on the GUI (default = enable).
show-checkbox-in-table {enable   disable}	Show checkboxes in tables in the GUI (default = disable).
show-device-import-export {enable   disable}	Enable/disable import/export of ADOM, device, and group lists (default = disable).
show_automatic_script {enable   disable}	Enable/disable automatic script (default = disable).
show-fct-manager {enable   disable}	Enable/disable FCT manager (default = disable).  <div style="display: flex; align-items: center;">  <div> <p>Although still available in FortiManager 8.0, this command has no impact on the GUI.</p> <p>This is because the FortiClient module requires ADOM version 6.0 or earlier, whereas FortiManager 8.0 only supports ADOM versions 6.2, 6.4, and 8.0.</p> </div> </div>
show_grouping_script {enable   disable}	Enable/disable grouping script (default = enable).
show_hostname {enable   disable}	Enable/disable showing the hostname on the GUI login page (default = disable).
show_schedule_script {enable   disable}	Enable/disable schedule script (default = disable).
show-sdwan-manager {enable   disable}	Enable/disable the visibility of the SD-WAN Manager on the GUI (default = enable).
show_tcl_script {enable   disable}	Enable/disable TCL script (default = disable).

Variable	Description
traffic-shaping-history {enable   disable}	Enable/disable traffic shaping history (default = disable).
unreg_dev_opt {add_allow_service   add_no_service}	Select action to take when an unregistered device connects to FortiManager: <ul style="list-style-type: none"> <li>add_allow_service: Add unregistered devices and allow service requests (default).</li> <li>add_no_service: Add unregistered devices and deny service requests.</li> </ul>
webadmin_language {auto_detect   english   french   japanese   korean   simplified_chinese   spanish   traditional_chinese}	Select the language to be used for web administration: <ul style="list-style-type: none"> <li>auto_detect: Automatically detect language (default)</li> <li>english: English</li> <li>french: French</li> <li>japanese: Japanese</li> <li>korean: Korean</li> <li>simplified_chinese: Simplified Chinese</li> <li>spanish: Spanish</li> <li>traditional_chinese: Traditional Chinese</li> </ul>

## admin tacacs

Use this command to add, edit, and delete administration TACACS+ servers.

### Syntax

```
config system admin tacacs
  edit <server>
    set authen-type {ascii | auto | chap | mschap | pap}
    set authorization {enable | disable}
    set key <passwd>
    set port <integer>
    set secondary-key <passwd>
    set secondary-server <string>
    set server <string>
    set src-ip <string>
    set tertiary-key <passwd>
    set tertiary-server <string>
  end
```

Variable	Description
<server>	Enter the name of the TACACS+ server or enter a new name to create an entry (character limit = 63).
authen-type {ascii   auto   chap   mschap   pap}	Choose which authentication type to use: <ul style="list-style-type: none"> <li>ascii: ASCII</li> <li>auto: Uses PAP, MSCHAP, and CHAP (in that order) (default).</li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>chap: Challenge Handshake Authentication Protocol (CHAP)</li> <li>mschap: Microsoft Challenge Handshake Authentication Protocol (MS-CHAP)</li> <li>pap: Password Authentication Protocol (PAP).</li> </ul>
authorization {enable   disable}	Enable/disable TACACS+ authorization (default = disable).
key <passwd>	Key to access the server (character limit = 128).
port <integer>	Port number of the TACACS+ server (1 - 65535, default = 49).
secondary-key <passwd>	Key to access the secondary server (character limit = 128).
secondary-server <string>	Secondary server domain name or IPv4 address.
server <string>	The server domain name or IPv4 address.
src-ip <string>	Source IP for connection, IPv4 or IPv6, must be consistent with server IP.
tertiary-key <passwd>	Key to access the tertiary server (character limit = 128).
tertiary-server <string>	Tertiary server domain name or IPv4 address.

## Example

This example shows how to add the TACACS+ server TAC1 at the IPv4 address 206.205.204.203 and set the key as R1a2D3i4U5s.

```
config system admin tacacs
edit TAC1
set server 206.205.204.203
set key R1a2D3i4U5s
end
```

## admin user

Use this command to add, edit, and delete administrator accounts.

You must use a super user administrator account to add, edit, or delete administrator accounts and control their permission levels. Each administrator account must include a minimum of an access profile. The access profile list is ordered alphabetically, capitals first. If custom profiles are defined, it may change the default profile from Restricted\_User. You cannot delete the admin administrator account. You cannot delete an administrator account if that user is logged on.



You can create meta-data fields for administrator accounts. These objects must be created using the FortiManager GUI. The only information you can add to the object is the value of the field (pre-determined text/numbers). For more information, see *System Settings* in the [FortiManager Administration Guide](#).

## Syntax

```

config system admin user
edit <name_str>
    set login-max <integer>
    set password <passwd>
    set change-password {enable | disable}
    set th-from-profile <integer>
    set th6-from-profile <integer>
    set trusthost1 <ipv4_mask>
    set trusthost2 <ipv4_mask>
    set trusthost3 <ipv4_mask>
    ...
    set trusthost10 <ipv4_mask>
    set ipv6_trusthost1 <ipv6_mask>
    set ipv6_trusthost2 <ipv6_mask>
    set ipv6_trusthost3 <ipv6_mask>
    ...
    set ipv6_trusthost10 <ipv6_mask>
    set profileid <profile-name>
    set adom <adom_name(s)>
    set adom-access {all | exclude | specify}
    set dev-group <group-name>
    set web-filter <Web Filter profile name>
    set ips-filter <IPS Sensor name>
    set app-filter <Application Sensor name>
    set policy-package {<adom name>: <policy package id> <adom policy folder name>/
        <package name> | all_policy_packages}
    set policy-block {<adom name>: <policy block id>}
    set description <string>
    set user_type {api | group | ldap | local | pki-auth | radius | sso | tacacs-plus}
    set group <string>
    set ldap-server <string>
    set radius_server <string>
    set tacacs-plus-server <string>
    set ssh-public-key1 <key-type> <key-value>
    set ssh-public-key2 <key-type> <key-value>
    set ssh-public-key3 <key-type> <key-value>
    set avatar <string>
    set wildcard {enable | disable}
    set ext-auth-accprofile-override {enable | disable}
    set ext-auth-adom-override {enable | disable}
    set ext-auth-group-match <string>
    set password-expire <yyyy-mm-dd>
    set force-password-change {enable | disable}
    set fingerprint <string>
    set subject <string>
    set ca <string>
    set cors-allow-origin <string>
    set two-factor-auth {disable | ftc-email | ftc-ftm | ftc-sms}
    set rpc-permit {none | read-only | read-write}
    set use-global-theme {enable | disable}
    set user-theme {astronomy | autumn | binary-tunnel | blue-sea | calla-lily | canyon | cat |
        cave | circuit-board | contrast-dark | dark-matter | fish | forest | graphite | jade |
        mariner | mars | mountain | northern-light | panda | penguin | spring | summer |
        technology | twilight | winter | zebra}
    set fortiai {enable | disable}

```

```

set autoreg-user {enable | disable}
set last-name <string>
set first-name <string>
set email-address <string>
set phone-number <string>
set mobile-number <string>
set pager-number <string>
config meta-data
  edit <fieldname>
    set fieldlength
    set fieldvalue <string>
    set importance
    set status
  end
config dashboard-tabs
  edit tabid <integer>
    set name <string>
  end
config dashboard
  edit moduleid
    set name <string>
    set column <column_pos>
    set diskio-content-type
    set diskio-period {1hour | 24hour | 8hour}
    set refresh-interval <integer>
    set status {close | open}
    set tabid <integer>
    set widget-type <string>
    set log-rate-type {device | log}
    set log-rate-topn {1 | 2 | 3 | 4 | 5}
    set log-rate-period {1hour | 2min | 6hours}
    set res-view-type {history | real-time}
    set res-period {10min | day | hour}
    set res-cpu-display {average | each}
    set num-entries <integer>
    set time-period {1hour | 24hour | 8hour}
  end
end

```

Variable	Description
<name_string>	Enter the name of the admin user or enter a new name to create a new user (character limit = 35).
login-max <integer>	Set the maximum number of login sessions for this user (default = 32).
password <passwd>	Enter a password for the administrator account (character limit = 128). For improved security, the password should be at least 6 characters long. This variable is available only if user_type is local.
change-password {enable   disable}	Enable/disable allowing restricted users to change their password (default = disable).
th-from-profile <integer>	
th6-from-profile <integer>	

Variable	Description
trusthost1 <ipv4_mask> trusthost2 <ipv4_mask> trusthost3 <ipv4_mask> ... trusthost10 <ipv4_mask>	Optionally, type the trusted host IPv4 address and network mask from which the administrator can log in to the FortiManager system. You can specify up to ten trusted hosts. Setting trusted hosts for all of your administrators can enhance the security of your system.  Defaults: trusthost1: 0.0.0.0 0.0.0.0 for all others: 255.255.255.255 255.255.255.255 for none
ipv6_trusthost1 <ipv6_mask> ipv6_trusthost2 <ipv6_mask> ipv6_trusthost3 <ipv6_mask> ... ipv6_trusthost10 <ipv6_mask>	Optionally, type the trusted host IPv6 address from which the administrator can log in to the FortiManager system. You can specify up to ten trusted hosts. Setting trusted hosts for all of your administrators can enhance the security of your system.  Defaults: ipv6_trusthost1: ::/0 for all others: ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff/128 for none
profileid <profile-name>	Enter the name of the access profile to assign to this administrator account (character limit = 35, default = Restricted_User). Access profiles control administrator access to FortiManager features.
adom <adom_name(s)>	Enter the name(s) of the ADOM(s) the administrator belongs to. Any configuration of ADOMs takes place via the FortiManager GUI.
adom-access {all   exclude   specify}	Set all/specify/exclude ADOM access mode (default = specify).
dev-group <group-name>	Enter the device group that the admin use can access. This option can only be used for administrators with access to only one ADOM.
web-filter <Web Filter profile name>	Enter the Web Filter profile to associate with the restricted admin profile. Dependencies: admin user must be associated with a restricted admin profile.
ips-filter <IPS Sensor name>	Enter the IPS Sensor to associate with the restricted admin profile. Dependencies: The admin user must be associated with a restricted admin profile.
app-filter <Application Sensor name>	Enter the Application Sensor to associate with the restricted admin profile. Dependencies: The admin user must be associated with a restricted admin profile.
policy-package {<adom name>: <policy package id> <adom policy folder name>/ <package name>   all_policy_packages}	Policy package access.
policy-block {<adom name>: <policy block id>}	Policy block write access.

Variable	Description
description <string>	Enter a description for this administrator account (character limit = 127). Enclose the description in quotes if it contains spaces.
user_type {api   group   ldap   local   pki-auth   radius   sso   tacacs-plus}	Select the administrator type: <ul style="list-style-type: none"> <li>• api: A REST API Admin is used to generate a permanent API key, which means the same user account will always share the same session and you do not need to use the login/logout endpoints.</li> <li>• group: The administrator is a member of a administrator group.</li> <li>• ldap: An LDAP server verifies the administrator's password.</li> <li>• local: The FortiManager system verifies the administrator's password (default).</li> <li>• pki-auth: The administrator uses PKI.</li> <li>• radius: A RADIUS server verifies the administrator's password.</li> <li>• tacacs-plus: A TACACS+ server verifies the administrator's password.</li> </ul>
group <string>	Enter the group name. This option is only available when user_type is group.
ldap-server <string>	Enter the LDAP server name if the user type is set to LDAP. This option is only available when user_type is ldap.
radius_server <string>	Enter the RADIUS server name if the user type is set to RADIUS. This option is only available when user_type is radius.
tacacs-plus-server <string>	Enter the TACACS+ server name if the user type is set to TACACS+. This option is only available when user_type is tacacs-plus.
ssh-public-key1 <key-type> <key-value> ssh-public-key2 <key-type> <key-value> ssh-public-key3 <key-type> <key-value>	You can specify the public keys of up to three SSH clients. These clients are authenticated without being asked for the administrator password. You must create the public-private key pair in the SSH client application. <key-type> is ssh-dss for a DSA key, ssh-rsa for an RSA key. <key-value> is the public key string of the SSH client.
avatar <string>	Image file for the administrator's avatar (maximum 4K base64 encode).
wildcard {enable   disable}	Enable/disable wildcard remote authentication (default = disable).
ext-auth-accprofile-override {enable   disable}	Enable/disable allowing the use of the access profile provided by the remote authentication server (default = disable).
ext-auth-adom-override {enable   disable}	Enable/disable allowing the use of the ADOM provided by the remote authentication server (default = disable). In order to support vendor specific attributes (VSA), the authentication server requires a dictionary to define which VSAs to support. The Fortinet RADIUS vendor ID is 12365. The Fortinet-Vdom-Name attribute is used by this command.

Variable	Description
ext-auth-group-match <string>	Only admin users that belong to this group are allowed to log in.
password-expire <yyyy-mm-dd>	When enforcing the password policy, enter the date that the current password will expire.
force-password-change {enable   disable}	Enable/disable force password change on next log in.
fingerprint <string>	PKI user certificate fingerprint based on MD5, SHA-1, or SHA-256 hash function. Format the fingerprint by removing spaces or replacing them with ':'. For example, 0123abcd... or 01:23:ab:cd....  This command is available when an API or PKI administrator account is configured.
subject <string>	PKI user certificate name constraints.  This command is available when an API or PKI administrator account is configured.
ca <string>	PKI user certificate CA (CA name in local).  This command is available when an API or PKI administrator account is configured.
cors-allow-origin <string>	Value for access-control-allow-origin on API responses (default = null).  This command is available when an API administrator account is configured.
two-factor-auth {disable   ftc-email   ftc-ftm   ftc-sms}	Enable/disable two-factor authentication (default = disable). You can enable for FortiToken Cloud email, mobile, or SMS.  This command is available when a PKI administrator account is configured.
rpc-permit {none   read-only   read-write}	Set the permission level for log in via Remote Procedure Call (RPC) (default = none).
use-global-theme {enable   disable}	Enable/disable global theme for administration GUI (default = enable).
user-theme {astronomy   autumn   binary-tunnel   blue-sea   calla-lily   canyon   cat   cave   circuit-board   contrast-dark   dark-matter   fish   forest   graphite   jade   mariner   mars   mountain   northern-light   panda   penguin   spring   summer   technology   twilight   winter   zebra}	Set the color scheme to use for the admin user GUI (default = jade): <ul style="list-style-type: none"> <li>• astronomy: Astronomy</li> <li>• autumn: Autumn</li> <li>• binary-tunnel: Binary Tunnel</li> <li>• blue-sea: Blue Sea</li> <li>• calla-lily: Calla Lily</li> <li>• canyon: Canyon</li> <li>• cat: Cat</li> <li>• cave: Cave</li> <li>• circuit-board: Circuit Board</li> <li>• contrast-dark: High Contrast Dark</li> <li>• dark-matter: Dark Matter</li> <li>• fish: Fish</li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>• forest: Forest</li> <li>• graphite: Graphite</li> <li>• jade: Jade</li> <li>• mariner: Mariner</li> <li>• mars: Mars</li> <li>• mountain: Mountain</li> <li>• neutrino: Neutrino</li> <li>• northern-light: Northern Light</li> <li>• panda: Panda</li> <li>• penguin: Penguin</li> <li>• spring: Spring</li> <li>• summer: Summer</li> <li>• technology: Technology</li> <li>• twilight: Twilight</li> <li>• winter: Winter</li> <li>• zebra: Zebra</li> </ul> <p>This command is available when <code>use-global-theme</code> is disabled.</p>
<code>fortiai {enable   disable}</code>	<p>Enable/disable FortiAI (default = disabled).</p> <p>If you have already reached the maximum number of users allowed, you will receive an error.</p>
<code>autoreg-user {enable   disable}</code>	<p>The admin is for autoreg (enable) or normal API (disable) (default = disable). This option is only available when <code>user_type</code> is <code>api</code>.</p>
<code>last-name &lt;string&gt;</code>	Administrator's last name (character limit = 63).
<code>first-name &lt;string&gt;</code>	Administrator's first name (character limit = 63).
<code>email-address &lt;string&gt;</code>	Administrator's email address.
<code>phone-number &lt;string&gt;</code>	Administrator's phone number.
<code>mobile-number &lt;string&gt;</code>	Administrator's mobile phone number.
<code>pager-number &lt;string&gt;</code>	Administrator's pager number.
<b>Variables for <code>config meta-data</code> subcommand:</b>	
<p>This subcommand can only change the value of an existing field. To create a new metadata field, use the <code>config system metadata</code> command.</p>	
<code>fieldname</code>	The label/name of the field (read-only, default = 50). Enclose the name in quotes if it contains spaces.
<code>fieldlength</code>	The maximum number of characters allowed for this field (read-only, default = 50).

Variable	Description
fieldvalue <string>	Enter a pre-determined value for the field. This is the only value that can be changed with the <code>config meta-data</code> subcommand (character limit = 255).
importance	Indicates whether the field is compulsory (required) or optional (optional) (read-only, default = optional).
status	The status of the field (read-only, default = enable).
<b>Variables for <code>config dashboard-tabs</code> subcommand:</b>	
tabid <integer>	Tab ID.
name <string>	Tab name.
<b>Variables for <code>config dashboard</code> subcommand:</b>	
moduleid	Widget ID.
name <string>	Widget name (character limit = 63).
column <column_pos>	Widget column ID (default = 0).
diskio-content-type {blks   iops   util}	Set the Disk I/O Monitor widget's chart type. <ul style="list-style-type: none"> <li>blks: the amount of data of I/O requests.</li> <li>iops: the number of I/O requests.</li> <li>util: bandwidth utilization (default).</li> </ul>
diskio-period {1hour   24hour   8hour}	Set the Disk I/O Monitor widget's data period (default = 1hour).
refresh-interval <integer>	Widget refresh interval (default = 300).
status {close   open}	Widget opened/closed status (default = open).
tabid <integer>	ID of the tab where the widget is displayed (default = 0).
widget-type <string>	Widget type: <ul style="list-style-type: none"> <li>alert: Alert Message Console</li> <li>devsummary: Device Summary</li> <li>disk-io: Disk I/O</li> <li>jsconsole: CLI Console</li> <li>licinfo: License Information</li> <li>log-rcvd-fwd: Receive Rate v. Forwarding Rate</li> <li>logdb-lag: Log Insert Lag Time</li> <li>logdb-perf: Insert Rate vs Receive Rate</li> <li>logrecv: Logs/Data Received (this widget has been deprecated)</li> <li>raid: Disk Monitor</li> <li>rpteng: Report Engine (this widget has been deprecated)</li> <li>statistics: Statistics (this widget has been deprecated)</li> <li>sysinfo: System Information</li> <li>sysop: Unit Operation</li> <li>sysres: System Resources</li> <li>top-lograte: Log Receive Monitor</li> </ul>

Variable	Description
log-rate-type {device   log}	Log receive monitor widget's statistics breakdown options (default = device).
log-rate-topn {1   2   3   4   5}	Log receive monitor widgets's number of top items to display (default = 5).
log-rate-period {1hour   2min   6hours}	Log receive monitor widget's data period (default = 2min).
res-view-type {history   real-time}	Widget's data view type (default = history).
res-period {10min   day   hour}	Widget data period: <ul style="list-style-type: none"> <li>10min: Last 10 minutes (default).</li> <li>day: Last day.</li> <li>hour: Last hour.</li> </ul>
res-cpu-display {average   each}	Widget CPU display type: <ul style="list-style-type: none"> <li>average: Average usage of CPU (default).</li> <li>each: Each usage of CPU.</li> </ul>
num-entries <integer>	Number of entries (default = 10).
time-period {1hour   24hour   8hour}	Set the Log Database Monitor widget's data period (default = 1hour).

## Using trusted hosts

Setting trusted hosts for all of your administrators increases the security of your network by further restricting administrative access. In addition to knowing the password, an administrator must connect only through the subnet or subnets you specify. You can even restrict an administrator to a single IPv4 address if you define only one trusted host IPv4 address with a netmask of 255.255.255.255.

When you set trusted hosts for all administrators, the FortiManager system does not respond to administrative access attempts from any other hosts. This provides the highest security. If you leave even one administrator unrestricted, the unit accepts administrative access attempts on any interface that has administrative access enabled, potentially exposing the unit to attempts to gain unauthorized access.

The trusted hosts you define apply both to the GUI and to the CLI when accessed through SSH. CLI access through the console connector is not affected.

## Example

Use the following commands to add a new administrator account named `admin_2` with the password set to `p8ssw0rd` and the `Super_User` access profile. Administrators that log in to this account will have administrator access to the FortiManager system from any IPv4 address.

```
config system admin user
  edit admin_2
    set description "Backup administrator"
    set password p8ssw0rd
    set profileid Super_User
```

```
end
```

## alert-console

Use this command to configure the alert console options. The alert console appears on the dashboard in the GUI.

### Syntax

```
config system alert-console
  set period {1 | 2 | 3 | 4 | 5 | 6 | 7}
  set severity-level {information | notify | warning | error | critical | alert | emergency}
end
```

Variable	Description
period {1   2   3   4   5   6   7}	Enter the number of days to keep the alert console alerts (default = 7).
severity-level {information   notify   warning   error   critical   alert   emergency}	Enter the minimum severity level to display on the alert console on the dashboard: <ul style="list-style-type: none"><li>• <b>emergency</b>: The unit is unusable (default).</li><li>• <b>alert</b>: Immediate action is required.</li><li>• <b>critical</b>: Functionality is affected.</li><li>• <b>error</b>: Functionality is probably affected.</li><li>• <b>warning</b>: Functionality might be affected.</li><li>• <b>notification</b>: Information about normal events.</li><li>• <b>information</b>: General information about unit operations.</li></ul>

### Example

This example sets the alert console message display to warning for a duration of three days.

```
config system alert-console
  set period 3
  set severity-level warning
end
```

## alertemail

Use this command to configure alert email settings for your FortiManager unit.

All variables are required when authentication is enabled.

## Syntax

```

config system alertemail
  set authentication {enable | disable}
  set fromaddress <email-address_string>
  set fromname <string>
  set smtppassword <passwd>
  set smtpport <integer>
  set smtpserver {<ipv4_address>|<fqdn_string>}
  set smtpuser <username>
end

```

Variable	Description
authentication {enable   disable}	Enable/disable alert email authentication (default = enable).
fromaddress <email-address_string>	The email address the alert message is from. This is a required variable.
fromname <string>	The SMTP name associated with the email address. Enclose the name in quotes if it contains spaces.
smtppassword <passwd>	Set the SMTP server password (character limit = 39).
smtpport <integer>	The SMTP server port (1 - 65535, default = 25).
smtpserver {<ipv4_address> <fqdn_string>}	The SMTP server address, either a DNS resolvable host name or an IPv4 address.
smtpuser <username>	Set the SMTP server username (character limit= 63).

## Example

Here is an example of configuring alertemail. Enable authentication, the alert is set in Mr. Customer's name and from his email address, the SMTP server port is the default port(25), and the SMTP server is at IPv4 address of 192.168.10.10.

```

config system alertemail
  set authentication enable
  set fromaddress customer@example.com
  set fromname "Mr. Customer"
  set smtpport 25
  set smtpserver 192.168.10.10
end

```

## auto-delete

Use this command to automatically delete policies for logs, reports, and archived and quarantined files.

## Syntax

```

config system auto-delete
  config dlp-files-auto-deletion
    set retention {days | weeks | months}
    set runat <integer>
    set status {enable | disable}
    set value <integer>
  end
  config quarantine-files-auto-deletion
    set retention {days | weeks | months}
    set runat <integer>
    set status {enable | disable}
    set value <integer>
  end
  config log-auto-deletion
    set retention {days | weeks | months}
    set runat <integer>
    set status {enable | disable}
    set value <integer>
  end
  config report-auto-deletion
    set retention {days | weeks | months}
    set runat <integer>
    set status {enable | disable}
    set value <integer>
  end
end
end

```

Variable	Description
dlp-files-auto-deletion	Automatic deletion policy for DLP archives.
quarantine-files-auto-deletion	Automatic deletion policy for quarantined files.
log-auto-deletion	Automatic deletion policy for device logs.
report-auto-deletion	Automatic deletion policy for reports.
retention {days   weeks   months}	Automatic deletion in days, weeks, or months (default = days).
runat <integer>	Automatic deletion run at (0 - 23) o'clock (default = 0).
status {enable   disable}	Enable/disable automatic deletion (default = disable).
value <integer>	Automatic deletion in x days, weeks, or months (default = 0).

## backup all-settings

Use this command to set or check the settings for scheduled backups.

An MD5 checksum is automatically generated in the event log when backing up the configuration. You can verify a backup by comparing the checksum in the log entry with that of the backup file.



It is mandatory to set a password for the backup file. See `set crptpasswd <passwd>` below.

## Syntax

```
config system backup all-settings
  set status {enable | disable}
  set server {<ipv4_address>|<fqdn_str>}
  set user <username>
  set directory <string>
  set week_days {monday tuesday wednesday thursday friday saturday sunday}
  set time <hh:mm:ss>
  set protocol {ftp | scp | sftp}
  set passwd <passwd>
  set cert <certificate_name>
  set crptpasswd <passwd>
end
```

Variable	Description
status {enable   disable}	Enable/disable scheduled backups (default = disable).
server {<ipv4_address> <fqdn_str>}	Enter the IPv4 address or DNS resolvable host name of the backup server.
user <username>	Enter the user account name for the backup server (character limit = 63).
directory <string>	Enter the name of the directory on the backup server in which to save the backup file.
week_days {monday tuesday wednesday thursday friday saturday sunday}	Enter the days of the week on which to perform backups. You may enter multiple days.
time <hh:mm:ss>	Enter the time of day to perform the backup. Time is required in the form <hh:mm:ss>.
protocol {ftp   scp   sftp}	Enter the transfer protocol (default = sftp).
passwd <passwd>	Enter the password for the backup server (character limit = 127).
cert <certificate_name>	SSH certificate for authentication. Only available if the protocol is set to scp. The SSH certificate object must already be configured. See <a href="#">certificate ssh on page 74</a> .
crptpasswd <passwd>	Enter a password to protect backup content (character limit = 63).

## certificate

Use the following commands to configure certificate related settings.

### certificate ca

Use this command to install Certificate Authority (CA) root certificates.

When a CA processes your Certificate Signing Request (CSR), it sends you the CA certificate, the signed local certificate and the Certificate Revocation List (CRL).

**The process for obtaining and installing certificates is as follows:**

1. Use the `execute certificate local generate` command to generate a CSR.
2. Send the CSR to a CA. The CA sends you the CA certificate, the signed local certificate and the CRL.
3. Use the `system certificate local` command to install the signed local certificate.
4. Use the `system certificate ca` command to install the CA certificate. Depending on your terminal software, you can copy the certificate and paste it into the command.

### Syntax

```
config system certificate ca
  edit <ca_name>
    set ca <certificate>
    set comment <string>
  end
```

To view all of the information about the certificate, use the `get` command:

```
get system certificate ca <ca_name>
```

Variable	Description
<ca_name>	Enter a name for the CA certificate (character limit = 35).
ca <certificate>	Enter or retrieve the CA certificate in PEM format.
comment <string>	Optionally, enter a descriptive comment (character limit = 127).

### certificate crl

Use this command to configure CRLs.

### Syntax

```
config system certificate crl
```

```

edit <name>
  set crl <crl>
  set comment <string>
end

```

Variable	Description
<name>	Enter a name for the CRL (character limit = 35).
crl <crl>	Enter or retrieve the CRL in PEM format.
comment <string>	Optionally, enter a descriptive comment for this CRL (character limit = 127).

## certificate local

Use this command to install local certificates. When a CA processes your CSR, it sends you the CA certificate, the signed local certificate and the CRL.

### The process for obtaining and installing certificates is as follows:

1. Use the execute `certificate local generate` command to generate a CSR.
2. Send the CSR to a CA. The CA sends you the CA certificate, the signed local certificate and the CRL.
3. Use the system `certificate local` command to install the signed local certificate.
4. Use the system `certificate ca` command to install the CA certificate. Depending on your terminal software, you can copy the certificate and paste it into the command.

## Syntax

```

config system certificate local
edit <cert_name>
  set password <passwd>
  set comment <string>
  set certificate <certificate_PEM>
  set private-key <prkey>
  set csr <csr_PEM>
end

```

Variable	Description
<cert_name>	Enter the local certificate name (character limit = 35).
password <passwd>	Enter the local certificate password (character limit = 67).
comment <string>	Enter any relevant information about the certificate (character limit = 127).
certificate <certificate_PEM>	Enter the signed local certificate in PEM format.
You should not modify the following variables if you generated the CSR on this unit:	
private-key <prkey>	The private key in PEM format.
csr <csr_PEM>	The CSR in PEM format.

## certificate oftp

Use this command to install OFTP certificates and keys.

### Syntax

```
config system certificate oftp
  set certificate <certificate>
  set comment <string>
  set local {Fortinet_Local | Fortinet_Local2}
  set mode {custom | default | local}
  set password <string>
  set private-key <key>
end
```

Variable	Description
certificate <certificate>	PEM format certificate.
comment <string>	OFTP certificate comment (character limit = 127).
local {Fortinet_Local   Fortinet_Local2}	Choose from the two available local certificates.
mode {custom   default   local}	Mode of certificates used by OFTPD (default = default): <ul style="list-style-type: none"> <li>• custom: Use a custom certificate.</li> <li>• default: Default mode.</li> <li>• local: Use a local certificate.</li> </ul>
password <string>	Password for encrypted 'private-key', unset for non-encrypted.
private-key <key>	PEM format private key.

## certificate remote

Use this command to install remote certificates

### Syntax

```
config system certificate remote
  edit <cert_name>
    set cert <certificate>
    set comment <string>
  next
end
```

Variable	Description
<cert_name>	Enter the remote certificate name (character limit = 35).
cert <certificate>	The remote certificate.
comment <string>	Optionally, enter a descriptive comment (character limit = 127).

## certificate ssh

Use this command to install SSH certificates and keys.

**The process for obtaining and installing certificates is as follows:**

1. Use the execute `certificate local generate` command to generate a CSR.
2. Send the CSR to a CA. The CA sends you the CA certificate, the signed local certificate and the CRL.
3. Use the `system certificate local` command to install the signed local certificate.
4. Use the `system certificate ca` command to install the CA certificate.
5. Use the `system certificate SSH` command to install the SSH certificate. Depending on your terminal software, you can copy the certificate and paste it into the command.

## Syntax

```
config system certificate ssh
  edit <name>
    set comment <comment_text>
    set password <passwd>
    set certificate <certificate>
    set private-key <key>
  end
```

Variable	Description
<name>	Enter the SSH certificate name (character limit = 63).
password <passwd>	Enter the SSH private-key password.
comment <comment_text>	Enter any relevant information about the certificate (character limit = 127).
certificate <certificate>	Enter the signed SSH certificate in PEM format.
You should not modify the following variables if you generated the CSR on this unit.	
private-key <key>	The private key in PEM format.

## connector

Use this command to configure connector related settings.

## Syntax

```

config system connector
  set cloud-orchest-refresh-interval <integer>
  set conn-refresh-interval <integer>
  set conn-ssl-protocol {follow-global-ssl-portocol | sslv3 | tlsv1.0 | tlsv1.1 | tlsv1.2 |
    tlsv1.3}
  set faznotify-msg-queue-max <integer>
  set faznotify-msg-timeout <integer>
  set fsso-refresh-interval <integer>
  set fsso-sess-timeout <integer>
  set px-svr-timeout <integer>
end

```

Variable	Description
cloud-orchest-refresh-interval <integer>	Set the Cloud Orchestration refresh interval, in seconds (300 - 1800, default = 300).
conn-refresh-interval <integer>	Set the connector refresh interval, in seconds (60 - 1800, default = 300). This variable is used for the request-response connectors, such as the ClearPass, VMware NSX-T, and FortiClient EMS connectors. It does not apply to connectors that keep a constant connection, such as the Cisco pxGrid connector.
conn-ssl-protocol {follow-global-ssl-portocol   sslv3   tlsv1.0   tlsv1.1   tlsv1.2   tlsv1.3}	Set the lowest SSL protocol version for connector (default = follow-global-ssl-portocol). The follow-global-ssl-portocol setting follows the setting for: <pre> config system global   set global-ssl-protocol {sslv3   tlsv1.0   tlsv1.1   tlsv1.2       tlsv1.3} </pre>
faznotify-msg-queue-max <integer>	Set the faznotify max queued message per connector (10 - 10000, default = 1000).
faznotify-msg-timeout <integer>	Set the faznotify message timeout (1 - 720 hours, default = 72).
fsso-refresh-interval <integer>	Set the FSSO refresh interval, in seconds (60 - 1800, default = 180).
fsso-sess-timeout <integer>	Set the FSSO session timeout, in seconds (30 - 600, default = 300).
px-svr-timeout <integer>	Set the pxGrid session timeout, in seconds (30 - 600, default = 300). If connecting to the pxGrid server without response for the set number of seconds (<integer>), it will trigger a timeout.

## csf

Use this command to add this device to a Security Fabric or set up a new Security Fabric on this device.

This command is used to establish a fabric connection with FortiAnalyzer. Once the status is enabled, you must configure the following settings to allow the fabric connection:

```

config system csf
  set accept-auth-by-cert enable
end

```

For more information about establishing this connection to FortiAnalyzer, see the [FortiManager Administration Guide](#).

## Syntax

```

config system csf
  set accept-auth-by-cert {enable | disable}
  set authorization-request-type {certificate | serial}
  set certificate <string>
  set fabric-workers <integer>
  set ssl-protocol {follow-global-ssl-portocol | sslv3 | tlsv1.0 | tlsv1.1 | tlsv1.2 | tlsv1.3}
  set status {enable | disable}
  set upstream <string>
  set upstream-port <integer>
  config trusted-list
    edit <name>
      set action {accept | deny}
      set adom <adom-name>
      set adom-access {all | specify}
      set authorization-type {certificate | serial}
      set certificate <string>
      set ha-members <ha members>
      set index <integer>
      set serial <string>
    end
  end
end

```

Variable	Description
accept-auth-by-cert {enable   disable}	Accept connections with unknown certificates and ask admin for approval (default = enable).
authorization-request-type {certificate   serial}	Authorization request type (default = certificate).
certificate <string>	Certificate (default = Fortinet_Local).
fabric-workers <integer>	Number of worker processes for Security Fabric daemon (default = 2).
ssl-protocol {follow-global-ssl-portocol   sslv3   tlsv1.0   tlsv1.1   tlsv1.2   tlsv1.3}	Set the lowest SSL protocol version for upstream and downstream connections (default = follow-global-ssl-portocol). The follow-global-ssl-portocol setting follows the setting for: <pre> config system global   set global-ssl-protocol {sslv3   tlsv1.0   tlsv1.1   tlsv1.2   tlsv1.3} </pre>
status {enable   disable}	Enable/disable Security Fabric (default = disable).
upstream <string>	IP/FQDN of the FortiManager upstream from this FortiManager in the Security Fabric.

Variable	Description
upstream-port <integer>	The port number to use to communicate with the FortiManager upstream from this FortiManager in the Security Fabric (default = 8013).
<b>Variables for config trusted-list subcommand:</b>	
<name>	Name.
action {accept   deny}	Security fabric authorization action (default = accept).
adom <adom-name>	Specify the ADOMs for adom-access. This variable is only available when adom-access is specify. Set adom-access to all to use all ADOMs.
adom-access {all   specify}	Select the adom access: <ul style="list-style-type: none"> <li>all: All ADOMs access (default).</li> <li>specify: Specify ADOM access with the adom variable.</li> </ul>
authorization-type {certificate   serial}	Authorization type (default = serial).
certificate <string>	Certificate.
ha-members <ha members>	HA members.
index <integer>	Index of the downstream in tree (default = 0).
serial <string>	Serial.

## dm

Use this command to configure Deployment Manager (DM) settings.

### Syntax

```
config system dm
  set autoupdate-merge-revision {enable | disable}
  set concurrent-install-image-limit <integer>
  set concurrent-install-limit <integer>
  set concurrent-install-script-limit <integer>
  set conf-merge-after-script {enable | disable}
  set discover-timeout <integer>
  set dpm-logsize <integer>
  set fgfm-auto-retrieve-timeout <integer>
  set fgfm-install-refresh-count <integer>
  set fgfm-sock-timeout <integer>
  set fgfm_keepalive_itvl <integer>
  set force-remote-diff {enable | disable}
  set fortiap-refresh-cnt <integer>
  set fortiap-refresh-itvl <integer>
  set fortiext-refresh-cnt <integer>
  set handle-nonhasync-config {enable | disable}
  set install-fds-timeout <integer>
```

```

set install-image-timeout <integer>
set install-tunnel-retry-itvl <integer>
set log-autoupdate {enable | disable}
set max-revs <integer>
set nr-retry <integer>
set retry {enable | disable}
set retry-intvl <integer>
set rollback-allow-reboot {enable | disable}
set script-logsize <integer>
set skip-scep-check {enable | disable}
set skip-tunnel-fcp-req {enable | disable}
set verify-install {enable | disable | optimal}
end

```

Variable	Description
autoupdate-merge-revision {enable   disable}	Merge/separate autoupdate config revisions (default = enable).
concurrent-install-image-limit <integer>	The maximum number of concurrent installs (1 - 1000, default = 500).
concurrent-install-limit <integer>	The maximum number of concurrent installs (5 - 2000, default = 480).
concurrent-install-script-limit <integer>	The maximum number of concurrent install scripts (5 - 2000, default = 480).
conf-merge-after-script {enable   disable}	Merge config after running the script on the remote device, instead of a full retrieve (default = disable).
discover-timeout <integer>	Check connection timeout when discovering a device (3 - 15, default = 6).
dpm-logsize <integer>	The maximum DPM log size per device, in kilobytes (1 - 10000, default = 10000).
fgfm-auto-retrieve-timeout <integer>	The maximum waiting time for auto retrieve in seconds (60 - 10800, default = 1800).
fgfm-install-refresh-count <integer>	The maximum FGFM install refresh attempts (default = 10).
fgfm-sock-timeout <integer>	The maximum FGFM communication socket idle time, in seconds (90 - 1800, default = 360).
fgfm_keepalive_itvl <integer>	The FortiManager/FortiGate communication protocol keep alive interval, in seconds (30 - 600, default = 120).
force-remote-diff {enable   disable}	Enable/disable always using remote diff when installing (default = disable).
fortiap-refresh-cnt <integer>	Maximum auto refresh FortiAP number each time (1 - 10000, default = 500).
fortiap-refresh-itvl <integer>	Auto refresh FortiAP status interval, in minutes (1 - 1440, 0 to disable, default = 10).
fortiext-refresh-cnt <integer>	Maximum device number for FortiExtender auto refresh (1 - 10000, default = 50).

Variable	Description
handle-nonhasync-config {enable   disable}	<p>Enable/disable nonhasync config handling (default = disable).</p> <ul style="list-style-type: none"> <li>Disable: Ignores and skips any nonhasync configuration installation to the remote device (FortiGate).</li> <li>Enable: Installs nonhasync configurations to the remote device (FortiGate). Allows updates to the nonhasync configurations and cluster member configurations.</li> </ul> <p>FortiGate configurations identified as nonhasync vary by platform and model and include HA configurations, vdom-exception configurations, and per-platform objects.</p>
install-fds-timeout <integer>	Maximum waiting time for fgt update during install, in minutes (1-30, default 10).
install-image-timeout <integer>	Maximum waiting time for image transfer and device upgrade, in seconds (600 - 7200, default = 3600).
install-tunnel-retry-intvl <integer>	Time to re-establish tunnel during install, in seconds (10 - 60, default = 60).
log-autoupdate {enable   disable}	Enable/disable autoupdate debug logging (default = disable).
max-revs <integer>	The maximum number of revisions saved (1 - 250, default = 100).
nr-retry <integer>	The number of times the FortiManager unit will retry (default = 1).
retry {enable   disable}	Enable/disable configuration installation retries (default = enable).
retry-intvl <integer>	The interval between attempting another configuration installation following a failed attempt (default = 15).
rollback-allow-reboot {enable   disable}	Enable/disable allowing a FortiGate unit to reboot when installing a script or configuration (default = disable).
script-logsize <integer>	Enter the maximum script log size per device, in kilobytes (1 - 10000, default = 100).
skip-scep-check {enable   disable}	Enable/disable installing scep related objects even if the scep URL is configured (default = disable).
skip-tunnel-fcp-req {enable   disable}	Enable/disable skipping the FCP request sent from an FGFM tunnel (default = enable).
verify-install {enable   disable   optimal}	<p>Enable/disable verify install against remote configuration:</p> <ul style="list-style-type: none"> <li>disable: Disable.</li> <li>enable: Always verify installation (default).</li> <li>optimal: Verify installation for command errors.</li> </ul>

## Example

This example shows how to set up configuration installations. It shows how to set 5 attempts to install a configuration on a FortiGate device, waiting 30 seconds between attempts.

```
config system dm
  set retry enable
```

```
set nr-retry 5
set retry-intvl 30
end
```

## dns

Use these commands to set the DNS server addresses. Several FortiManager functions, including sending alert email, use DNS. You can configure both IPv4 and IPv6 DNS server addresses.

### Syntax

```
config system dns
set primary <ipv4_address>
set secondary <ipv4_address>
set ip6-primary <ipv6_address>
set ip6-secondary <ipv6_address>
end
```

Variable	Description
primary <ipv4_address>	Enter the primary DNS server IPv4 address.
secondary <ipv4_address>	Enter the secondary DNS IPv4 server address.
ip6-primary <ipv6_address>	Enter the primary DNS server IPv6 address.
ip6-secondary <ipv6_address>	Enter the secondary DNS IPv6 server address.

### Example

This example shows how to set the primary FortiManager DNS server IPv4 address to 172.20.120.99 and the secondary FortiManager DNS server IPv4 address to 192.168.1.199.

```
config system dns
set primary 172.20.120.99
set secondary 192.168.1.199
end
```

## fips

Use this command to enable the Federal Information Processing Standards (FIPS) status. FIPS mode is an enhanced security option for some FortiManager models. Installation of FIPS firmware is required only if the unit was not ordered with this firmware pre-installed.



FIPS mode can only be enabled via console.

## Syntax

```
config system fips
  set status enable
end
```

Variable	Description
status enable	Enable the FIPS-CC mode of operation. <b>Note:</b> enable option is available only via console and when the device is not in FIPS mode.

## fmg-cluster

Use this command to configure a FortiManager cluster.

## Syntax

```
config system fmg-cluster
  set fqdn <string>
  set ip <string>
  set mode {primary | standalone | worker}
  config peer
    edit <sn>
      set addr <string>
      set fqdn <string>
    next
  end
```

Variable	Description
fqdn <string>	Enter the local fully qualified domain name.
ip <string>	Enter the local IP address.
mode {primary   standalone   worker}	Enter the mode for this FortiManager in the cluster. To leave the cluster, enter standalone.
<b>Variables for config peer subcommand:</b>	
<sn>	Enter the serial number of the peer.
addr <string>	Enter the IP address of the peer.
fqdn <string>	Enter the fully qualified domain name of the peer.

# fortiview

## fortiview setting

Use this command to configure FortiView settings.

### Syntax

```
config system fortiview setting
  set data-source {auto | cache-only | log-and-cache}
  set not-scanned apps {exclude | include}
  set query-run-mode {auto | boost}
  set resolve-ip {enable | disable}
end
```

Variable	Description
data-source {auto   cache-only   log-and-cache}	Data source of the FortiView query (default = auto): <ul style="list-style-type: none"> <li>auto: Data from hcache and from logs in a flexible way.</li> <li>cache-only: Data from hcache only.</li> <li>log-and-cache: Data from logs and hcache.</li> </ul>
not-scanned apps {exclude   include}	Include/exclude unscanned applications in FortiView (default = include). Set to exclude to filter out never scanned applications.
query-run-mode {auto   boost}	Set the CPU usage mode for running the FortiView query. <ul style="list-style-type: none"> <li>auto: Adapted CPU usage on FortiView query (default).</li> <li>boost: High CPU usage on FortiView query.</li> </ul>
resolve-ip {enable   disable}	Enable/disable resolving the IP address to the hostname in FortiView (default = disable).

## fortiview autocache

Use this command to configure FortiView autocache settings.

### Syntax

```
config system fortiview auto-cache
  set aggressive-fortiview {enable | disable}
  set incr-fortiview {enable | disable}
  set interval <integer>
  set status {enable | disable}
end
```

Variable	Description
aggressive-fortiview {enable   disable}	Enable/disable aggressive auto-cache on FortiView (default = disable).
incr-fortiview {enable   disable}	Enable/disable FortiView incremental auto-cache (default = disable).
interval <integer>	The time interval for FortiView auto-cache, in hours (default = 168).
status {enable   disable}	Enable/disable FortiView auto-cache (default = enable).

## global

Use this command to configure global settings that affect miscellaneous FortiManager features.

### Syntax

```

config system global
  set admin-host <string>
  set admin-lockout-duration <integer>
  set admin-lockout-method {ip | user}
  set admin-lockout-threshold <integer>
  set admin-ssh-grace-time <integer>
  set adom-mode {advanced | normal}
  set adom-rev-auto-delete {by-days | by-revisions | disable}
  set adom-rev-max-backup-revisions <integer>
  set adom-rev-max-days <integer>
  set adom-rev-max-revisions <integer>
  set adom-select {enable | disable}
  set adom-status {enable | disable}
  set ai-mode {enable | disable}
  set apache-mode {event | prefork}
  set apache-wsgi-processes <integer>
  set api-ip-binding {enable | disable}
  set auth-dev-restapi-allowlist {enable | disable}
  set cli-auth {enable | disable}
  set clone-name-option {default | keep}
  set clt-cert-req {enable | disable}
  set console-output {more | standard}
  set contentpack-fgt-install {enable | disable}
  set country-flag {enable | disable}
  set create-revision {enable | disable}
  set daylightsavetime {enable | disable}
  set debug-tool {enable | disable}
  set detect-unregistred-log-device {enable | disable}
  set device-view-mode {regular | tree}
  set dh-params <integer>
  set disable-module {fortiview-noc}
  set enc-algorithm {custom | high | medium | low}
  set fabric-storage-pool-quota <integer>
  set fabric-storage-pool-size <integer>
  set faz-status {enable | disable}

```

```
set fcp-cfg-service {enable | disable}
set fgfm-allow-products {FortiSwitch FortiCache FortiClient FortiManager FortiSandbox
    FortiDDoS FortiAuthenticator FortiDeceptor FortiExtender}
set fgfm-allow-vm {enable | disable}
set fgfm-ca-cert <certificate>
set fgfm-cert-exclusive {enable | disable}
set fgfm-deny-unknown {enable | disable}
set fgfm-local-cert <certificate>
set fgfm-ssl-protocol {ssl3 | tlsv1.0 | tlsv1.1 | tlsv1.2 | tlsv1.3}
set fmg-fabric-port <integer>
set fortiservice-port <integer>
set global-ssl-protocol {ssl3 | tlsv1.0 | tlsv1.1 | tlsv1.2 | tlsv1.3}
set gui-curl-timeout <integer>
set gui-feature-visibility-mode {per-admin | per-adom}
set gui-install-preview-concurrency <integer>
set gui-max-objects-per-row <integer>
set gui-object-protect {enable | disable}
set gui-object-search {enable | disable}
set ha-member-auto-grouping {enable | disable}
set hitcount-response-timeout <integer>
set hostname <string>
set http-extended-log {enable | disable}
set httpd-ssl-protocol {tlsv1.3 tlsv1.2 tlsv1.1 tlsv1.0 ssl3}
set import-ignore-addr-cmt {enable | disable}
set jsonapi-log {all | disable | request | response}
set language {english | japanese | simch | spanish | trach}
set latitude <string>
set ldap-cache-timeout <integer>
set ldapconntimeout <integer>
set lock-preempt {enable | disable}
set log-checksum {md5 | md5-auth | none}
set log-checksum-upload {enable | disable}
set log-forward-cache-size <integer>
set longitude <string>
set management-ip <address>
set management-port <integer>
set mapclient-ssl-protocol {follow-global-ssl-protocol | ssl3 | tlsv1.0 | tlsv1.1 | tlsv1.2 |
    tlsv1.3}
set max-log-forward <integer>
set max-running-reports <integer>
set mc-policy-disabled-adoms <adom-name>
set multiple-steps-upgrade-in-autolink {enable | disable}
set no-copy-permission-check {enable | disable}
set no-vip-value-check {enable | disable}
set normalized-intf-zone-only {enable | disable}
set object-revision-db-max <integer>
set object-revision-mandatory-note {enable | disable}
set object-revision-object-max <integer>
set object-revision-status {enable | disable}
set oftp-ssl-protocol {ssl3 | tlsv1.0 | tlsv1.1 | tlsv1.2 | tlsv1.3}
set partial-install {enable | disable}
set partial-install-force {enable | disable}
set partial-install-rev {enable | disable}
set perform-improve-by-ha {enable | disable}
set per-policy-lock {enable | disable}
set policy-object-icon {enable | disable}
set policy-object-in-dual-pane {enable | disable}
```

```

set pre-login-banner {enable | disable}
set pre-login-banner-message <string>
set private-data-encryption {enable | disable}
set remoteauthtimeout <integer>
set rpc-log {enable | disable}
set save-last-hit-in-adomdb {enable | disable}
set search-all-adoms {enable | disable}
set skip-ip-check-in-session {enable | disable}
set ssh-enc-algo {3des-cbc aes128-cbc aes128-ctr aes128-gcm@openssh.com aes192-cbc aes192-ctr
aes256-cbc aes256-ctr aes256-gcm@openssh.com arcfour arcfour128 blowfish-cbc cast128-cbc
chacha20-poly1305@openssh.com rijndael-cbc@lysator.liu.se}
set ssh-hostkey-algo {ecdsa-sha2-nistp521 rsa-sha2-256 rsa-sha2-512 ssh-ed25519 ssh-rsa}
set ssh-kex-algo {curve25519-sha256@libssh.org diffie-hellman-group-exchange-sha1 diffie-
hellman-group-exchange-sha256 diffie-hellman-group14-sha1 diffie-hellman-group14-sha256
diffie-hellman-group16-sha512 diffie-hellman-group18-sha512 ecdh-sha2-nistp256 ecdh-sha2-
nistp384 ecdh-sha2-nistp521}
set ssh-mac-algo {hmac-md5 hmac-md5-96 hmac-md5-96-etm@openssh.com hmac-md5-etm@openssh.com
hmac-ripemd160 hmac-ripemd160-etm@openssh.com hmac-ripemd160@openssh.com hmac-sha1 hmac-
sha1-etm@openssh.com hmac-sha2-256 hmac-sha2-256-etm@openssh.com hmac-sha2-512 hmac-sha2-
512-etm@openssh.com umac-128-etm@openssh.com umac-128@openssh.com umac-64-etm@openssh.com
umac-64@openssh.com}
config ssl-cipher-suites
  edit <priority>
    set cipher <string>
    set version {tls1.2-or-below | tls1.3}
  end
set ssl-low-encryption {enable | disable}
set ssl-static-key-ciphers {enable | disable}
set storage-age-limit <integer>
set swapmem {enable | disable}
set table-entry-blink {enable | disable}
set task-list-size <integer>
set timezone <integer>
set tunnel-mtu <integer>
set usg {enable | disable}
set vdom-mirror {enable | disable}
set workspace-mode {disabled | normal | per-adom | workflow}
set workspace-task-min-device-size <integer>
set workspace-unlock-after-install {enable | disable}
end

```

Variable	Description
admin-host <string>	Administrative host for HTTP and HTTPSs. When set, will be used instead of the client's Host header for any redirection (default = null).
admin-lockout-duration <integer>	Set the lockout duration for FortiManager administration, in seconds (default = 60).
admin-lockout-method {ip   user}	Set the lockout method for FortiManager administration (default = ip).
admin-lockout-threshold <integer>	Set the lockout threshold for FortiManager administration (1 - 10, default = 3).

Variable	Description
admin-ssh-grace-time <integer>	Maximum time in seconds permitted between making an SSH connection to the FortiManager unit and authenticating (10 - 3600 seconds (one hour), default = 120).
adom-mode {advanced   normal}	Set the ADOM mode (default = normal).
adom-rev-auto-delete {by-days   by-revisions   disable}	Auto delete features for old ADOM revisions: <ul style="list-style-type: none"> <li>by-days: Auto delete ADOM revisions by maximum days.</li> <li>by-revisions: Auto delete ADOM revisions by maximum number of revisions (default).</li> <li>disable: Disable auto delete function for ADOM revision.</li> </ul>
adom-rev-max-backup-revisions <integer>	The maximum number of ADOM revisions to be included in the system configuration backup (default = 5).
adom-rev-max-days <integer>	The maximum number of days to keep old ADOM revisions (default = 30).
adom-rev-max-revisions <integer>	The maximum number of ADOM revisions to keep (default = 120).
adom-select {enable   disable}	Enable/disable a pop-up window that allows administrators to select an ADOM after logging in (default = enable).
adom-status {enable   disable}	Enable/disable administrative domains (default = disable).
ai-mode {enable   disable}	Enable/disable the AI feature (default = enable).
apache-mode {event   prefork}	Set Apache mode to Apache event mode or Apache prefork mode (default = event).
apache-wsgi-processes <integer>	Set Apache wsgi processes (5 - 250, default = 10).
api-ip-binding {enable   disable}	Enable/disable source IP check for JSON API request (default = enable).
auth-dev-restapi-allowlist {enable   disable}	Enable/disable checking the REST API allowlist for authorized client device (default = disable).
cli-auth {enable   disable}	Enable/disable CLI authentication (default = disable).
clone-name-option {default   keep}	Set the cloned object name option: <ul style="list-style-type: none"> <li>default: Add a Clone of prefix to the name.</li> <li>keep: Keep the original name for the user to edit.</li> </ul>
clt-cert-req {enable   disable}	Enable/disable requiring a client certificate for GUI login (default = disable). When both clt-cert-req and admin-https-pki-required are enabled, only PKI administrators can connect to the GUI.
console-output {more   standard}	Select how the output is displayed on the console (default = standard). Select more to pause the output at each full screen until keypress. Select standard for continuous output without pauses.
contentpack-fgt-install {enable   disable}	Enable/disable auto outbreak auto install for FortiGate ADOMs (default = disable).

Variable	Description
country-flag {enable   disable}	Enable/disable a country flag icon beside an IP address (default = enable).
create-revision {enable   disable}	Enable/disable create revision by default (default = disable).
daylightsavetime {enable   disable}	Enable/disable daylight saving time (default = enable). If you enable daylight saving time, the FortiManager unit automatically adjusts the system time when daylight saving time begins or ends.
debug-tool {enable   disable}	Enable/disable debug tool (default = disable).
detect-unregistered-log-device {enable   disable}	Enable/disable unregistered log device detection (default = enable).
device-view-mode {regular   tree}	Set the devices/groups view mode (default = regular).
dh-params <integer>	Set the minimum size of the Diffie-Hellman prime for SSH/HTTPS, in bits (default = 2048).
disable-module {fortiview-noc}	Disable module list.
enc-algorithm {custom   high   medium   low}	Set SSL communication encryption algorithms: <ul style="list-style-type: none"> <li>• custom: SSL communication using custom encryption algorithms.</li> <li>• high: SSL communication using high encryption algorithms (default).</li> <li>• medium: SSL communication using high and medium encryption algorithms.</li> <li>• low: SSL communication using all available encryption algorithms.</li> </ul>
fabric-storage-pool-quota <integer>	Set the disk quota reserved for Fabric Log (MB) (maximum = 50286, default = 50286).
fabric-storage-pool-size <integer>	Set the maximum storage pool size (maximum = 50, minimum = 1, default = 20).
faz-status {enable   disable}	Enable/disable FortiAnalyzer features in FortiManager (default = disable). This command is not available on the FMG-100C. <b>Note:</b> With FortiManager 7.0.0, you can enable FortiAnalyzer features, or you can have FortiManager HA, but not both at the same time.
fcg-cfg-service {enable   disable}	Enable/disable FCP service processing configuration requests from web (default = disable).
fgfm-allow-products {FortiSwitch FortiCache FortiClient FortiManager FortiSandbox FortiDDoS FortiAuthenticator FortiDeceptor FortiExtender}	Set the additional products that FortiManager can manage by fgfm (default = (null)). Note: multiple products must be separated by spaces, and all products should be placed within the same double quotation marks.
fgfm-allow-vm {enable   disable}	Enable/disable VM platform FGFM connect restriction. <ul style="list-style-type: none"> <li>• enable: Allow VM platform connection in FGFM.</li> <li>• disable: Don't allow VM platform connection in FGFM (default).</li> </ul>

Variable	Description
fgfm-ca-cert <certificate>	Set the extra FGFM CA certificates ("" = default certificate will be used).
fgfm-cert-exclusive {enable   disable}	Enable if the local or CA certificates should be used exclusively (default = disable; certificate is used best-effort).
fgfm-deny-unknown {enable   disable}	Set if allow devices with unknown serial number actively register as an unauthorized device. <ul style="list-style-type: none"> <li>• <b>disable</b> (default): allow devices with unknown SN to actively register as an unauthorized device.</li> <li>• <b>enable</b>: deny devices with unknown SN to actively register as an unauthorized device.</li> </ul>
fgfm-local-cert <certificate>	Set the FGFM local certificate ("" = default certificate will be used).
fgfm-ssl-protocol {ssl3   tlsv1.0   tlsv1.1   tlsv1.2   tlsv1.3}	Set the lowest SSL protocols for fgfmsd (default = tlsv1.2).
fmg-fabric-port <integer>	Set the FMG fabric port (1 - 64435, default = 8893). Used for FortiManager Fabric communication between supervisor and members.
fortiservice-port <integer>	Set the FortiService port (1 - 65535, default = 8013). Used by FortiClient endpoint compliance. Older versions of FortiClient used a different port.
global-ssl-protocol {ssl3   tlsv1.0   tlsv1.1   tlsv1.2   tlsv1.3}	Set the lowest SSL protocol version for all SSL connections (default = tlsv1.2).
gui-curl-timeout <integer>	Set the GUI cURL timeout in seconds (5-300 default = 30).
gui-feature-visibility-mode {per-admin   per-adom}	Set GUI feature visibility mode to one of the following: <ul style="list-style-type: none"> <li>• <b>per-admin</b>: Per-admin control in policy &amp; objects and provisioning templates.</li> <li>• <b>per-adom</b>: Per-ADOM control in policy &amp; objects and provisioning templates (default).</li> </ul>
gui-install-preview-concurrency <integer>	Set the maximum number of devices to be processed in a single GUI install preview request (1 - 100, default = 20).
gui-max-objects-per-row <integer>	Set the maximum number of objects shown per row in the policy table (3-100, default = 5).
gui-object-protect {enable   disable}	Enable/disable object protect function at the ADOM level (default = disable).
gui-object-search {enable   disable}	Enable/disable object search function in policy lists (default = disable).
ha-member-auto-grouping {enable   disable}	Enable/disable automatically grouping HA members when the group name is unique in your network (default = enable).
set hitcount-response-timeout <integer>	Set the timeout of waiting for hitcount response (60 - 300 seconds, default = 60).
hostname <string>	FortiManager host name.

Variable	Description
http-extended-log {enable   disable}	Extended logging for web GUI (default = disable).
httpd-ssl-protocol {tlsv1.3   tlsv1.2   tlsv1.1   tlsv1.0   sslv3}	Set SSL protocols for apache daemon (httpd) (default = tlsv1.3   tlsv1.2).
import-ignore-addr-cmt {enable   disable}	Enable/disable import ignore of address comments (default = disable).
jsonapi-log {all   disable   request   response}	Enable jsonapi log: <ul style="list-style-type: none"> <li>• all: logging both jsonapi request &amp; response.</li> <li>• disable: disable jsonapi log (default).</li> <li>• request: logging jsonapi request.</li> <li>• response: logging jsonapi response.</li> </ul>
language {english   japanese   simch   spanish   trach}	GUI language: <ul style="list-style-type: none"> <li>• english: English (default)</li> <li>• japanese: Japanese</li> <li>• simch: Simplified Chinese</li> <li>• spanish: Spanish</li> <li>• trach: Traditional Chinese</li> </ul>
latitude <string>	Set the FortiManager device's latitude.
ldap-cache-timeout <integer>	LDAP cache timeout, in seconds (default = 86400).
ldapconntimeout <integer>	LDAP connection timeout, in milliseconds (default = 60000).
lock-preempt {enable   disable}	Enable/disable the ADOM lock override (default = disable).
log-checksum {md5   md5-auth   none}	Record log file hash value, timestamp, and authentication code at transmission or rolling: <ul style="list-style-type: none"> <li>• md5: Record log file's MD5 hash value only.</li> <li>• md5-auth: Record log file's MD5 hash value and authentication code.</li> <li>• none: Do not record the log file checksum (default).</li> </ul>
log-checksum-upload {enable   disable}	Enable/disable upload log checksum with log files (default = disable).
log-forward-cache-size <integer>	Set the log forwarding disk cache size, in gigabytes (default = 0).
longitude <string>	Set the FortiManager device's longitude.
management-ip <address>	Set the management IP address of this FortiGate (default = null). Used to log into this FortiGate from another FortiGate in the Security Fabric. Please input the management IP address in IPv4 or FQDN format.
management-port <integer>	Set the overriding port for management connection (overrides admin port) (default = 443).
mapclient-ssl-protocol {follow-global-ssl-protocol   sslv3   tlsv1.0   tlsv1.1   tlsv1.2   tlsv1.3}	Set the lowest SSL protocol version for connection to mapserver (default = follow-global-ssl-protocol). The follow-global-ssl-protocol setting follows the setting for:

Variable	Description
	<pre>config system global   set global-ssl-protocol {ssl3   tlsv1.0   tlsv1.1   tlsv1.2     tlsv1.3}</pre>
max-log-forward <integer>	Set the maximum log forwarding and aggregation number (5 - 20).
max-running-reports <integer>	Maximum running reports number (1 - 10, default = 1).
mc-policy-disabled-adoms <adom-name>	Set the multicast policy disabled ADOMs, separated by spaces. Only ADOMs below version 6.0 can be included.
multiple-steps-upgrade-in-autolink {enable   disable}	Enable/disable multiple steps upgrade in an autolink process (default = disable).
no-copy-permission-check {enable   disable}	<p>Do not perform permission check to block object changes in different adom during copy and install (default = disable).</p> <p>When set to enable, a check is performed when copying policies to prevent changing global device objects if the user does not have permission. By default, this is set to disable, so the check is not performed.</p>
no-vip-value-check {enable   disable}	Enable/disable skipping policy instead of throwing error when VIP has no default or dynamic mapping during policy copy (default = disable).
normalized-intf-zone-only {enable   disable}	Allow the normalized interface to be zone only (default = disable).
object-revision-db-max <integer>	Maximum revisions for a single database (10000 - 1000000, default = 100000).
object-revision-mandatory-note {enable   disable}	Enable/disable mandatory note when creating a revision (default = enable).
object-revision-object-max <integer>	Set the maximum revisions for a single object (10 - 1000, default = 100).
object-revision-status {enable   disable}	Enable/disable creating revisions when modifying objects (default = enable).
oftp-ssl-protocol {ssl3   tlsv1.0   tlsv1.1   tlsv1.2   tlsv1.3}	Set the lowest SSL protocols for oftpd (default = tlsv1.2).
partial-install {enable   disable}	<p>Enable/disable partial install (install only some objects) (default= disable).</p> <p>Use this command to enable pushing individual objects of the policy package down to all FortiGates in the Policy Package.</p> <p>Once enabled, in the GUI you can right-click an object and choose to install it.</p>
partial-install-force {enable   disable}	<p>Enable/disable partial install when the Dev database is modified (default= disable).</p> <p>This option is only available when partial-install is enabled.</p>
partial-install-rev {enable   disable}	<p>Enable/disable partial install revision (default= disable).</p> <p>This option is only available when partial-install is enabled.</p>

Variable	Description
perform-improve-by-ha {enable   disable}	Enable/disable performance improvement by distributing tasks to secondary HA units (default= disable).
per-policy-lock {enable   disable}	Enable/disable per policy lock (default= disable). This option is only available in workspace lock mode.
policy-object-icon {enable   disable}	Enable/disable show icons of policy objects (default= disable).
policy-object-in-dual-pane {enable   disable}	Enable/disable show policies and objects in dual pane (default= disable).
pre-login-banner {enable   disable}	Enable/disable pre-login banner (default= disable).
pre-login-banner-message <string>	Set the pre-login banner message.
private-data-encryption {enable   disable}	Enable/disable private data encryption using an AES 128 bit key (default = disable).
remoteauthtimeout <integer>	Remote authentication (RADIUS/LDAP) timeout, in seconds (default = 10).
rpc-log {enable   disable}	Enable/disable incoming/outgoing RPC logs (default = enable).
save-last-hit-in-adomdb {enable   disable}	Enable/disable save last-hit value in ADOM DB (default = disable).
search-all-adoms {enable   disable}	Enable/disable search all ADOMs for where-used queries (default= disable).
skip-ip-check-in-session {enable   disable}	Enable/disable remote IP check for gui session. Recommend disabling this when the request's remote IP may change (default = disable).
ssh-enc-algo {3des-cbc aes128-cbc aes128-ctr aes128-gcm@openssh.com aes192-cbc aes192-ctr aes256-cbc aes256-ctr aes256-gcm@openssh.com arcfour arcfour128 blowfish- cbc cast128-cbc chacha20- poly1305@openssh.com rijndael-cbc@lysator.liu.se}	<p>Select one or more SSH ciphers.</p> <ul style="list-style-type: none"> <li>• aes256-ctr</li> <li>• aes256-gcm@openssh.com</li> <li>• chacha20-poly1305@openssh.com</li> </ul> <p>Note that the following are only available when ssh-strong-crypto is set to disable:</p> <ul style="list-style-type: none"> <li>• 3des-cbc</li> <li>• aes128-cbc</li> <li>• aes128-ctr</li> <li>• aes128-gcm@openssh.com</li> <li>• aes192-cbc</li> <li>• aes192-ctr</li> <li>• aes256-cbc</li> <li>• arcfour</li> <li>• arcfour128</li> <li>• arcfour256</li> <li>• blowfish-cbc</li> <li>• cast128-cbc</li> <li>• rijndael-cbc@lysator.liu.se</li> </ul>

Variable	Description
	Default = chacha20-poly1305@openssh.com aes256-ctr aes256-gcm@openssh.com
ssh-hostkey-algo {ecdsa-sha2-nistp521 rsa-sha2-256 rsa-sha2-512 ssh-ed25519 ssh-rsa}	Select one or more SSH hostkey algorithms. <ul style="list-style-type: none"> <li>• ecdsa-sha2-nistp521</li> <li>• rsa-sha2-256</li> <li>• rsa-sha2-512</li> <li>• ssh-ed25519</li> <li>• ssh-rsa (only available when ssh-strong-crypto is set to disable)</li> </ul> Default = ecdsa-sha2-nistp521 rsa-sha2-256 rsa-sha2-512 ssh-ed25519
ssh-kex-algo {curve25519-sha256@libssh.org diffie-hellman-group-exchange-sha1 diffie-hellman-group-exchange-sha256 diffie-hellman-group14-sha1 diffie-hellman-group14-sha256 diffie-hellman-group16-sha512 diffie-hellman-group18-sha512 ecdh-sha2-nistp256 ecdh-sha2-nistp384 ecdh-sha2-nistp521}	Select one or more SSH kex algorithms. <ul style="list-style-type: none"> <li>• curve25519-sha256@libssh.org</li> <li>• diffie-hellman-group-exchange-sha1 (only available when ssh-strong-crypto is set to disable)</li> <li>• diffie-hellman-group-exchange-sha256</li> <li>• diffie-hellman-group14-sha1 (only available when ssh-strong-crypto is set to disable)</li> <li>• diffie-hellman-group14-sha256</li> <li>• diffie-hellman-group16-sha512</li> <li>• diffie-hellman-group18-sha512</li> <li>• ecdh-sha2-nistp256</li> <li>• ecdh-sha2-nistp384</li> <li>• ecdh-sha2-nistp521</li> </ul> Default = diffie-hellman-group14-sha256 diffie-hellman-group16-sha512 diffie-hellman-group18-sha512 diffie-hellman-group-exchange-sha256 curve25519-sha256@libssh.org ecdh-sha2-nistp256 ecdh-sha2-nistp384 ecdh-sha2-nistp521

Variable	Description
ssh-mac-algo {hmac-md5 hmac-md5-96 hmac-md5-96- etm@openssh.com hmac- md5-etm@openssh.com hmac-ripemd160 hmac- ripemd160-etm@openssh.com hmac- ripemd160@openssh.com hmac-sha1 hmac-sha1- etm@openssh.com hmac- sha2-256 hmac-sha2-256- etm@openssh.com hmac- sha2-512 hmac-sha2-512- etm@openssh.com umac-128- etm@openssh.com umac- 128@openssh.com umac-64- etm@openssh.com umac- 64@openssh.com}	<p>Select one or more SSH MAC algorithms.</p> <ul style="list-style-type: none"> <li>hmac-sha2-256</li> <li>hmac-sha2-256-etm@openssh.com</li> <li>hmac-sha2-512</li> <li>hmac-sha2-512-etm@openssh.com</li> </ul> <p>Note that the following are only available when ssh-strong-crypto is set to disable:</p> <ul style="list-style-type: none"> <li>hmac-md5</li> <li>hmac-md5-96</li> <li>hmac-md5-96-etm@openssh.com</li> <li>hmac-md5-etm@openssh.com</li> <li>hmac-ripemd160</li> <li>hmac-ripemd160-etm@openssh.com</li> <li>hmac-ripemd160@openssh.com</li> <li>hmac-sha1</li> <li>hmac-sha1-etm@openssh.com</li> <li>umac-128-etm@openssh.com</li> <li>umac-128@openssh.com</li> <li>umac-64-etm@openssh.com</li> <li>umac-64@openssh.com</li> </ul> <p>Default = hmac-sha2-256 hmac-sha2-256-etm@openssh.com hmac-sha2-512 hmac-sha2-512-etm@openssh.com</p>
ssl-low-encryption {enable   disable}	Enable/disable SSL low-grade (40-bit) encryption (default= disable).
ssl-static-key-ciphers {enable   disable}	Enable/disable SSL static key ciphers (default = enable).
storage-age-limit <integer>	Set the storage age limit in number of days (default = 0).
swapmem {enable   disable}	Enable/disable virtual memory.
table-entry-blink {enable   disable}	Enable/disable table entry blink in GUI (default = enable).
task-list-size <integer>	Set the maximum number of completed tasks to keep (default = 2000).
timezone <integer>	The time zone for the FortiManager unit (default = Pacific Time). See <a href="#">Time zones on page 95</a>
tunnel-mtu <integer>	Set the maximum transportation unit (68 - 9000, default = 1500).
usg {enable   disable}	Enable/disable contacting only FortiGuard servers in the USA (default = enable).
vdom-mirror {enable   disable}	<p>Enable/disable VDOM mirror (default = disable).</p> <p>Once enabled in the CLI, you can select to enable VDOM Mirror when editing a virtual domain in the System &gt; Virtual Domain device tab in Device Manager. You can then add devices and VDOMs to the list so they may be mirrored. An icon is displayed in the Mirror column of the page to indicate that the VDOM is being mirrored to another device/VDOM.</p>

Variable	Description
	<p>When changes are made to the primary device's VDOM database, a copy is applied to the mirror device's VDOM database. A revision is created and then installed to the devices.</p> <p>VDOM mirror is intended to be used by MSSP or enterprise companies who need to provide a backup VDOM for their customers.</p>
webservice-proto {tls1.3   tls1.2   tls1.1   tls1.0   sslv3   sslv2}	Web Service connection (default = tls1.3 tls1.2).
workspace-mode {disabled   normal   per-adom   workflow}	<p>Enable/disable Workspace and Workflow (ADOM locking):</p> <ul style="list-style-type: none"> <li>• disabled: Workspace is disabled (default).</li> <li>• normal: Workspace lock mode enabled.</li> <li>• per-adom: Per-ADOM workspace mode enabled.</li> <li>• workflow: Workspace workflow mode enabled.</li> </ul>
workspace-task-min-device-size <integer>	<p>Set the minimum devices to start a workspace save task (default 100, must be &gt;= 100).</p> <p>This option is not available if workspace-mode is set to disabled.</p>
workspace-unlock-after-install {enable   disable}	<p>Enable/disable ADOM auto-unlock after device installation (default = disable).</p> <p>This option is not available if workspace-mode is set to disabled.</p>
ssl-cipher-suites	<p>Configure the ssl-cipher-suites table to enforce the user specified preferred cipher order in the incoming SSL connections.</p> <p><b>Note:</b> This command is only available if enc-algorithm is set to custom.</p>
<b>Variables for config ssl-cipher-suites subcommand:</b>	
<priority>	Set the order of the ciphers in the ssl-cipher-suites table.
cipher <string>	Enter the SSL cipher name from the list.
version {tls1.2-or-below   tls1.3}	Set the SSL/TLS version the cipher suite can be used with (default = tls1.2-or-below).

## Example

The following command turns on daylight saving time, sets the FortiManager unit name to FMG3k, and chooses the Eastern time zone for US & Canada.

```
config system global
  set daylightsavetime enable
  set hostname FMG3k
  set timezone 12
end
```

## Time zones

Integer	Time zone	Integer	Time zone
00	(GMT-12:00) Eniwetak, Kwajalein	40	(GMT+3:00) Nairobi
01	(GMT-11:00) Midway Island, Samoa	41	(GMT+3:30) Tehran
02	(GMT-10:00) Hawaii	42	(GMT+4:00) Abu Dhabi, Muscat
03	(GMT-9:00) Alaska	43	(GMT+4:00) Baku
<b>04</b>	<b>(GMT-8:00) Pacific Time (US &amp; Canada)</b>	44	(GMT+4:30) Kabul
05	(GMT-7:00) Arizona	45	(GMT+5:00) Ekaterinburg
06	(GMT-7:00) Mountain Time (US & Canada)	46	(GMT+5:00) Islamabad, Karachi, Tashkent
07	(GMT-6:00) Central America	47	(GMT+5:30) Calcutta, Chennai, Mumbai, New Delhi
08	(GMT-6:00) Central Time (US & Canada)	48	(GMT+5:45) Kathmandu
09	(GMT-6:00) Mexico City	49	(GMT+6:00) Almaty, Novosibirsk
10	(GMT-6:00) Saskatchewan	50	(GMT+6:00) Astana, Dhaka
11	(GMT-5:00) Bogota, Lima, Quito	51	(GMT+6:00) Sri Jayawardenapura
12	(GMT-5:00) Eastern Time (US & Canada)	52	(GMT+6:30) Rangoon
13	(GMT-5:00) Indiana (East)	53	(GMT+7:00) Bangkok, Hanoi, Jakarta
14	(GMT-4:00) Atlantic Time (Canada)	54	(GMT+7:00) Krasnoyarsk
15	(GMT-4:00) La Paz	55	(GMT+8:00) Beijing, ChongQing, HongKong, Urumqi
16	(GMT-4:00) Santiago	56	(GMT+8:00) Irkutsk, Ulaanbaatar
17	(GMT-3:30) Newfoundland	57	(GMT+8:00) Kuala Lumpur, Singapore
18	(GMT-3:00) Brasilia	58	(GMT+8:00) Perth
19	(GMT-3:00) Buenos Aires, Georgetown	59	(GMT+8:00) Taipei
20	(GMT-3:00) Nuuk (Greenland)	60	(GMT+9:00) Osaka, Sapporo, Tokyo, Seoul
21	(GMT-2:00) Mid-Atlantic	61	(GMT+9:00) Yakutsk
22	(GMT-1:00) Azores	62	(GMT+9:30) Adelaide
23	(GMT-1:00) Cape Verde Is	63	(GMT+9:30) Darwin
24	(GMT) Casablanca, Monrovia	64	(GMT+10:00) Brisbane
25	(GMT) Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London	65	(GMT+10:00) Canberra, Melbourne, Sydney

Integer	Time zone	Integer	Time zone
26	(GMT+1:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna	66	(GMT+10:00) Guam, Port Moresby
27	(GMT+1:00) Belgrade, Bratislava, Budapest, Ljubljana, Prague	67	(GMT+10:00) Hobart
28	(GMT+1:00) Brussels, Copenhagen, Madrid, Paris	68	(GMT+10:00) Vladivostok
29	(GMT+1:00) Sarajevo, Skopje, Sofija, Vilnius, Warsaw, Zagreb	69	(GMT+11:00) Magadan
30	(GMT+1:00) West Central Africa	70	(GMT+11:00) Solomon Is., New Caledonia
31	(GMT+2:00) Athens, Istanbul, Minsk	71	(GMT+12:00) Auckland, Wellington
32	(GMT+2:00) Bucharest	72	(GMT+12:00) Fiji, Kamchatka, Marshall Is
33	(GMT+2:00) Cairo	73	(GMT+13:00) Nuku'alofa
34	(GMT+2:00) Harare, Pretoria	74	(GMT-4:30) Caracas
35	(GMT+2:00) Helsinki, Riga, Tallinn	75	(GMT+1:00) Namibia
36	(GMT+2:00) Jerusalem	76	(GMT-5:00) Brazil-Acre
37	(GMT+3:00) Baghdad	77	(GMT-4:00) Brazil-West
38	(GMT+3:00) Kuwait, Riyadh	78	(GMT-3:00) Brazil-East
39	(GMT+3:00) Moscow, St.Petersburg, Volgograd	79	(GMT-2:00) Brazil-DeNoronha

## ha

Use the `config system ha` command to enable and configure FortiManager high availability (HA). FortiManager HA provides a solution for a key requirement of critical enterprise management and networking components: enhanced reliability.

A FortiManager HA cluster consists of up five FortiManager units of the same FortiManager model. One of the FortiManager units in the cluster operates as a primary unit and the other one to four units operate as backup units. All of the units are visible on the network. The primary unit and the backup units can be at the same location. FortiManager HA also supports geographic redundancy so the primary unit and backup units can be in different locations attached to different networks as long as communication is possible between them (for example over the Internet, over a WAN, or through a private network).

**Note:** With FortiManager 7.0.0, you can enable FortiAnalyzer features, or you can have FortiManager HA, but not both at the same time.

Administrators connect to the primary unit GUI or CLI to perform FortiManager operations. The primary unit also interacts with managed FortiGate devices, and FortiSwitch devices. Managed devices connect with the primary unit for configuration backup and restore. If FortiManager is being used to distribute firmware updates and FortiGuard updates to managed devices, the managed devices can connect to the primary unit or one of the backup units.

If the primary FortiManager unit fails you must manually configure one of the backup units to become the primary unit. The new primary unit will have the same IPv4 addresses as it did when it was the backup unit. For the managed devices to automatically start using the new primary unit, you should add all of the FortiManager units in the cluster to the managed devices.

For more information, see the [FortiManager Administration Guide](#).

## Syntax

```
config system ha
  set clusterid <clusert_ID_int>
  set failover-mode {manual | vrrp}
  set file-quota <integer>
  set hb-interval <integer>
  set hb-lost-threshold <integer>
  set local-cert <string>
  set mode {primary | secondary | standalone}
  set monitored-interfaces <string>
  set password <passwd>
  set priority <integer>
  set unicast {enable | disable}
  set vip <string>
  set vip-interface <string>
  set vrrp-adv-interval <integer>
  set vrrp-interface <string>
  config monitored-ips
    edit <id>
      set interface <string>
      ip <string>
    next
  config peer
    edit <peer_id_int>
      set ip <peer_ipv4_address>
      set ip6 <peer_ipv6_address>
      set serial-number <string>
      set status {enable | disable}
    next
  next
end
```

Variable	Description
clusterid <clusert_ID_int>	A number that identifies the HA cluster (1 - 64, default = 1). All members of the HA cluster must have the same cluster ID. If you have more than one FortiManager HA cluster on the same network, each HA cluster must have a different ID.
failover-mode {manual   vrrp}	The HA failover mode: <ul style="list-style-type: none"> <li>manual: Manual failover mode (default).</li> <li>vrrp: VRRP mode.</li> </ul>
file-quota <integer>	Set the HA file quota, in megabytes (2048 - 20480, default = 4096).

Variable	Description
hb-interval <integer>	<p>The time that a cluster unit waits between sending heartbeat packets, in seconds (1 - 255, default = 10).</p> <p>The heartbeat interval is also the amount of time that a cluster unit waits before expecting to receive a heartbeat packet from the other cluster unit.</p>
hb-lost-threshold <integer>	<p>The number of heartbeat intervals that one of the cluster units waits to receive HA heartbeat packets from other cluster units before assuming that the other cluster units have failed (1 - 255, default = 30).</p> <p>In most cases you do not have to change the heartbeat interval or failover threshold. With default settings, failure is detected after 30 (failover threshold) x 10 (heart beat interval) = 300 seconds; resulting in a failure detection time of 300 seconds or 5 minutes.</p> <p>If the failure detection time is too short, the HA cluster may detect a failure when none has occurred. For example, if the primary unit is very busy it may not respond to HA heartbeat packets in time. In this situation, the backup unit may assume the primary unit has failed when the primary unit is actually just busy. Increase the failure detection time to prevent the backup unit from detecting a failure when none has occurred.</p> <p>If the failure detection time is too long, administrators will be delayed in learning that the cluster has failed. In most cases, a relatively long failure detection time will not have a major effect on operations. But if the failure detection time is too long for your network conditions, then you can reduce the heartbeat interval or failover threshold.</p>
local-cert <string>	Set the local HA certificate.
mode {primary   secondary   standalone}	<p>The HA mode (default = standalone).</p> <p>Select <code>primary</code> to configure the FortiManager unit to be the primary unit in a cluster. Select <code>secondary</code> to configure the FortiManager unit to be a backup unit in a cluster. Select <code>standalone</code> to stop operating in HA mode.</p>
monitored-interfaces <string>	<p>Set the interface to be monitored. Enter <code>port1, port2, port3....port10</code>.</p> <p><b>Note:</b> This variable is only available when the <code>failover-mode</code> is set to <code>vrrp</code>.</p>
password <passwd>	<p>A group password for the HA cluster. All members of the HA cluster must have the same group password. If you have more than one FortiManager HA cluster on the same network, each HA cluster must have a different password (character limit: 19).</p>
priority <integer>	<p>Set the runtime priority where 1 is the lowest and 253 is highest priority (1 - 253, default = 1).</p> <p><b>Note:</b> This variable is only available when the <code>failover-mode</code> is set to <code>vrrp</code>.</p>
unicast {enable   disable}	<p>Enable/disable using unicast for VRRP message (default = disable).</p> <p><b>Note:</b> This variable is only available when the <code>failover-mode</code> is set to <code>vrrp</code>.</p>
vip <string>	<p>Enter the Virtual IP address.</p> <p><b>Note:</b> This variable is only available when the <code>failover-mode</code> is set to <code>vrrp</code>.</p>

Variable	Description
vip-interface <string>	Set the Virtual IP interface. Enter port1, port2, port3....port10. <b>Note:</b> This variable is only available when the failover-mode is set to vrrp.
vrrp-adv-interval <integer>	Set the VRRP advert interval, in seconds (1 - 30, default = 3). <b>Note:</b> This variable is only available when the failover-mode is set to vrrp.
vrrp-interface <string>	Set VRRP and VIP interface name. Enter port1, port2, port3....port10. <b>Note:</b> This variable is only available when the failover-mode is set to vrrp.
monitored-ips	Add monitored IPS addresses.
peer	Add peers to the HA configuration of the FortiManager unit. For the primary unit, add all of the backup units as peers, up to a maximum of four. For a backup unit, only add the primary unit as a peer.
<b>Variables for config monitored-ips subcommand:</b>	
<id>	Enter an Id.
interface <string>	Set the interface name. Enter port1, port2, port3....port10.
ip <string>	Set the IPv4/IPv6 address.
<b>Variables for config peer subcommand:</b>	
<peer_id_int>	Add a peer and add the peer's IPv4 or IPv6 address and serial number.
ip <peer_ipv4_address>	Enter the IPv4 address of the peer FortiManager unit.
ip6 <peer_ipv6_address>	Enter the IPv6 address of the peer FortiManager unit.
serial-number <string>	Enter the serial number of the peer FortiManager unit.
status {enable   disable}	Enter the status of the peer FortiManager unit (default = enable).

## General FortiManager HA configuration steps

The following steps assume that you are starting with four FortiManager units running the same firmware build and are set to the factory default configuration. The primary unit and the first backup unit are connected to the same network. The second and third backup units are connected to a remote network and communicate with the primary unit over the Internet.

1. Enter the following command to configure the primary unit for HA operation.

```
config system ha
  set mode primary
  set password <password_str>
  set clusterid 10
  config peer
    edit 1
      set ip <peer_ip_ipv4>
      set serial-number <peer_serial_str>
    next
  next
```

```

edit 2
  set ip <peer_ip_ipv4>
  set serial-number <peer_serial_str>
next
edit 3
  set ip <peer_ip_ipv4>
  set serial-number <peer_serial_str>
next
end

```

This command configures the FortiManager unit to operate as the primary unit, adds a password, sets the clusterid to 10, and accepts defaults for the other HA settings. This command also adds the three backup units to the primary unit as peers.

2. Enter the following command to configure the backup units for HA operation.

```

config system ha
  set mode secondary
  set password <password_str>
  set clusterid 10
  config peer
    edit 1
      set ip <peer_ip_ipv4>
      set serial-number <peer_serial_str>
    next
  end
end

```

This command configures the FortiManager unit to operate as a backup unit, adds the same password, and clusterid as the primary unit, and accepts defaults for the other HA settings. This command also adds the primary unit to the backup unit as a peer.

3. Repeat step 2 to configure each backup unit.

## ha-scheduled-check

Use this command to schedule an HA integrity check.

### Syntax

```

config system ha-scheduled-check
  set status {enable | disable}
  set time <hh:mm:ss>
  set week_days {monday tuesday wednesday thursday friday saturday sunday}
end

```

Variable	Description
status {enable   disable}	Enable/disable scheduled backups (default = disable).
time <hh:mm:ss>	Enter the time of day to perform the backup. Time is required in the form <hh:mm:ss> where hh: 0-23, mm: 0-59, and ss: 0-59.

Variable	Description
week_days {monday tuesday wednesday thursday friday saturday sunday}	Enter the days of the week on which to perform backups. You may enter multiple days.

## interface

Use this command to edit the configuration of a FortiManager network interface.

### Syntax

#### To configure a physical interface:

```
config system interface
  edit <interface name>
    set status {enable | disable}
    set mode {dhcp | static}
    set ip <ipv4_mask>
    set dhcp-client-identifier <integer>
    set defaultgw {enable | disable}
    set dns-server-override {enable | disable}
    set mtu-override {enable | disable}
    set allowaccess {fabric http https ping snmp soc-fabric ssh}
    set serviceaccess {fclupdates fgtupdates webfilter-antispam}
    set update-service-ip <ip&netmask>
    set rating-service-ip <ip&netmask>
    set lldp-reception {enable | disable}
    set lldp-transmission {enable | disable}
    set speed {1000full | 100full | 100half | 10full | 10half | auto}
    set description <string>
    set alias <string>
    set mtu <integer>
    set type {aggregate | physical | vlan}
    config ipv6
      set ip6-address <ipv6 prefix>
      set ip6-allowaccess {fabric http https https-logging ping snmp ssh}
      set ip6-autoconf {enable | disable}
    end
  end
end
```

#### To configure an aggregate interface:

```
config system interface
  edit <interface name>
    set status {enable | disable}
    set mode {dhcp | static}
    set ip <ipv4_mask>
    set dhcp-client-identifier <integer>
    set defaultgw {enable | disable}
```

```

set dns-server-override {enable | disable}
set mtu-override {enable | disable}
set allowaccess {fabric http https ping snmp soc-fabric ssh}
set serviceaccess {fclupdates fgtupdates webfilter-antispam}
set update-service-ip <ip&netmask>
set rating-service-ip <ip&netmask>
set speed {1000full | 100full | 100half | 10full | 10half | auto}
set description <string>
set alias <string>
set mtu <integer>
set type {aggregate | physical | vlan}
set lacp-speed {fast | slow}
set min-links <integer>
set min-links-down {administrative | operational}
set link-up-delay <integer>
config member
    edit <interface-name>
end
config ipv6
    set ip6-address <ipv6 prefix>
    set ip6-allowaccess {fabric http https https-logging ping snmp ssh}
    set ip6-autoconf {enable | disable}
end
end


```

### To configure a VLAN interface:

```

config system interface
    edit <interface name>
        set status {enable | disable}
        set mode {dhcp | static}
        set ip <ipv4_mask>
        set dhcp-client-identifier <integer>
        set defaultgw {enable | disable}
        set dns-server-override {enable | disable}
        set mtu-override {enable | disable}
        set allowaccess {fabric http https ping snmp soc-fabric ssh}
        set serviceaccess {fclupdates fgtupdates webfilter-antispam}
        set update-service-ip <ip&netmask>
        set rating-service-ip <ip&netmask>
        set speed {1000full | 100full | 100half | 10full | 10half | auto}
        set description <string>
        set alias <string>
        set mtu <integer>
        set type {aggregate | physical | vlan}
        set interface <string>
        set vlanid <integer>
        set vlan-protocol {8021ad | 8021q}
        config ipv6
            set ip6-address <ipv6 prefix>
            set ip6-allowaccess {fabric http https https-logging ping snmp ssh}
            set ip6-autoconf {enable | disable}
        end
    end
end

```

Variable	Description
<interface name>	The interface name. The port can be set to a port number such as port1, port2, port3, or port4. Different FortiManager models have different numbers of ports.
status {enable   disable}	Enable/disable the interface (default = enable). If the interface is disabled it does not accept or send packets. If you disable a physical interface, VLAN interfaces associated with it are also disabled.
mode {dhcp   static}	Set the addressing mode (static setting, or DHCP client mode).
ip <ipv4_mask>	Enter the interface IPv4 address and netmask. The IPv4 address cannot be on the same subnet as any other interface.
dhcp-client-identifier <integer>	Enter the DHCP client identifier (default = (null)). This variable is only available when the mode is dhcp.
defaultgw {enable   disable}	Enable/disable default gateway (default = enable). This variable is only available when the mode is dhcp.
dns-server-override {enable   disable}	Enable/disable use DNS acquired by DHCP or PPPoE (default = enable). This variable is only available when the mode is dhcp.
mtu-override {enable   disable}	Enable/disable use MTU acquired by DHCP or PPPoE (default = enable). This variable is only available when the mode is dhcp.
allowaccess {fabric http https ping snmp soc-fabric ssh}	Enter the types of management access permitted on this interface. Separate multiple selected types with spaces. If you want to add or remove an option from the list, retype the list as required.
 <p>For more information on each access protocol, see the <a href="#">FortiManager Administration Guide</a>.</p>	
serviceaccess {fclupdates fgtupdates webfilter-antispam}	Enter the types of service access permitted on this interface. Separate multiple selected types with spaces. If you want to add or remove an option from the list, retype the list as required. <ul style="list-style-type: none"> <li>• fclupdates: FortiClient updates access.</li> <li>• fgtupdates: FortiGate updates access.</li> <li>• webfilter-antispam: Web filtering and antispam access.</li> </ul>
update-service-ip <ip&netmask>	The IP address for the FortiGate update service. It must be on the same subnet as the interface IP address. This variable is only available when serviceaccess is fgtupdates.
rating-service-ip <ip&netmask>	The IP address for the FortiGate rating service. It must be on the same subnet as the interface IP address. This variable is only available when serviceaccess is webfilter-antispam.
lldp-reception {enable   disable}	Enable/disable LLDP (Link Layer Discovery Protocol) reception (default = disable). This variable is only available when the type is physical.

Variable	Description
lldp-transmission {enable   disable}	Enable/disable LLDP (Link Layer Discovery Protocol) transmission (default = disable). This variable is only available when the type is physical.
speed {1000full   100full   100half   10full   10half   auto}	Enter the speed and duplexing the network port uses: <ul style="list-style-type: none"> <li>100full: 100M full-duplex</li> <li>100half: 100M half-duplex</li> <li>10full: 10M full-duplex</li> <li>10half: 10M half-duplex</li> <li>auto: Automatically negotiate the fastest common speed (default)</li> </ul>
description <string>	Enter a description of the interface (character limit = 63).
alias <string>	Enter an alias for the interface.
mtu <integer>	Set the maximum transportation unit (68 - 9000, default = 1500).
type {aggregate   physical   vlan}	Set the type of interface (default = aggregate).
lacp-speed {fast   slow}	Set how often the interface sends LACP messages: <ul style="list-style-type: none"> <li>fast: Send LACP message every second.</li> <li>slow: Send LACP message every 30 seconds (default).</li> </ul> This variable is only available when the type is aggregate.
min-links <integer>	Set the minimum number of aggregated ports that must be up (default = 1). This variable is only available when the type is aggregate.
min-links-down {administrative   operational}	Action to take when less than the configured minimum number of links are active: <ul style="list-style-type: none"> <li>administrative: Set the aggregate administratively down.</li> <li>operational: Set the aggregate operationally down (default).</li> </ul> This variable is only available when the type is aggregate.
link-up-delay <integer>	Set the number of milliseconds to wait before considering a link is up (default = 50). This variable is only available when the type is aggregate.
interface <string>	Set the underlying interface name for the VLAN interface. This variable is only available when the type is vlan.
vlanid <integer>	Set the VLAN ID (1 - 4094, default = 0). This variable is only available when the type is vlan.
vlan-protocol {8021ad   8021q}	Set the ethernet protocol of the VLAN (IEEE 802.1AD or IEEE 802.1Q, default = IEEE 802.1Q). This variable is only available when the type is vlan.
<b>Variables for config member subcommand:</b>	
This subcommand is only available when the type is aggregate.	

Variable	Description
<interface-name>	Enter the interface name that belongs to the aggregate or the redundant interface.
<b>Variables for config ipv6 subcommand:</b>	
ip6-address <ipv6 prefix>	IPv6 address/prefix of interface.
ip6-allowaccess {fabric http https https-logging ping snmp ssh}	Allow management access to the interface.
ip6-autoconf {enable   disable}	Enable/disable address automatic configuration (SLAAC) (default = enable).

## Example

This example shows how to set the FortiManager port1 interface IPv4 address and network mask to 192.168.100.159 and 255.255.255.0, and the management access to ping, https, and ssh.

```
config system interface
  edit port1
    set allowaccess ping https ssh
    set ip 192.168.110.26 255.255.255.0
    set status enable
  end
```

## local-in-policy

Use this command to edit the configuration of an IPv4 local-in policy.

### Syntax

```
config system local-in-policy
  edit <id>
    set action {accept | drop | reject}
    set description <string>
    set dport <integer>
    set dst <ip&netmask>
    set intf <string>
    set protocol {tcp | tcp_udp | udp}
    set src <ip&netmask>
  end
end
```

Variable	Description
<id>	Set the entry number.
action {accept   drop   reject}	Select the action to be performed on the traffic matching this policy:

Variable	Description
	<ul style="list-style-type: none"> <li>accept: Allow traffic matching this policy.</li> <li>drop: Drop traffic matching this policy (default).</li> <li>reject: Reject traffic matching this policy.</li> </ul>
description <string>	Enter a description.
dport <integer>	Enter the destination port number (1 - 65535).
dst <ip&netmask>	Enter the destination IPv4 address and mask using the following format: xxx.xxx.xxx.xxx/xx.
intf <string>	Enter a name for the incoming interface. Enter port1, port2, port3....port12.
protocol {tcp   tcp_udp   udp}	Set the traffic protocol: <ul style="list-style-type: none"> <li>tcp: TCP only.</li> <li>tcp_udp: TCP and UDP (default).</li> <li>udp: UDP only.</li> </ul>
src <ip&netmask>	Enter the source IPv6 address and mask using the following format: xxx.xxx.xxx.xxx/xx.

FortiManager local-in policies support multiple entries when configuring ports, addresses, and interfaces. For example:



```

config system local-in-policy
  edit 1
    set description "IP group 123"
    set dport "22" "443" "80" "8080" "514"
    set dst "1.1.1.1/16" "2.2.2.2/24" "3.3.3.3/32"
    set intf "port1" "port2"
    set src "1.1.1.1/16" "2.2.2.2/24"
  
```

## local-in-policy6

Use this command to edit the configuration of an IPv6 local-in policy.

### Syntax

```

config system local-in-policy6
  edit <id>
    set action {accept | drop | reject}
    set description <string>
    set dport <integer>
    set dst <ip&netmask>
    set intf <string>
    set protocol {tcp | tcp_udp | udp}
    set src <ip&netmask>
  end
end

```

Variable	Description
<id>	Set the entry number.
action {accept   drop   reject}	Select the action to be performed on the traffic matching this policy: <ul style="list-style-type: none"> <li>accept: Allow traffic matching this policy.</li> <li>drop: Drop traffic matching this policy (default).</li> <li>reject: Reject traffic matching this policy.</li> </ul>
description <string>	Enter a description.
dport <integer>	Enter the destination port number (1 - 65535).
dst <IPv6 prefix>	Enter the destination IPv6 address and prefix using the following format: xxx:xxx:xxx:xxx:xxx:xxx:xxx:xxx/xxx.
intf <string>	Enter a name for the incoming interface. Enter port1, port2, port3....port12.
protocol {tcp   tcp_udp   udp}	Set the traffic protocol: <ul style="list-style-type: none"> <li>tcp: TCP only.</li> <li>tcp_udp: TCP and UDP (default).</li> <li>udp: UDP only.</li> </ul>
src <IPv6 prefix>	Enter the source IPv6 address and prefix using the following format: xxx:xxx:xxx:xxx:xxx:xxx:xxx:xxx/xxx.

FortiManager local-in policies support multiple entries when configuring ports, addresses, and interfaces. For example:



```
config system local-in-policy6
edit 1
set description "IPv6 group 123"
set dport "22" "443" "80" "8080" "514"
set dst6 "2001:db8:1::/48" "2001:db8:2::/64" "2001:db8:3::1/128"
set intf "port1" "port2"
set src6 "2001:db8:4::/48" "2001:db8:5::/64"
```

## locallog

Use the following commands to configure local log settings.

## locallog setting

Use this command to configure locallog logging settings.

### Syntax

```
config system locallog setting
set log-daemon-crash {enable | disable}
```

```

set log-interval-adom-perf-stats <integer>
set log-interval-dev-no-logging <integer>
set log-interval-disk-full <integer>
set log-interval-gbday-exceeded <integer>
set no-log-detection-threshold <integer>
end

```

Variable	Description
log-daemon-crash {enable   disable}	Send a log message when a daemon crashes (default = disable).
log-interval-adom-perf-stats <integer>	Interval for logging the event of adom perf stats, in minutes (default = 5).
log-interval-dev-no-logging <integer>	Interval for logging the event of no logs received from a device, in minutes (default = 1440).
log-interval-disk-full <integer>	Interval for logging the event of disk full, in minutes (default = 5).
log-interval-gbday-exceeded <integer>	Interval for logging the event of the GB/Day license exceeded, in minutes (default = 1440).
no-log-detection-threshold <integer>	Interval to trigger a local event message if no log data is received, in minutes (default = 15).

## locallog disk setting

Use this command to configure the disk settings for uploading log files, including configuring the severity of log levels.

- status must be enabled to view diskfull, max-log-file-size and upload variables.
- upload must be enabled to view/set other upload\* variables.

### Syntax

```

config system locallog disk setting
  set status {enable | disable}
  set severity {alert | critical | debug | emergency | error | information | notification |
    warning}
  set max-log-file-size <integer>
  set max-log-file-num <integer>
  set roll-schedule {none | daily | weekly}
  set roll-day {sunday | monday | tuesday | wednesday | thursday | friday | saturday}
  set roll-time <hh:mm>
  set diskfull {nolog | overwrite}
  set log-disk-full-percentage <integer>
  set log-disk-quota <integer>
  set log-max-days <integer>
  set log-rate-limit <integer>
  set upload {enable | disable}
  set uploadip <ipv4_address>
  set server-type {FAZ | FTP | SCP | SFTP}

```

```

set uploadport <integer>
set uploaduser <string>
set uploadpass <passwd>
set uploaddir <string>
set uploadtype <event>
set uploadzip {enable | disable}
set uploadsched {enable | disable}
set upload-time <hh:mm>
set upload-delete-files {enable | disable}
end

```

Variable	Description
status {enable   disable}	Enable/disable logging to the local disk (default = enable)
severity {emergency   alert   critical   error   warning   notification   information   debug}	<p>Select the logging severity level.</p> <p>The FortiManager unit logs all messages at and above the logging severity level you select.</p> <ul style="list-style-type: none"> <li>emergency: The unit is unusable.</li> <li>alert: Immediate action is required.</li> <li>critical: Functionality is affected.</li> <li>error: Functionality is probably affected.</li> <li>warning: Functionality might be affected.</li> <li>notification: Information about normal events.</li> <li>information: General information about unit operations (default).</li> <li>debug: Information used for diagnosis or debugging.</li> </ul>
max-log-file-size <integer>	Enter the size at which the log is rolled, in megabytes (1 - 1024, default = 100).
max-log-file-num <integer>	Enter the number of log files at which the logs are rolled (10 - 10000, default = 10000).
roll-schedule {none   daily   weekly}	<p>Enter the period for the scheduled rolling of a log file:</p> <ul style="list-style-type: none"> <li>none: Not scheduled; the log rolls when max-log-file-size is reached (default).</li> <li>daily: Every day.</li> <li>weekly: Every week.</li> </ul>
roll-day {sunday   monday   tuesday   wednesday   thursday   friday   saturday}	Enter the day for the scheduled rolling of a log file (default = sunday).
roll-time <hh:mm>	Enter the time for the scheduled rolling of a log file.
diskfull {nolog   overwrite}	<p>Enter action to take when the disk is full:</p> <ul style="list-style-type: none"> <li>nolog: stop logging</li> <li>overwrite: overwrites oldest log entries (default)</li> </ul>
log-disk-full-percentage <integer>	Enter the percentage at which the log disk will be considered full (50 - 90, default = 80).
log-disk-quota <integer>	<p>Enter the quota for controlling local log size, in GB (0 - 50, default = 0).</p> <p><b>Note:</b> 0 means no control of local log size.</p>

Variable	Description
log-max-days <integer>	Set the number of days for keeping local logs (0 - 365, default = 0). Use 0 to disable date-based expiration of logs.
log-rate-limit <integer>	Set the log rate limit per minute (0, 1000 - 100000). Use 0 for no limit.
upload {enable   disable}	Enable/disable uploading of logs when rolling log files (default = disable).
uploadip <ipv4_address>	Enter IPv4 address of the destination server.
server-type {FTP   SCP   SFTP}	Enter the server type to use to store the logs: <ul style="list-style-type: none"> <li>• FTP: upload via FTP (default)</li> <li>• SCP: upload via SCP</li> <li>• SFTP: upload via SFTP</li> </ul>
uploadport <integer>	Enter the port to use when communicating with the destination server (1 - 65535, default = 0).
uploaduser <string>	Enter the user account on the destination server.
uploadpass <passwd>	Enter the password of the user account on the destination server (character limit = 127).
uploaddir <string>	Enter the destination directory on the remote server.
uploadtype <event>	Enter to upload the event log files (default = event).
uploadzip {enable   disable}	Enable to compress uploaded log files (default = disable).
uploadsched {enable   disable}	Enable to schedule log uploads (default = disable).
upload-time <hh:mm>	Enter to configure when to schedule an upload.
upload-delete-files {enable   disable}	Enable/disable deleting log files after uploading (default = enable).

## Example

In this example, the logs are uploaded to an upload server and are not deleted after they are uploaded.

```
config system locallog disk setting
  set status enable
  set severity information
  set max-log-file-size 1000MB
  set roll-schedule daily
  set upload enable
  set uploadip 10.10.10.1
  set uploadport port 443
  set uploaduser myname2
  set uploadpass 12345
  set uploadtype event
  set uploadzip enable
  set uploadsched enable
  set upload-time 06:45
  set upload-delete-file disable
end
```

## locallog filter

Use this command to configure filters for local logs. All keywords are visible only when event is enabled.

### Syntax

```
config system locallog {disk | memory | fortianalyzer | fortianalyzer2 | fortianalyzer3 |
    syslogd | syslogd2 | syslogd3} filter
    set controller {enable | disable}
    set devcfg {enable | disable}
    set devops {enable | disable}
    set diskquota {enable | disable}
    set dm {enable | disable}
    set dvm {enable | disable}
    set ediscovery {enable | disable}
    set epmgr {enable | disable}
    set event {enable | disable}
    set eventmgmt {enable | disable}
    set faz {enable | disable}
    set fazfabric {enable | disable}
    set fazha {enable | disable}
    set fazsys {enable | disable}
    set fgd {enable | disable}
    set fgfm {enable | disable}
    set fips {enable | disable}
    set fmgws {enable | disable}
    set fmlmgr {enable | disable}
    set fmwmgr {enable | disable}
    set fortism {enable | disable}
    set fortiview {enable | disable}
    set glbcfg {enable | disable}
    set ha {enable | disable}
    set hcache {enable | disable}
    set http {enable | disable}
    set incident {enable | disable}
    set iolog {enable | disable}
    set logd {enable | disable}
    set logdb {enable | disable}
    set logdev {enable | disable}
    set logfile {enable | disable}
    set logging {enable | disable}
    set lrmgr {enable | disable}
    set objcfg {enable | disable}
    set report {enable | disable}
    set rev {enable | disable}
    set rtmon {enable | disable}
    set scfw {enable | disable}
    set scply {enable | disable}
    set scrmgr {enable | disable}
    set scvpn {enable | disable}
    set system {enable | disable}
    set webport {enable | disable}
end
```

Variable	Description
controller {enable   disable}	Enable/disable controller application generic messages (default = enable).
devcfg {enable   disable}	Enable/disable logging device configuration messages (default = enable).
devops {enable   disable}	Enable/disable managed device's operations messages (default = enable).
diskquota {enable   disable}	Enable/disable logging FortiAnalyzer disk quota messages (default = enable).
dm {enable   disable}	Enable/disable logging deployment manager messages (default = enable).
dvm {enable   disable}	Enable/disable logging device manager messages (default = enable).
ediscovery {enable   disable}	Enable/disable logging device manager messages (default = enable).
epmgr {enable   disable}	Enable/disable logging endpoint manager messages (default = enable).
event {enable   disable}	Enable/disable configuring log filter messages (default = enable).
eventmgmt {enable   disable}	Enable/disable logging FortiAnalyzer event handler messages (default = enable).
faz {enable   disable}	Enable/disable logging FortiAnalyzer messages (default = enable).
fazfabric {enable   disable}	Enable/disable logging FortiAnalyzer HA messages (default = enable).
fazha {enable   disable}	Enable/disable logging FortiAnalyzer HA messages (default = enable).
fazsys {enable   disable}	Enable/disable logging FortiAnalyzer system messages (default = enable).
fgd {enable   disable}	Enable/disable logging FortiGuard service messages (default = enable).
fgfm {enable   disable}	Enable/disable logging FortiGate/FortiManager communication protocol messages (default = enable).
fips {enable   disable}	Enable/disable logging FIPS messages (default = enable).
fmgws {enable   disable}	Enable/disable logging web service messages (default = enable).
fmlmgr {enable   disable}	Enable/disable logging FortiMail manager messages (default = enable).
fmwmgr {enable   disable}	Enable/disable logging firmware manager messages (default = enable).
fortism {enable   disable}	Enable/disable logging Fortinet Secure Module messages (default = enable).
fortiview {enable   disable}	Enable/disable logging FortiAnalyzer FortiView messages (default = enable).
glbcfg {enable   disable}	Enable/disable logging global database messages (default = enable).
ha {enable   disable}	Enable/disable logging high availability activity messages (default = enable).
hcache {enable   disable}	Enable/disable logging hcache messages (default = enable).
http {enable   disable}	Enable/disable logging HTTP extended access logs (default = enable).

Variable	Description
incident {enable   disable}	Enable/disable logging FortiAnalyzer incident messages (default = enable).
iolog {enable   disable}	Enable/disable input/output log activity messages (default = enable).
logd {enable   disable}	Enable/disable logd messages (default = enable).
logdb {enable   disable}	Enable/disable logging FortiAnalyzer log DB messages (default = enable).
logdev {enable   disable}	Enable/disable logging FortiAnalyzer log device messages (default = enable).
logfile {enable   disable}	Enable/disable logging FortiAnalyzer log file messages (default = enable).
logging {enable   disable}	Enable/disable logging FortiAnalyzer logging messages (default = enable).
lrmgr {enable   disable}	Enable/disable logging log and report manager messages (default = enable).
objcfg {enable   disable}	Enable/disable logging object configuration (default = enable).
report {enable   disable}	Enable/disable logging FortiAnalyzer report messages (default = enable).
rev {enable   disable}	Enable/disable logging revision history messages (default = enable).
rtmon {enable   disable}	Enable/disable logging real-time monitor messages (default = enable).
scfw {enable   disable}	Enable/disable logging firewall objects messages (default = enable).
scply {enable   disable}	Enable/disable logging policy console messages (default = enable).
scrmgr {enable   disable}	Enable/disable logging script manager messages (default = enable).
scvpn {enable   disable}	Enable/disable logging VPN console messages (default = enable).
system {enable   disable}	Enable/disable logging system manager messages (default = enable).
webport {enable   disable}	Enable/disable logging web portal messages (default = enable).

## Example

In this example, the local log filters are log and report manager, and system settings. Events in these areas of the FortiManager unit will be logged.

```
config system locallog filter
  set event enable
  set lrmgr enable
  set system enable
end
```

## locallog fortianalyzer (fortianalyzer2, fortianalyzer3) setting

Use this command to enable or disable, and select the severity threshold of, remote logging to the FortiAnalyzer units. You can configure up to three FortiAnalyzer devices.

The severity threshold required to forward a log message to the FortiAnalyzer unit is separate from event, syslog, and local logging severity thresholds.

### Syntax

```
config system locallog {fortianalyzer | fortianalyzer2 | fortianalyzer3} setting
  set peer-cert-cn <string>
  set reliable {enable | disable}
  set severity {emergency | alert | critical | error | warning | notification | information |
    debug}
  set server <address>
  set secure-connection {enable | disable}
  set status {disable | realtime | upload}
  set upload-time <hh:mm>
end
```

Variable	Description
peer-cert-cn <string>	Certificate common name for the remote FortiAnalyzer. This variable is available only when the status is upload. <b>Note:</b> Null or '-' means no certificate CN for the remote FortiAnalyzer. Multiple CNs are separated by commas. If there is comma in CN, it must follow an escape character.
reliable {enable   disable}	Enable/disable reliable realtime logging (default = disable).
severity {emergency   alert   critical   error   warning   notification   information   debug }	Select the logging severity level (default = notification). The FortiManager unit logs all messages at and above the logging severity level you select.
server <address>	Remote FortiAnalyzer server IP address, FQDN, or hostname.
secure-connection {enable   disable}	Enable/disable connection secured by TLS/SSL (default = disable).
status {disable   realtime   upload}	Set the log to FortiAnalyzer status: <ul style="list-style-type: none"> <li>disable: Do not log to FortiAnalyzer (default).</li> <li>realtime: Log to FortiAnalyzer in realtime.</li> <li>upload: Log to FortiAnalyzer at a scheduled time.</li> </ul>
upload-time <hh:mm>	Set the time to upload local log files (default = 00:00).

## Example

You might enable remote logging to the FortiAnalyzer unit configured. Events at the information level and higher, which is everything except debug level events, would be sent to the FortiAnalyzer unit.

```
config system locallog fortianalyzer setting
  set status enable
  set severity information
end
```

## locallog memory setting

Use this command to configure memory settings for local logging purposes.

### Syntax

```
config system locallog memory setting
  set diskfull {nolog | overwrite}
  set severity {emergency | alert | critical | error | warning | notification | information |
  debug}
  set status {enable | disable}
end
```

Variable	Description
diskfull {nolog   overwrite}	Enter the action to take when the disk is full: <ul style="list-style-type: none"> <li>nolog: stop logging when disk full</li> <li>overwrite: overwrite oldest log entries (default)</li> </ul>
severity {emergency   alert   critical   error   warning   notification   information   debug}	Select the logging severity level (default = notification). The FortiManager unit logs all messages at and above the logging severity level you select.
status {enable   disable}	Enable/disable logging to the memory buffer (default = disable).

## Example

This example shows how to enable logging to memory for all events at the notification level and above. At this level of logging, only information and debug events will not be logged.

```
config system locallog memory
  set severity notification
  set status enable
end
```

## locallog syslogd (syslogd2, syslogd3) setting

Use this command to configure the settings for logging to a syslog server. You can configure up to three syslog servers: syslogd, syslogd2 and syslogd3.

### Syntax

```
config system locallog {syslogd | syslogd2 | syslogd3} setting
  set csv {enable | disable}
  set facility {alert | audit | auth | authpriv | clock | cron | daemon | ftp | kernel | local0
    | local1 | local2 | local3 | local4 | local5 | local6 | local7 | lpr | mail | news | ntp
    | syslog | user | uucp}
  set severity {emergency | alert | critical | error | warning | notification | information |
    debug}
  set status {enable | disable}
  set syslog-name <string>
end
```

Variable	Description
csv {enable   disable}	Enable/disable producing the log in comma separated value (CSV) format (default = disable). If you do not enable CSV format the FortiManager unit produces space separated log files.
facility {alert   audit   auth   authpriv   clock   cron   daemon   ftp   kernel   local0   local1   local2   local3   local4   local5   local6   local7   lpr   mail   news   ntp   syslog   user   uucp}	Enter the facility type (default = local7). The facility identifies the source of the log message to syslog. Change facility to distinguish log messages from different FortiManager units so you can determine the source of the log messages. local0 to local7 are reserved for local use.
severity {emergency   alert   critical   error   warning   notification   information   debug}	Select the logging severity level (default = notification). The FortiManager unit logs all messages at and above the logging severity level you select.
status {enable   disable}	Enable/disable logging to the remote syslog server (default = disable).
syslog-name <string>	Enter the remote syslog server name. To configure a syslog server, use the <code>config system syslog</code> command. See <a href="#">syslog on page 151</a> for information.

### Example

In this example, the logs are uploaded to a previously configured syslog server named logstorage. The FortiManager unit is identified as facility local0.

```
config system locallog syslogd setting
  set facility local0
```

```

set syslog-name logstorage
set status enable
set severity information
end

```

## locallog tacacs+accounting filter

Use this command to configure the settings for tacacs+ accounting events filter.

### Syntax

```

config system locallog tacacs+accounting filter
set cli-cmd-audit {enable | disable}
set config-change-audit {enable | disable}
set login-audit {enable | disable}
end

```

Variable	Description
cli-cmd-audit {enable   disable}	Enable/disable TACACS+ accounting for CLI commands audit (default = enable).
config-change-audit {enable   disable}	Enable/disable TACACS+ accounting for configuration change events audit (default = enable).
login-audit {enable   disable}	Enable/disable TACACS+ accounting for login events audit (default = enable).

## locallog tacacs+accounting setting

Use this command to configure the settings for tacacs+ accounting.

### Syntax

```

config system locallog tacacs+accounting setting
set status {enable | disable}
set tacacs-name <integer>
set timeout <integer>
end

```

Variable	Description
status {enable   disable}	Enable/disable TACACS+ accounting (default = disable).
tacacs-name <integer>	Set the TACACS+ server name as configured in config system admin tacacs. This option is only available when the status must be set to enable.
timeout <integer>	Set the connection timeout in seconds (default = 5).

## log

Use the following commands to configure log settings.

### log alert

Use this command to configure log based alert settings.

#### Syntax

```
config system log alert
  set max-alert-count <integer>
  set min-severity-to-raise-incident-by-grouping {critical | high | none}
end
```

Variable	Description
max-alert-count <integer>	Set the maximum number of alerts supported (100 - 50000, default = 10000).
min-severity-to-raise-incident-by-grouping {critical   high   none}	Set the minimum severity to raise incident by grouping (default = critical). <ul style="list-style-type: none"> <li>critical: Raise incident by grouping alerts when alert-serverity is critical.</li> <li>high: Raise incident by grouping alerts when alert-serverity is critical or high.</li> <li>none: Do not raise incident by grouping alerts.</li> </ul>

### log api-ratelimit

Use this command to configure the API rate limit.

#### Syntax

```
config system log api-ratelimit
  set read-limit <integer>
  set write-limit <integer>
end
```

Variable	Description
read-limit <integer>	Set the API rate limiting per minute: applies to read methods such as get, fetch (default = 1000).
write-limit <integer>	Set the API rate limiting per minute: applies to write methods such as exec, add, and others (default = 100).

## log device-selector

Use this command to accept or reject devices matching specified filter types.

### Syntax

```
config system log device-selector
  edit <id>
    set action <exclude | include>
    set comment <string>
    set devid <input>
    set expire <string>
    set srcip <input>
    set srcip-mode <TCP514 | UDP514 | any>
    set type <devid | srcip | unspecified>
  end
```

Variable	Description
<id>	The ID for the device selector entry.
action <exclude   include>	Include or exclude devices matching specified filter type (default = include).
comment <string>	Additional comment for the selector. This option is not available when the type is unspecified.
devid <input>	Enter the device ID to be disabled for logging. Wildcard matching supported.
expire <string>	Set the expiration time of the rule. Leave the field unset for no expiration. Duration or formatted date time string are supported. <ul style="list-style-type: none"> <li>Duration example: '1d5h', meaning 1 day and 5 hours.</li> <li>Formatted date time string: %Y-%m-%d %H:%M:%S.</li> </ul> Supported units for duration: <ul style="list-style-type: none"> <li>d- day.</li> <li>h- hour.</li> <li>m- minute.</li> <li>s- second.</li> </ul>
srcip <input>	Enter the source IP or an IP range. This option is only available when the type is srcip.
srcip-mode <TCP514   UDP514   any>	Apply the selector to UDP/514, TCP/514, or any mode (default = UDP514).
type <devid   srcip   unspecified>	Set the type of the selector. You can filter devices by Device ID, source IP, or leave unspecified (default = unspecified).

## fos-policy-stats

Use this command to configure FortiOS policy statistics settings.

### Syntax

```
config system log fos-policy-stats
  set retention-days <integer>
  set sampling-interval <integer>
  set status{enable | disable}
end
```

Variable	Description
retention-days <integer>	The number of days that FortiOS policy stats are stored (60 - 1825, default = 365)
sampling-interval <integer>	The interval in which policy stats data are received from FortiOS devices, in minutes (5 - 1440, default = 60)
status {enable   disable}	Enable/disable FortiOS policy statistics feature (default = enable).

## log interface-stats

Use this command to configure log based interface statistics settings.

### Syntax

```
config system log interface-stats
  set billing-report {enable | disable}
  set retention-days <integer>
  set sampling-interval <integer>
  set status {enable | disable}
end
```

Variable	Description
billing-report {enable   disable}	Enable/disable billing report feature (default = disable).
retention-days <integer>	The number of days that interface data are stored (0 - 2000, default = 100).
sampling-interval <integer>	The interval in which interface data are received from FortiGate devices, in seconds (300 - 86400, default = 1200).
status {enable   disable}	Enable/disable interface statistics (default = enable).

## log ioc

Use this command to configure log based IoC (Indicators of Compromise) settings.

## Syntax

```
config system log ioc
  set notification {enable | disable}
  set notification-throttle <integer>
  set rescan-max-runner <integer>
  set rescan-run-at <integer>
  set rescan-status {enable | disable}
  set status {enable | disable}
end
```

Variable	Description
notification {enable   disable}	Enable/disable loC notification (default = enable).
notification-throttle <integer>	Set the minute value for throttling the rate of loC notifications (1 - 10080, default = 1440).
rescan-max-runner <integer>	Set the maximum number of concurrent loC rescans (1 to CPU count, default = 8).
rescan-run-at <integer>	Set the hour of the day when loC rescan runs (1 - 24, 0 = run immediately, default = 24).
rescan-status {enable   disable}	Enable/disable loC rescan (default = enable).
status {enable   disable}	Enable/disable the loC feature (default = enable).

## log mail-domain

Use this command to configure FortiMail domain settings.

### Syntax

```
config system log mail-domain
  edit <id>
    set devices <string>
    set domain <string>
    set vdom <string>
  end
```

Variable	Description
<id>	The ID of the FortiMail domain.
devices <string>	The device IDs for domain to VDOM mapping, separated by commas (default = All_FortiMails). For example: FEVM020000000000, FEVM020000000001
domain <string>	The FortiMail domain.
vdom <string>	The VDOM name that is mapping to the FortiMail domain.

## log ratelimit

Use this command to log the rate limit.

### Syntax

```
config system log ratelimit
  set device-ratelimit-default <integer>
  set mode {disable | manual}
  set system-ratelimit <integer>
  config ratelimits
    edit id
      set filter <string>
      set filter-type {adom | devid}
      set ratelimit <integer>
    end
  end
end
```

Variable	Description
device-ratelimit-default <integer>	The default maximum device log rate limit (default = 0). <b>Note:</b> This command is only available when the mode is set to manual.
mode {disable   manual}	The logging rate limit mode (default = disable). In the manual mode, the system rate limit and the device rate limit both are configurable, no limit if not configured.
system-ratelimit <integer>	The maximum system log rate limit (default = 0). <b>Note:</b> This command is only available when the mode is set to manual.
ratelimits	The log rate limit.
<b>Variables for config ratelimits subcommand:</b>	
<id>	The device id.
filter <string>	The device(s) or ADOM filter according to the filter-type setting. <b>Note:</b> Wildcard expression is supported.
filter-type {adom   devid}	The device filter type (default = devid): <ul style="list-style-type: none"> <li>adom: ADOM name.</li> <li>devid: Device ID.</li> </ul>
ratelimit <integer>	The maximum device log rate limit (default = 0).

## log settings

Use this command to configure settings for logs.

### Syntax

```
config system log settings
  set browse-max-logfiles <integer>
  set device-auto-detect {enable | disable}
  set dns-resolve-dstip {enable | disable}
  set download-max-logs <integer>
  set FAC-custom-field1 <string>
  set FCH-custom-field1 <string>
  set FCT-custom-field1 <string>
  set FDD-custom-field1 <string>
  set FFW-custom-field1 <string>
  set FGT-custom-field1 <string>
  set FML-custom-field1 <string>
  set FPX-custom-field1 <string>
  set FSA-custom-field1 <string>
  set FWB-custom-field1 <string>
  set ha-auto-migrate {enable | disable}
  set import-max-logfiles <integer>
  set keep-dev-logs {enable | disable}
  set legacy-auth-mode {enable | disable}
  set log-file-archive-name {basic | extended}
  set log-interval-dev-no-logging <integer>
  set log-process-fast-mode {enable | disable}
  set log-upload-interval-dev-no-logging <integer>
  set sync-search-timeout <integer>
  set syslog-over-tls-port {514 | 6514}
  set unencrypted-logging-tcp {enable | disable}
  set unencrypted-logging-udp {enable | disable}
config client-cert-auth
  set mode {basic | strict}
  set tls-port {514 | 6514 | both}
config trusted-client
  edit <id>
    set certificate <string>
    set description <string>
    set domain <string>
    set type {certificate | domain}
  next
end
end
config {rolling-regular | rolling-local | rolling-analyzer}
  set days {fri | mon | sat | sun | thu | tue | wed}
  set del-files {enable | disable}
  set directory <string>
  set file-size <integer>
  set gzip-format {enable | disable}
  set hour <integer>
  set server <string>
  set server2 <string>
```

```

set server3 <string>
set log-format {csv | native | text}
set min <integer>
set password <passwd>
set password2 <passwd>
set password3 <passwd>
set port <integer>
set port2 <integer>
set port3 <integer>
set rolling-upgrade-status <integer>
set server-type {ftp | scp | sftp}
set upload {enable | disable}
set upload-hour <integer>
set upload-mode {backup | mirror}
set upload-trigger {on-roll | on-schedule}
set username <string>
set username2 <string>
set username3 <string>
set when {daily | none | weekly}
end
end

```

Variable	Description
browse-max-logfiles <integer>	Maximum number of log files for each log browse attempt, per ADOM (default = 10000).
device-auto-detect {enable   disable}	Enable/disable looking up device ID in syslog received with no encryption (default = enable).
dns-resolve-stip {enable   disable}	Enable/disable resolving destination IP by DNS (default = disable).
download-max-logs <integer>	Maximum number of logs for each log download attempt (default = 100000).
FAC-custom-field1 <string>	Enter a name of the custom log field to index (character limit = 31).
FCH-custom-field1 <string>	Enter a name of the custom log field to index (character limit = 31).
FCT-custom-field1 <string>	Enter a name of the custom log field to index (character limit = 31).
FDD-custom-field1 <string>	Enter a name of the custom log field to index (character limit = 31).
FFW-custom-field1	Enter a name of the custom log field to index (character limit = 31).
FGT-custom-field1 <string>	Enter a name of the custom log field to index (character limit = 31).
FML-custom-field1 <string>	Enter a name of the custom log field to index (character limit = 31).
FPX-custom-field1 <string>	Enter a name of the custom log field to index (character limit = 31).
FSA-custom-field1 <string>	Enter a name of the custom log field to index (character limit = 31).
FWB-custom-field1 <string>	Enter a name of the custom log field to index (character limit = 31).
ha-auto-migrate {enable   disable}	Enabled/disable automatically merging HA member's logs to HA cluster (default = disable).
import-max-logfiles <integer>	Maximum number of log files for each log import attempt (default = 10000).

Variable	Description
keep-dev-logs {enable   disable}	Enable/disable keeping the device logs after the device has been deleted (default = disable).
legacy-auth-mode {enable   disable}	Enable/disable legacy mode of device authentication by username/password (default = enable). When disabled, FortiGate, FortiWeb, FortiMail, and other devices that connect through OFTP connection must send the correct certificate that includes the device serial number in the Common Name field. If the correct certificate is not sent with the serial number, FortiManager will fail the OFTP connection.
log-file-archive-name {basic   extended}	Log file name format for archiving. <ul style="list-style-type: none"> <li>basic: Basic format for log archive file name (default), for example: FGT20C000000001.tlog.1417797247.log.</li> <li>extended: Extended format for log archive file name, for example: FGT20C000000001.2014-12-05-08:34:58.tlog.1417797247.log.</li> </ul>
log-process-fast-mode {enable   disable}	Enable/disable log process fast mode (default = disable).
sync-search-timeout <integer>	The maximum amount of time that a log search session can run in synchronous mode, in seconds (1 - 86400, default = 60).
syslog-over-tls-port {514   6514}	Set the TCP port for receiving syslog over TLS: <ul style="list-style-type: none"> <li>514: Default port for syslog over TLS receiving (default).</li> <li>6514: Port 6514 recommended by RFC 5425.</li> </ul>
unencrypted-logging-tcp {enable   disable}	Enable/disable receiving syslog through TCP(514) un-encrypted (default = disable).
unencrypted-logging-udp {enable   disable}	Enable/disable receiving syslog through UDP(514) un-encrypted (default = disable).
<b>Variables for config client-cert-auth subcommand:</b>	
mode {basic   strict}	Set the client certificate authentication mode for specified tls_port. <ul style="list-style-type: none"> <li>basic: Verify client certificate by trusted CA (default).</li> <li>strict: Client certificate must match either a trusted certificate or a trusted domain.</li> </ul>
tls-port {514   6514   both}	
<b>Variables for trusted-client subcommand:</b>	
<b>Variables for trusted-client subcommand:</b>	
edit <id>	ID of trusted-client entry.
certificate <string>	Enter the PEM format certificate. This option is only available when type is set to certificate.
description <string>	Enter additional comment.
domain <string>	Enter the trusted domain value in the format xyz.example.com or *.example.com. This variable supported wildcard patterns. This option is only available when type is set to domain.

Variable	Description
type {certificate   domain}	Set the type to one of the following: <ul style="list-style-type: none"> <li>certificate: Set the trusted certificate.</li> <li>domain: Set the trusted CN/SAN domain (default).</li> </ul>
<b>Variables for config {rolling-regular   rolling-local   rolling-analyzer} subcommand:</b>	
days {fri   mon   sat   sun   thu   tue   wed}	Log files rolling schedule (days of the week). When when is set to weekly, you can configure days, hour, and min values.
del-files {enable   disable}	Enable/disable log file deletion after uploading (default = disable).
directory <string>	The upload server directory (character limit = 127).
file-size <integer>	Roll log files when they reach this size, in megabytes (10 - 1000, default = 200).
gzip-format {enable   disable}	Enable/disable compression of uploaded log files (default = disable).
hour <integer>	The hour of the day that log files are rolled (0 - 23, default = 0).
server <string> server2 <string> server3 <string>	Upload server FQDN, IPv4, or IPv6 addresses. Configure up to three servers.
log-format {csv   native   text}	Format of uploaded log files: <ul style="list-style-type: none"> <li>csv: CSV (comma-separated value) format.</li> <li>native: Native format (text or compact) (default).</li> <li>text: Text format (convert if necessary).</li> </ul>
min <integer>	The minute of the hour that log files are rolled (0 - 59, default = 0).
password <passwd> password2 <passwd> password3 <passwd>	Upload server log in passwords (character limit = 128).
port <integer> port2 <integer> port3 <integer>	Upload server IP port number.
rolling-upgrade-status <integer>	The rolling upgrade status.
server-type {ftp   scp   sftp}	Upload server type (default = ftp).
upload {enable   disable}	Enable/disable log file uploads (default = disable).
upload-hour <integer>	The hour of the day that log files are uploaded (0 - 23, default = 0).
upload-mode {backup   mirror}	Configure upload mode with multiple servers. Servers are tried then used one after the other upon failure to connect. <ul style="list-style-type: none"> <li>backup: Servers are attempted and used one after the other upon failure to connect (default).</li> <li>mirror: All configured servers are attempted and used.</li> </ul>
upload-trigger {on-roll   on-schedule}	Event triggering log files upload: <ul style="list-style-type: none"> <li>on-roll: Upload log files after they are rolled (default).</li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>on-schedule: Upload log files daily.</li> </ul>
username <string> username2 <string> username3 <string>	Upload server log in usernames (character limit = 35).
when {daily   none   weekly}	Roll log files periodically: <ul style="list-style-type: none"> <li>daily: Roll log files daily.</li> <li>none: Do not roll log files periodically (default).</li> <li>weekly: Roll log files on certain days of week.</li> </ul>

## log topology

Use this command to configure settings for the logging topology.

### Syntax

```
config system log topology
  set max-depth <integer>
  set max-depth-share <integer>
end
```

Variable	Description
max-depth <integer>	Maximum levels to descend from this device to get the logging topology information (0 - 32, default = 5).
max-depth-share <integer>	Maximum levels to descend from this device to share logging topology information with upstream (0 - 32, default = 5).

## log ueba

Use this command to configure UEBA settings.

### Syntax

```
config system log ueba
  set hostname-ep-unifier {enable | disable}
  set ip-only-ep {enable | disable}
  set ip-unique-scope {adom | vdom}
end
```

Variable	Description
hostname-ep-unifier {enable   disable}	Disable/Enable hostname as endpoint unifier (default = disable).
ip-only-ep {enable   disable}	Disable/Enable IP-only endpoint identification (default = disable).
ip-unique-scope {adom   vdom}	Set the IP unique scope to ADOM or VDOM (default = vdom). This command is only effective when ip-only-ep is enabled.

## mail

Use this command to configure mail servers on your FortiManager unit.

### Syntax

```
config system mail
  edit <id>
    set auth {enable | disable}
    set auth-type {certificate | psk}
    set from <string>
    set local-cert {Fortinet_Local | Fortinet_Local2}
    set passwd <passwd>
    set port <integer>
    set secure-option {default | none | smtps | starttls}
    set server <string>
    set ssl-protocol {follow-global-ssl-portocol | sslv3 | tlsv1.0 | tlsv1.1 | tlsv1.2 |
      tlsv1.3}
    set user <string>
  end
```

Variable	Description
<id>	Enter the mail service ID of the entry you would like to edit or type a new name to create an entry (character limit = 63).
auth {enable   disable}	Enable/disable authentication (default = disable).
auth-type {certificate   psk}	Select the SMTP authentication type (default = psk): <ul style="list-style-type: none"> <li>certificate: Use local certificate to authenticate.</li> <li>psk: Use username and password to authenticate.</li> </ul>
from <string>	Set the SMTP default username for sending.
local-cert {Fortinet_Local   Fortinet_Local2}	Choose from the two available local certificates. This variable is available only when the auth-type is certificate.
passwd <passwd>	Enter the SMTP account password value (character limit = 63). This variable is available only when the auth-type is psk.

Variable	Description
port <integer>	Enter the SMTP server port (1 - 65535, default = 25).
secure-option {default   none   smtps   starttls}	Select the communication secure option: <ul style="list-style-type: none"> <li>default: Try STARTTLS, proceed as plain text communication otherwise (default).</li> <li>none: Communication will be in plain text format.</li> <li>smtps: Communication will be protected by SMTPS.</li> <li>starttls: Communication will be protected by STARTTLS.</li> </ul>
server <string>	Enter the SMTP server name.
ssl-protocol {follow-global-ssl-protocol   sslv3   tlsv1.0   tlsv1.1   tlsv1.2   tlsv1.3}	Set the lowest SSL protocol version for connection to mail server (default = follow-global-ssl-protocol). The follow-global-ssl-protocol setting follows the setting for: <pre>config system global   set global-ssl-protocol {sslv3   tlsv1.0   tlsv1.1   tlsv1.2   tlsv1.3}</pre>
user <string>	Enter the SMTP account user name. This variable is available only when the auth-type is psk.

## metadata

Use this command to add additional information fields to the administrator accounts of your FortiManager unit.



This command creates the metadata fields. Use `config system admin user` to add data to the metadata fields.

## Syntax

```
config system metadata admins
  edit <fieldname>
    set field_length {20 | 50 | 255}
    set importance {optional | required}
    set status {enabled | disabled}
  end
```

Variable	Description
<fieldname>	Enter the name of the field.
field_length {20   50   255}	Select the maximum number of characters allowed in this field (default = 50).

Variable	Description
importance {optional   required}	Select if this field is required or optional when entering standard information (default = required).
status {enabled   disabled}	Enable/disable the metadata (default = enabled).

## ntp

Use this command to configure automatic time setting using a network time protocol (NTP) server.

### Syntax

```

config system ntp
  set status {enable | disable}
config ntpserver
  edit <id>
    set ntpv3 {enable | disable}
    set authentication {enable | disable}
    set key <passwd>
    set key-fmt {ascii | hex}
    set key-id <integer>
    set key-type {md5 | sha256}
    set server <string>
    set minpoll <integer>
    set maxpoll <integer>
  end
end

```

Variable	Description
status {enable   disable}	Enable/disable NTP time setting (default = enable).
<b>Variables for config ntpserver subcommand:</b>	
<id>	Time server ID.
ntpv3 {enable   disable}	Enable/disable NTPv3 (default = disable).
authentication {enable   disable}	Enable/disable MD5 authentication (default = disable).
key <passwd>	The authentication key (character limit = 63).
key-fmt {ascii   hex}	Select the key format (default = ascii).
key-id <integer>	The key ID for authentication (default = 0).
key-type {md5   sha256}	Select the key type (default = md5).
server <string>	Enter the IPv4 or IPv6 address or fully qualified domain name of the NTP server (default = ntpl.fortinet.com).

Variable	Description
minpoll <integer>	Minimum poll interval in seconds as power of 2 (e.g. 6 means 64 seconds, default = 6).
maxpoll <integer>	Maximum poll interval in seconds as power of 2 (e.g. 6 means 64 seconds, default = 10).

## password-policy

Use this command to configure access password policies.

### Syntax

```

config system password-policy
  set status {enable | disable}
  set minimum-length <integer>
  set must-contain {lower-case-letter non-alphanumeric number upper-case-letter}
  set change-4-characters {enable | disable}
  set expire <integer>
  set password-history <integer>
  set login-lockout-upon-downgrade {enable | disable}
end

```

Variable	Description
status {enable   disable}	Enable/disable the password policy (default = enable).
minimum-length <integer>	Set the password's minimum length (8 - 256, default = 8).
must-contain {lower-case-letter non-alphanumeric number upper-case-letter}	Characters that a password must contain. <ul style="list-style-type: none"> <li>lower-case-letter: the password must contain at least one lower case letter.</li> <li>non-alphanumeric: the password must contain at least one non-alphanumeric character.</li> <li>number: the password must contain at least one number.</li> <li>upper-case-letter: the password must contain at least one upper case letter.</li> </ul> Default = upper-case-letter lower-case-letter number non-alphanumeric.
change-4-characters {enable   disable}	Enable/disable changing at least 4 characters for a new password (default = disable).
expire <integer>	Set the number of days after which admin users' passwords will expire (0 - 3650, 0 = never, default = 0).
password-history <integer>	Set the number of unique new passwords that must be used before old password can be reused (0 - 20, default = 0).
login-lockout-upon-downgrade {enable   disable}	Enable/disable administrative user login lockout upon downgrade (default = disable).

Variable	Description
	If enabled, downgrading firmware to a lower version where safer passwords are unsupported will lock out administrative users.

## report

Use the following command to configure report related settings.

### report auto-cache

Use this command to view or configure report auto-cache settings.

#### Syntax

```
config system report auto-cache
  set aggressive-schedule {enable | disable}
  set order {latest-first | oldest-first}
  set sche-rpt-only {enable | disable}
  set status {enable | disable}
end
```

Variable	Description
aggressive-schedule {enable   disable}	Enable/disable auto-cache on schedule reports aggressively (default = disable).
order {latest-first   oldest-first}	The order of which SQL log table is processed first: <ul style="list-style-type: none"> <li>latest-first: The newest SQL log table is processed first.</li> <li>oldest-first: The oldest SQL log table is processed first (default).</li> </ul>
sche-rpt-only {enable   disable}	Enable/disable auto-cache on scheduled reports only (default = disable).
status {enable   disable}	Enable/disable the SQL report auto-cache (default = enable).

### report est-browse-time

Use this command to view or configure report settings.

#### Syntax

```
config system report est-browse-time
  set max-read-time <integer>
  set status {enable | disable}
```

end

Variable	Description
max-read-time <integer>	Set the read time threshold for each page view (1 - 3600, default = 180).
status {enable   disable}	Enable/disable estimating browse time (default = enable).

## report group

Use these commands to configure report groups.

### Syntax

```

config system report group
  edit <group-id>
    set adom <adom-name>
    set case-insensitive {enable | disable}
    set report-like <string>
    config chart-alternative
      edit <chart-name>
        set chart-replace <string>
      end
    config group-by
      edit <var-name>
        set var-expression <string>
        set var-type {enum | integer | ip | string}
      end
    end
  end
end

```

Variable	Description
<group-id>	The identification number of the group to be edited or created.
adom <adom-name>	The ADOM that contains the report group.
case-insensitive {enable   disable}	Enable/disable case sensitivity (default = enable).
report-like <string>	Report pattern.
<b>Variables for config chart-alternative subcommand:</b>	
<chart-name>	The chart name.
chart-replace <string>	Chart replacement.
<b>Variables for config group-by subcommand:</b>	
<var-name>	The variable name.
var-expression <string>	Variable expression.
var-type {enum   integer   ip   string}	Variable type (default = string).

## report setting

Use these commands to view or configure report settings.

### Syntax

```
config system report setting
  set aggregate-report {enable | disable}
  set capwap-port <integer>
  set capwap-service <string>
  set exclude-capwap {by-port | by-service | disable}
  set hcache-lossless {enable | disable}
  set ldap-cache-timeout <integer>
  set max-pdf-rows <integer>
  set max-table-rows <integer>
  set report-priority {auto | high | low}
  set template-auto-install {default | english}
  set week-start {mon | sun}
end
```

Variable	Description
aggregate-report {enable   disable}	Enable/disable including a group report along with the per-device reports (default = disable).
capwap-port <integer>	Exclude capwap traffic by port (default = 5246).
capwap-service <string>	Exclude capwap traffic by service.
exclude-capwap {by-port   by-service   disable}	Exclude capwap traffic (default = by-port).
hcache-lossless {enable   disable}	Enable/disable ready-with-loss hcache (default = disable).
ldap-cache-timeout <integer>	Set the LDAP cache timeout in minutes (0 = do not use cache, default = 60).
max-pdf-rows <integer>	Set the maximum number of rows that can be generated in a single PDF (1000 - 1000000, default = 10000).
max-table-rows <integer>	Set the maximum number of rows that can be generated in a single table (10000 - 100000, default = 100000).
report-priority {auto   high   low}	Set the Priority of the SQL report (default = auto).
template-auto-install {default   english}	Set the language used for new ADOMs (default = default).
week-start {mon   sun}	Set the day that the week starts on, either sun (Sunday) or mon (Monday) (default = sun).

## route

Use this command to view or configure static routing table entries on your FortiManager unit.

### Syntax

```
config system route
  edit <seq_int>
    set device <port>
    set dst <dst_ipv4mask>
    set gateway <gateway_ipv4_address>
  end
```

Variable	Description
<seq_int>	Enter an unused routing sequence number to create a new route. Enter an existing route number to edit that route.
device <port>	Enter the port (interface) used for this route.
dst <dst_ipv4mask>	Enter the IPv4 address and mask for the destination network.
gateway <gateway_ipv4_address>	Enter the default gateway IPv4 address for this network.

## route6

Use this command to view or configure static IPv6 routing table entries on your FortiManager unit.

### Syntax

```
config system route6
  edit <seq_int>
    set device <string>
    set dst <ipv6_prefix>
    set gateway <ipv6_address>
  end
```

Variable	Description
<seq_int>	Enter an unused routing sequence number to create a new route. Enter an existing route number to edit that route.
device <string>	Enter the port (interface) used for this route.
dst <ipv6_prefix>	Enter the IPv6 address and mask for the destination network.
gateway <ipv6_address>	Enter the default gateway IPv6 address for this network.

# saml

Use this command to configure global settings for SAML authentication.

## Syntax

```
config system saml
  set auth-request-signed {enable | disable}
  set cert <certificate>
  set default-profile <string>
  set digest-method {sha256 | sha512}
  set forticloud-sso {enable | disable}
  set idp-cert <string>
  set idp-digest-method {sha256 | sha512}
  set idp-entity-id <string>
  set idp-signature-algorithm {rsa-sha256 | rsa-sha512}
  set idp-single-logout-url <string>
  set idp-single-sign-on-url <string>
  set login-auto-redirect {enable | disable}
  set logout-request-signed {enable | disable}
  set logout-response-signed {enable | disable}
  set role {FAB-SP | IDP | SP}
  set server-address <string>
  set signature-algorithm {rsa-sha256 | rsa-sha512}
  set status {enable | disable}
  set user-auto-create {enable | disable}
  set want-assertions-signed {enable | disable}
config service-providers
  edit <name>
    set idp-entity-id <string>
    set idp-single-logout-url <string>
    set idp-single-sign-on-url <string>
    set prefix <string>
    set sp-adom <string>
    set sp-cert <string>
    set sp-entity-id <string>
    set sp-profile <string>
    set sp-single-logout-url <string>
    set sp-single-sign-on-url <string>
  next
end
config fabric-idp
  edit <device-id>
    set idp-cert <string>
    set idp-entity-id <string>
    set idp-single-logout-url <string>
    set idp-single-sign-on-url <string>
    set idp-status {enable | disable}
  next
end
end
```

Variable	Description
acs-url	The Assertion Consumer Service (acs) URL is set automatically once the server-address is configured. You can view the URL using the get command. This variable is only available when the role is FAB-SP or SP.
auth-request-signed {enable   disable}	Enable/disable auth request signed (default = disable).
cert <certificate>	The certificate name. This variable is only available when the status = enable and the role = IDP or SP.
default-profile <string>	The default profile (default = No_Permission_User).
digest-method {sha256   sha512}	Set the digest method for SP requests (default = sha256). This variable is only available when the role is SP.
entity-id	The entity ID is set automatically once the server-address is configured. You can view the entity ID using the get command. This variable is only available when the role is FAB-SP or SP.
forticloud-sso {enable   disable}	Enable/disable FortiCloud SSO (default = disable).
idp-cert <string>	The IDP certificate name. This variable is only available when the status = enable and the role = SP.
idp-digest-method {sha256   sha512}	Set the digest method for IDP assertions (default = sha256). This variable is only available when the role is IDP.
idp-entity-id <string>	The IDP entity ID. This variable is only available when the status = enable and the role = SP.
idp-signature-algorithm {rsa-sha256   rsa-sha512}	Set the signature algorithm for IDP assertions (default = rsa-sha256). This variable is only available when the role is IDP.
idp-single-logout-url <string>	The IDP single logout URL. This variable is only available when the status = enable and the role = SP.
idp-single-sign-on-url <string>	The IDP single sign-on URL. This variable is only available when the status = enable and the role = SP.
login-auto-redirect {enable   disable}	Enable/disable automatic redirect to the IDP login page (default = disable). This variable is only available when the status = enable and the role = SP.
logout-request-signed {enable   disable}	Enable/disable logout request signed (default = disable).
logout-response-signed {enable   disable}	Enable/disable logout response signed (default = disable).
role {FAB-SP   IDP   SP}	The SAML role:

Variable	Description
	<ul style="list-style-type: none"> <li>FAB-SP: Fabric service provider</li> <li>IDP: Identity provider</li> <li>SP: Service provider (default)</li> </ul> This variable is only available when the status = enable.
server-address <string>	The server address.
signature-algorithm {rsa-sha256   rsa-sha512}	Set the signature algorithm for SP requests (default = rsa-sha256). This variable is only available when the role is SP.
sls-url	The Single Logout Service (sls) URL is set automatically once the server-address is configured. You can view the URL using the get command. This variable is only available when the role is FAB-SP or SP.
status {enable   disable}	Enable/disable SAML authentication (default = disable).
user-auto-create {enable   disable}	Enable/disable automatic user creation (default = disable).
want-assertions-signed {enable   disable}	Enable/disable want assertions signed (default = disable).
<b>Variables for config service-providers subcommand:</b>	
This command is only available when role is IDP.	
<name>	Service provide name.
idp-entity-id <string>	The IDP entity ID.
idp-single-logout-url <string>	The IDP single logout URL.
idp-single-sign-on-url <string>	The IDP single sign-on URL.
prefix <string>	The prefix. Can contain only letters and numbers.
sp-adom <string>	The SP ADOM name.
sp-cert <string>	The SP certificate name.
sp-entity-id <string>	The SP entity ID.
sp-profile <string>	The SP profile name.
sp-single-logout-url <string>	The SP single sign-on URL.
sp-single-sign-on-url <string>	The SP single logout URL.
<b>Variables for config fabric-idp subcommand:</b>	
This command is only available when role is FAB-SP.	
<device-id>	Device ID.
idp-cert <string>	The IDP certificate name.
idp-entity-id <string>	The IDP entity ID.

Variable	Description
idp-single-logout-url <string>	The IDP single logout URL.
idp-single-sign-on-url <string>	The IDP single sign-on URL.
idp-status {enable   disable}	Enable/disable SAML authentication (default = disable).

To view the service provider IdP information, use the following commands:

```
config system saml
  config service-providers
    edit <name>
      get
```

Output:

```
name : name
prefix : y9jr06vq0k
sp-cert : (null)
sp-entity-id : http://https://172.27.2.225//metadata/
  sp-single-sign-on-url: https://https://172.27.2.225//saml/?acs
  sp-single-logout-url: https://https://172.27.2.225//saml/?sls
sp-adom: (null)
sp-profile: (null)
idp-entity-id : http://172.27.2.225/saml-idp/y9jr06vq0k/metadata/
idp-single-sign-on-url: https://172.27.2.225/saml-idp/y9jr06vq0k/login/
idp-single-logout-url: https://172.27.2.225/saml-idp/y9jr06vq0k/logout/
```

## sniffer

Configure packet sniffing.

### Syntax

```
config system sniffer
  edit <id>
    set host <string>
    set interface <interface>
    set ipv6 {enable | disable}
    set max-packet-count <integer>
    set non-ip {enable | disable}
    set port <string>
    set protocol <string>
    set vlan <string>
  next
end
```

Variable	Description
<id>	Sniffer ID.
host <string>	IP addresses of the hosts to filter for in sniffer traffic. Multiple individual IP addresses and ranges of addresses can be entered.
interface <interface>	The interface to sniff.
ipv6 {enable   disable}	Enable/disable sniffing IPv6 packets.
max-packet-count <integer>	The maximum packet count (1 - 1000000, default - 4000).
non-ip {enable   disable}	Enable/disable sniffing non-IP packets.
port <string>	The ports to sniff. Individual ports or port ranges can be entered.
protocol <string>	Integer value for the protocol type as defined by IANA (0 - 255).
vlan <string>	The VLANs to sniff.

## snmp

Use the following commands to configure SNMP related settings.

### snmp community

Use this command to configure SNMP communities on your FortiManager unit.

You add SNMP communities so that SNMP managers, typically applications running on computers to monitor SNMP status information, can connect to the FortiManager unit (the SNMP agent) to view system information and receive SNMP traps. SNMP traps are triggered when system events happen such as when there is a system restart, or when the log disk is almost full.

You can add up to three SNMP communities, and each community can have a different configuration for SNMP queries and traps. Each community can be configured to monitor the FortiManager unit for a different set of events.

Hosts are the SNMP managers that make up this SNMP community. Host information includes the IPv4 address and interface that connects it to the FortiManager unit.

For more information on SNMP traps and variables, see the [Fortinet Document Library](#).



Part of configuring an SNMP manager is to list it as a host in a community on the FortiManager unit that it will be monitoring. Otherwise that SNMP manager will not receive any traps or events from the FortiManager unit, and will be unable to query the FortiAnalyzer unit as well.

## Syntax

```

config system snmp community
  edit <index_number>
    set events <events_list>
    set name <community_name>
    set query-v1-port <integer>
    set query-v1-status {enable | disable}
    set query-v2c-port <integer>
    set query-v2c-status {enable | disable}
    set status {enable | disable}
    set trap-v1-rport <integer>
    set trap-v1-status {enable | disable}
    set trap-v2c-rport <integer>
    set trap-v2c-status {enable | disable}
  config hosts
    edit <host_number>
      set interface <interface_name>
      set ip <ipv4_address>
    next
  config hosts6
    edit <host_number>
      set interface <interface_name>
      set ip <ipv6_address>
    end
  end
end

```

Variable	Description
<index_number>	Enter the index number of the community in the SNMP communities table. Enter an unused index number to create a new SNMP community.
events <events_list>	<p>Enable the events for which the FortiManager unit should send traps to the SNMP managers in this community (default = All events enabled). The raid_changed event is only available for devices that support RAID.</p> <ul style="list-style-type: none"> <li>cpu-high-exclude-nice: CPU usage exclude NICE threshold.</li> <li>cpu_high: CPU usage too high.</li> <li>disk_low: Disk usage too high.</li> <li>ha_switch: HA switch.</li> <li>intf_ip_chg: Interface IP address changed.</li> <li>lic-dev-quota: High licensed device quota detected.</li> <li>lic-gbday: High licensed log GB/day detected.</li> <li>log-alert: Log base alert message.</li> <li>log-data-rate: High incoming log data rate detected.</li> <li>log-rate: High incoming log rate detected.</li> <li>mem_low: Available memory is low.</li> <li>raid_changed: RAID status changed.</li> <li>sys_reboot: System reboot.</li> </ul>
name <community_name>	Enter the name of the SNMP community. Names can be used to distinguish between the roles of the hosts in the groups.

Variable	Description
	For example the Logging and Reporting group would be interested in the <code>disk_low</code> events, but likely not the other events. The name is included in SNMPv2c trap packets to the SNMP manager, and is also present in query packets from, the SNMP manager.
<code>query-v1-port &lt;integer&gt;</code>	Enter the SNMPv1 query port number used when SNMP managers query the FortiManager unit (1 - 65535, default = 161).
<code>query-v1-status {enable   disable}</code>	Enable/disable SNMPv1 queries for this SNMP community (default = enable).
<code>query-v2c-port &lt;integer&gt;</code>	Enter the SNMP v2c query port number used when SNMP managers query the FortiManager unit. SNMP v2c queries will include the name of the community (1 - 65535, default = 161).
<code>query-v2c-status {enable   disable}</code>	Enable/disable SNMPv2c queries for this SNMP community (default = enable).
<code>status {enable   disable}</code>	Enable/disable this SNMP community (default = enable).
<code>trap-v1-rport &lt;integer&gt;</code>	Enter the SNMPv1 remote port number used for sending traps to the SNMP managers (1 - 65535, default = 162).
<code>trap-v1-status {enable   disable}</code>	Enable/disable SNMPv1 traps for this SNMP community (default = enable).
<code>trap-v2c-rport &lt;integer&gt;</code>	Enter the SNMPv2c remote port number used for sending traps to the SNMP managers (1 - 65535, default = 162).
<code>trap-v2c-status {enable   disable}</code>	Enable/disable SNMPv2c traps for this SNMP community. SNMP v2c traps sent out to SNMP managers include the community name (default = enable).
<b>Variables for <code>config hosts</code> subcommand:</b>	
<code>&lt;host_number&gt;</code>	Enter the index number of the host in the table. Enter an unused index number to create a new host.
<code>interface &lt;interface_name&gt;</code>	Enter the name of the FortiManager unit that connects to the SNMP manager (default = any).
<code>ip &lt;ipv4_address&gt;</code>	Enter the IPv4 address of the SNMP manager.
<b>Variables for <code>config hosts6</code> subcommand:</b>	
<code>&lt;host_number&gt;</code>	Enter the index number of the host in the table. Enter an unused index number to create a new host.
<code>interface &lt;interface_name&gt;</code>	Enter the name of the FortiManager unit that connects to the SNMP manager (default = any).
<code>ip &lt;ipv6_address&gt;</code>	Enter the IPv6 address of the SNMP manager.

## Example

This example shows how to add a new SNMP community named `SNMP_Com1`. The default configuration can be used in most cases with only a few modifications. In the example below the community is added, given a name, and then because this community is for an SNMP manager that is SNMP v1 compatible, all v2c functionality is

disabled. After the community is configured the SNMP manager, or host, is added. The SNMP manager IPv4 address is 192.168.20.34 and it connects to the FortiManager unit internal interface.

```
config system snmp community
  edit 1
  set name SNMP_Com1
  set query-v2c-status disable
  set trap-v2c-status disable
  config hosts
    edit 1
    set interface internal
    set ip 192.168.10.34/24
  end
end
```

## snmp sysinfo

Use this command to enable the FortiManager SNMP agent and to enter basic system information used by the SNMP agent. Enter information about the FortiManager unit to identify it. When your SNMP manager receives traps from the FortiManager unit, you will know which unit sent the information. Some SNMP traps indicate high CPU usage, log full, or low memory.

For more information on SNMP traps and variables, see the [Fortinet Document Library](#).

### Syntax

```
config system snmp sysinfo
  set contact-info <string>
  set description <description>
  set engine-id <string>
  set location <location>
  set status {enable | disable}
  set trap-high-cpu-threshold <percentage>
  set trap-low-memory-threshold <percentage>
  set trap-cpu-high-exclude-nice-threshold <percentage>
end
```

Variable	Description
contact-info <string>	Add the contact information for the person responsible for this FortiManager unit (character limit = 255).
description <description>	Add a name or description of the FortiManager unit (character limit = 255).
engine-id <string>	Local SNMP engine ID string (character limit = 24).
location <location>	Describe the physical location of the FortiManager unit (character limit = 255).
status {enable   disable}	Enable/disable the FortiManager SNMP agent (default = disable).
trap-cpu-high-exclude-nice-threshold <percentage>	SNMP trap for CPU usage threshold (excluding NICE processes), in percent (default = 80).

Variable	Description
trap-high-cpu-threshold <percentage>	SNMP trap for CPU usage threshold, in percent (default = 80).
trap-low-memory-threshold <percentage>	SNMP trap for memory usage threshold, in percent (default = 80).

## Example

This example shows how to enable the FortiManager SNMP agent and add basic SNMP information.

```
config system snmp sysinfo
  set status enable
  set contact-info 'System Admin ext 245'
  set description 'Internal network unit'
  set location 'Server Room A121'
end
```

## snmp user

Use this command to configure SNMPv3 users on your FortiManager unit. To use SNMPv3, you will first need to enable the FortiManager SNMP agent. For more information, see [snmp sysinfo](#). There should be a corresponding configuration on the SNMP server in order to query to or receive traps from FortiManager.

For more information on SNMP traps and variables, see the [Fortinet Document Library](#).

## Syntax

```
config system snmp user
  edit <name>
    set auth-proto {md5 | sha | sha224 | sha256 | sha384 | sha512}
    set auth-pwd <passwd>
    set events <events_list>
    set notify-hosts <ipv4_address>
    set notify-hosts6 <ipv6_address>
    set notify-port <integer>
    set priv-proto {aes | aes256 | aes256cisco | des}
    set priv-pwd <passwd>
    set queries {enable | disable}
    set query-port <integer>
    set security-level {auth-no-priv | auth-priv | no-auth-no-priv}
  end
end
```

Variable	Description
<name>	Enter a SNMPv3 user name to add, edit, or delete.
auth-proto {md5   sha   sha224   sha256   sha384   sha512}	Authentication protocol. The security level must be set to auth-no-priv or auth-priv to use this variable:

Variable	Description
	<ul style="list-style-type: none"> <li>md5: HMAC-MD5-96 authentication protocol.</li> <li>sha: HMAC-SHA-96 authentication protocol (default).</li> <li>sha224: HMAC-SHA224 authentication protocol.</li> <li>sha256: HMAC-SHA256 authentication protocol.</li> <li>sha384: HMAC-SHA384 authentication protocol.</li> <li>sha512: HMAC-SHA512 authentication protocol.</li> </ul>
auth-pwd <passwd>	Password for the authentication protocol. The security level must be set to auth-no-priv or auth-priv to use this variable.
events <events_list>	<p>Enable the events for which the FortiManager unit should send traps to the SNMPv3 managers in this community (default = All events enabled). The raid_changed event is only available for devices which support RAID.</p> <ul style="list-style-type: none"> <li>cpu-high-exclude-nice: CPU usage exclude nice threshold.</li> <li>cpu_high: The CPU usage is too high.</li> <li>disk_low: The log disk is getting close to being full.</li> <li>ha_switch: A new unit has become the primary HA.</li> <li>intf_ip_chg: An interface IP address has changed.</li> <li>lic-dev-quota: High licensed device quota detected.</li> <li>lic-gbday: High licensed log GB/Day detected.</li> <li>log-alert: Log base alert message.</li> <li>log-data-rate: High incoming log data rate detected.</li> <li>log-rate: High incoming log rate detected.</li> <li>mem_low: The available memory is low.</li> <li>raid_changed: RAID status changed.</li> <li>sys_reboot: The FortiManager unit has rebooted.</li> </ul>
notify-hosts <ipv4_address>	Hosts to send notifications (traps) to.
notify-hosts6 <ipv6_address>	Hosts to send notifications (traps) to.
notify-port <integer>	Set the SNMPv3 trap remote port (default = 162).
priv-proto {aes   aes256   aes256cisco   des}	<p>Privacy (encryption) protocol. The security level must be set to auth-priv to use this variable:</p> <ul style="list-style-type: none"> <li>aes: CFB128-AES-128 symmetric encryption protocol (default).</li> <li>aes256: CBC-AES-256 symmetric encryption protocol.</li> <li>aes256cisco: CBC-AES-256 symmetric encryption protocol compatible with CISCO.</li> <li>des: CBC-DES symmetric encryption protocol.</li> </ul>
priv-pwd <passwd>	Password for the privacy (encryption) protocol. The security level must be set to auth-priv to use this variable.
queries {enable   disable}	Enable/disable queries for this user (default = enable)
query-port <integer>	SNMPv3 query port (1 - 65535, default = 161).
security-level {auth-no-priv   auth-priv   no-auth-no-priv}	<p>Security level for message authentication and encryption:</p> <ul style="list-style-type: none"> <li>auth-no-priv: Message with authentication but no privacy (encryption).</li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>auth-priv: Message with authentication and privacy (encryption).</li> <li>no-auth-no-priv: Message with no authentication and no privacy (encryption) (default).</li> </ul>

## soc-fabric

Use this command to configure the SOC Fabric.

### Syntax

```

config system soc-fabric
  set name <string>
  set port <integer>
  set role {member | supervisor}
  set secure-connection {enable | disable}
  set status {enable | disable}
  set supervisor <string>
  config trusted-list
    edit <id>
      set serial <string>
    next
  end
end

```

Variable	Description
name <string>	Enter the Fabric name.
port <integer>	Set the communication port (1 - 65535, default = 6443).
role {member   supervisor}	Set the SOC Fabric role (default = member).
secure-connection {enable   disable}	Enable/disable SSL/TLS (default = enable).
status {enable   disable}	Enable/disable SOC Fabric (default = disable).
supervisor <string>	Enter the IP/FQDN of the supervisor.
<b>Variables for config trusted-list subcommand:</b>	
<id>	Enter the ID for the trusted-list.
serial <string>	Enter a serial number to add to the trusted-list. Wildcard (*) is supported.

## sql

Configure Structured Query Language (SQL) settings.


### Syntax

```

config system sql
  set background-rebuild {enable | disable}
  set compress-table-min-age <integer>
  set database-type <postgres>
  set device-count-high {enable | disable}
  set event-table-partition-time <integer>
  set fct-table-partition-time <integer>
  set prompt-sql-upgrade {enable | disable}
  set start-time <hh>:<mm> <yyyy>/<mm>/<dd>
  set status {disable | local}
  set text-search-index {enable | disable}
  set traffic-table-partition-time <integer>
  set utm-table-partition-time <integer>
  config custom-index
    edit <id>
      set device-type <device>
      set index-field <string>
      set log-type <log type>
    next
  end
  config custom-skipidx
    edit <id>
      set device-type <device>
      set index-field <string>
      set log-type <log type>
    next
  end
  config ts-index-field
    edit <category>
      set <value> <string>
    next
  end
end

```

Variable	Description
background-rebuild {enable   disable}	Disable/enable rebuilding the SQL database in the background (default = enable).
compress-table-min-age <integer>	Minimum age in days for SQL tables to be compressed (0 - 10000, default = 7). <b>Note:</b> 0-day allows you to compress SQL tables with less than one-day of age.

Variable	Description
database-type <postgres>	Database type (default = postgres).
device-count-high {enable   disable}	<p>Enable/disable a high device count (default = disable). You must set to enable if the count of registered devices is greater than 8000:</p> <ul style="list-style-type: none"> <li>• <code>disable</code>: Set to disable if device count is less than 8000.</li> <li>• <code>enable</code>: Set to enable if device count is equal to or greater than 8000.</li> </ul> <hr/> <div style="display: flex; align-items: center;">  <p>Enabling or disabling this command will result in an SQL database rebuild. The time required to rebuild the database is dependent on the size of the database. Please plan a maintenance window to complete the database rebuild. This operation will also result in a device reboot.</p> </div> <hr/>
event-table-partition-time <integer>	Maximum SQL database table partitioning time range for event logs, in minutes (3 - 1440, 0 = unlimited, default = 0).
fct-table-partition-time <integer>	Maximum SQL database table partitioning time range for FortiClient logs, in minutes (6 - 1440, 0 = unlimited, default = 360).
prompt-sql-upgrade {enable   disable}	Prompt to convert log database into SQL database at start time on GUI (default = enable).
start-time <hh>:<mm> <yyyy>/<mm>/<dd>	The date and time that logs will start to be inserted.
status {disable   local}	<p>SQL database status:</p> <ul style="list-style-type: none"> <li>• <code>disable</code>: Disable SQL database.</li> <li>• <code>local</code>: Enable local database (default).</li> </ul>
text-search-index {enable   disable}	Enable/disable the creation of a text search index (default = disable).
traffic-table-partition-time <integer>	Maximum SQL database table partitioning time range for traffic logs (1 - 1440, 0 = unlimited, default = 0).
utm-table-partition-time <integer>	Maximum SQL database table partitioning time range in minutes for UTM logs (1 - 1440, 0 = unlimited, default = 0).
<b>Variables for <code>config custom-index</code> subcommand:</b>	
device-type <device type>	Set the device type.

Variable	Description																						
index-field <string>	Enter a valid field name. Select one of the available field names. The available options for index-field is dependent on the device-type entry.																						
log-type <log type>	Enter the log type. The available options for log-type is dependent on the device-type entry.																						
<b>Variables for config custom-skipidx subcommand:</b>																							
List of additional SQL skip index fields.																							
device-type <device type>	Set the device type.																						
index-field <string>	Enter a valid field name. Select one of the available field names. The available options depend on the device-type.																						
log-type <log type>	Enter the log type. The available options depend on the device-type.																						
<b>Variables for config ts-index-field subcommand:</b>																							
<category>	Category of the text search index fields. The following is the list of categories and their default fields.																						
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Categor	Value						
y							
FWB-traffic	src,dst,service,http_method,msg						
value <string>	Fields of the text search filter. Enter one or more field names separated with a comma.						

## syslog

Use this command to configure syslog servers.

### Syntax

```

config system syslog
  edit <name>
    set ip <string>
    set local-cert {Fortinet_Local | Fortinet_Local2}
    set peer-cert-cn <string>
    set port <integer>
    set reliable {enable | disable}
    set secure-connection {enable | disable}
    set ssl-protocol {follow-global-ssl-portocol | sslv3 | tlsv1.0 | tlsv1.1 | tlsv1.2 |
      tlsv1.3}
  end
end

```

Variable	Description
<name>	Syslog server name.
ip <string>	Enter the syslog server IPv4/IPv6 address or hostname.
local-cert {Fortinet_Local   Fortinet_Local2}	Select from the two available local certificates used for secure connection. This variable is only available when secure-connection is enabled.
peer-cert-cn <string>	Certificate common name of syslog server. This variable is only available when secure-connection is enabled. <b>Note:</b> Null or '-' means no certificate CN for the syslog server.
port <integer>	Enter the syslog server port (1 - 65535, default = 514).
reliable {enable   disable}	Enable/disable reliable connection with syslog server (default = disable).
secure-connection {enable   disable}	Enable/disable connection secured by TLS/SSL (default = disable). This variable is only available when reliable is enabled.

Variable	Description
ssl-protocol {follow-global-ssl-protocol   sslv3   tlsv1.0   tlsv1.1   tlsv1.2   tlsv1.3}	<p>Set the lowest SSL protocol version for connection to syslog server (default = follow-global-ssl-protocol).</p> <p>This variable is only available when reliable and secure-connection are enabled.</p> <p>The follow-global-ssl-protocol setting follows the setting for:</p> <pre>config system global   set global-ssl-protocol {sslv3   tlsv1.0   tlsv1.1   tlsv1.2       tlsv1.3}</pre>

## web-proxy

Use this command to configure the system web proxy.

### Syntax

```
config system web-proxy
  set address <string>
  set mode {proxy | tunnel}
  set password <passwd>
  set port <integer>
  set status {enable | disable}
  set username <string>
end
```

Variable	Description
address <string>	Enter the web proxy address.
mode {proxy   tunnel}	Enter the web proxy mode (default = tunnel). <ul style="list-style-type: none"> <li>tunnel mode uses port TCP/443.</li> <li>proxy mode uses port TCP/80.</li> </ul>
password <passwd>	Enter the password for the user name used for authentication (default = *).
port <integer>	Enter the port number of the web proxy (1 - 65535, default = 1080).
status {enable   disable}	Enable/disable system web proxy (default = disable).
username <string>	Enter the user name used for authentication.

## workflow approval-matrix

Use this command to configure workflow settings.

## Syntax

```

config system workflow approval-matrix
  edit <ADOM_name>
    set mail-server <string>
    set notify <string>
    config approver
      edit <sequence_number>
        set member <string>
      end
    end
  end
end

```

Variable	Description
<ADOM_name>	The name of the ADOM.
mail-server <string>	Enter the mail server IPv4 address or hostname.
notify <string>	Enter the notified users. Use a comma as a separator.
<b>Variables for config approver subcommand:</b>	
<sequence_number>	Enter the entry number.
member <string>	Enter the members of the approval group. Use a comma as a separator.

## Example

This example shows configuring the admin administrator as an approver for the root ADOM.

```

config system workflow approval-matrix
  edit "root"
    config approver
      edit 1
        set member "admin"
      next
    end
    set mail-server "mail.fortinet.com"
    set notify "admin"
  end
end

```

# fmupdate

Use `fmupdate` to configure settings related to FortiGuard service updates and the FortiManager unit's built-in FDS.



CLI commands and variables are case sensitive.

<code>analyzer virusreport</code>	<code>fds-setting</code>	<code>server-access-priorities</code>
<code>av-ips advanced-log</code>	<code>fgd-setting</code>	<code>server-override-status</code>
<code>custom-url-list</code>	<code>fwm-setting</code>	<code>service</code>
<code>disk-quota</code>	<code>multilayer</code>	
<code>fct-services</code>	<code>publicnetwork</code>	



TCP port numbers cannot be used by multiple services at the same time with the same IP address. If a port is already in use, it cannot be assigned to another service. For example, HTTPS and HTTP cannot have the same port number.

## analyzer virusreport

Use this command to enable or disable notification of virus detection to FortiGuard.

### Syntax

```
config fmupdate analyzer virusreport
  set status {enable | disable}
end
```

Variable	Description
<code>status {enable   disable}</code>	Enable/disable sending virus detection notification to FortiGuard (default = enable).

### Example

This example enables virus detection notifications to FortiGuard.

```
config fmupdate analyzer virusreport
```

```
    set status enable
end
```

## av-ips advanced-log

Use this command to enable logging of FortiGuard antivirus and IPS update packages received by the FortiManager unit's built-in FDS from the external FDS.

### Syntax

```
config fmupdate av-ips advanced-log
    set log-fortigate {enable | disable}
    set log-server {enable | disable}
end
```

Variable	Description
log-fortigate {enable   disable}	Enable/disable logging of FortiGuard antivirus and IPS service updates of FortiGate devices (default = disable).
log-server {enable   disable}	Enable/disable logging of update packages received by the built-in FDS server (default = enable).

### Example

You could enable logging of FortiGuard antivirus updates to FortiClient installations and update packages downloaded by the built-in FDS from the FDS.

```
config fmupdate av-ips advanced-log
    set log-forticlient enable
    set log-server enable
end
```

## custom-url-list

Use this command to configure the URL database for rating and filtering. You can select to use the FortiGuard URL database, a custom URL database, or both. When selecting to use a custom URL database, use the `fmupdate {ftp | scp | tftp} import` command to import the custom URL list. When FortiManager performs the URL rating, it will check the custom URL first. If a match is found, the custom rating is returned. If there is no match, then FortiManager will check the FortiGuard database.

### Syntax

```
config fmupdate custom-url-list
```

```

    set db_selection {both | custom-url | fortiguard-db}
end

```

Variable	Description
db_selection {both   custom-url   fortiguard-db}	Manage the FortiGuard URL database: <ul style="list-style-type: none"> <li>• both: Support both custom URL database and the FortiGuard database (default)</li> <li>• custom-url: Customer imported URL list.</li> <li>• fortiguard-db: Fortinet's FortiGuard database</li> </ul>

## disk-quota

Use this command to configure the disk space available for use by the Upgrade Manager.

If the Upgrade Manager disk space is full or if there is insufficient space to save an update package to disk, the package will not download and an alert will be sent to notify you.

### Syntax

```

config fmupdate disk-quota
    set value <size_int>
end

```

Variable	Description
value <size_int>	Configure the size of the Upgrade Manager disk quota, in megabytes (default = 51200). If you set the disk-quota smaller than the size of an update package, the update package will not download and you will get a disk full alert.

## fct-services

Use this command to configure the built-in FDS to provide FortiGuard services to FortiClient installations.

### Syntax

```

config fmupdate fct-services
    set status {enable | disable}
    set port <integer>
end

```

Variable	Description
status {enable   disable}	Enable/disable built-in FDS service to FortiClient installations (default = enable).
port <integer>	Enter the port number on which the built-in FDS should provide updates to FortiClient installations (1 - 65535, default = 80).

## Example

You could configure the built-in FDS to accommodate older versions of FortiClient installations by providing service on their required port.

```
config fmupdate fct-services
  set status enable
  set port 80
end
```

## fds-setting

Use this command to set FDS settings.

### Syntax

```
config fmupdate fds-setting
  set controller-contract-download {enable | disable}
  set fds-clt-ssl-protocol {ssl3 | tlsv1.0 | tlsv1.1 | tlsv1.2}
  set fds-ssl-protocol {ssl3 | tlsv1.0 | tlsv1.1 | tlsv1.2}
  set fmtr-log {alert | critical | debug | disable | emergency | error | info | notice | warn}
  set fortiguard-anycast {enable | disable}
  set fortiguard-anycast-source {aws | fortinet}
  set linkd-log {alert | critical | debug | disable | emergency | error | info | notice | warn}
  set max-av-ips-version <integer>
  set max-work <integer>
  set send_report {enable | disable}
  set send_setup {enable | disable}
  set system-support-fai {7.x}
  set system-support-faz {6.x 7.x}
  set system-support-fct {4.x 5.0 5.2 5.4 5.6 6.0 6.2 6.4 7.0 7.2 7.4}
  set system-support-fdc {3.x 4.x 5.x 6.x}
  set system-support-fgt {5.4 5.6 6.0 6.2 6.4 7.0 7.2 7.4 7.6}
  set system-support-fis {1.x 2.x}
  set system-support-fml {4.x 5.x 6.x 7.x}
  set system-support-fsa {1.x 2.x 3.0 3.1 3.2 3.x 4.x 5.x}
  set system-support-fts {3.x 4.x 7.x}
  set umsvc-log {alert | critical | debug | disable | emergency | error | info | notice | warn}
  set unreg-dev-option {add-service | ignore | svc-only}
  set User-Agent <text>
  set wanip-query-mode {disable | ipify}
end
```

Variable	Description
controller-contract-download {enable   disable}	Enable/disable automatic download controller contract information (default = disable).
fds-clt-ssl-protocol {ssl3   tls1.0   tls1.1   tls1.2}	Set the SSL protocols version for connecting FDS server (default = tls1.2).
fds-ssl-protocol {ssl3   tls1.0   tls1.1   tls1.2}	Set the SSL protocols version for FDS service (default = tls1.0).
fmtr-log {alert   critical   debug   disable   emergency   error   info   notice   warn}	The fmtr log level. Set to disable to disable the log (default = info).
fortiguard-anycast {enable   disable}	Enable/disable use of FortiGuard's anycast network (default = disable).
fortiguard-anycast-source {aws   fortinet}	Configure which servers provide FortiGuard services in FortiGuard's anycast network (default = fortinet).
linkd-log {alert   critical   debug   disable   emergency   error   info   notice   warn}	The linkd log level (default = info).
max-av-ips-version <integer>	The maximum number of AV/IPS full version downloadable packages (default = 20).
max-work <integer>	The maximum number of worker processing downlink requests (default = 1).
send_report {enable   disable}	Enable/disable sending reports to the FDS server (default = enable).
send_setup {enable   disable}	Enable/disable sending setup to the FDS server (default = disable).
system-support-fai {7.x}	Set the FortiAI support version.
system-support-faz {6.x 7.x}	Set the FortiAnalyzer support version.
system-support-fct {4.x 5.0 5.2 5.4 5.6 6.0 6.2 6.4 7.0 7.2 7.4}	Set the FortiClient support version.
system-support-fdc {3.x 4.x 5.x 6.x}	Set the FortiDeceptor support version.
system-support-fgt {5.4 5.6 6.0 6.2 6.4 7.0 7.2 7.4 7.6}	Set the FortiGate support version.
system-support-fis {1.x 2.x}	Set the FortiSolator support version.
system-support-fml {4.x 5.x 6.x 7.x}	Set the FortiMail support version.
system-support-fsa {1.x 2.x 3.0 3.1 3.2 3.x 4.x 5.x}	Set the FortiSandbox support version.

Variable	Description
system-support-fts {3.x 4.x 7.x}	Set the FortiTester support version.
umsvc-log {alert   critical   debug   disable   emergency   error   info   notice   warn}	The um_service log level (default = info).
unreg-dev-option {add-service   ignore   svc-only}	Set the option for unregistered devices: <ul style="list-style-type: none"> <li>add-service: Add unregistered devices and allow update request (default).</li> <li>ignore: Ignore all unregistered devices.</li> <li>svc-only: Allow update request without add unregistered device.</li> </ul>
User-Agent <text>	Configure the User-Agent string.
wanip-query-mode {disable   ipify}	Set the public IP query mode. <ul style="list-style-type: none"> <li>disable: Do not query public IP (default)</li> <li>ipify: Get public IP through https://api.ipify.org</li> </ul>

## fds-setting push-override

Use this command to enable or disable push updates, and to override the default IP address and port to which the FDS sends FortiGuard antivirus and IPS push messages.

This is useful if push notifications must be sent to an IP address and/or port other than the FortiManager unit, such as the external or virtual IP address of a NAT device that forwards traffic to the FortiManager unit.

### Syntax

```
config fmupdate fds-setting
  config push-override
    set ip <ipv_address>
    set port <integer>
    set status {enable | disable}
  end
end
```

Variable	Description
ip <ipv_address>	Enter the external or virtual IP address of the NAT device that will forward push messages to the FortiManager unit.
port <integer>	Enter the receiving port number on the NAT device (1 - 65535, default = 9443).
status {enable   disable}	Enable/disable the push updates (default = disable).

## Example

You could enable the FortiManager unit's built-in FDS to receive push messages.

If there is a NAT device or firewall between the FortiManager unit and the FDS, you could also notify the FDS to send push messages to the external IP address of the NAT device, instead of the FortiManager unit's private network IP address.

```
config fmupdate fds-setting
  config push-override
    set status enable
    set ip 172.16.124.135
    set port 9000
  end
end
```

You would then configure port forwarding on the NAT device, forwarding push messages received on User Datagram Protocol (UDP) port 9000 to the FortiManager unit on UDP port 9443.

## fds-setting push-override-to-client

Use this command to define which FortiManager IP addresses/ports are announced to devices for which the FortiManager provides FDS services. By default, FortiManager will announce all its interfaces using the port 8890.

### Syntax

```
config fmupdate fds-setting
  config push-override-to-client
    set status {enable | disable}
    config <announce-ip>
      edit <id>
        set ip <ip_address>
        set port <integer>
      end
    end
  end
end
```

Variable	Description
status {enable   disable}	Enable/disable the push updates (default = disable).
<b>Variables for config announce-ip subcommand:</b>	
<id>	Edit the announce IP address ID (1 - 10).
ip <ip_address>	Enter the announce IP address.
port <integer>	Enter the announce IP port (1 - 65535, default = 8890).

## fds-setting server-override

Use this command to override the default IP address and port that the built-in FDS contacts when requesting FortiGuard spam updates.

### Syntax

```
config fmupdate fds-setting
  config server-override
    set status {enable | disable}
    config servlist
      edit <id>
        set ip <ipv4_address>
        set ip6 <ipv6_address>
        set port <integer>
        set server-type {fai | fct | fds}
      end
    end
  end
end
```

Variable	Description
status {enable   disable}	Enable/disable the override (default = disable).
<b>Variable for config servlist subcommand:</b>	
<id>	Enter the override server ID (1 - 10).
ip <ipv4_address>	Enter the IPv4 address of the override server address.
ip6 <ipv6_address>	Enter the IPv6 address of the override server address.
port <integer>	Enter the port number to use when contacting the FDS (1 - 65535, default = 443).
server-type {fai   fct   fds}	Set the override server type (default = fds).

## fds-setting update-schedule

Use this command to schedule when the built-in FortiGuard retrieves antivirus and IPS updates.

### Syntax

```
config fmupdate fds-setting
  config update-schedule
    set day {Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday}
    set frequency {every | daily | weekly}
    set status {enable | disable}
    set time <hh:mm>
  end
end
```

Variable	Description
day {Sunday   Monday   Tuesday   Wednesday   Thursday   Friday   Saturday}	The day that the update will occur (Sunday - Saturday, default = Monday). This option is only available if the update frequency is weekly.
frequency {every   daily   weekly}	The update frequency: every given time interval, once a day, or once a week (default = every).
status {enable   disable}	Enable/disable scheduled updates (default = enable).
time <hh:mm>	The time interval between updates, or the hour and minute when the update occurs (hh: 0 - 23, mm: 0 - 59 or 60 = random, default = 00:10).

## fgd-setting

Use this command to configure FortiGuard run parameters.

### Syntax

```

config fmupdate fgd-setting
  set as-cache <integer>
  set as-log {all | disable | nospam}
  set as-preload {enable | disable}
  set av-cache <integer>
  set av-log {all | disable | novirus}
  set av-preload {enable | disable}
  set av2-cache <integer>
  set av2-log {all | disable | noav2}
  set av2-preload {enable | disable}
  set eventlog-query {enable | disable}
  set fgd-pull-interval <integer>
  set fq-cache <integer>
  set fq-log {all | disable | nofilequery}
  set fq-preload {enable | disable}
  set iot-cache <integer>
  set iot-log {all | disable | nofilequery}
  set iot-preload {enable | disable}
  set iotv-preload {enable | disable}
  set linkd-log {enable | disable}
  set max-client-worker <integer>
  set max-log-quota <integer>
  set max-unrated-size <integer>
  set restrict-as1-dbver <string>
  set restrict-as2-dbver <string>
  set restrict-as4-dbver <string>
  set restrict-av-dbver <string>
  set restrict-av2-dbver <string>
  set restrict-fq-dbver <string>
  set restrict-iots-dbver <string>
  set restrict-wf-dbver <string>

```

```

set stat-log {alert | critical | debug | disable | emergency | error | info | notice | warn}
set stat-log-interval <integer>
set stat-sync-interval <integer>
set update-interval <integer>
set update-log {enable | disable}
set wf-cache <integer>
set wf-dn-cache-expire-time <integer>
set wf-dn-cache-max-number <integer>
set wf-log {all | disable | nouri}
set wf-preload {enable | disable}
config server-override
  set status {enable | disable}
  config servlist
    edit <id>
      set ip <ipv4_address>
      set ip6 <ipv6_address>
      set port <integer>
      set service-type {fgc | fgd | fsa}
    end
  end
end

```

Variable	Description
as-cache <integer>	Antispam service maximum memory usage, in megabytes (maximum = physical memory-1024, 0 = no limit, default = 300).
as-log {all   disable   nospam}	Antispam log setting: <ul style="list-style-type: none"> <li>all: Log all spam lookups.</li> <li>disable: Disable spam log.</li> <li>nospam: Log non-spam events (default)</li> </ul>
as-preload {enable   disable}	Enable/disable preloading the antispam database into memory (default = disable).
av-cache <integer>	Antivirus service maximum memory usage, in megabytes (100 - 500, default = 300).
av-log {all   disable   novirus}	Antivirus log setting: <ul style="list-style-type: none"> <li>all: Log all virus lookups.</li> <li>disable: Disable virus log.</li> <li>novirus: Log non-virus events (default).</li> </ul>
av-preload {enable   disable}	Enable/disable preloading antivirus database to memory (default = disable).
av2-cache <integer>	Antispam service maximum memory usage, in megabytes ( physical memory to 1024, 0 = no limit, default = 800).
av2-log {all   disable   novirus}	Outbreak prevention log setting: <ul style="list-style-type: none"> <li>all: Log all av2 lookups.</li> <li>disable: Disable av2 logs.</li> <li>noav2: Log non-av2 events (default).</li> </ul>
av2-preload {enable   disable}	Enable/disable preloading outbreak prevention database to memory (default = disable).

Variable	Description
eventlog-query {enable   disable}	Enable/disable record query to event-log besides fgd-log (default = disable).
fgd-pull-interval <integer>	FortiGuard pull interval setting, in minutes (1 - 1440, default = 10).
fq-cache <integer>	File query service maximum memory usage, in megabytes (100 - 500, default = 300).
fq-log {all   disable   nofilequery}	Filequery log setting: <ul style="list-style-type: none"> <li>• all: Log all file query.</li> <li>• disable: Disable file query log.</li> <li>• nofilequery: Log non-file query events (default).</li> </ul>
fq-preload {enable   disable}	Enable/disable preloading the filequery database to memory (default = disable).
iot-cache <integer>	IoT service maximum memory usage, in megabytes (100 - 500, default = 300).
iot-log {all   disable   nofilequery}	IoT log setting (default = nofilequery).
iot-preload {enable   disable}	Enable/disable preloading IoT database to memory (default = disable).
iotv-preload {enable   disable}	Enable/disable preloading IoT-Vulnerability database to memory (default = disable).
linkd-log {alert   critical   debug   disable   emergency   error   info   notice   warn}	Linkd log setting: <ul style="list-style-type: none"> <li>• alert: Immediate action is required.</li> <li>• critical: Functionality is affected.</li> <li>• debug: Debug information (default).</li> <li>• disable: Linkd logging is disabled.</li> <li>• emergency: The unit is unusable.</li> <li>• error: Functionality is probably affected.</li> <li>• info: General information.</li> <li>• notice: Information about normal events.</li> <li>• warn: Functionality might be affected.</li> </ul>
max-client-worker <integer>	Maximum workers to use for TCP client connections (0 - 16, 0 = use CPU count, default = 0).
max-log-quota <integer>	Maximum log quota setting, in megabytes (100 - 20480, default = 6144).
max-unrated-size <integer>	Maximum number of unrated site in memory, in kilobytes(10 - 5120, default = 500).
restrict-as1-dbver <string>	Restrict system update to indicated antispam(1) database version (character limit = 127).
restrict-as2-dbver <string>	Restrict system update to indicated antispam(2) database version (character limit = 127).
restrict-as4-dbver <string>	Restrict system update to indicated antispam(4) database version (character limit = 127).

Variable	Description
restrict-av-dbver <string>	Restrict system update to indicated antivirus database version (character limit = 127).
restrict-av2-dbver <string>	Restrict system update to indicated outbreak prevention database version (character limit = 127).
restrict-fq-dbver <string>	Restrict system update to indicated file query database version (character limit = 127).
restrict-iots-dbver <string>	Restrict system update to indicated file query database version (character limit = 127).
restrict-wf-dbver <string>	Restrict system update to indicated web filter database version (character limit = 127).
stat-log {alert   critical   debug   disable   emergency   error   info   notice   warn}	Statistic log setting (default = disable). <ul style="list-style-type: none"> <li>• alert: Immediate action is required (1).</li> <li>• critical: Functionality is affected (2).</li> <li>• debug: Debug information (7).</li> <li>• disable: Linkd logging is disabled.</li> <li>• emergency: The unit is unusable (0).</li> <li>• error: Functionality is probably affected (3).</li> <li>• info: General information (6).</li> <li>• notice: Information about normal events (5).</li> <li>• warn: Functionality might be affected (4).</li> </ul>
stat-log-interval <integer>	Statistic log interval setting, in minutes (1 - 1440, default = 60).
stat-sync-interval <integer>	Synchronization interval for statistic of unrated site in minutes (1 - 60, default = 60).
update-interval <integer>	FortiGuard database update wait time if not enough delta files, in hours (2 - 24, default = 6).
update-log {enable   disable}	Enable/disable update log setting (default = enable).
wf-cache <integer>	Web filter service maximum memory usage, in megabytes (maximum = physical memory-1024, 0 = no limit, default = 600).
wf-dn-cache-expire-time	Web filter DN cache expire time, in minutes (1 - 1440, 0 = never, default = 30).
wf-dn-cache-max-number	Maximum number of Web filter DN cache (0 = disable, default = 10000).
wf-log {all   disable   nourl}	Web filter log setting: <ul style="list-style-type: none"> <li>• all: Log all URL lookups.</li> <li>• disable: Disable URL log.</li> <li>• nourl: Log non-URL events (default).</li> </ul>
wf-preload {enable   disable}	Enable/disable preloading the web filter database into memory (default = disable).
<b>Variables for config server-override subcommand:</b>	

Variable	Description
status {enable   disable}	Enable/disable the override (default = disable).
<id>	Override server ID (1 - 10).
ip <ipv4_address>	IPv4 address of the override server.
ip6 <ipv6_address>	IPv6 address of the override server.
port <integer>	Port number to use when contacting FortiGuard (1 - 65535, default = 443).
service-type {fgc   fgd   fsa   geoup   iot-collect}	Override service type.

## fwm-setting

Use this command to configure firmware management settings.

### Syntax

```

config fmupdate fwm-setting
  set auto-scan-fgt-disk {enable | disable}
  set check-fgt-disk {enable | disable}
  set fds-failover-fmg {enable | disable}
  set fds-image-timeout <integer>
  set health-check {enable | disable}
  set immx-source {cloud | fgt | fmg}
  set log {fwm | fwm_dm | fwm_dm_json}
  set max-device-history <integer>
  set max-profile-history <integer>
  set multiple-steps-interval <integer>
  set retry-interval <integer>
  set retry-max <integer>
  set retrieve {enable | disable}
  set revision-diff {enable | disable}
  set send-image-retry <integer>
config upgrade-timeout
  set check-status-timeout <integer>
  set ctrl-check-status-timeout <integer>
  set ctrl-put-image-by-fds-timeout <integer>
  set ha-sync-timeout <integer>
  set health-check-timeout <integer>
  set license-check-timeout <integer>
  set prepare-image-timeout <integer>
  set put-image-by-fds-timeout <integer>
  set put-image-timeout <integer>
  set reboot-of-fsck-timeout <integer>
  set reboot-of-upgrade-timeout <integer>
  set retrieve-timeout <integer>
  set rpc-timeout <integer>
  set total-timeout <integer>
end

```

end

Variable	Description
auto-scan-fgt-disk {enable   disable}	Enable/disable automatic scanning of a FortiGate disk when required (default = enable).
check-fgt-disk {enable   disable}	Enable/disable checking a FortiGate disk prior to upgrading the image (default = enable).
fds-failover-fmg {enable   disable}	Enable/disable using the a local image file on the FortiManager when the FDS download fails (default = enable).
fds-image-timeout <integer>	Set the timer for FortiGate image downloads from FortiGuard, in seconds (300 - 3600, default = 1800).
immx-source {cloud   fgt   fmg}	Configure which of the IMMX file to be used for choosing the upgrade patch: <ul style="list-style-type: none"> <li>• cloud: Use the IMMX file for FortiCloud.</li> <li>• fgt: Use the IMMX file for FortiGate.</li> <li>• fmg: Use the IMMX file for FortiManager.</li> </ul> The default file is the one for FortiManager (default = fmg).
log {fwm   fwm_dm   fwm_dm_json}	Configure log setting for the firmware manager daemon (default = fwm_dm): <ul style="list-style-type: none"> <li>• fwm: Firmware Manager daemon log.</li> <li>• fwm_dm: Firmware Manager and deployment service log.</li> <li>• fwm_dm_json: Firmware Manager and Deployment service log with JSON data between FortiManager-FortiGate.</li> </ul>
max-device-history <integer>	Set the max number of device upgrade report (1-10000, default=100).
max-profile-history <integer>	Set the max number of profile upgrade report (1-10000, default=100).
multiple-steps-interval <integer>	Set the waiting time between multiple step upgrades, in seconds (30 - 180, default = 60).
retry-interval <integer>	Waiting time for resending request to device (1 - 360, default = 60).
retry-max <integer>	Maximum number of retries for sending request to device (0 - 100, default = 10).
send-image-retry <integer>	Set the number of retries to send image when failed (0-2, default = 0). 0 indicates no retry.
<b>Variables for config upgrade-timeout subcommand:</b>	
check-status-timeout <integer>	Set the timeout for checking status after tunnel is up, in seconds. (1 - 6000, default = 600)
ctrl-check-status-timeout <integer>	Set the timeout for checking FortiAP/FortiSwitch/FortiExtender status after request upgrade, in seconds. (1 - 12000, default = 1200)
ctrl-put-image-by-fds-timeout <integer>	Set the timeout for waiting device get FortiAP/FortiSwitch/FortiExtender image from FortiGuard, in seconds. (1 - 9000, default = 900)

Variable	Description
ha-sync-timeout <integer>	Set the timeout for waiting HA sync, in seconds. (1 - 18000, default = 1800)
health-check-timeout <integer>	Set the timeout for waiting retrieve, in seconds. (1 - 6000, default = 600).
license-check-timeout <integer>	Set the timeout for waiting FortiGate check license, in seconds. (1 - 6000, default = 600)
prepare-image-timeout <integer>	Set the timeout for preparing image, in seconds. (1 - 6000, default = 600)
put-image-by-fds-timeout <integer>	Set the timeout for waiting device get image from FortiGuard, in seconds. (1 - 18000, default = 1800)
put-image-timeout <integer>	Set the timeout for waiting send image over tunnel, in seconds. (1 - 18000, default = 1800)
reboot-of-fsck-timeout <integer>	Set the timeout for waiting FortiGate reboot, in seconds. (1 - 18000, default = 1800)
reboot-of-upgrade-timeout <integer>	Set the timeout for waiting FortiGate reboot after image upgrade, in seconds. (1 - 12000, default = 1200)
retrieve-timeout <integer>	Set the timeout for waiting retrieve, in seconds. (1 - 18000, default = 1800)
rpc-timeout <integer>	Set the timeout for waiting FortiGate rpc response, in seconds. (1 - 1800, default = 180)
total-timeout <integer>	Set the timeout for the whole FortiGate upgrade, in seconds. (1 - 86400, default = 3600)

## multilayer

Use this command to set multilayer mode configuration.

### Syntax

```
config fmupdate multilayer
  set webspam-rating {enable | disable}
end
```

Variable	Description
webspam-rating {enable   disable}	Enable/disable URL/antispam rating service (default = enable).

## publicnetwork

Use this command to enable access to the public FDS. If this function is disabled, the service packages, updates, and license upgrades must be imported manually.

### Syntax

```
config fmupdate publicnetwork
  set status {enable | disable}
  set update-server-location {eu | global | usa}
end
```

Variable	Description
status {enable   disable}	Enable/disable the public network (default = enable).
update-server-location {eu   global   usa}	Set the location from which to receive FortiGuard updates (default = global).

## server-access-priorities

Use this command to configure how a FortiGate unit may download antivirus updates and request web filtering services from multiple FortiManager units and private FDS servers.

Use the private-server subcommand to configure multiple FortiManager units and private servers.



By default, the FortiGate unit receives updates from the FortiManager unit if the FortiGate unit is managed by the FortiManager unit and the FortiGate unit was configured to receive updates from the FortiManagerunit.

### Syntax

```
config fmupdate server-access-priorities
  set access-public {enable | disable}
  set av-ips {enable | disable}
  set web-spam {enable | disable}
config private-server
  edit <id>
    set ip <ipv4_address>
    set ip6 <ipv6_address>
    set time_zone <integer>
  end
end
```

Variable	Description
access-public {enable   disable}	Enable/disable allowing FortiGates to access public FortiGuard servers when private servers are unavailable (default = disable).
av-ips {enable   disable}	Enable/disable receiving antivirus and IPS update service for private servers (default = disable).
web-spam {enable   disable}	Enable/disable Web Filter and Email Filter update service for private servers (default = enable).
<b>Variables for config private-server subcommand:</b>	
<id>	Enter a number to identify the FortiManager unit or private server (1 - 10).
ip <ipv4_address>	Enter the IPv4 address of the FortiManager unit or private server.
ip6 <ipv6_address>	Enter the IPv6 address of the FortiManager unit or private server.
time_zone <integer>	Enter the correct time zone of the private server (-24 = local time zone, default = -24).

## Example

The following example configures access to public FDS servers and allows FortiGate units to receive antivirus updates from other FortiManager units and private FDS servers. This example also configures three private servers.

```
config fmupdate server-access-priorities
  set access-public enable
  set av-ips enable
  config private-server
    edit 1
      set ip 172.16.130.252
    next
    edit 2
      set ip 172.31.145.201
    next
    edit 3
      set ip 172.27.122.99
    end
  end
end
```

## server-override-status

Configure strict or loose server override.

### Syntax

```
config fmupdate server-override-status
  set mode {loose | strict}
end
```

Variable	Description
mode {loose   strict}	Set the server override mode: <ul style="list-style-type: none"> <li>• loose: Allow access other servers (default).</li> <li>• strict: Access override server only.</li> </ul>

## service

Use this command to enable or disable the services provided by the built-in FDS.

### Syntax

```
config fmupdate service
  set avips {enable | disable}
  set geoip {enable | disable}
  set query-antispam {enable | disable}
  set query-antivirus {enable | disable}
  set query-filequery {enable | disable}
  set query-ioc {enable | disable}
  set query-iot {enable | disable}
  set query-iot-collection {enable | disable}
  set query-iot-vulnerability {enable | disable}
  set query-outbreak-prevention {enable | disable}
  set query-webfilter {enable | disable}
  set webfilter-https-traversal {enable | disable}
end
```

Variable	Description
avips {enable   disable}	Enable/disable the built-in FortiGuard to provide FortiGuard antivirus and IPS updates (default = enable).
geoip {enable   disable}	Enable/disable the built-in FortiGuard to provide GEO-city query (default = enable).
query-antispam {enable   disable}	Enable/disable antispam service (default = disable).
query-antivirus {enable   disable}	Enable/disable antivirus service (default = disable).
query-filequery {enable   disable}	Enable/disable file query service (default = disable).
query-ioc {enable   disable}	Enable/disable the built-in FortiGuard to provide IoC query (default = disable).
query-iot {enable   disable}	Enable/disable IOT query service (default = disable).
query-iot-collection {enable   disable}	Enable/disable IOT collection query service (default = disable).

Variable	Description
query-iot-vulnerability {enable   disable}	Enable/disable IOT vulnerability query service (default = disable).
query-outbreak-prevention {enable   disable}	Enable/disable outbreak prevention query service (default = disable).
query-webfilter {enable   disable}	Enable/disable web filter service (default = disable).
webfilter-https-traversal {enable   disable}	Enable/disable Web Filter HTTPS traversal (default = disable).

## Example

```
config fmupdate service
  set avips enable
end
```

# execute

The execute commands perform immediate operations on the FortiManager unit. You can:

- Back up and restore the system settings, or reset the unit to factory settings.
- Set the unit date and time.
- Use ping to diagnose network problems.
- View the processes running on the FortiManager unit.
- Start and stop the FortiManager unit.
- Reset or shut down the FortiManager unit.



FortiManager CLI commands and variables are case sensitive.

add-on-license	fgfm	nslookup	sql-query-dataset
add-vm-license	fmpolicy	ping	sql-query-generic
backup	fmprofile	ping6	sql-query-siem
benchmark	fmscript	raid	sql-report
bootimage	fmupdate	reboot	ssh
certificate	format	remove	ssh-known-hosts
chassis	gui-db	reset	ssh-list-keys
console baudrate	iotop	reset-sqllog-transfer	ssh-regen-keys
date	iotps	restore	tac
device	log	sdns	time
dmserver	log-fetch	sensor	top
erasedisk	log-integrity	shutdown	traceroute
fabric-config-sync	lvm	software-raid	traceroute6
factory-license	migrate	sql-local	vm-license

## add-on-license

Use this command to load add-on licenses to support more devices with a license key.

## Syntax

```
execute add-on-license <license>
```

Variable	Description
<license>	The add-on license string. Copy and paste the string from the license file. The license string must be enclosed with double quotes. Do not removed line breaks from the string.

## add-vm-license

Add a VM license to the FortiManager.



This command is only available on FortiManager VM models.

## Syntax

```
execute add-vm-license {<vm license string> | ftp | sftp | scp} <server:port> <file path> <user>
{<password> | <ssh-cert>}
```

Variable	Description
{<vm license string>   ftp   sftp   scp}	Enter the string of license, or enter license retrieval method (ftp/sftp/scp) . If entering the license string, copy and paste the string from the license file. The license string must be enclosed with double quotes. Do not removed line breaks from the string.
<server:port>	Enter the server:port to retrieve license from.
<file path>	Enter the filename and path to license file on the server.
<user>	Enter the username to use on server.
{<password>   <ssh-cert>}	Enter the password to use on server (for FTP/SFTP) or the SSH certificate (for SCP).

## Example

The contents of the license file needs to be in quotes in order for it to work.

```
execute add-vm-license "-----BEGIN FMG VM LICENSE-----
QAAAAJ09s+LTe...ISJTYPcKoDmMa6
-----END FAZ VM LICENSE-----"
```

## api-user

Use this command to generate a key for API users.

### Syntax

```
execute api-user generate-key <name>
```

Variable	Description
<name>	Enter the API user name. Optionally, leave blank and press enter to list all API users.

## backup

Use this command to backup the configuration or database to a file.

When you back up the unit settings from the vdom\_admin account, the backup file contains global settings and the settings for each VDOM. When you back up the unit settings from a regular administrator account, the backup file contains the global settings and only the settings for the VDOM to which the administrator belongs.

An MD5 checksum is automatically generated in the event log when backing up the configuration. You can verify a backup by comparing the checksum in the log entry with that of the backup file.

### Syntax

```
execute backup all-settings {ftp | scp | sftp} <ip:port> <string> <username> <passwd> <ssh-cert>
  <crptpasswd>
execute backup fds {ftp | scp | sftp} <ip:port> <string> <username> <passwd> <ssh-cert>
execute backup fgd {ftp | scp | sftp} <ip:port> <string> <username> <passwd> <ssh-cert>
execute backup fmg-logs {ftp | scp | sftp} <ip:port> <string> <username> <passwd> <ssh-cert>
execute backup fwm {ftp | scp | sftp} <ip:port> <string> <username> <passwd> <ssh-cert>
execute backup ha {ftp | scp | sftp} <ip:port> <string> <username> <passwd> <ssh-cert>
execute backup logs <device name(s)> {ftp | scp | sftp} <ip/fqdn> <username> <passwd> <directory>
  [vdlist]
execute backup logs-only <device name(s)> {ftp | scp | sftp} <ip/fqdn> <username> <passwd>
  <directory> [vdlist]
execute backup logs-rescue <device serial number(s)> {ftp | scp | sftp} <ip> <username> <passwd>
  <directory> [vdlist]
execute backup reports <report schedule name(s)> {ftp | scp | sftp} <ip/fqdn> <username> <passwd>
  <directory> [vdlist]
execute backup reports-config <adom name(s)> {ftp | scp | sftp} <ip/fqdn> <username> <passwd>
  <directory> [vdlist]
execute backup rtm {ftp | scp | sftp} <device name> <ip:port> <string> <username> <passwd> <ssh-
  cert>
execute backup task {ftp | scp | sftp} <ip:port> <string> <username> <passwd> <ssh-cert>
```

Variable	Description
all-settings	Backup all FortiManager settings to a file on a server.
fds	Backup FortiGuard Distribution Server data.
fgd	Backup FortiGuard data.
fmg-logs	Backup log files.
fwm	Backup firmware management data.
ha	Backup HA logs.
logs	Backup the device logs to a specified server.
logs-only	Backup device logs only to a specified server.
logs-rescue	Use this hidden command to backup logs regardless of DVM database for emergency reasons. This command will scan folders under /Storage/Logs/ for possible device logs to backup.
reports	Backup the reports to a specified server.
reports-config	Backup reports configuration to a specified server.
rtm	Backup real time monitor data.
task	Backup the task database.
<device name>	Enter the device name for which you want to backup.
<device name(s)>	Enter the device name(s) separated by a comma, or enter all for all devices.
<device serial number(s)>	Enter the device serial number(s) separated by a comma, or enter all for all devices.
<report schedule name(s)>	Enter the report schedule name(s) separated by a comma, or enter all for all reports schedules.
<adom name(s)>	Enter the ADOM name(s) separated by a comma, or enter all for all ADOMs.
{ftp   scp   sftp}	Enter the server type: ftp, scp, or sftp.
<ip:port>	Enter the server IP address and optionally, for FTP servers, the port number.
<ip>	Enter the server IP address.
<ip/fqdn>	Enter the server IP address or fully-qualified domain name (FQDN).
<string>	Enter the path and file name for the backup.
<username>	Enter username to use to log on the backup server.
<passwd>	Enter the password for the username on the backup server. <b>Note:</b> You cannot use \ \ in passwords.
<ssh-cert>	Enter the SSH certification for the server. This option is only available for backup operations to SCP servers.



Variable	Description
	<p>rw (read and write), randread (random read), randwrite (random write), and randrw (random read and write).</p> <ul style="list-style-type: none"> <li>• numjobs = Number of jobs doing io-perf.</li> <li>• bs = The block size in bytes used for I/O units (unit is KB).</li> <li>• size = The total size of file I/O for each job (unit is GB).</li> <li>• runtime = Limit runtime for io-perf (unit is seconds).</li> </ul>
rand-read [reboot]	Test random read IO performance. Enter reboot to reboot for io-perf running in clean env.
rand-rw [reboot]	Test random read and write IO performance. Enter reboot to reboot for io-perf running in clean env.
rand-write [reboot]	Test random write IO performance. Enter reboot to reboot for io-perf running in clean env.
seq-read [reboot]	Test sequential read IO performance. Enter reboot to reboot for io-perf running in clean env.
seq-rw [reboot]	Test sequential read and write IO performance. Enter reboot to reboot for io-perf running in clean env.
seq-write [reboot]	Test sequential write IO performance. Enter reboot to reboot for io-perf running in clean env.
show-last-result <operation>	<p>Show the last io-perf result for one of the following operations:</p> <ul style="list-style-type: none"> <li>• all = All operations</li> <li>• seq-read = Sequential read</li> <li>• seq-write = Sequential write</li> <li>• seq-rw = Sequential read and write</li> <li>• rand-read = Random read</li> <li>• rand-write = Random write</li> <li>• rand-rw = Random read and write</li> <li>• custom = Custom io-perf parameters</li> </ul>

## benchmark stress

Use these commands to stress test.

### Syntax

```
execute benchmark stress cpu <duration> <worker>
execute benchmark stress custom <parameter> .. <parameter>
execute benchmark stress disk <duration> <worker> <data-size>
execute benchmark stress mem <duration> <worker> <data-size>
```

Variable	Description
cpu <duration> <worker>	Run CPU stress test. <ul style="list-style-type: none"> <li>&lt;duration&gt;: Enter the test duration. For example, 100s, 10m, or 1h.</li> <li>&lt;worker&gt;: Enter the number of workers.</li> </ul>
custom <parameter> .. <parameter>	Run a custom stress test. Enter <code>execute benchmark stress custom help</code> to view the usage and available general control options and stressor specific options.
disk <duration> <worker> <data-size>	Run disk stress test. <ul style="list-style-type: none"> <li>&lt;duration&gt;: Enter the test duration. For example, 100s, 10m, or 1h.</li> <li>&lt;worker&gt;: Enter the number of workers.</li> <li>&lt;data-size&gt;: Enter the size of data to test. For example, 256M or 1G.</li> </ul>
mem <duration> <worker> <data-size>	Run memory stress test. <ul style="list-style-type: none"> <li>&lt;duration&gt;: Enter the test duration. For example, 100s, 10m, or 1h.</li> <li>&lt;worker&gt;: Enter the number of workers.</li> <li>&lt;data-size&gt;: Enter the size of data to test. For example, 256M or 1G.</li> </ul>

## bootimage

Set the image from which the FortiManager unit will boot the next time it is restarted.



This command is only available on hardware-based FortiManager models.

### Syntax

```
execute bootimage <primary | secondary>
```

Variable	Description
{primary   secondary}	Select to boot from either the primary or secondary partition.

If you do not specify primary or secondary, the command will report whether it last booted from the primary or secondary boot image.

If your FortiManager unit does not have a secondary image, the bootimage command will inform you that option is not available.

To reboot your FortiManager unit, use:

```
execute reboot
```

## certificate

Use these commands to manage certificates.

## certificate ca

Use these commands to list CA certificates, and to import or export CA certificates.

### Syntax

**To list the CA certificates installed on the FortiManager unit:**

```
execute certificate ca list
```

**To export or import CA certificates:**

```
execute certificate ca export <cert_name> <tftp_ip>  
execute certificate ca import <filename> <tftp_ip> <cert_name>
```

Variable	Description
list	Generate a list of CA certificates on the FortiManager system.
<export>	Export CA certificate to TFTP server.
<import>	Import CA certificate from a TFTP server.
<cert_name>	Name of the certificate.
<tftp_ip>	IP address of the TFTP server.
<filename>	File name on the TFTP server.

## certificate crl

Use this command to import CRL certificate from a TFTP server.

## Syntax

```
execute certificate crl import <filename> <tftp_ip> <cert_name>
```

## certificate local

Use these commands to list, import, or export local certificates, and to generate a certificate request

## Syntax

```
execute certificate local export <cert_name> <tftp_ip>
execute certificate local import <filename> <tftp_ip> <cert_name>
execute certificate local import-pkcs12 {ftp | scp | sftp} <ip:port> <filename> <username>
    <password> <password> <name>
execute certificate local generate <certificate-name-string> <subject> <number> [<optional_
    information>]
execute certificate local list
```

Variable	Description
export <cert_name> <tftp_ip>	Export a certificate or request to a TFTP server. <ul style="list-style-type: none"> <li>cert_name - Name of the certificate.</li> <li>tftp_ip - IP address of the TFTP server.</li> </ul>
import <filename> <tftp_ip> <cert_name>	Import a signed certificate from a TFTP server.
import-pkcs12 {ftp   scp   sftp} <ip:port> <filename> <username> <password> <password> <name>	Import a certificate and private key from a PKCS#12 file. <ul style="list-style-type: none"> <li>ftp, scp, sftp - The type of server the file will be imported from.</li> <li>ip:port - The server IP address and, optional, the port number.</li> <li>filename - The path and file name on the server.</li> <li>username - The user name on the server.</li> <li>password - The user password.</li> <li>password - The file password.</li> <li>name - The certificate name.</li> </ul>
generate <certificate-name-string> <subject> <number> [<optional_information>]	Generate a certificate request. <ul style="list-style-type: none"> <li>certificate-name-string - Enter a name for the certificate. The name can contain numbers (0-9), uppercase and lowercase letters (A-Z, a-z), and the special characters - and _. Other special characters and spaces are not allowed.</li> <li>number - The size, in bits, of the encryption key, 512, 1024, 1536, or 2048.</li> <li>subject - Enter one of the following pieces of information to identify the FortiManager unit being certified: <ul style="list-style-type: none"> <li>The FortiManager unit IP address</li> </ul> </li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>• The fully qualified domain name of the FortiManager unit</li> <li>• An email address that identifies the FortiManager unit</li> <li>• An IP address or domain name is preferable to an email address.</li> <li>• <code>optional_information</code> - Enter <code>optional_information</code> as required to further identify the unit. See <a href="#">Optional information variables on page 182</a> for more information.</li> </ul>
list	Generate a list of CA certificates and requests that are on the FortiManager system.

## Optional information variables

You must enter the optional variables in the order that they are listed in the table. To enter any optional variable you must enter all of the variables that come before it in the list.

For example, to enter the `organization_name_str`, you must first enter the `country_code_str`, `state_name_str`, and `city_name_str`.

While entering optional variables, you can type ? for help on the next required variable.

Variable	Description
<country_code_str>	Enter the two-character country code.
<state_name_str>	Enter the name of the state or province where the FortiManager unit is located.
<city_name_str>	Enter the name of the city, or town, where the person or organization certifying the FortiManager unit resides.
<organization-name_str>	Enter the name of the organization that is requesting the certificate for the FortiManager unit.
<organization-unit_name_str>	Enter a name that identifies the department or unit within the organization that is requesting the certificate for the FortiManager unit.
<email_address_str>	Enter a contact email address for the FortiManager unit.
<ca_server_url>	Enter the URL of the CA (SCEP) certificate server that allows auto-signing of the request.
<challenge_password>	Enter the challenge password for the SCEP certificate server.

## certificate remote

Use these commands to list, import, or export remote certificates.

## Syntax

To list the remote certificates installed on the FortiManager unit:

```
execute certificate remote list
```

To export or import remote certificates:

```
execute certificate remote {<export>|<import>} <cert_name> <tftp_ip>
```

Variable	Description
list	Generate a list of remote certificates on the FortiManager system.
<export>	Export the certificate to TFTP server.
<import>	Import the certificate from a TFTP server.
<cert_name>	Name of the certificate.
<tftp_ip>	IP address of the TFTP server.

## chassis

Use this command to replace a chassis device password on your device.



This command is only available on devices that support chassis management.

## Syntax

```
execute chassis replace <pw>
```

Variable	Description
<pw>	Replace the chassis password.

## console baudrate

Use this command to get or set the console baudrate.

## Syntax

```
execute console baudrate [9600 | 19200 | 38400 | 57600 | 115200]
```

If you do not specify a baudrate, the command returns the current baudrate.

Setting the baudrate will disconnect your console session.

## Example

Get the baudrate:

```
execute console baudrate
```

The response is displayed:

```
current baud rate is: 9600
```

Set the baudrate to 115200:

```
execute console baudrate 115200
```

# date

Get or set the FortiManagersystem date.

## Syntax

```
execute date [<date_str>]
```

`date_str` has the form `mm/dd/yyyy`, where

- `mm` is the month and can be 01 to 12
- `dd` is the day of the month and can be 01 to 31
- `yyyy` is the year and can be 2001 to 2037

If you do not specify a date, the command returns the current system date.

Dates entered will be validated - `mm` and `dd` require one or two digits, and `yyyy` requires four digits. Entering fewer digits will result in an error.

## Example

This example sets the date to 29 September 2020:

```
execute date 9/29/2020
```

## device

Use this command to reset the device database or change a device password, serial number, or user.

## device replace

Use this command to change a device password, serial number, or user when changing devices due to a hardware issue.

### Syntax

```
execute device replace pw <device_name> <password>
execute device replace sn <device_name> <serial_number>
execute device replace user <device_name> <user>
```

Variable	Description
pw	Replace the device password.
sn	Replace the device serial number.
user	Replace the device user.
<device_name>	The name of the device.
<password>	The new password for the new device.
<serial_number>	The new serial number for the new device, for example: FWF40C391XXX0062.
<user>	The new user for the new device.

### Example

```
execute device replace pw FGT600C2805030002
This operation will clear the password of the device.
Do you want to continue? (y/n)y
```

## device reset

Use this command to force reset the device database to default configuration.

### Syntax

```
execute device reset database <name>
```

Variable	Description
<name>	Enter the device name or ID.

## dmserver

Use these commands to manage devices and revisions.

```
dmserver clearrev on page 186
dmserver
dmserver revlist
dmserver showconfig
dmserver showdev
dmserver showrev
```

## dmserver clearrev

Use this command to clear all revisions.

### Syntax

```
execute dmserver clearrev <devname>
```

Variable	Description
<devname>	The name of the device.

## dmserver delrev

Use this command to delete configuration revisions. The device name will be kept.

### Syntax

```
execute dmserver delrev <device_name> <startrev> <endrev>
```

Variable	Description
<device_name>	The name of the device.
<startrev>	The starting configuration revision number that you want to delete.
<endrev>	The ending configuration revision number that you want to delete.

## dmserver revlist

Use this command to show a list of revisions for a device.

### Syntax

```
execute dmserver revlist <device_name>
```

Variable	Description
<device_name>	The name of the device.

## dmserver showconfig

Use this command to show the current configuration of a managed device.

The configuration is fetched from the managed device. If the device is not live or reachable, the FortiManager CLI will display an error code.

### Syntax

```
execute dmserver showconfig <device_name>
```

Variable	Description
<device_name>	The name of the device.

## dmserver showdev

Use this command to show a list of available devices. For each listed device, this command lists the device ID, device name, and serial number.

### Syntax

```
execute dmserver showdev
```

## dmserver showrev

Use this command to display a device's configuration revision.

## Syntax

```
execute dmserver showrev <device_name> <revision>
```

Variable	Description
<device_name>	The name of the device.
<revision>	The configuration revision you want to display. You can enter a negative revision number, such as -1, to display the latest revision.

## erasedisk

Overwrite the flash (boot device) with random data a specified number of times. When you run this command, you will be prompted to confirm the request.



Executing this command will overwrite all information on the FortiManager system's flash drive. The FortiManager system will no longer be able to boot up.

## Syntax

```
execute erase-disk flash <erase-times>
```

Variable	Description
<erase-times>	Number of times to overwrite the flash with random data (1 - 35, default = 1).

## fabric-config-sync

Use this command to manage and synchronize FortiAnalyzer Fabric configurations.

## Syntax

```
execute fabric-config-sync purge <task-id> {all | default | <members>}
execute fabric-config-sync push report <config-name> {all | default | <members>}
execute fabric-config-sync push task <task-id>
execute fabric-config-sync status member
execute fabric-config-sync status task <task-id>
```

Variable	Description
purge <task-id> {all   default   <members>}	Delete configuration and cleans references from FAZ Fabric member(s). <ul style="list-style-type: none"> <li>&lt;task-id&gt;: Enter the task ID of a previous installation.</li> <li>{all   default   &lt;members&gt;}: <ul style="list-style-type: none"> <li>all: Target all FAZ Fabric member(s).</li> <li>default: Target FAZ Fabric member(s) inside report schedule if applicable.</li> <li>&lt;members&gt;: Please select serial number from the available FAZ Fabric member(s) separated by ','.</li> </ul> </li> </ul>
push report <config-name> <members>	Install local report configuration to FAZ Fabric member(s). <ul style="list-style-type: none"> <li>&lt;config-name&gt;: Select one of the available SQL report titles.</li> <li>{all   default   &lt;members&gt;}: <ul style="list-style-type: none"> <li>all: Target all FAZ Fabric member(s).</li> <li>default: Target FAZ Fabric member(s) inside report schedule if applicable.</li> <li>&lt;members&gt;: Please select serial number from the available FAZ Fabric member(s) separated by ','.</li> </ul> </li> </ul>
push task <task-id>	Reinstall previous task to FAZ Fabric member(s). <ul style="list-style-type: none"> <li>&lt;task-id&gt;: Enter the task ID of a previous installation.</li> </ul>
status member	Show status by member.
status task <task-id>	Show status by task.

## factory-license

Use this command to enter a factory license key. This command is hidden.

### Syntax

```
execute factory-license <key>
```

Variables	Description
<key>	The factory license key.

## fgfm

Use these commands to reclaim a management tunnel or resync the FGFM (FortiGate to FortiManager) status to device manager.

### fgfm cluster-move-dev

Use this command to move a device to other cluster member.

#### Syntax

```
execute fgfm cluster-move-dev <device> <member> <member>
```

Variable	Description
<device>	Enter the device name.
<member>	Enter the new member's serial number.
<member>	Enter the secondary member's serial number.

### fgfm cluster-move-group

Use this command to move a device group to other cluster member.

#### Syntax

```
execute fgfm cluster-move-group <adom> <group> <member> <member>
```

Variable	Description
<adom>	Enter the ADOM name.
<group>	Enter the group name.
<member>	Enter the new member's serial number.
<member>	Enter the secondary member's serial number.

### fgfm migrate-license

Use this command to migrate the FortiManager license.

## Syntax

```
execute fgfm migrate-license <new-sn>
```

Variable	Description
<new-sn>	Enter the FortiManager's new serial number.

## fgfm reclaim-dev-tunnel

Use this command to reclaim a management tunnel. The device name is optional.

### Syntax

```
execute fgfm reclaim-dev-tunnel <device_name> force [admin] [password]
```

Variable	Description
<device_name>	Enter the device name.
force	Optionally, force the tunnel to be reclaimed
[admin]	Optionally, enter the administrator name.
[password]	Optionally, enter the administrator password.

## fgfm resync-dev-status

Use this command to resync FGFM status to device manager. The device name is optional.

### Syntax

```
execute fgfm resync-dev-status <device_name>
```

Variable	Description
<device_name>	Optionally, enter the device name.

## fgfm verify-migrate-license

Use this command to verify the migrated FortiManager license.

## Syntax

```
execute fgfm verify-migrate-license
```

# fmpolicy

Use these commands to perform policy and object related actions:

## fmpolicy check-upgrade-object

Use this command to check/upgrade objects by syntax.

### Syntax

```
execute fmpolicy check-upgrade-object manual {checking | fixing} {basic | auto | misc | full}
execute fmpolicy check-upgrade-object report
execute fmpolicy check-upgrade-object reset
```

Variable	Description
<action>	Enter the auto upgrade action: <ul style="list-style-type: none"> <li>• <b>manual</b>: run auto-upgrade manually.</li> <li>• <b>report</b>: show checking/upgrade report.</li> <li>• <b>reset</b>: cleanup saved checking/upgrade status</li> </ul>
{checking   fixing}	<ul style="list-style-type: none"> <li>• <b>checking</b>: only do checking.</li> <li>• <b>fixing</b>: checking and fixing.</li> </ul>
{basic   auto   misc   full}	<ul style="list-style-type: none"> <li>• <b>basic</b>: only do basic (know cases) checking/fixing.</li> <li>• <b>auto</b>: only do auto (syntax based) checking/fixing.</li> <li>• <b>misc</b>: only do misc (know cases) checking/fixing.</li> <li>• <b>full</b>: do a full basic/auto/misc checking/fixing.</li> </ul>

## fmpolicy clone-adom-object

Use this command to clone an ADOM object.

### Syntax

```
execute fmpolicy clone-adom-object <src-adom> <category> <key> <target-adom> <new-key>
```

Variable	Description
<arc-adom>	Enter the name of the source ADOM.
<category>	Enter the name of the category in the ADOM.
<key>	Enter the name of the object key.
<target-adom>	Enter the name of the target ADOM.
<new-key>	Enter the name of the new key.

## fmpolicy copy-adom-object

Use this command to set the policy to copy an ADOM object.

### Syntax

```
execute fmpolicy copy-adom-object <adom> <category> <key> <device> <vdom>
```

Variable	Description
<adom>	Enter the name of the ADOM.
<category>	Enter the name of the category in the ADOM.
<key>	Enter the name of the object key.
<device>	Enter the name of the device.
<vdom>	Enter the name of the VDOM.

## fmpolicy install-config

Use this command to install the configuration for an ADOM.

### Syntax

```
execute fmpolicy install-config <adom> <device_id> <revname>
```

Variable	Description
<adom>	Enter the name of the ADOM.
<device_id>	Enter the device id of the ADOM.
<revname>	Enter the revision name.

## fmpolicy link-adom-object

Use this command to link ADOM object to the device DB.

### Syntax

```
execute fmpolicy link-adom-object <adom> <category> <key> <device> <vdom>
```

Variable	Description
<adom>	Enter the name of the ADOM: 104: FortiCarrier 148: FortiFirewall 128: Unmanaged_Devices 3: root
<category>	Enter the category name.
<key>	Enter the name of the object key.
<device>	Enter the name of the device.
<vdom>	Enter the name of the VDOM.

## fmpolicy print-adom-database

Use this command to display the device database configuration for an ADOM.

### Syntax

```
execute fmpolicy print-adom-database <adom_name> <output_filename>
```

## fmpolicy print-adom-object

Use this command to display the device objects.

### Syntax

```
execute fmpolicy print-adom-object <adom_name>
execute fmpolicy print-adom-object <adom_name> <category> {all | list} <output>
execute fmpolicy print-adom-object Global <category> {all | list} <output>
```

Variable	Description
<adom_name>	Enter the name of the ADOM or "Global".
<category>	Enter the category name.
{all   list}	<ul style="list-style-type: none"> <li>• all: Show all objects.</li> <li>• list: Get all objects.</li> </ul>
<output>	Output file name (output dump to file: [/tmp/p1]).

## fmpolicy print-adom-package

Use this command to display the package for an ADOM.

### Syntax

```
execute fmpolicy print-adom-package <adom> <template_name> <package_name> <category_name>
<object_name> [<output>]
```

Variable	Description
<adom>	Enter the name of the ADOM or "Global".
<template_name>	Enter the policy package/template name.
<package_name>	Enter the package name ID.
<category_name>	Enter the category name.
<object_name>	Show object by name. <ul style="list-style-type: none"> <li>• all: Show all objects.</li> <li>• list: Get all objects.</li> </ul>
[<output>]	Output file name (output dump to file: [/tmp/p1]).

## fmpolicy print-adom-package-assignment

Use this command to display the packages and provisioning templates assignment information for an ADOM.

### Syntax

```
execute fmpolicy print-adom-package-assignment <adom> <policy package/template name>
```

Variable	Description
<adom>	Enter the name of the ADOM or "Global": <ul style="list-style-type: none"> <li>• 104: FortiCarrier</li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>• 149: FortiFirewall</li> <li>• 128: Unmanaged_Devices</li> <li>• 3: root</li> </ul>
<policy package/template name>	Enter the policy package or the template name: <ul style="list-style-type: none"> <li>• 1: Policy Packages</li> <li>• 5: System Templates</li> <li>• 8: FortiClient Templates</li> <li>• 9: Threat Weight Templates</li> <li>• 10: WTP Packages</li> <li>• 14: FortiExtender Packages</li> <li>• 11: WAN Templates</li> <li>• 12: FortiSwitch Packages</li> <li>• 20: All Non-policy Packages</li> </ul>

## fmpolicy print-adom-policyblock

Use this command to display the policy block for an ADOM.

### Syntax

```
execute fmpolicy print-adom-policyblock <adom> <policy_block_name> <category_name> <object_name>
<output>
```

Variable	Description
<adom>	Enter the name of the ADOM or "Global".
<policy_block_name>	Enter the policy block name ID.
<category_name>	Enter the category name.
<object_name>	Show object by name. <ul style="list-style-type: none"> <li>• all: Show all objects.</li> <li>• list: Get all objects.</li> </ul>
<output>	Output file name (output dump to file: [/tmp/p1]).

## fmpolicy print-device-database

Use this command to print the device database configuration.

## Syntax

```
execute fmpolicy print-device-database <adom> <device_name> <output>
```

Variable	Description
<adom>	Enter the name of the ADOM.
<device_name>	Enter the name of the device.
<output>	Output file name (output dump to file: [/tmp/p1]).

## fmpolicy print-device-nonsync-config

Use this command to print the device non-HAsync configuration.

### Syntax

```
execute fmpolicy print-device-nonsync-config <adom> <device_name> <member> <output>
```

Variable	Description
<adom>	Enter the name of the ADOM.
<device_name>	Enter the name of the device.
<member>	Enter the HA member's serial number.
<output>	Output file name (output dump to file: [/tmp/p1]).

## fmpolicy print-device-object

Use this command to display the device objects.

### Syntax

```
execute fmpolicy print-device-object <adom> <device_name> <vdom> <category> {<key> | list | all}
<output>
```

Variable	Description
<adom>	Enter the name of the ADOM.
<device_name>	Enter the name of the device.
<vdom>	Enter the VDOM name.
<category>	Enter the category name.

Variable	Description
{<key>   list   all}	<ul style="list-style-type: none"> <li>all: Show all objects.</li> <li>list: Get all objects.</li> </ul>
<output>	Output file name (output dump to file: [/tmp/p1]).

## fmpolicy promote-adom-object

Use this command to promote an ADOM object.

### Syntax

```
execute fmpolicy promote-adom-object <adom> <category> <key> <new-key>
```

Variable	Description
<adom>	Enter the name of the source ADOM.
<category>	Enter the name of the category in the ADOM.
<key>	Enter the name of the object key.
<new-key>	Enter the name of the new key.

## fmpolicy unlink-adom-object

Use this command to unlink device-to-adom object reference.

### Syntax

```
execute fmpolicy unlink-adom-object <adom> <category> <key> <device> <vdom>
```

Variable	Description
<adom>	Enter the name of the ADOM.
<category>	Enter the category name.
<key>	Enter the name of the object key.
<device>	Enter the name of the device.
<vdom>	Enter the name of the VDOM.

## fmpolicy upload-print-log

Use this command to upload the latest print command logs to a server.

### Syntax

```
execute fmpolicy upload-print-log [ftp|scp|sftp] <server> <port> <path> <user> <passwd>
```

Variable	Description
[ftp scp sftp]	Enter the type of server to upload the logs to.
<server>	Enter the server IP address or DNS.
<port>	Enter the port number (0 for default).
<path>	Enter the path on the server.
<user>	Enter the username.
<passwd.	Enter the user's password.

## fmprofile

Use these commands to perform profile related actions:

fmprofile copy-to-device	fmprofile import-from-device
fmprofile delete-profile	fmprofile import-profile
fmprofile export-profile	fmprofile list-profiles

## fmprofile copy-to-device

Use this command to copy profile settings from a profile to a device.

### Syntax

```
execute fmprofile copy-to-device <adom> <profile-id> <device_name>
```

Variable	Description
<adom>	Enter the name of the ADOM.
<profile-id>	Enter the profile ID.
<device_name>	Enter the device ID.

## fmprofile delete-profile

Use this command to delete a profile.

### Syntax

```
execute fmprofile delete-profile <adom> <profile-id>
```

Variable	Description
<adom>	Enter the name of the ADOM.
<profile-id>	Enter the profile ID.

## fmprofile export-profile

Use this command to export profile configurations.

### Syntax

```
execute fmprofile export-profile <adom> <profile-id> <output>
```

Variable	Description
<adom>	Enter the name of the ADOM.
<profile-id>	Enter the profile ID.
<output>	Enter the output file name.

## fmprofile import-from-device

Use this command to import profile settings from a device to a profile.

### Syntax

```
execute fmprofile import-from-device <adom> <device_name> <profile-id>
```

Variable	Description
<adom>	Enter the name of the ADOM.
<device_name>	Enter the device ID.
<profile-id>	Enter the profile ID.

## fmprofile import-profile

Use this command to import profile configurations.

### Syntax

```
execute fmprofile import-profile <adom> <profile_id> <filename>
```

Variable	Description
<adom>	Enter the name of the ADOM.
<profile-id>	Enter the profile ID.
<filename>	Enter the full path to the input file containing CLI configuration.

## fmprofile list-profiles

Use this command to list all profiles in an ADOM.

### Syntax

```
execute fmprofile list-profiles <adom_name>
```

Variable	Description
<adom_name>	Enter the name of the ADOM.

## fmscript

Use these commands to perform script related actions:

fmscript clean-sched	fmscript import
fmscript clear-tcl-files	fmscript list
fmscript copy	fmscript list-tcl-files
fmscript delete	fmscript run
fmscript export-tcl-files	fmscript run-task
	fmscript

## fmscript clean-sched

Clean the script schedule table for all non-existing devices.

### Syntax

```
execute fmscript clean-sched
```

## fmscript clear-tcl-files

Delete all tcl files.

### Syntax

```
execute fmscript clear-tcl-files
```

## fmscript copy

Copy a script or scripts between ADOMs.

### Syntax

```
execute fmscript copy <src_adom> <script> <dst_adom>
```

Variable	Description
<src_adom>	The source ADOM name.
<script>	The name of the script to copy (0000 = copy all scripts).
<dst_adom>	The destination ADOM name.

## fmscript delete

Delete a script from FortiManager.

### Syntax

```
execute fmscript delete <adom> <name>
```

Variable	Description
<adom>	Enter the adom name.
<name>	Enter the script name.

## fmscript export-tcl-files

Export all tcl files to a remote server.

### Syntax

```
execute fmscript export-tcl-files <sftp | scp | ftp> <string> <ip:port> <username> <password>
```

Variable	Description
<sftp   scp   ftp>	Enter the transfer protocol.
<string>	Enter the remote path/filename.
<ip:port>	Enter the remote server IP address. Port is optional.
<username>	Enter the remote username.
<password>	Enter the remote password.

## fmscript import

Import a script from an FTP server to FortiManager.

### Syntax

```
execute fmscript import <ftpserver_ipv4> <filename> <username> <password> <scriptname>
<scripttype> <comment> <adom_name> <os_type> <os_version> <platform> <device_name> <build_
number> <hostname> <serial_number>
```

Variable	Description
<ftpserver_ipv4>	The IPv4 address of the FTP server.
<filename>	The filename of the script to be imported to the FortiManager system.
<username>	The user name used to access the FTP server.
<password>	The password used to access the FTP server.
<scriptname>	The name of the script to import.
<scripttype>	The type of script as one of CLI, Jinja or TCL.

Variable	Description
<comment>	A comment about the script being imported, such as a brief description.
<adom_name>	Name of the administrative domain.
<os_type>	The operating system type, such as FortiOS. Options include any, FortiOS, and others.
<os_version>	The operating system version, such as FortiOS. Options include any, 400, and 500.
<platform>	The hardware platform this script can be run on. Options include any, or the model of the device such as Fortigate 60C.
<device_name>	The device name to run this script on. Options include any, or the specific device name as it is displayed on the FortiManager system
<build_number>	The specific build number this script can be run on. Options include any, or the three digit build number. Build numbers can be found in the firmware name for the device.
<hostname>	The host name of the device this script can be run on. Options include any, or the specific host name.
<serial_number>	The serial number of the device this script can be run on. Options include any, or the specific serial number of the device, such as FGT60C3G28033042.

## fmscript list

List the scripts on the FortiManager device.

### Syntax

```
execute fmscript list <adom>
```

Variable	Description
<adom>	Enter the ADOM name or Global.

### Example

This is a sample output of the execute fmscript list command.

```
FMG400C # execute fmscript list
scriptid=8,name=new account profile,type=CLI
scriptid=7,name=import_script,type=CLI
scriptid=6,name=group1,type=CLIGROUP
scriptid=5,name=basic_test,type=CLI
scriptid=3,name=interface info,type=CLI
scriptid=1,name=xml_script1,type=CLI
```

## fmscript list-tcl-files

List exportable tcl files.

### Syntax

```
execute fmscript list-tcl-files
```

## fmscript run

Run a script on a device, the device's object database, or on the global database. Only CLI scripts can be run on databases, and they must contain only complete commands. Any scripts that use shortened CLI commands will generate errors.

When a script is run on the database, the device will be updated with any configuration changes the next time the configuration is uploaded from the FortiManager system to the device.

### Syntax

```
execute fmscript run <adom> <script> <run_on> <dev/grp/pkgid>
```

Variable	Description
<adom>	Enter the name of the ADOM or Global.
<script>	Enter the script name to run.
<run_on>	Select where to run the script: <ul style="list-style-type: none"> <li>• device: on the device</li> <li>• group: on a group</li> <li>• devicedb: on the device's object database</li> <li>• adomdb: on a specific package</li> <li>• globaldb: on the global database</li> </ul>
<dev/grp/pkgid>	Enter the name of the device or group, or the ID of the package, to run the script on.

## fmscript run-task

Run a script on a device, the device's object database, or on the global database and return a task id (async call). Only CLI scripts can be run on databases, and they must contain only complete commands. Any scripts that use shortened CLI commands will generate errors.

When a script is run on the database, the device will be updated with any configuration changes the next time the configuration is uploaded from the FortiManager system to the device.

## Syntax

```
execute fmscript run-task <adom> <script> <run_on> <dev/grp/pkgid>
```

Variable	Description
<adom>	Enter the name of the ADOM or Global.
<script>	Enter the script name to run.
<run_on>	Select where to run the script: <ul style="list-style-type: none"> <li>• device: on the device</li> <li>• group: on a group</li> <li>• devicedb: on the device's object database</li> <li>• adomdb: on a specific package</li> <li>• globaldb: on the global database</li> </ul>
<dev/grp/pkgid>	Enter the name of the device or group, or the ID of the package, to run the script on.

## fmscript showlog

Display the log of scripts that have run on the selected device.

## Syntax

```
execute fmscript showlog <device_name>
```

Variable	Description
<device_name>	The name of a managed FortiGate device.

## Example

This example shows the output of `execute fmscript showlog Dev3` that displays the output from a CLI script called `xml_script1` that was run on the object database.

```
execute fmscript showlog Dev3
Starting log
config firewall address
  edit 33
    set subnet 33.33.33.33 255.255.255.0
config firewall address
  edit 33
Running script(xml_script1) on DB success
cdb_find_entry_by_canon,52:parent=1,category=2,key=(null)
```

# fmupdate

Import or export packages using the FTP, SCP, or TFTP servers.

## Syntax

```
execute fmupdate {ftp | scp | tftp} import <type> <filename> <server> <port> <directory>
    <username> <password>
execute fmupdate {ftp | scp | tftp} export <type> <filename> <server> <port> <directory>
    <username> <password> [base64 | delta | only]
execute fmupdate {ftp | scp | tftp} fds-export <objid> <filename> <server> <directory> <username>
    <password> [base64 | delta | only]
execute fmupdate fgd-db-merge {as | av | av2 | fq | iot | wf}
```

Variables	Description
{ftp   scp   tftp}	Select the file transfer protocol to use: ftp, scp, or tftp. Select fgd-db-merge to merge the FortiGuard database immediately.
fds-export	Export the AV-IPS package to the FTP server.
fgd-db-merge {as   av   av2   fq   iot   wf}	Merge FortiGuard database immediately. Select the database type.
<type>	Select the package type to export or import: <ul style="list-style-type: none"> <li>import: <ul style="list-style-type: none"> <li>package = fcp package</li> <li>license = license package</li> <li>custom-url = customized URL database</li> <li>som = som.dat default download list</li> </ul> </li> <li>export: <ul style="list-style-type: none"> <li>license = license package</li> <li>license-xml = license info. in xml</li> <li>custom-url = customized URL database</li> <li>som = som.dat default download list</li> </ul> </li> </ul>
<filename>	Update manager packet file name on the server or host.
<objid>	Enter the object ID (use '-' as a separator).
<port>	Only available when the file transfer protocol is scp. Enter the port to connect to on the remote SCP host (1 - 65535).
<server>	Enter the server IP address.
<directory>	Enter the name of the directory of the file to download from the FTP server or SCP host. If the directory name has spaces, use quotes instead.
<username>	Enter the username to log into the FTP server or SCP host.

Variables	Description
<password>	Enter the password to log into the FTP server or SCP host.
[base64   delta   only]	(Optional) <ul style="list-style-type: none"> <li>base64: export in base64 format.</li> <li>delta: include delta object.</li> <li>only: only export selected object.</li> </ul>

## format

Format the hard disk on the FortiManager system. You can select to perform a secure (deep-erase) format which overwrites the hard disk with random data. You can also specify the number of time to erase the disks.

To format the disk, FortiManager must be in Standalone mode, not in a HA cluster.

### Syntax


```
execute format disk <RAID level> [<group>] [deep-erase] [<erase-times>]
```

When you run this command, you will be prompted to confirm the request.



Executing this command will erase all device settings/images, VPN & Update Manager databases, and log data on the FortiManager system's hard drive. The FortiManager device's IP address, and routing information will be preserved.

Variable	Description
disk	Format the hard disk (ext4).
[deep-erase]	Overwrite the hard disk with random data. Selecting this option will take longer than a standard format.
[<erase-times>]	Number of times to overwrite the hard disk with random data (1 - 35, default = 1).
[<group>]	Enter the number of RAID groups to be used in the RAID array (default = 2). To view the available options, use an asterisk (*). For example: <pre>execute format disk 50 *</pre> The number of groups can only be selected for RAID 50 and RAID 60.

Variable	Description
	 <p>When building a RAID array, select a number of groups that will use all disks.</p> <p>For example, consider a RAID array with 15 disks. Using the default 2 groups (7 disks per group) would leave 1 disk unused. In order to use all disks, it would be better to select 3 groups (5 disks per group).</p>
<RAID level>	<p>Enter the RAID level to be set on the device. This option is only available on FortiManager models that support RAID.</p> <p>Enter * to show available RAID levels.</p>

## gui-db

Use these commands to apply new migration scripts to the GUI DB, show the history of GUI DB, and roll back to previous versions.

### Syntax

```
execute gui-db history
execute gui-db migration
execute gui-db rollback <previous version>
```

Variable	Description
history	Show the history of GUI DB migrations.
migration	Apply new migration scripts to GUI DB.
rollback <previous version>	Roll back GUI DB to a previous migration version. Enter the previous version to roll back to.

## iotop

Use this command to display system processes input/output usage information.

### Syntax

```
execute iotop <parameter> <parameter> <parameter> <parameter> <parameter> <parameter> <parameter>
<parameter>
```

Parameter	Description
--version	Show the program's version number and exit.
-h, --help	Show this help message and exit.
-o, --only	Only show processes or threads that are actually doing I/O.
-b, --batch	Non-interactive mode.
-n NUM, --iter=NUM	The number of iterations before ending (default = infinite).
-d SEC, --delay=SEC	The delay between iterations, in seconds (default = 1).
-p PID, --pid=PID	The processes/threads to monitor (default = all).
-u USER, --user=USER	The users to monitor (default = all).
-P, --processes	Only show processes, not all threads.
-a, --accumulated	Show the accumulated I/O instead of bandwidth.
-k, --kilobytes	Use kilobytes instead of a human friendly unit.
-t, --time	Add a timestamp on each line (implies --batch).
-q, --quiet	Suppress some lines of header (implies --batch).

## iotps

Use this command to list system processes sorted by their read/write system call rate.

### Syntax

```
execute iotps
```

Variable	Description
<parameter>	Parameters: <ul style="list-style-type: none"> <li>• -r</li> <li>• -w</li> <li>• -e</li> <li>• -t [intv]</li> </ul>

## log

Use these commands to manage device logs:

```

log adom disk_quota
log device disk_quota
log device permissions
log device vdom
log dlp-files clear

log import
log ips-pkt clear
log quarantine-files clear
log storage-warning

```

## log adom disk\_quota

Set the ADOM disk quota.

### Syntax

```
execute log adom disk_quota <adom_name> <value>
```

Variable	Description
<adom_name>	Enter the ADOM name, or enter All for all ADOMs.
<value>	Enter the disk quota value in megabytes.

## log device disk\_quota

Set the log device disk quota.

### Syntax

```
execute log device disk_quota <device_id> <value>
```

Variable	Description
<device_id>	Enter the log device ID number, or All for all devices.
<value>	Enter the disk quota value, in megabytes (100 - 5655).

## log device permissions

Set or view the log device permissions.

### Syntax

```
execute log device permissions <device_id> <permission> {enable | disable}
```

Variable	Description
<device_id>	Enter the log device ID number, or A11 for all devices.
<permission>	The following permissions are available: <ul style="list-style-type: none"> <li>• all: All permissions</li> <li>• logs: Log permission</li> <li>• content: Content permission</li> <li>• quar: Quarantine permission</li> <li>• ips: IPS permission</li> </ul>
{enable   disable}	Enable/disable the option.

## log device vdom

Use this command to add, delete, or list VDOMs.

### Syntax

```
execute log device vdom add <device_name> <ADOM> <VDOM>
execute log device vdom delete <device_name> <VDOM>
execute log device vdom delete-by-id <device_name> <Id>
execute log device vdom list <device_name>
```

Variable	Description
add <device_name> <ADOM> <VDOM>	Add a new VDOM to a device with the device name, the ADOM that contains the device, and the name of the new VDOM.
delete <device_name> <VDOM>	Delete a VDOM from a device.
delete-by-id <device_name> <Id>	Delete a VDOM from a device using its ID number.
list <device_name>	List all the VDOMs on a device.

## log dlp-files clear

Delete log DLP files.

### Syntax

```
execute log dlp-files clear <device_name> <archive type>
```

Variable	Description
<device_name>	Enter the device name.
<archive type>	Enter the device archive type: all, email, im, ftp, http, or mms.

## log import

Use this command to import log files from another device and replace the device ID on imported logs.

### Syntax

```
execute log import <service> <ip_address> <user-name> <password> <file-name> <device-id>
```

Variable	Description
<service>	Select the file transfer protocol to use: ftp, sftp, scp, or tftp.
<ip:port>	Server IP address or host name. Port is optional.
<user-name>	Enter the username.
<password>	Enter the password or - for no password. The <password> field is not required when <service> is tftp.
<file-name>	The file name (e.g. dir/fgt.alog.log) or directory name (e.g. dir/subdir/).
<device-id>	Replace the device ID on imported logs. Enter a device serial number of one of your log devices.

## log ips-pkt clear

Delete IPS packet files.

### Syntax

```
execute log ips-pkt clear <device_name>
```

Variable	Description
<device_name>	Enter the device name.

## log quarantine-files clear

Delete log quarantine files.

## Syntax

```
execute log quarantine-files clear <string>
```

Variable	Description
<string>	Enter the device name.

## log storage-warning

Reset the licensed VM storage size warning

### Syntax

```
execute log storage-warning reset
```

## log-fetch

Use the following commands to fetch logs.

## log-fetch client

Use these commands to manage client sessions.

### Syntax

```
execute log-fetch client cancel <profile name>
execute log-fetch client list <profile name>
execute log-fetch client pause <profile name>
execute log-fetch client resume <profile name>
execute log-fetch client run <profile name>
execute log-fetch client view <profile name>
```

Variable	Description
cancel <profile name>	Cancel one session.
list <profile name>	List all sessions.
pause <profile name>	Pause one session.
resume <profile name>	Resume one session.

Variable	Description
run <profile name>	Start a new session.
view <profile name>	View the session status.

## log-fetch server

Use this command to manager the log fetching server.

### Syntax

```
execute log-fetch server approve <session id>
execute log-fetch server cancel <session id>
execute log-fetch server deny <session id>
execute log-fetch server list
execute log-fetch server pause <session id>
execute log-fetch server resume <session id>
execute log-fetch server view <session id>
```

Variable	Description
approve <session id>	Approve a session.
cancel <session id>	Pause and clear one session or all sessions.
deny <session id>	Deny a session.
list	List all sessions.
pause <session id>	Pause a session.
resume <session id>	Resume a session.
view <session id>	View the session.

## log-integrity

Query the log file's MD5 checksum and timestamp.

### Syntax

```
execute log-integrity <device_name> <vdom name> <log_name>
```

Variable	Description
<device_name>	The name of the log device.
<vdom name>	The VDOM name.
<log_name>	The log file name.

## lvm

With Logical Volume Manager (LVM), a FortiManager VM device can have up to fifteen total log disks added to an instance. More space can be added by adding another disk and running the LVM extend command.



This command is only available on FortiManager VM models.



You can use the `execute format disk` command to start the LVM. See [format](#) on page 208.

## Syntax

```
execute lvm extend
execute lvm hwinfo
execute lvm info
```

Variables	Description
extend	Extend the LVM logical volume.
hwinfo	Show LVM hardware information.
info	Get system LVM information.

## migrate

Use this command to migrate all backup settings from the FTP, SCP, or SFTP server. This command also allows migrating to the fabric ADOM from a non-fabric ADOM.

## Syntax

```
execute migrate all-settings {ftp | scp | sftp} <ip:port> <string> <username> <password> <ssh-
cert> [<crptpasswd>]
execute migrate fabric <adom name>
```

Variable	Description
{ftp   scp   sftp}	Enter the server type: ftp, scp, or sftp.
<ip:port>	Enter the server IP address and optionally, for FTP servers, the port number.
<string>	Enter the path and file name for the backup.
<username>	Enter username to use to log on the backup server.
<passwd>	Enter the password for the username on the backup server.
<ssh-cert>	Enter the SSH certification for the server. This option is only available for backup operations to SCP servers.
[<crptpasswd>]	Optional password to protect backup content. Use any for no password.
<adom name>	Enter names of the ADOM(s) separated by commas.

## nslookup

Use this command to query Internet name servers interactively.

### Syntax

```
execute nslookup <host>
```

Variable	Description
<host>	Enter the hostname/IP.

## ping

Send an ICMP echo request (ping) to test the network connection between the FortiManager system and another network device.

### Syntax

```
execute ping <ip | hostname>
```

Variable	Description
<ip   hostname>	IPv4 address or DNS resolvable hostname of network device to contact.

## Example

This example shows how to ping a host with the IPv4 address 192.168.1.23:

```
execute ping 192.168.1.23
```

## ping6

Send an ICMP echo request (ping) to test the network connection between the FortiManager system and another network device.

## Syntax

```
execute ping6 <ip | hostname>
```

Variable	Description
<ip   hostname>	Enter the IPv6 address or DNS resolvable hostname of network device to contact.

## Example

This example shows how to ping a host with the IPv6 address 8001:0DB8:AC10:FE01:0:0:0:0:

```
execute ping6 8001:0DB8:AC10:FE01:0:0:0:0:
```

## raid

This command allows you to add and delete RAID disks.



This command is only available on hardware-based FortiManager models that support RAID.

## Syntax

```
execute raid add-disk <disk index>
execute raid delete-disk <disk index>
```

Variable	Description
add-disk <disk index>	Add a disk and give it an index number.
delete-disk <disk index>	Delete the specified disk.

## reboot

Restart the FortiManager system. This command will disconnect all sessions on the FortiManager system.

### Syntax

```
execute reboot
```

## remove

Use this command to remove all GUI data cache, all custom settings in Logview, all reports for a specific device, resync files, security fabric from a specific ADOM, and all endpoints and end user related information from files, tables, and memory.

### Syntax

```
execute remove endpoints-endusers
execute remove gui-data-cache
execute remove gui-logview-settings
execute remove reports <device-id>
execute remove resync
execute remove security-fabric <adom-name> <security-fabric-name>
```

Variable	Description
<device-id>	The device identifier for the device that all reports are being removed from.
<adom-name>	The ADOM that contains the security fabric that is being removed.
<security-fabric-name>	The security fabric that is being removed.

## Example

```
execute remove gui-logview-settings
```

This operation will Remove all custom settings in GUI LogView and reset to default for all users.  
Do you want to continue? (y/n)y

```
Remove all custom settings in GUI LogView ...
```

```
Done! Reset all settings in GUI LogView to default.
```

## reset

Use this command to reset the FortiManager unit. These commands will disconnect all sessions and restart the FortiManager unit.

### Syntax

```
execute reset adom-settings <adom> <version> <mr> <ostype>
execute reset all-except-ip
execute reset all-settings
execute reset all-shutdown
execute reset gui-db
```

Variable	Description
adom-settings <adom> <version> <mr> <ostype>	Reset an ADOM's settings. <ul style="list-style-type: none"> <li>&lt;adom&gt;: The ADOM name.</li> <li>&lt;version&gt;: The ADOM version. For example, 5 for 5.x releases.</li> <li>&lt;mr&gt;: The major release number.</li> <li>&lt;ostype&gt;: Supported OS type. For example, 18 for FortiDeceptor.</li> </ul> This variable is applies to FortiAnalyzer only. For more information, see the FortiAnalyzer CLI Reference.
all-except-ip	Reset all settings except the current IP address and route information.
all-settings	Reset to factory default settings.
all-shutdown	Reset all settings and shutdown.
gui-db	Reset the GUI DB. Customized GUI display settings will be lost.

## reset-sqllog-transfer

Use this command to resend SQL logs to the database.

## Syntax

```
execute reset-sqllog-transfer <enter>
```

## restore

Use this command to restore the configuration or database from a file and change the FortiManager unit image. These commands will disconnect all sessions and restart the FortiManager unit.

## Syntax

```
execute restore all-settings {ftp | sftp} <ip:port> <filename> <username> <password> <crtpasswd>
    [option1+option2+...]
execute restore all-settings <scp> <ip:port> <filename> <username> <ssh-cert> <crtpasswd>
    [option1+option2+...]
execute restore image {ftp | scp | sftp} <filepath> <ip:port> <username> <password>
execute restore image tftp <string> <ip>
execute restore logs <device name(s)> {ftp | scp | sftp} <ip> <username> <password> <directory>
    [vdlist]
execute restore logs-only <device name(s)> {ftp | scp | sftp} <ip> <username> <password>
    <directory> [vdlist]
execute restore reports <report name(s)> {ftp | scp | sftp} <ip> <username> <password>
    <directory> [vdlist]
execute restore reports-config {<adom_name> | all} {ftp | scp | sftp} <ip> <username> <password>
    <directory> [full]
```

Variable	Description
all-settings	Restore all FortiManager settings from a file on a server. The new settings replace the existing settings, including administrator accounts and passwords.
image	Upload a firmware image from a(an) FTP/SCP/SFTP/TFTP server to the FortiManager unit. The FortiManager unit reboots, loading the new firmware.
logs	Restore the device logs.
logs-only	Restore only the device logs.
reports	Restore device reports.
reports-config	Restore the reports configuration.
ftp	Restore from an FTP server.
sftp	Restore from a SFTP server.
scp	Restore from an SCP server.

Variable	Description
<ip:port>	Enter the IP address of the server to get the file from and optionally , for FTP servers, the port number.
<ip>	Enter the server IP address.
<device name(s)>	Enter the device name(s) separated by a comma, or enter all for all devices.
<report name(s)>	Restore specific reports (separated by commas), all for all reports, or reports with names containing given pattern. A '?' matches any single character. A '*' matches any string, including the empty string, e.g.: <ul style="list-style-type: none"> <li>• foo: for exact match</li> <li>• *foo: for report names ending with foo</li> <li>• foo*: for report names starting with foo</li> <li>• *foo*: for report names containing foo substring.</li> </ul>
{<adom_name>   all}	Select to backup a specific ADOM or all ADOMs.
<filename>	Enter the file to get from the server. You can enter a path with the filename, if required.
<filepath>	Enter the file to get from the server. You can enter a path with the filename, if required.
<username>	The username to log on to the server. This option is not available for restore operations from TFTP servers.
<password>	The password for username on the server. This option is not available for restore operations from TFTP servers.
<ssh-cert>	The SSH certification for the server. This option is only available for restore operations from SCP servers.
<crptpasswd>	Enter the password that was used to protect backup content. If no password was used for the backup file, use two single quotation marks ( ' ' ) to indicate no password.
[option1+option2+...]	Enter keepbasic to retain IP and routing information on the original unit.
<directory>	Enter the directory.
[full]	Reports configuration full restoration.

## Example

This example shows how to upload a configuration file from a FTP server to the FortiManager unit. The name of the configuration file on the FTP server is backupconfig. No crptpasswd was used when backing up the content. The IP address of the FTP server is 192.168.1.23. The user is admin with a password of mypassword. The configuration file is located in the /usr/local/backups/ directory on the TFTP server.

```
execute restore all-settings 192.168.1.23 /usr/local/backups/backupconfig admin mypassword ''
```

## sdns

Use this command to enable and reboot the SDNS system, and to load an SDNS image.



This command is only available on hardware-based FortiManager models .

### Syntax

```
execute sdns enable
execute sdns image ftp <filepath> <ip> <username> <password>
```

Variable	Description
enable	Enable and reboot to SDNS system.
image ftp <filepath> <ip> <username> <password>	Load an SDNS image.

## sensor

This command lists sensors and readings.



This command is only available on hardware-based FortiManager models.

### Syntax

```
execute sensor detail
execute sensor list
```

Variable	Description
detail	List detailed sensors and readings.
list	List sensors and readings.

## shutdown

Shut down the FortiManager system. This command will disconnect all sessions.

### Syntax

```
execute shutdown
```

## software-raid

This command allows you to add and delete software RAID disks for FortiManager hardware platforms with hybrid storage systems



This command is only available on applicable FortiManager hardware platforms that support RAID with hybrid storage systems.

### Syntax

```
execute software-raid add-disk [<disk ID>]
execute software-raid delete-disk [<disk ID>]
```

Variable	Description
add-disk [<disk ID>]	Add a disk to Software RAID. Enter the disk ID of the software RAID SSD to add to the array. If you do not enter a disk ID, a list of disks that are not part of the software RAID array is listed.
delete-disk [<disk ID>]	Delete a disk from Software RAID. Enter the disk ID of the software RAID SSD to remove from the array. If you do not enter a disk ID, a list of disks that may be safely removed without breaking the RAID array will be listed. This list only includes disks that are allowed to be deleted from the array.



The SSD disks are not hot swappable. Once you have identified the faulty drive:

1. Delete the faulty disk from the array (execute `software-raid delete-disk [<disk ID>]`).
2. Replace the faulty drive.
3. Reboot the FortiManager unit.
4. Add the disk (execute `software-raid add-disk [<disk ID>]`).

**Example:**

When checking available disks to delete, the list only includes disks that are allowed to be deleted from the array.

```
FMG-3700G # execute software-raid delete-disk *
!!!! WARNING !!!!! To prevent data loss DO NOT REMOVE unlisted disks !!!!! WARNING !!!!!
Available disks:
1
2
3
4
5
6
!!!! WARNING !!!!! To prevent data loss DO NOT REMOVE unlisted disks !!!!! WARNING !!!!!
```

## sql-local

Use these commands to remove the SQL database and logs from the FortiManager system and to rebuild the database and devices.



When rebuilding the SQL database, new logs will not be available until the rebuild is complete. The time required to rebuild the database is dependent on the size of the database. Please plan a maintenance window to complete the database rebuild. You can use the `diagnose sql status rebuild-db` command to display the SQL log database rebuild status.

The following features will not be available until after the SQL database rebuild has completed: FortiView, Log View, Event Management, and Reports.

## Syntax

```
execute sql-local rebuild-db
execute sql-local rebuild-index <adom> <start-time > <end-time>
execute sql-local rebuild-metadb
```

Variable	Description
rebuild-db	Rebuild entire log SQL database from log data. This operation will remove the SQL database and rebuild from log data. It will also reboot the device.
rebuild-index	Rebuild indexes for an ADOM.
rebuild-metadb	Rebuild the metadata database.
<adom>	The ADOM name. Multiple ADOM names can be entered when rebuilding ADOMs.

Variable	Description
<start-time >	Enter the start time (timestamp or <yyyy-mm-dd hh:mm:ss>).
<end-time>	Enter the end time (timestamp or <yyyy-mm-dd hh:mm:ss>).
<log type>	Enter the log type from available log types, for example: emailfilter

## sql-query-dataset

Use this command to execute a SQL dataset against the FortiManager system.

### Syntax

```
execute sql-query-dataset <adom_name> <dataset-name> <device/group name> <faz/dev> <start-time>
<end-time>
```

Variable	Description
<adom_name>	Enter the ADOM name.
<dataset-name>	Enter the SQL dataset name.
<device/group name>	Enter the name of the device or device group.
<faz/dev>	Enter the reference time: FortiAnalyzer time or device time.
<start-time>	Enter the log start time (timestamp or <yyyy-mm-dd hh:mm:ss>).
<end-time>	Enter the log end time (timestamp or <yyyy-mm-dd hh:mm:ss>).

## sql-query-generic

Use this command to execute a SQL statement against the FortiManager system.

### Syntax

```
execute sql-query-generic <string>
```

Variable	Description
<string>	Specify the SQL statement to be executed.

## sql-query-siem

Use this command to execute a SIEM SQL statement.

### Syntax

```
execute sql-query-siem <string>
```

Variable	Description
<string>	Specify the SQL statement to be executed.

## sql-report

Use these commands to import and display language translation and fonts files, and to run a SQL report once against the FortiManager system.

### Syntax

```
execute sql-report delete-font <font-name>
execute sql-report delete-lang <language-name>
execute sql-report delete-template adom-installed <adom> <language> [title]
execute sql-report delete-template device-default <dev-type> <language> [title]
execute sql-report export-lang <language-name> <service> <ip> <argument 1> <argument 2> <argument
  3>
execute sql-report export-template adom-installed <adom> <service> <ip> <user> <password> <file
  name> [language] [title]
execute sql-report export-template device-default <dev-type> <service> <ip> <user> <password>
  <file name> [language] [title]
execute sql-report hcache-build <adom> <name/title> <start-time> <end-time>
execute sql-report hcache-check <adom> <name/title> <start-time> <end-time>
execute sql-report import-font <service> <ip> <argument 1> <argument 2> <argument 3>
execute sql-report import-lang <language-name> <service> <ip> <argument 1> <argument 2> <argument
  3>
execute sql-report import-template <devtype> <service> <ip> <user> <password> <file name>
execute sql-report install-template <adom> <language> <service> <ip> <user> <password> <file
  name>
execute sql-report list <adom> [days-range] [layout-name]
execute sql-report list-fonts
execute sql-report list-lang [language]
execute sql-report list-schedule <adom> [sched-only | autocache-only | detail] [detail]
execute sql-report list-template adom-installed <adom> [language]
execute sql-report list-template device-default <dev-type> [language]
execute sql-report run <adom> <name/title> <start-time> <end-time>
execute sql-report view <data-type> <adom> <report-name> <filter> <view-by>
```

Variable	Description
delete-font	Delete one font.
delete-lang	Delete one language translation file.
delete-template	Delete templates. <ul style="list-style-type: none"> <li>• <code>adom-installed</code> - Delete report templates installed in ADOM.</li> <li>• <code>device-default</code> - Delete device type default report templates.</li> </ul>
export-lang	Export a user-defined language translation file.
export-template	Export report templates. <ul style="list-style-type: none"> <li>• <code>adom-installed</code> - Export ADOM report templates to file.</li> <li>• <code>device-default</code> - Export device type default report templates to file.</li> </ul>
hcache-build	Build report hcache.
hcache-check	Check report hcache.
import-font	Import one font.
import-lang	Import a user-defined language translation file.
import-template	Import per device type template from a configuration file.
install-template	Install specific language templates to an ADOM.
list	List recent generated reports.
list-fonts	List all imported fonts.
list-lang	Display all supported language translation files.
list-schedule	List report schedule and autocache information.
list-template	List templates. <ul style="list-style-type: none"> <li>• <code>adom-installed</code> - Display report templates installed in ADOM.</li> <li>• <code>device-default</code> - Display device type default report templates.</li> </ul>
run	Run a report once.
view	View report data.
<adom>	Specify the ADOM name.
<font-name>	The name of a font.
<dev-type>	Enter the device type abbreviation: <ul style="list-style-type: none"> <li>• FGT - FortiGate</li> <li>• FMG - FortiManager</li> <li>• FCT - FortiClient</li> <li>• FML - FortiMail</li> <li>• FWB - FortiWeb</li> <li>• FCH - FortiCache</li> <li>• FAZ - FortiAnalyzer</li> <li>• FSA - FortiSandbox</li> <li>• FDD - FortiDDoS</li> <li>• FAC - FortiAuthenticator</li> <li>• FPX - FortiProxy</li> </ul>

Variable	Description
<language-name>	Enter the language name to import, export, or delete a language translation file, or select one of the following options: <ul style="list-style-type: none"> <li>English</li> <li>French</li> <li>Japanese</li> <li>Korean</li> <li>Portuguese</li> <li>Simplified_Chinese</li> <li>Spanish</li> <li>Traditional_Chinese</li> </ul>
<service>	Enter the transfer protocol: ftp, sftp, scp, or tftp. TFTP is not available for all commands.
<ip>	Enter the server IP address.
<argument 1>	For FTP, SFTP, or SCP, type a user name. For TFTP, enter a file name.
<argument 2>	For FTP, SFTP, or SCP, type a password or '-'. For TFTP, press <enter>.
<argument 3>	Enter a file name and press <enter>.
<user>	Enter a user name for the remote server.
<password>	Enter the password, or -, for the remote server user.
<file name>	Enter the name of the file.
<filter>	Set filter for the data. Enter "" to set no filter.
<data-type>	The data type to view: report-data or report-log.
<report-name>	The name of the report to view.
<name/title>	Select one of the available names or titles.
<start-time>	The start date and time of the report schedule, in the format: "HH:MM yyyy/mm/dd"
<end-time>	The enddate and time of the report schedule, in the format: "HH:MM yyyy/mm/dd"
[days-range]	The recent n days to list reports, from 1 to 99.
[layout-name]	One of the available SQL report layout names.
[language]	Enter the language abbreviation: <ul style="list-style-type: none"> <li>en - English</li> <li>de - German</li> <li>es - Spanish</li> <li>fr - French</li> <li>it - Italian</li> <li>ja - Japanese</li> <li>ko - Korean</li> <li>pt - Portuguese</li> <li>ru - Russian</li> <li>zh - Simplified Chinese</li> <li>zh_Hant - Traditional Chinese</li> </ul>
[title]	Title of a specific report template.
<view-by>	View the document all or by page, "view-all" or "view-by-page".

## ssh

Use this command to establish an SSH session with another system.

### Syntax

```
execute ssh <destination> <username>
```

Variable	Description
<destination>	Enter the IP address or fully qualified DNS resolvable hostname of the system you are connecting to.
<username>	Enter the user name to use to log on to the remote system.

To leave the SSH session type `exit`. To confirm that you are connected or disconnected from the SSH session, verify the command prompt has changed.

## ssh-known-hosts

Use these commands to remove all known SSH hosts.

### Syntax

```
execute ssh-known-hosts remove-all  
execute ssh-known-hosts remove-host <host/ip>
```

Variable	Description
remove-all	Remove all known SSH hosts.
remove-host	Remove the specified SSH hosts. <ul style="list-style-type: none"><li>• &lt;host/IP&gt; - The hostname or IP address of the SSH host to remove.</li></ul>

## ssh-list-keys

Use this command to list SSH host keys fingerprint.

### Syntax

```
execute ssh-list-keys
```

## ssh-regen-keys

Use this command to regenerate SSH host keys.

### Syntax

```
execute ssh-regen-keys
```

## tac

Use this command to upload, debug, or remove dangling debug reports older than an hour.

### Syntax

```
execute tac cleanup
execute tac report [logarchive]
execute tac upload <service> <ip> <dir> <user name> <password>
```

Variable	Description
[logarchive]	Flag to run in background and generate log archive.
<service>	Enter the transfer protocol: ftp, sftp, or scp.
<ip>	Enter the server IP address. For ftp, the port can be specified by adding :port.
<dir>	Enter the directory.
<user name>	Enter the username.
<password>	Enter the password or enter - for no password.

## time

Get or set the system time.

### Syntax

```
execute time [<time_str>]
```

Variable	Description
[<time_str>]	<p>The time of day, in the form hh:mm:ss.</p> <ul style="list-style-type: none"> <li>• hh is the hour and can be 00 to 23</li> <li>• mm is the minutes and can be 00 to 59</li> <li>• ss is the seconds and can be 00 to 59</li> </ul> <p>All parts of the time are required. Single digits are allowed for each of hh, mm, and ss.</p>

If you do not specify a time, the command returns the current system time.

## Example

This example sets the system time to 15:31:03:

```
execute time 15:31:03
```

## top

Use this command to view the processes running on the FortiManager system.

## Syntax

```
execute top <parameter> <parameter> ... <parameter>
```

Variable	Description
<parameter>	<p>The following parameters can be used:</p> <pre>-hv   -bcHi0Ss -d secs -n max -u U user -p pid(s) -o field -w [cols]</pre>

## execute top help menu

Use the following commands when viewing the running processes. Press h or ? for help.

Command	Description
Z,B,E,e	Global: 'Z' colors; 'B' bold; 'E'/'e' summary/task memory scale
l,t,m	Toggle Summary: 'l' load avg; 't' task/cpu stats; 'm' memory info
0,1,2,3,l	Toggle: '0' zeros; '1/2/3' cpus or numa node views; 'l' lrix mode
f,F,X	Fields: 'f'/'F' add/remove/order/sort; 'X' increase fixed-width
L,&,<,> .	Locate: 'L'/'&' find/again; Move sort column: '<'/'>' left/right

Command	Description
R,H,V,J .	Toggle: 'R' Sort; 'H' Threads; 'V' Forest view; 'J' Num justify
c,i,S,j .	Toggle: 'c' Cmd name/line; 'i' Idle; 'S' Time; 'j' Str justify
x,y.	Toggle highlights: 'x' sort field; 'y' running tasks
z,b.	Toggle: 'z' color/mono; 'b' bold/reverse (only if 'x' or 'y')
u,U,o,O .	Filter by: 'u'/'U' effective/any user; 'o'/'O' other criteria
n,#,^O.	Set: 'n'/'#' max tasks displayed; Show: Ctrl+'O' other filter(s)
C,....	Toggle scroll coordinates msg for: up,down,left,right,home,end
k,r	Manipulate tasks: 'k' kill; 'r' renice
d or s	Set update interval
W,Y	Write configuration file 'W'; Inspect other output 'Y'
q or <Esc>	Quit

## traceroute

Test the connection between the FortiManager system and another network device, and display information about the network hops between the device and the FortiManager system.

### Syntax

```
execute traceroute <host>
```

Variable	Description
<host>	Enter the IPv4 address or hostname of network device.

## traceroute6

Test the connection between the FortiManager system and another network device, and display information about the network hops between the device and the FortiManager system.

### Syntax

```
execute traceroute6 <host>
```

Variable	Description
<host>	Enter the IPv6 address or hostname of network device.

## vm-license

Activate the VM license to the FortiManager by entering the token.



This command is only available on FortiManager VM models.

---

### Syntax

```
execute vm-license <token>
```

Variable	Description
<token>	The VM license token.

# diagnose

The diagnose commands display diagnostic information that help you to troubleshoot problems.



CLI commands and variables are case sensitive.

auto-delete	fmupdate	lldp	system
cdb	fortilogd	log	test
debug	fortitoken-cloud	pm2	upload
dlp-archives	fwmanager	report	vpn
dvm	ha	rtm	
faz-cdb	hardware	sniffer	
fgfm	incident	sql	
fmnetwork	license	svctools	

## auto-delete

Use this command to diagnose auto deletion of DLP files, log files, quarantine files, and report files.

### Syntax

```
diagnose auto-delete dlp-files {delete-now | list}
diagnose auto-delete log-files {delete-now | list}
diagnose auto-delete quar-files {delete-now | list}
diagnose auto-delete report-files {delete-now | list}
```

Variable	Description
dlp-files {delete-now   list}	Delete or list DLP files. <ul style="list-style-type: none"><li>delete-now: Delete DLP files right now according to system automatic deletion policy.</li><li>list: List DLP files according to system automatic deletion policy.</li></ul>
log-files {delete-now   list}	Delete or list log files. <ul style="list-style-type: none"><li>delete-now: Delete log files right now according to system automatic deletion policy.</li></ul>

Variable	Description
	<ul style="list-style-type: none"> <li><code>list</code>: List log files according to system automatic deletion policy.</li> </ul>
<code>quar-files {delete-now   list}</code>	Delete or list quarantine files. <ul style="list-style-type: none"> <li><code>delete-now</code>: Delete quarantine files right now according to system automatic deletion policy.</li> <li><code>list</code>: List quarantine files according to system automatic deletion policy.</li> </ul>
<code>report-files {delete-now   list}</code>	Delete or list report files. <ul style="list-style-type: none"> <li><code>delete-now</code>: Delete report files right now according to system automatic deletion policy.</li> <li><code>list</code>: List report files according to system automatic deletion policy.</li> </ul>

## cdb

Use the following commands for configuration database related settings.

## cdb check

Use this command to check and repair configuration database.

### Syntax

```
diagnose cdb check adom-integrity [adom]
diagnose cdb check adom-rebuild [adom]
diagnose cdb check adom-revision [adom] [preview]
diagnose cdb check internet-service-name [adom]
diagnose cdb check policy-packages [adom]
diagnose cdb check update-devinfo logdisk-size [new value] [0 | 1] [model-name]
diagnose cdb check update-devinfo sslvpn-flag <devname>
```

Variable	Description
<code>check adom-integrity [adom]</code>	Check and repair the specified ADOM's database.
<code>check adom-rebuild [adom]</code>	Rebuild the specified ADOM.
<code>check adom-revision [adom] [preview]</code>	Check or remove invalid ADOM revision database. Optionally, preview the check before running it.
<code>check internet-service-name [adom]</code>	Check mis-matched internet service name. Optinally, specify the ADOM.
<code>check policy-packages [adom]</code>	Check the policy packages.

Variable	Description
check update-devinfo logdisk-size [new value] [0   1] [model-name]	Update device log disk size. <ul style="list-style-type: none"> <li>new value: Item new value.</li> <li>0   1: update only empty values (default), or always update (1)</li> <li>model-name: Only update on model name (default: all models).</li> </ul>
check update-devinfo sslvpn-flag <devname>	Upgrade the device SSL-VPN flag on the specified device.

## cdb manual-fix

Use this command to manually repair the configuration database.

### Syntax

```
diagnose cdb manual-fix adom <adom> <repair action>
```

Variable	Description
adom <adom> <repair action>	Manually repair adom configuration database. Enter the ADOM name. The following repair actions are available: <ul style="list-style-type: none"> <li>cli-templates-path: update cli template working path</li> <li>fw-policy-match-vip: Fix firewall policy match-vip after adom upgrades from 7.0 to 7.2</li> <li>generate-adom-ca: Re-generate ADOM CA</li> </ul>

## cdb upgrade

Use this command to upgrade and repair configuration database.

### Syntax

```
diagnose cdb upgrade check <action>
diagnose cdb upgrade force-retry <action>
diagnose cdb upgrade log
diagnose cdb upgrade pending-list
diagnose cdb upgrade summary
```

Variable	Description
upgrade check <action>	Perform a check to see if upgrade and repair is necessary. <ul style="list-style-type: none"> <li>objcfg-integrity: Object config database integrity</li> <li>reference-integrity: Reference table integrity</li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>• <code>object-sequence</code>: Repair invalid object sequence</li> <li>• <code>duplicate-uuid</code>: Reassign duplicated uuid in ADOM database</li> <li>• <code>resync-dev-vdms</code>: Resync and add any missing vdoms from device database to DVM database</li> <li>• <code>invalid-install-target</code>: Invalid policy package and template install target</li> <li>• <code>fw-addr-type</code>: Firewall address wrong FQDN type</li> <li>• <code>normalized-intf-devmapping</code>: Delete invalid device level mapping for normalized interface</li> <li>• <code>del-orphan-entry</code>: Delete invalid orphan entries</li> <li>• <code>user-group-guest</code>: Drop table of user group guest</li> <li>• <code>invalid-assign-status</code>: Invalid assign status entries</li> <li>• <code>copy-section-title</code>: Copy section title from previous policy config</li> <li>• <code>invalid-created-timestamp</code>: Fix invalid created timestamp</li> <li>• <code>fix-gl-policy-ssl-profile</code>: Remove ssl-ssh-profile from global policies with profile-type group</li> <li>• <code>recover-global-objs</code>: Recover global objects from local ADOM(s)</li> <li>• <code>invalid-visibility</code>: Remove invalid visibility entries from global ADOM</li> <li>• <code>invalid-global-policies</code>: Remove invalid global policies</li> <li>• <code>wtp-prof-platform-mode</code>: Check and fix wtp prof platform mode</li> <li>• <code>invalid-global-assignment</code>: Remove invalid global assignment</li> <li>• <code>invalid-device-usage</code>: Remove object's invalid device usage from ADOM</li> <li>• <code>duplicate-root-node</code>: Check and fix duplicate ADOM root node</li> </ul>
<code>upgrade force-retry &lt;action&gt;</code>	<p>Re-run an upgrade that was already performed in previous release.</p> <ul style="list-style-type: none"> <li>• <code>repair-missing-attr-ref</code>: Repair missing reference in attribute</li> <li>• <code>add-missing-ref</code>: Add missing reference in policy package</li> <li>• <code>fw-addr-name</code>: Firewall address name with space</li> <li>• <code>del-invalid-ref</code>: Remove invalid reference in wtp</li> <li>• <code>remove-nonexistence-datasrc</code>: Remove already deleted object used in policy</li> <li>• <code>upgrade-rtm-history-db</code>: Upgrade RTM history database to new format</li> <li>• <code>remove-old-rtm-history-db</code>: Remove old format RTM history database</li> <li>• <code>clear-max-policyid</code>: Clear ADOM max_policyid cache</li> <li>• <code>refresh-controller-count</code>: Refresh controller license count</li> <li>• <code>resync-dbcache</code>: Resync device database cache</li> <li>• <code>drop-hitcount</code>: Drop hitcount</li> <li>• <code>resync-assignment-obj-cache</code>: Resync Global assignment object cache</li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>resync-controller-adom-config: Resync Controller Adom Config</li> <li>upgrade-normalized-intf: Upgrade normalized interface</li> <li>reload-template-action: Reload template action list</li> <li>update-pkgstatus-table: Upgrade package status table</li> <li>add-oid-index: Add unique index to oid column</li> <li>regenerate-cluster-scope: Regenerate Cluster Scope</li> <li>update-table-schema: Update table schema</li> <li>repair-swc-nac-vlans: Repair switch-controller NAC vlans</li> <li>default-cli-templates: Add default cli templates</li> <li>delete-endpoint-control-fctems-null-ems-id: Delete endpoint-control fctems entries with invalid (null) ems-id</li> <li>set-trust-ca-cn-endpoint-control-fctems: Set trust-ca-cn disable for endpoint-control fctems entries with certificate-fingerprint</li> <li>fix-dev-double-obj: Add global default entries to double-scoped objects for vdom enabled devices</li> <li>upgrade_router_route_map: Upgrade router route-map default values</li> <li>fsw-manager-key-upgrade: Upgrade FortiSwitch Manager to use name instead of serial number as key</li> <li>adom-copy-default-double-objects: Copy default double objects in adoms</li> <li>router-static-vrf-unspecified: Support router static vrf default value as 'unspecified'</li> <li>fix-fw-ssl-ssh-profile-dot-quit-nd: Support new no-default-value attr "quic" in "firewall ssl-ssh-profile {https dot}"</li> <li>upgrade-adom-fw-ssl-ssh-profile-quic: Upgrade ADOM firewall ssl-ssh-profile {https dot} quic</li> <li>upgrade-adom-fw-multicast-policy-logtraffic: Upgrade ADOM firewall multicast-policy logtraffic</li> <li>fix-objcfg_switch_controller_security_policy_802_1X-nd: Support new no-default-value attr "switch-controller security-policy 802-1X dacl"</li> <li>del-invalid-node: Remove invalid policy node</li> <li>delete-extender-controller-extender-null-id: Delete extender-controller extender entries with invalid (null) id</li> <li>update-wireless-controller-vap-sec: Update wireless-controller vap security config when the mode is captive-portal related</li> </ul>
upgrade log	Display the configuration database upgrade log.
upgrade pending-list	Display the list of upgrades scheduled for the next reboot.
upgrade summary	Display the firmware upgrade summary.

## debug

Use the following commands to debug the FortiManager.

### debug apache

Use these commands to show apache config and log files.

#### Syntax

```
diagnose debug apache access-log
diagnose debug apache error-log
diagnose debug apache httpd-config
diagnose debug apache httpd-ssl-config
```

Variable	Description
access-log	Show file access_log.
error-log	Show file error_log.
httpd-config	Show file httpd.conf.
httpd-ssl-config	Show file httpd-ssl.conf.

### debug application

Use this command to view or set the debug levels for the FortiManager applications. All of the debug levels are 0 by default.

#### Syntax

```
diagnose debug application alertmail <integer>
diagnose debug application apiproxyd <integer>
diagnose debug application archd <integer>
diagnose debug application auth <integer>
diagnose debug application clusterd <integer>
diagnose debug application connector <integer>
diagnose debug application csfd <integer>
diagnose debug application curl <integer>
diagnose debug application ddmd <integer> <deviceName>
diagnose debug application depmanager <integer>
diagnose debug application dhcpd <integer>
diagnose debug application dmapi <integer>
diagnose debug application dmsase <integer>
diagnose debug application dmssh <integer>
diagnose debug application dns <integer>
```

```
diagnose debug application dump
diagnose debug application execcmd <integer>
diagnose debug application fabricsyncd <integer>
diagnose debug application fazalertd <integer>
diagnose debug application fazcfgd <integer>
diagnose debug application fazincid <integer>
diagnose debug application fazmaild <integer>
diagnose debug application faznotify <integer>
diagnose debug application fazsvcd <integer> <reg exp filter>
diagnose debug application fazwatchd <integer>
diagnose debug application fdssvrd <integer>
diagnose debug application fgdlinkd <integer>
diagnose debug application fgdsvr <integer>
diagnose debug application fgdupd <integer>
diagnose debug application fgfmsd <integer> <deviceName>
diagnose debug application filefwd <integer>
diagnose debug application fileparsed <integer>
diagnose debug application fortilogd <integer>
diagnose debug application fortimeter <integer>
diagnose debug application fsvrd <integer>
diagnose debug application gui <integer>
diagnose debug application ha <integer>
diagnose debug application ipsec <integer>
diagnose debug application keepalived <integer>
diagnose debug application lldp <integer>
diagnose debug application localmod <integer>
diagnose debug application logd <integer>
diagnose debug application log-fetchd <integer>
diagnose debug application logfiled <integer>
diagnose debug application logfwd <integer>
diagnose debug application lrm <integer>
diagnose debug application mapclient <integer>
diagnose debug application oftpd <integer> <IP/deviceSerial/deviceName>
diagnose debug application pgsvrd <integer>
diagnose debug application rptchkd <integer>
diagnose debug application rptsched <integer>
diagnose debug application rtmmond <integer>
diagnose debug application run-sql-rpt <integer>
diagnose debug application scansched <integer>
diagnose debug application scheduled <integer>
diagnose debug application sdnproxy <integer>
diagnose debug application securityconsole <integer>
diagnose debug application siemagentd <integer>
diagnose debug application siemdbd <integer>
diagnose debug application sniffer <integer>
diagnose debug application snmpd <integer>
diagnose debug application sql-integration <integer>
diagnose debug application sqllogd <integer>
diagnose debug application sqlplugind <integer> <filter>
diagnose debug application sqlreportd <integer> <filter>
diagnose debug application sqlrptcached <integer>
diagnose debug application srchd <integer>
diagnose debug application ssh <integer>
diagnose debug application sshd <integer>
diagnose debug application storaged <integer>
diagnose debug application syncsched <integer>
diagnose debug application uploadd <integer>
```

```
diagnose debug application vmd <integer>
```

Variable	Description
alertmail <integer>	Set the debug level of the alert email daemon.
apiproxyd <integer>	Set the debug level of the API proxy daemon.
archd <integer>	Set the debug level of the archd daemon (0 - 8).
auth <integer>	Set the debug level of the Fortinet authentication module.
clusterd <integer>	Set the debug level of the clusterd daemon.
connector <integer>	Set the debug level of the connector daemon.
csfd <integer>	Set the debug level of the Security Fabric daemon.
curl <integer>	Set the debug level of the curl daemon. Use this CLI command to enable debug for monitoring progress when performing a backup/restore of a large database via FTP.
ddmd <integer> <deviceName>	Set the debug level of the dynamic data monitor. Enter a device name to only show messages related to that device. <b>Note:</b> Enter "" to reset.
depmanager <integer>	Set the debug level of the deployment manager.
dhcpcd <integer>	Set the debug level of the dhcpcd daemon.
dmworker <integer>	Set the debug level of the deployment manager worker.
dmapi <integer>	Set the debug level of the dmapi daemon.
dmsase <integer>	Set the debug level of the deployment manager SASE handler.
dmssh <integer>	Set the debug level of the deployment manager SSH.
dns <integer>	Set the debug level of the DNS daemon.
dump	Dump services.
execmd <integer>	Set the debug level of the execmd daemon.
fabricsyncd <integer>	Set the debug level of the fabricsyncd daemon (0 - 8).
fazalrtd <integer>	Set the debug level of the fazalrtd daemon (0 - 8).
fazcfgd <integer>	Set the debug level of the fazcfgd daemon.
fazincid <integer>	Set the debug level of the fazincid daemon.
fazmaild <integer>	Set the debug level of the fazmaild daemon.
faznotify <integer>	Set the debug level of the faznotify daemon.
fazsvcd <integer> <reg exp filter>	Set the debug level of the FAZ server daemon. Set a filter; use "" to reset. Debug logs can be filtered using simple string, regular expression, or not operator. For example, use <code>filter=~!request response</code> to remove all requests and responses from the debug logs.

Variable	Description
fazwatchd <integer>	Set the debug level of the fazwatchd daemon.
fdssvr <integer>	Set the debug level of the FDS server daemon.
fgdlinkd <integer>	Set the debug level of the FGD server daemon (0 - 8).
fgdsvr <integer>	Set the debug level of the FortiGuard query daemon.
fgdupd <integer>	Set the debug level of the FortiGuard update daemon.
fgmsd <integer> <deviceName>	Set the debug level of FGFM daemon. Enter a device name to only show messages related to that device. <b>Note:</b> Enter "" to reset. Multiple device names should be separated by commas. For example, Host1, Host2.
filefwd <integer>	Set the debug level of the filefwd daemon.
fileparsed <integer>	Set the debug level of the fileparsed daemon.
fortilogd <integer>	Set the debug level of the fortilogd daemon.
fortimeter <integer>	Set the debug level of the Fortimeter.
fsvrd <integer>	Set the debug level of the FortiService daemon.
gui <integer>	Set the debug level of the GUI.
ha <integer>	Set the debug level of high availability daemon.
ipsec <integer>	Set the debug level of the IPsec daemon.
keepalived <integer>	Set the debug level of the keepalived daemon.
lldp <integer>	Set the debug level of the link layer discovery protocol (LLDP) daemon.
localmod <integer>	Set the debug level of the localmod daemon.
logd <integer>	Set the debug level of the log daemon.
log-fetched <integer>	Set the debug level for the log-fetched.
logfiled <integer>	Set the debug level of the logfiled daemon.
logfwd <integer>	Set the debug level of the logfwd daemon.
lrm <integer>	Set the debug level of the Log and Report Manager.
mapclient <integer>	Set the debug level of the mapserver client.
oftpd <integer> <IP/deviceSerial/deviceName>	Set the debug level of the oftpd daemon. Enter an IPv4 address, device serial number, or device name to only show messages related to that device or IPv4 address. <b>Note:</b> Enter "" to reset.
pgsvrd <integer>	Set the debug level of the postgres sever daemon.
rptchkd <integer>	Set the debug level of the rptchkd daemon.

Variable	Description
rptsched <integer>	Set the debug level of the rptsched daemon.
rtmmond <integer>	Set the debug level of the real time monitor daemon.
run-sql-rpt <integer>	Set the debug level of the SQL report daemon.
scansched <integer>	Set the debug level of the scan schedule daemon.
scheduled <integer>	Set the debug level of the schedule task daemon.
sdnproxy <integer>	Set the debug level of the sdnproxy daemon.
securityconsole <integer>	Set the debug level of the security console daemon.
siemagentd <integer>	Set the debug level of the siemagentd daemon.
siemdbd <integer>	Set the debug level of the siemdbd daemon.
sniffer <integer>	Set the debug level of the interface sniffer.
snmpd <integer>	Set the debug level of the SNMP daemon.
sql-integration <integer>	Set the debug level of SQL applications.
sqllogd <integer>	Set the debug level of SQL log daemon.
sqlplugind <integer> <filter>	Set the debug level of the SQL plugin daemon. Set filter for sqlplugind. <b>Note:</b> Enter "" to reset the filter.
sqlreportd <integer> <filter>	Set the debug level (0-8) of the SQL report daemon. Set the filter for sqlreportd. <b>Note:</b> Enter "" to reset the filter. Without <integer> and <filter>, it shows the current debug level and filter of sqlreportd.
sqlrptcached <integer>	Set the debug level of the SQL report caching daemon.
srchd <integer>	Set the debug level of the SRCH daemon.
ssh <integer>	Set the debug level of SSH protocol transactions.
sshd <integer>	Set the debug level of the SSH daemon.
stored <integer>	Set the debug level of communication with java clients.
syncsched <integer>	Set the debug level of the syncsched daemon.
uploadd <integer>	Set the debug level of the upload daemon.
vmd <integer>	Set the debug level for vmd.

## Example

This example shows how to set the debug level to 7 for the upload daemon:

```
diagnose debug application uploadd 7
```

## debug backup-oldformat-script-logs

Use this command to backup script log files that failed to be upgraded to the FTP server.

### Syntax

```
diagnose debug backup-oldformat-script-logs <ip> <string> <username> <password>
```

Variable	Description
<ip>	Enter the FTP server IP address.
<string>	Enter the path/filename to save the log to the FTP server.
<username>	Enter the user name on the FTP server.
<password>	Enter the password associated with the user name.

## debug cdbchk

Use these commands to enable or disable CLI CDB check debug output.

### Syntax

```
diagnose debug cdbcheck {enable | disable}
```

## debug cli

Use this command to set the debug level of CLI.

### Syntax

```
diagnose debug cli <integer>
```

Variable	Description
<integer>	Set the debug level of the CLI (0 - 8, default = 3).

## debug console

Use this command to enable or disable console debugging.

## Syntax

```
diagnose debug console {enable | disable}
```

Variable	Description
{enable   disable}	Enable/disable console debugging.

## debug coredump

Use this command to manage daemon and process core dumps.

### Syntax

```
diagnose debug coredump crash-pid <pid>
diagnose debug coredump delete <daemon>
diagnose debug coredump disable <daemon>
diagnose debug coredump disable-pid <pid>
diagnose debug coredump enable <daemon>
diagnose debug coredump enable-once <daemon>
diagnose debug coredump enable-pid <pid>
diagnose debug coredump list
diagnose debug coredump upload <daemon> <service> <ip> <username> <password> <directory>
```

Variable	Description
crash-pid <pid>	Crash running process for core dump.
delete <daemon>	Delete core dumps for a daemon.
disable <daemon>	Disable core dump for a daemon.
disable-pid <pid>	Disable core dump of running process.
enable <daemon>	Enable core dump for a daemon.
enable-once <daemon>	Enable core dump the next time a daemon starts (one time only).
enable-pid <pid>	Enable core dump of running process.
list	List core dumps.
upload <daemon> <service> <ip> <username> <password> <directory>	Upload core dumps for a daemon to the specified server.

## debug crashlog

Use this command to manage crash logs.

## Syntax

```
diagnose debug crashlog clear
diagnose debug crashlog read
```

Variable	Description
clear	Delete backtrace and core files.
read	Show the crash logs. This command is hidden.

## debug disable

Use this command to disable debug.

### Syntax

```
diagnose debug disable
```

## debug dpm

Use this command to manage the deployment manager.

### Syntax

```
diagnose debug dpm comm-trace {enable | disable | status}
diagnose debug dpm conf-trace {enable | disable | status}
diagnose debug dpm probe-device <ip>
```

Variable	Description
comm-trace {enable   disable   status}	Enable/disable a DPM to FortiGate communication trace, or view the status of it.
conf-trace {enable   disable   status}	Enable/disable a DPM to FortiGate configuration trace, or view the status of it.
probe-device <ip>	Check device status.

## debug enable

Use this command to enable debug.

## Syntax

```
diagnose debug enable
```

## debug filter

Use this command to filter the terminal session debug output. The debug filter is disabled by default.

## Syntax

```
diagnose debug filter <filter>
```

Variable	Description
<filter>	<p>Set a pattern to filter the debug output. This is a global pattern for all session terminals that overrides the old pattern.</p> <p>You can use a normal string search or a regex search as the filter:</p> <ul style="list-style-type: none"> <li>Normal string search: <code>strstr(msg, filter)</code> For example: <code>diagnose debug filter "test"</code> For inverse matching, use an exclamation point: <code>diagnose debug filter "!test"</code></li> <li>Regex search: <code>regexexec(regex, msg, 0, NULL, 0)</code> For example: <code>diag debug filter "~(req rsp)"</code> For inverse matching, use an exclamation point: <code>diagnose debug filter "~!(req rsp)"</code></li> </ul> <p>Leave blank to show the current pattern. Enter "" to reset the filter.</p>

## debug gui

Use these commands to enable or disable the GUI debug flag.

## Syntax

```
diagnose debug gui {enable | disable}
```

## debug info

Use this command to show active debug level settings.

## Syntax

```
diagnose debug info
```

## debug klog

Use this command to show all kernel logs.

## Syntax

```
diagnose debug klog clear  
diagnose debug klog read
```

## debug logfile

Use this command for to manage the debug output log file.

## Syntax

```
diagnose debug logfile clear  
diagnose debug logfile disable  
diagnose debug logfile enable  
diagnose debug logfile read  
diagnose debug logfile upload <sftp | scp | ftp> <server> <username> <password> <directory>  
    <filename>
```

Variable	Description
clear	Clear the debug log file.
disable	Disable saving debug output to file.
enable	Enable saving debug output to file.
read	Read debug log file.
upload <sftp   scp   ftp> <server> <username> <password> <directory> <filename>	Upload debug log file.

## debug raw-elog

Use this command to show raw elog.

## Syntax

```
diagnose debug raw-elog [filter]
```

Variable	Description
[filter]	Set filter to local event logs.

## debug reset

Use this command reset the debug level settings. All debug settings will be reset.

### Syntax

```
diagnose debug reset
```

## debug service

Use this command to view or set the debug level of various service daemons.

### Syntax

```
diagnose debug service anonymous <integer>
diagnose debug service cdb <integer>
diagnose debug service cluster <integer>
diagnose debug service cmdb <integer>
diagnose debug service csf <integer>
diagnose debug service dbcach <integer>
diagnose debug service dump
diagnose debug service dvmcmd <integer>
diagnose debug service dvmdb <integer>
diagnose debug service fazcmd <integer>
diagnose debug service fazconf <integer>
diagnose debug service fgfm-cluster <integer>
diagnose debug service fgfm-ha <integer>
diagnose debug service httpd <integer>
diagnose debug service main <integer>
diagnose debug service rpc-auth <integer>
diagnose debug service rtm <integer>
diagnose debug service sys <integer>
diagnose debug service task <integer>
```

Variable	Description
<integer>	The debug level
dump	Dump services.

The anonymous, dbcach, dump, fazcmd, and rpc-auth commands are only available on hardware devices.

## debug sysinfo

Use this command to show system information.

### Syntax

```
diagnose debug sysinfo
```

## debug sysinfo-log

Use this command to generate one system log information log file every two minutes.

### Syntax

```
diagnose debug sysinfo-log {on | off}
```

## debug sysinfo-log-backup

Use this command to backup all system information log files to an FTP server.

### Syntax

```
diagnose debug sysinfo-log-backup <server> <filepath> <user> <password>
```

Variable	Description
<server>	Enter the FTP server IPv4 address.
<filepath>	Enter the path/filename to save the log to the FTP server.
<user>	Enter the user name for the FTP server.
<password>	Enter the password associated with the user name.

## debug sysinfo-log-list

Use this command to show system information elogs.

## Syntax

```
diagnose debug sysinfo-log-list <integer>
```

Variable	Description
<integer>	Display the last n elogs (default = 10).

## debug timestamp

Use this command to enable/disable debug timestamp.

### Syntax

```
diagnose debug timestamp {enable | disable}
```

## debug vmd

Use this command to show all the VMD (Virtual Machine Daemon) logs.

### Syntax

```
diagnose debug vmd
```

## debug vminfo

Use this command to show VM license information.



This command is only available on FortiManager VM models.

---

### Syntax

```
diagnose debug vminfo
```

## dlp-archives

Use this command to manage the DLP archives.

### Syntax

```
diagnose dlp-archives quar-cache list-all-process
diagnose dlp-archives quar-cache kill-process <pid>
diagnose dlp-archives rebuild-quar-db
diagnose dlp-archives remove
diagnose dlp-archives statistics {show | flush}
diagnose dlp-archives status
diagnose dlp-archives upgrade
```

Variable	Description
quar-cache list-all-process	List all processes that are using the quarantine cache.
quar-cache kill-process <pid>	Kill a process that is using the quarantine cache.
rebuild-quar-db	Rebuild Quarantine Cache DB
remove	Remove all upgrading DLP archives.
statistics {show   flush}	Display or flush the quarantined and DLP archived file statistics.
status	Running status.
upgrade	Upgrade the DLP archives.

## dvm

Use the following commands for DVM related settings.

### dvm adom

Use this command to list or clone ADOMs.

### Syntax

```
diagnose dvm adom clone <adom> <new_adom>
diagnose dvm adom list [<adom>]
diagnose dvm adom lockinfo <admon>
diagnose dvm adom reset-default-flags
diagnose dvm adom time-zone
```

Variable	Description
clone <adom> <new_adom>	Clone an ADOM. Enter the name of the ADOM that will be cloned, and the name of the clone.
list [<adom>]	List ADOMs, state, product, OS version (OSVER), major release (MR), name, mode, VPN management, and IPS. Optionally, specify the ADOM or OID.
lockinfo <adom>	Print adom lock states. Enter the ADOM or OID.
reset-default-flags	Reset ADOM default flags.
time-zone	List ADOM time zone information.

## dvm capability

Use this command to set the DVM capability.

### Syntax

```
diagnose dvm capability set {all | standard}
diagnose dvm capability show
```

Variable	Description
set {all   standard}	Set the capability to all or standard.
show	Show what the capability is set to.

## dvm chassis

Use this command to list chassis and supported chassis models.

### Syntax

```
diagnose dvm chassis list
diagnose dvm chassis supported models
```

Variable	Description
list	List chassis.
supported-models	List supported chassis models.

## dvm check-integrity

Use this command to check the DVM database integrity.

### Syntax

```
diagnose dvm check-integrity
```

## dvm csf

Use this command to print the CSF configuration.

### Syntax

```
diagnose dvm csf <adom> <category>
```

Variable	Description
<adom>	The ADOM name.
<category>	The category: <ul style="list-style-type: none"><li>• all: Dump all CSF categories</li><li>• group: Dump CSF group</li><li>• intf-role: Dump interface role</li><li>• user-device: Dump user device</li></ul>

## dvm dbstatus

Use this command to print the database status.

### Syntax

```
diagnose dvm dbstatus
```

## dvm debug

Use this command to enable/disable debug channels, and show debug message related to DVM.

### Syntax

```
diagnose dvm debug {enable | disable} <channel> <channel> <channel> <channel> <channel>
```

```
diagnose dvm debug trace [filter]
```

Variable	Description
{enable   disable}	Enable/disable debug channels.
trace	Show the DVM debug message.
<channel>	The following channels are available: all, dvm_db, dvm_dev, shelfmgr, ipmi, lib, dvmcmd, dvmcore, gui, and monitor
<filter>	The following filters are available: all, dvm_db, dvm_dev, shelfmgr, ipmi, lib, dvmcmd, dvmcore, gui, and monitor.

## dvm device

Use this command to list devices or objects referencing a device.

### Syntax

```
diagnose dvm device auto-management-list <device>
diagnose dvm device coordinate <action> [device]
diagnose dvm device delete <adom> <device>
diagnose dvm device dynobj <device>
diagnose dvm device list <device> <vdom>
diagnose dvm device lockinfo <device>
diagnose dvm device monitor <device> <api>
diagnose dvm device object-reference
diagnose dvm device reload <device> <vdom> <category> <object>
diagnose dvm device token-list <device>
```

Variable	Description
auto-management-list <device>	List devices with auto management flags information. Optionally, enter a device name or OID.
coordinate <action> [device]	List device coordinate. Enter an action: <ul style="list-style-type: none"> <li>list</li> <li>update</li> <li>clear</li> </ul> Optionally, enter a device name or OID.
delete <adom> <device>	Delete a device in a specific ADOM.
dynobj <device>	List dynamic objects on this device.
list <device> <vdom>	List devices. Optionally, enter a device or VDOM name.
lockinfo <device>	Print device lock states. Enter the device name or OID.

Variable	Description
monitor <device> <api>	JSON API for device monitor. Specify the device name and the monitor API name.
object-reference	List object reference.
reload <device> <vdom> <category> <object>	Reload device config. Specify the device name, VDOM, category (or <i>all</i> for all categories), and object.
token-list <device>	Print the device token list.

## Example

The following example shows the results of running the monitor command for WiFi clients.

```
FMG-VM64 # diagnose dvm device monitor FortiGate-VM64 wifi/client
```

```
Request :
```

```
{
  "id": 1473975442,
  "method": "exec",
  "params": [
    {
      "data": {
        "action": "get",
        "resource": "/api/v2/monitor/wifi/client",
        "target": [
          "adom/root/device/FortiGate-VM64"
        ]
      },
      "url": "sys/proxy/json"
    }
  ]
}
```

```
Response :
```

```
{
  "id": 1473975442,
  "result": [
    {
      "data": [
        {
          "response": {
            "action": "select",
            "build": 0105,
            "http_method": "GET",
            "name": "client",
            "path": "wifi",
            "results": null,
            "serial": "FGVMEV0000000000",
            "status": "success",
            "vdom": "root",
            "version": "v8.0.0"
          },
          "status": {
            "code": 0,
            "message": "OK"
          }
        }
      ]
    }
  ]
}
```

```

        },
        "target": "FortiGate-VM64"
    }
],
"status": {
    "code": 0,
    "message": "OK"
},
"url": "sys/proxy/json"
}
]
}

```

## dvm device-tree-update

Use this command to enable/disable device tree automatic updates.

### Syntax

```
diagnose dvm device-tree-update {enable | disable}
```

Variable	Description
{enable   disable}	Enable/disable device tree automatic updates.

## dvm extender

Use these commands to list FortiExtender devices, synchronize FortiExtender data via JSON, and perform other actions.

### Syntax

```

diagnose dvm extender copy-data-to-device <device>
diagnose dvm extender import-profile <device> <vdom> <name>
diagnose dvm extender import-template <device> <extender id>
diagnose dvm extender list [device]
diagnose dvm extender reset-adom <adom> [clear-only] [skip-restart]
diagnose dvm extender set-template <device> <extender id> <template>
diagnose dvm extender sync-extender-data <device> [savedb/no/force] [syncadom/no] [task]

```

Variable	Description
copy-data-to-device <device>	Copy extender data (data plan and SIM profile) to the device. Enter the device name.
import-profile <device> <vdom> <name>	Import extender profile to the ADOM. Enter the device name or ID, VDOM, and profile name.

Variable	Description
import-template <device> <extender id>	Import dataplan and SIM profile to the ADOM template. Enter the device name or ID, and the extender ID.
list [device]	List FortiExtender devices, or those connected to a specific device.
reset-adom <adom> [clear-only] [skip-restart]	Reset all extender data in the ADOM: <ul style="list-style-type: none"> <li>adom: Enter 104 for FortiCarrier, 130 for FortiFirewall, 134 for Unmanaged_Devices, and 3 for root</li> </ul> Optionally, use the following variables: <ul style="list-style-type: none"> <li>clear-only: Do not sync extender data to the ADOM</li> <li>skip-restart: Do not restart FortiManager after the operation</li> </ul>
set-template <device> <extender id> <template>	Set template to the extender modem. Enter the device name or ID, extender ID, and template.
sync-extender-data <device> [savedb/no/force] [syncadom/no] [task]	Synchronize FortiExtender data by JSON. Optionally: save the data to the database, synchronize the ADOM, and/or create a task.

## dvm fap

Use this command to list the FortiAP devices connected to a device.

### Syntax

```
diagnose dvm fap list <devname>
diagnose dvm fap sync-to-adom <adom> [device]
```

Variable	Description
list <devname>	List the FortiAP. Enter the device name or ID.
sync-to-adom <adom> [device]	Sync device FortiAP to ADOM. Enter the ADOM. Enter the device name or press Enter for all devices.

## dvm fsw

Use this command to list the FortiSwitch devices connected to a device.

### Syntax

```
diagnose dvm fsw list <devname>
diagnose dvm fsw sync-to-adom <adom> [device]
```

Variable	Description
list <devname>	List the FortiSwitch. Enter the device name or ID.
sync-to-adom <adom> [device]	Sync device FortiSwitch to ADOM. Enter the ADOM. Enter the device name or press Enter for all devices.

## dvm group

Use this command to list groups.

### Syntax

```
diagnose dvm group list
```

Variable	Description
list	List groups.

## dvm lockinfo

Use this command to print the DVM lock states.

### Syntax

```
diagnose dvm lockinfo
```

## dvm proc

Use this command to list DVM process (dvmcmd) information.

### Syntax

```
diagnose dvm proc list
```

## dvm psirt

Use these commands to list device PSIRT data.

## Syntax

```
diagnose dvm psirt controller-status clear <adom> [<device>] [<local>]
diagnose dvm psirt controller-status list <adom> [<device>] [<local>]
diagnose dvm psirt controller-status refresh <adom> [<device>] [<ctype>] [<options>]
diagnose dvm psirt device <adom> [<device> | fap | faz | fsw] [<local>]
diagnose dvm psirt ir-number <ir-number>
diagnose dvm psirt product <product>
diagnose dvm psirt reset [clear-only]
diagnose dvm psirt version
```

Variable	Description
controller-status clear	Clear the controller status,
controller-status list <adom> [<device>] [<local>]	List the controller status.
controller-status refresh <adom> [<device>] [<ctype>] [<options>]	Refresh controller status. Use help (?) to determine available options.
device <adom> [<device>   fap   faz   fsw] [<local>]	List the PSIRT data of the device(s).
ir-number <ir-number>	Check PSIRT data by entering the IR number of the PSIRT.
product <product>	List PSIRT data by product. Use help (?) to determine available products.
reset [clear-only]	Reset PSIRT data for device.
version	List version info of PSIRT.

## dvm remove

Use these commands to remove the autoupdate log files or remove all unused IPS package files.

### Syntax

```
diagnose dvm remove autoupdate-log <device id>
```

Variable	Description
<device id>	Enter the device ID.

## dvm supported-platforms

Use this command to list supported platforms and firmware versions.

## Syntax

```
diagnose dvm supported-platforms list <detail>
diagnose dvm supported-platforms mr-list
diagnose dvm supported-platforms fortiswitch [<adom>]
```

Variable	Description
list <detail>	List supported platforms by device type. Enter <i>detail</i> to show details with syntax support.
mr-list	List supported platforms by major release.
fortiswitch [<adom>]	List supported platforms in FortiSwitch manager. Optionally, enter the ADOM name.

## dvm task

Use this command to repair or reset the task database.

### Syntax

```
diagnose dvm task list <adom> <type>
diagnose dvm task lockinfo
diagnose dvm task repair
diagnose dvm task reset
```

Variable	Description
list <adom> <type>	List task database information.
lockinfo	Print task lock states.
repair	Repair the task database while preserving existing data where possible. The FortiManager will reboot after the repairs.
reset	Reset the task database to its factory default state. All existing tasks and the task history will be erased. The FortiManager will reboot after the reset.

## dvm taskline

Use this command to repair the task lines.

### Syntax

```
diagnose dvm taskline repair
```

Variable	Description
repair	Repair the task lines while preserving data wherever possible. The FortiManager will reboot after the repairs.

## dvm template

Use this command to update the default template settings.

### Syntax

```
diagnose dvm template update <category> <adom> [country]
```

Variable	Description
update <category> <adom> [country]	Enter the template category {wtp   vap   wifi-setting   extender} and ADOM. Optionally, enter a country ID or country ISO code.

## dvm transaction-flag

Use this command to edit or display DVM transaction flags.

### Syntax

```
diagnose dvm transaction-flag [abort | debug | none]
```

Variable	Description
transaction-flag [abort   debug   none]	Set the transaction flag.

## dvm workflow

Use this command to edit or display workflow information.

### Syntax

```
diagnose dvm workflow log-list <adom_name> <workflow_session_ID>
diagnose dvm workflow session-list [adom_name]
diagnose dvm workflow workflow-db-reset <adom> [skip-restart]
```

Variable	Description
log list <adom_name> <workflow_session_ID>	List workflow session logs.
session list [adom_name]	List workflow sessions.
workflow-db-reset <adom> [skip-restart]	Reset workflow database from ADOM rundb. Optionally, don't restart FortiManager after the operation.

## faz-cdb

Use these commands for FortiAnalyzer database configuration related settings.

## faz-cdb fix

Use this command to fix the FortiAnalyzer configuration database.

### Syntax

```
diagnose faz-cdb fix check-report-folder <adom name>
diagnose faz-cdb fix fix-report-folder <adom name>
```

Variable	Description
check-report-folder	Check FortiAnalyzer configuration database report folders from the last upgrade backup.
fix-report-folder	Fix FortiAnalyzer configuration database report folders from the last upgrade.
<adom name>	Enter the ADOM name or enter all for all ADOMs.

## faz-cdb reset

Use this command to reset the FortiAnalyzer configuration database.

### Syntax

```
diagnose faz-cdb reset
```

## faz-cdb upgrade

Use this command to upgrade the FortiAnalyzer configuration database.

### Syntax

```
diagnose faz-cdb upgrade check-adom <adom name>
diagnose faz-cdb upgrade check-global
diagnose faz-cdb upgrade export-config <adom name> <service> <ip> <user> <password>
    <path/filename>
diagnose faz-cdb upgrade import-config <adom name> <service> <ip> <user> <password>
    <path/filename>
diagnose faz-cdb upgrade log
diagnose faz-cdb upgrade summary
```

Variable	Description
check-adom	Check the last ADOM upgrade result.
check-global	Check the last global upgrade result.
export-config	Export the FortiAnalyzer configuration database files.
import-config	Import the FortiAnalyzer configuration database files.
log	Display the FortiAnalyzer configuration database upgrade log.
summary	Display the FortiAnalyzer configuration database summary.
<adom name>	Enter the ADOM name or enter all for all ADOMs.
<service>	Enter the transfer protocol one of: ftp, sftp, or scp.
<ip>	Enter the server IP address. For FTP, the port can be specified by adding :port to the server IP address.
<user>	Enter a user name of the remote server.
<password>	Enter the password or ' - ' for user.
<path/filename>	Enter the path/ filename on remote server.

## fgfm

Use this command to get installation session, object, and session lists.

### Syntax

```
diagnose fgfm cluster-session-list <device ID>
diagnose fgfm ha-session-list <device ID>
diagnose fgfm install-session
```

```
diagnose fgfm object-list
diagnose fgfm session-list <device ID>
```

Variable	Description
cluster-session-list <device ID>	Get cluster session lists.
install-session	Get installations session lists.
ha-session-list <device ID>	Get HA session list.
object-list	Get object lists.
session-list <device ID>	Get session lists.

## fmnetwork

Use the following commands for network related settings.

### fmnetwork arp

Use this command to manage ARP.

#### Syntax

```
diagnose fmnetwork arp del <intf-name> <IP>
diagnose fmnetwork arp list
```

Variable	Description
del <intf-name> <IP>	Delete an ARP entry.
list	List ARP entries.

### fmnetwork interface

Use this command to view interface information.

#### Syntax

```
diagnose fmnetwork interface detail <interface>
diagnose fmnetwork interface list [<interface>]
```

Variable	Description
detail <interface>	View a specific interface's details, for example: port1.
list [<interface>]	List all interface details.

## fmnetwork netstat

Use this command to view network statistics.

### Syntax

```
diagnose fmnetwork netstat list [-r]
diagnose fmnetwork netstat tcp [-r]
diagnose fmnetwork netstat udp [-r]
```

Variable	Description
list [-r]	List all connections, or use -r to list only resolved IP addresses.
tcp [-r]	List all TCP connections, or use -r to list only resolved IP addresses.
udp [-r]	List all UDP connections, or use -r to list only resolved IP addresses.

## fmupdate

Use this command to diagnose update services.

### Syntax

```
diagnose fmupdate check-disk-quota {export-import | fds | fgd | all} <clean>
diagnose fmupdate crdb {generate | view}
diagnose fmupdate dbcontract [<serial>]
diagnose fmupdate del-device <serial>
diagnose fmupdate del-log
diagnose fmupdate del-object {fds | fgd | fqfq | geoip} [<object_type>] [<object_version>]
diagnose fmupdate del-serverlist {fct | fds | fgd}
diagnose fmupdate dump-um-db {um2.db | fds.db} [<table>]
diagnose fmupdate fds-dump {breg | fds-log | fect | fmgf | imlt | imlt-d | imlt-d20 | immx | oblt
| srul | subs}
diagnose fmupdate fds-getobject <filter type> <filter> <other options>
diagnose fmupdate fds-update-info
diagnose fmupdate fgd-bandwidth {1h | 6h | 12h | 24h | 7d | 30d}
diagnose fmupdate fgd-dbver [{as1 | as2 | as4 | av | av2 | cat1 | fq | geoip | iotm | iotr | iots
| wf}]
diagnose fmupdate fgd-del-db [{as1 | as2 | as4 | av | av2 | cat1 | fq | geoip | iotm | iotr |
iots | wf}]
```

```

diagnose fmupdate fgd-dump [{as1 | as2 | as4 | av | av2 | cat1 | fq | geoip | iotm | iotr | iots
| wf}]
diagnose fmupdate fgd-wfas-clear-log
diagnose fmupdate fgd-wfas-log [{name | ip} {<name> | <ip addr>}]
diagnose fmupdate fgd-wfas-rate {wf | av | as_ip | as_url | as_hash}
diagnose fmupdate fgd-wfdevice-stat {10m | 30m | 1h | 6h | 12h | 24h | 7d} {all | <serial>
[<integer>]}
diagnose fmupdate fgd-wfserver-stat {top10sites | top10devices} [{10m | 30m | 1h | 6h | 12h |
24h | 7d}]
diagnose fmupdate fgt-del-statistics
diagnose fmupdate fgt-del-um-db [{um.db | um2.db | fds.db | um_stat.db | som.dat}]
diagnose fmupdate fortitoken {seriallist | add | del} <serial>
diagnose fmupdate list-object {fds | fgd | fqfq | geo-ip} [<object_type>] [<object_version>]
diagnose fmupdate priority-download {clear | list | view}
diagnose fmupdate service-restart {fds | fgd | fmtr | fwm}
diagnose fmupdate show-bandwidth {fct | fgt | fm1 | faz} {1h | 6h | 12h | 24h | 7d | 30d}
diagnose fmupdate show-dev-obj [<serial>]
diagnose fmupdate test {fgd-url-rating | fgd-test-client | ping-server | fds-contract} <string>
<string> <string> <string>
diagnose fmupdate update-status {fds | fct | fgd}
diagnose fmupdate updatenow {fds | fgd} {fgd | fgfq | geoip} {SelectivePoll | Poll |
Consolidation | Command}
diagnose fmupdate view-figure {fds | fct | fgd | fmtr}
diagnose fmupdate view-linkd-log {fct | fds | fgd}
diagnose fmupdate view-serverlist {fds | fgd}
diagnose fmupdate view-service-info {fds | fgd}
diagnose fmupdate vm-license

```

Variables	Description
check-disk-quota {export-import   fds   fgd   all} <clean>	Check the related directory size. Clean the export/import directory, if necessary.
crdb {generate   view}	Generate or view certificate files from the database.
dbcontract [<serial>]	Dump the subscriber contract. Optionally, enter the serial number of the device.
del-device <serial>	Delete a device. Optionally, enter a serial number for the device.
del-log	Delete all the logs for FDS and FortiGuard update events.
del-object {fds   fgd   fqfq   geoip} [<object_type>] [<object_version>]	Remove all objects from the specified service. Optionally, enter the object type and version or time.
del-serverlist {fct   fds   fgd}	Delete the server list file (fdni.dat) from the specified service.
dump-um-db {um2.db   fds.db} [<table>]	Dump um databases or dump either um2 or fds database. Optionally, you can dump a specified table in um2 or fds databases.
fds-dump {breg   fds-log   fect   fmg   imlt   imlt-d   imlt-d20   immx   oblt   srul   subs}	Dump FDS files: <ul style="list-style-type: none"> <li>breg: Dump the FDS beta serial numbers.</li> <li>fds-log: Dump the FDS svrd log. Optionally, enter a rolling number from 0 to 10.</li> <li>fect: Dump the FortiClient image file. Choose from the two available options of dumping the FortiClient file for the server or the client.</li> </ul>

Variables	Description
	<ul style="list-style-type: none"> <li>• <code>fmg1</code>: Dump FMGI (Object description details) file.</li> <li>• <code>im1t</code>: Dump FGT image list file.</li> <li>• <code>im1t-d</code>: Dump FGT image file for downstream device.</li> <li>• <code>im1t-d20</code>: Dump FGT image list file for downstream, v2.0.</li> <li>• <code>immx</code>: Dump the image upgrade matrix file. You can dump the IMMX files for FortiManager, FortiGate, or FortiCloud.</li> <li>• <code>ob1t</code>: Dump the object list file. You can dump the object list files for FGT, FCT, FGD, FQFQ, or geoip services. You can also dump the downstream object file for one of these services.</li> <li>• <code>sru1</code>: Dump the FDS select filtering rules.</li> <li>• <code>subs</code>: Dump Contract file.</li> </ul>
<code>fds-getobject &lt;filter type&gt; &lt;filter&gt; &lt;other options&gt;</code>	<p>Get the versions of all FortiGate objects for antivirus-IPS.</p> <ul style="list-style-type: none"> <li>• <code>&lt;filter type&gt;</code>: Enter product or objid as the filter type.</li> <li>• <code>&lt;filter&gt;</code>: Enter an available filter. These filters are available only when you select product as your filter type. Enter <code>a11</code> for all product filters.</li> <li>• <code>&lt;other options&gt;</code>: Enter used to show used-only objects or <code>raw</code> to show response in raw JSON format.</li> </ul>
<code>fds-update-info</code>	Display scheduled update information.
<code>fgd-bandwidth {1h   6h   12h   24h   7d   30d}</code>	Display the download bandwidth.
<code>fgd-dbver [{as1   as2   as4   av   av2   cat1   fq   geoip   iotm   iotr   iots   wf}]</code>	<p>Get the version of the database. Optionally, enter the database type:</p> <ul style="list-style-type: none"> <li>• <code>as1</code>: Antispam (IP).</li> <li>• <code>as2</code>: Antispam (URL).</li> <li>• <code>as4</code>: Antispam (HASH).</li> <li>• <code>av</code>: AntiVirus Query.</li> <li>• <code>av2</code>: Outbreak Prevention.</li> <li>• <code>cat1</code>: Query Category.</li> <li>• <code>fq</code>: File Query.</li> <li>• <code>geoip</code>: GeoIP.</li> <li>• <code>iotm</code>: IoT (mapping).</li> <li>• <code>iotr</code>: IoT (range).</li> <li>• <code>iots</code>: IoT (single).</li> <li>• <code>wf</code>: Webfilter.</li> </ul>
<code>fgd-del-db [{as1   as2   as4   av   av2   cat1   fq   geoip   iotm   iotr   iots   wf}]</code>	<p>Delete FortiGuard database. Optionally, enter the database type:</p> <ul style="list-style-type: none"> <li>• <code>as1</code>: Antispam (IP).</li> <li>• <code>as2</code>: Antispam (URL).</li> <li>• <code>as4</code>: Antispam (HASH).</li> <li>• <code>av</code>: AntiVirus Query.</li> <li>• <code>av2</code>: Outbreak Prevention.</li> <li>• <code>cat1</code>: Query Category.</li> </ul>

Variables	Description
	<ul style="list-style-type: none"> <li>fq: File Query.</li> <li>geoip: GeoIP.</li> <li>iotm: IoT (mapping).</li> <li>iotr: IoT (range).</li> <li>iots: IoT (single).</li> <li>wf: Webfilter.</li> </ul>
fgd-dump [{as1   as2   as4   av   av2   cat1   fq   geoip   iotm   iotr   iots   wf}]	<p>Dump the FortiGuard information. Optionally, select a database category type:</p> <ul style="list-style-type: none"> <li>as1: Antispam (IP).</li> <li>as2: Antispam (URL).</li> <li>as4: Antispam (HASH).</li> <li>av: AntiVirus Query.</li> <li>av2: Outbreak Prevention.</li> <li>cat1: Query Category.</li> <li>fq: File Query.</li> <li>geoip: GeoIP.</li> <li>iotm: IoT (mapping).</li> <li>iotr: IoT (range).</li> <li>iots: IoT (single).</li> <li>wf: Webfilter.</li> </ul>
fgd-wfas-clear-log	Clear the FortiGuard service log file.
fgd-wfas-log [{name   ip} {<name>   <ip addr>}]	View the FortiGuard service log file. Optionally, enter the device filter type, and device name or IPv4 address.
fgd-wfas-rate [{as_hash   as_ip   as_url   av   av2   fq   wf}]	<p>Get the web filter / antispam rating speed. Optionally, enter the server type:</p> <ul style="list-style-type: none"> <li>as_hash: Antispam (HASH).</li> <li>as_ip: Antispam (IP).</li> <li>as_ur1: Antispam (URL).</li> <li>av: AntiVirus Query.</li> <li>av2: Outbreak Prevention.</li> <li>fq: File Query.</li> <li>wf: Webfilter.</li> </ul>
fgd-wfdevice-stat {10m   30m   1h   6h   12h   24h   7d} <serial> [<integer>]	Display web filter device statistics. Enter all or a specific device's serial number. Optionally, enter the number of time periods to display (default = 1).
fgd-wfserver-stat {top10sites   top10devices} [{10m   30m   1h   6h   12h   24h   7d}]	Display web filter server statistics for the top 10 sites or devices. Optionally, enter the time frame to cover.
fgt-del-statistics	Remove all statistics (antivirus / IPS and web filter / antispam). This command requires a reboot.

Variables	Description
fgt-del-um-db [{um.db   um2.db   fds.db   um_stat.db   som.dat}]	Remove UM, UM2, fds, and um_stat databases. This command requires a reboot. <b>Note:</b> um.db is a sqlite3 database that update manager uses internally. It will store AV/IPS package information of downloaded packages. This command removes the database file information. The package is not removed. After the reboot, the database will be recreated. Use this command if you suspect the database file is corrupted.
fortitoken {seriallist   add   del} <serial>	FortiToken related operations.
list-object {fds   fgd   fqfq   geo-ip} [<object_type>] [<object_version>]	List downloaded objects of linkd service. Optionally, enter the object type and version or time.
priority-download {clear   list   view}	Command for priority download: <ul style="list-style-type: none"> <li>• clear: view config.</li> <li>• list: list object id of list.</li> <li>• view: clear config.</li> </ul>
service-restart {fds   fgd   fmtr   fwm}	Restart the linkd service.
show-bandwidth {fct   fgt   fml   faz} {1h   6h   12h   24h   7d   30d}	Display the download bandwidth for a device type over a specified time period.
show-dev-obj [<serial>]	Display an objects version of a device. Optionally, enter a serial number.
test {fgd-url-rating   fgd-test-client   ping-server   fds-contract} <string> <string> <string> <string> <string>	Test tools: <ul style="list-style-type: none"> <li>• fgd-url-rating: Rate URLs within the FortiManager database using the hostname or IP of the FortiGuard server. <ul style="list-style-type: none"> <li>• &lt;string&gt;: Enter the hostname or IP of the FortiGuard server.</li> <li>• &lt;string&gt;: Enter the FortiGate serial number.</li> <li>• &lt;string&gt;: Enter the category version.</li> <li>• &lt;string&gt;: Enter the URL.</li> <li>• &lt;string&gt;: Enter the IP (optional).</li> </ul> </li> <li>• fgd-test-client: Execute FortiGuard test client using the hostname or IP of the FortiGuard server. <ul style="list-style-type: none"> <li>• &lt;string&gt;: Enter the hostname or IP of the FortiGuard server.</li> <li>• &lt;string&gt;: Enter the serial number of the device.</li> <li>• &lt;string&gt;: Enter the query number per second (for stress test) or URL (for single query).</li> <li>• &lt;string&gt;: Enter the category version (optional, default 7).</li> </ul> </li> <li>• ping-server: Check connection of FortiGuard servers. <ul style="list-style-type: none"> <li>• &lt;string&gt;: Enter the DNS server (optional).</li> <li>• &lt;string&gt;: Enter the server number or address.</li> </ul> </li> </ul>

Variables	Description
	<ul style="list-style-type: none"> <li>• <code>fds-contract</code>: Get the fds contract by SelectivePoll.</li> <li>• <code>&lt;string&gt;</code>: Enter the details (optional).</li> </ul>
<code>update-status {fds   fct   fgd}</code>	Display the update status for a service.
<code>updatenow {fds   fgd} {fgd   fgfq   geop} {SelectivePoll   Poll   Consolidation   Command}</code>	Update immediately. Select a service, service type, and task type. <b>Note:</b> Selecting a service and task type is only available when the service is fgd.
<code>view-configure {fds   fct   fgd   fmtr}</code>	Dump the running configuration.
<code>view-linkd-log {fct   fds   fgd}</code>	View the linkd log file.
<code>view-serverlist {fds   fgd}</code>	Dump the server list.
<code>view-service-info {fds   fgd}</code>	Display the service information.
<code>vm-license</code>	Dump the FortiGate VM license.

## fortilogd

Use this command to view FortiLog daemon information.

### Syntax

```
diagnose fortilogd lograte
diagnose fortilogd lograte-adom
diagnose fortilogd lograte-device [filter]
diagnose fortilogd lograte-total
diagnose fortilogd lograte-type
diagnose fortilogd logvol-adom
diagnose fortilogd msgrate
diagnose fortilogd msgstat [flush]
diagnose fortilogd status
```

Variable	Description
<code>lograte</code>	Display the log rate.
<code>lograte-adom</code>	Display log rate by ADOM.
<code>lograte-device [filter]</code>	Display log rate by device.
<code>lograte-total</code>	Display log rate by total.
<code>lograte-type</code>	Display log rate by type.

Variable	Description
logvol-adom	Display the GB/day by ADOM.
msgrate	Display log message rate.
msgstat [flush]	Display or flush log message statuses.
status	Running status.

## fortitoken-cloud

Use these commands to show the FortiToken Cloud (FTC) status or activate a FTC free trial.

### Syntax

```
diagnose fortitoken-cloud status
diagnose fortitoken-cloud trial
```

Variable	Description
status	Show the FCT status.
trial	Activate a FTC free trial.

## fwmanager

Use these commands to manage firmware.

### Syntax

```
diagnose fwmanager fwm-log <dump> [rolling number]
diagnose fwmanager image-clear
diagnose fwmanager image-download <platform> <version>
diagnose fwmanager image-list <product> [raw]
diagnose fwmanager image-sync <adom>
diagnose fwmanager profile <action> [adom] <device | group | profile> <id | name> <raw | name>
    <raw>
diagnose report <action> <argument 1> <argument 2>
diagnose fwmanager service-restart
diagnose fwmanager set-controller-schedule <device> <controller_id> <version> [date_time]
diagnose fwmanager set-dev-schedule <device> <version> [flags] [date_time]
diagnose fwmanager set-grp-schedule <group> <version> [flags] [date_time]
diagnose fwmanager show-dev-disk-check-status <device>
diagnose fwmanager show-dev-upgrade-path <device> <version>
diagnose fwmanager show-grp-disk-check-status <group>
```

```
diagnose fwmanager test-upgrade-path <platform> <from-version> <to-version> [debug]
```

Variable	Description
fwm-log <dump> [rolling number]	View the firmware manager log file. Optionally, dump whole log. Optionally, enter a rolling number from 0 to 10.
image-clear	Clear all local images and its FCP object files.
image-download <platform> <version>	Download the official image. Enter the platform name and version.
image-list <product> [raw]	Get the local firmware image list for the product: <ul style="list-style-type: none"> <li>• FGT: FortiGate</li> <li>• FMG: FortiManager</li> <li>• FAZ: FortiAnalyzer</li> <li>• FAP: FortiAP</li> <li>• FSW: FortiSwitch</li> <li>• FXT: FortiExtender</li> </ul> Optionally, enter raw get the raw JSON response.
image-sync <adom>	Sync images to all clusters. Enter the ADOM name.
profile <action> [adom] <device   group   profile> <id   name> <raw   name> <raw>	Clear, list, or synchronize the firmware profile setting. Enter one of the following actions: <ul style="list-style-type: none"> <li>• cancel</li> <li>• clear</li> <li>• list</li> <li>• list-by-device</li> <li>• sync</li> </ul> If using list-by-device, enter the name or id of the device or group. If using cancel, enter the profile name, device name or id, and, optionally, enter raw to show the raw data.
service-restart	Restart the firmware manager server.
set-controller-schedule <device> <controller_id> <version> [date_time]	Create a controller upgrade schedule for a device.
set-dev-schedule <device> <version> [flags] [date_time]	Create an upgrade schedule for a device. The build number is only needed for special images, use 0 for regular images.
set-grp-schedule <group> <version> <flags> <date_time>	Create an upgrade schedule for a group.
show-dev-disk-check-status <device>	Show whether the device needs a disk check
show-dev-upgrade-path <device> <version>	Show the possible upgrade path

Variable	Description
show-grp-disk-check-status <group>	Show whether the devices in the group need disk checks
test-upgrade-path <platform> <from-version> <to-version> [debug]	Show possible FortiGate upgrade paths.

## ha

Use this command to view and manage high availability.

### Syntax

```
diagnose ha check-data {start | stop | status}
diagnose ha data-check-report {read | delete}
diagnose ha dump-cloud-api-log
diagnose ha dump-datalog
diagnose ha force-resync
diagnose ha force-vrrp-election
diagnose ha stats
diagnose ha trace-client-req {enable | disable}
```

Variable	Description
check-data {start   stop   status}	Start/stop or check status of database hash and revision files.
data-check-report {read   delete}	Read or delete the data check validation report.
dump-cloud-api-log	Dump cloud API log.
dump-datalog	Dump the HA data log.
force-resync	Force HA to re-synchronize the configuration.
force-vrrp-election	Force a Virtual Router Redundancy Protocol (VRRP) new election.
stats	Get HA statistics.
trace-client-req {enable   disable}	Enable/disable trace of client side request.

## hardware

Use this command to view hardware information.

### Syntax

```
diagnose hardware info
```

## incident

Use this command to view incident attachment information

### Syntax

```
diagnose incident attachment status <adom> <attachment type> [detail]
```

Variable	Description
attachment	Incident's Attachment.
status	Attachment status information.
<adom>	ADOM name or all for all ADOMs.
<attachment type>	The attachment type: report, alertevent, note, file, or all for all types.
[detail]	Show detailed information.

## license

Use this command to check license information.

### Syntax

```
diagnose license list  
diagnose license update
```

Variable	Description
list	List the FortiAnalyzer license information.
update	Update the FortiAnalyzer license information.

## lldp

Link Layer Description Protocol (LLDP) Receiver diagnostics.

### Syntax

```
diagnose lldp rx neighbor details
diagnose lldp rx neighbor summary
diagnose lldp rx port details
diagnose lldp rx port summary
diagnose lldp rx restart
```

Variable	Description
neighbor details	Display details of each LLDP neighbor.
neighbor summary	Display summary of each LLDP neighbor.
port details	Display details of the LLDP enabled ports.
port summary	Display summary of the LLDP enabled ports.
restart	Restart the LLDP process.

## log

Use the following command to view log information.

## log device

Use this command to view device log usage.

### Syntax

```
diagnose log device [<device-id> | adom] [adom-name | all | *]
```

Variable	Description
[<device-id>   adom]	Optionally filter by device ID or ADOM.
[adom-name   all   *]	Optionally filter by ADOM name when filtering by ADOM.

## log restore

Use this command to view the last log restore result or to cancel the last log restore request.

### Syntax

```
diagnose log restore cancel
diagnose log restore status
```

Variable	Description
cancel	Cancel the last log restore request.
status	Show the last log restore result.

## pm2

Use this command to print from and check the integrity of the FortiManager database.

### Syntax

```
diagnose pm2 check-integrity {all adom device global ips task ncldb}
diagnose pm2 db-recover <db-category>
diagnose pm2 print <log-type>
```

Variable	Description
check-integrity {all adom device global ips task ncldb}	Check FortiManager database integrity. Multiple database categories can be checked at once.
db-recover <db-category>	Recover data from a corrupted database. Enter the database category.
print <log-type>	Print FortiManager database log messages.

## report

Use these commands to check the SQL database.

### Syntax

```
diagnose report clean {ldap-cache | report-queue}
diagnose report status {pending | running}
```

Variable	Description
clean {ldap-cache   report-queue}	Cleanup the SQL report queue or LDAP cache.
status {pending   running}	Check status information on pending and running reports.

## rtm

### rtm debug-log

Use this command for RTM daemon debug log functions.

#### Syntax

```
diagnose rtm debug-log clear
diagnose rtm debug-log enable
diagnose rtm debug-log read
```

Variable	Description
clear	Delete and disable rtmmond debug log.
enable	Enable rtmmond debug log.
read	Dump rtmmond debug log to console.

### rtm history-data

Use this command to view and export the real time monitor history data.

#### Syntax

```
diagnose rtm history-data export clear <device>
diagnose rtm history-data export csv <device> <monitor> <filter:1> ... <filter:9>
diagnose rtm history-data export list <device>
diagnose rtm history-data info <device> <monitor>
diagnose rtm history-data key-list <device> <monitor> <key-name>
diagnose rtm history-data query <device> <monitor> <filter:1> ... <filter:9>
```

Variable	Description
export clear <device>	Remove exported files.

Variable	Description
export csv <device> <monitor> <filter:1> ... <filter:8>	Export data to csv file.
export list <device>	List exported files.
info <device> <monitor>	View real time monitor history database information.
key-list <device> <monitor> <key-name>	Query real time monitor history key list.
query <device> <monitor> <filter:1> ... <filter:8>	Query real time monitor history data.

## rtm history-db

Use this command to purge the real time monitor history database.

### Syntax

```
diagnose rtm history-db purge
```

Variable	Description
purge	Purge the history database.

## rtm profile

Use this command to display or update real time monitor profile database.

### Syntax

```
diagnose rtm profile change-adom <adom>
diagnose rtm profile list
diagnose rtm profile update check-interval {fap | fsw6 | fsw7 | ha-chksum | license| lte | nonha-
chksum | rogue | sdwan-intf | sdwan-sla | shaper} <new value>
diagnose rtm profile update post-interval {fap | fsw6 | fsw7 | ha-chksum | license| lte | nonha-
chksum | rogue | sdwan-intf | sdwan-sla | shaper} <new value>
diagnose rtm profile update retry-interval {fap | fsw6 | fsw7 | ha-chksum | license| lte | nonha-
chksum | rogue | sdwan-intf | sdwan-sla | shaper} <new value>
diagnose rtm profile unset
```

Variable	Description
change-adom <adom>	Change ADOM for the RTM profile.

Variable	Description
list	List the RTM profile.
update check-interval {fap   fsw6   fsw7   ha-chksum   license   lte   nonha-chksum   rogue   sdwan-intf   sdwan-sla   shaper} <new value>	<p>Update the RTM profile task to check the WiFi interval:</p> <ul style="list-style-type: none"> <li>• fap: FortiAP.</li> <li>• fsw6: FortiSwitch v6.</li> <li>• fsw7: FortiSwitch v7.</li> <li>• ha-chksum: HA checksum.</li> <li>• license: License status.</li> <li>• lte: LTE modem.</li> <li>• nonha-chksum: Non-HA checksum.</li> <li>• rogue: Rogue AP.</li> <li>• sdwan-intf: SD-WAN interface-log.</li> <li>• sdwan-sla: SD-WAN sla-log.</li> <li>• shaper: Multi-class shaper.</li> </ul> <p><b>Note:</b> For the new value variable, enter an interval range between 10 - 7200 seconds, or 0 to disable the RTM task for this ADOM.</p>
update post-interval {fap   fsw6   fsw7   ha-chksum   license   lte   nonha-chksum   rogue   sdwan-intf   sdwan-sla   shaper} <new value>	<p>Update the post interval:</p> <ul style="list-style-type: none"> <li>• fap: FortiAP.</li> <li>• fsw6: FortiSwitch v6.</li> <li>• fsw7: FortiSwitch v7.</li> <li>• ha-chksum: HA checksum.</li> <li>• license: License status.</li> <li>• lte: LTE modem.</li> <li>• nonha-chksum: Non-HA checksum.</li> <li>• rogue: Rogue AP.</li> <li>• sdwan-intf: SD-WAN interface-log.</li> <li>• sdwan-sla: SD-WAN sla-log.</li> <li>• shaper: Multi-class shaper.</li> </ul> <p><b>Note:</b> For the new value variable, enter an interval range between 10 - 7200 seconds.</p>
update retry-interval {fap   fsw6   fsw7   ha-chksum   license   lte   nonha-chksum   rogue   sdwan-intf   sdwan-sla   shaper} <new value>	<p>Update the retry interval:</p> <ul style="list-style-type: none"> <li>• fap: FortiAP.</li> <li>• fsw6: FortiSwitch v6.</li> <li>• fsw7: FortiSwitch v7.</li> <li>• ha-chksum: HA checksum.</li> <li>• license: License status.</li> <li>• lte: LTE modem.</li> <li>• nonha-chksum: Non-HA checksum.</li> <li>• rogue: Rogue AP.</li> <li>• sdwan-intf: SD-WAN interface-log.</li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>sdwan-s1a: SD-WAN sla-log.</li> <li>shaper: Multi-class shaper.</li> </ul> <p><b>Note:</b> For the new value variable, enter an interval range between 10 - 7200 seconds.</p>
unset	Unset the RTM profile to default value.

## sniffer

Use this command to perform a packet trace on one or more network interfaces.

Packet capture, also known as sniffing, records some or all of the packets seen by a network interface. By recording packets, you can trace connection states to the exact point at which they fail, which may help you to diagnose some types of problems that are otherwise difficult to detect.

FortiManager units have a built-in sniffer. Packet capture on FortiManager units is similar to that of FortiGate units. Packet capture is displayed on the CLI, which you may be able to save to a file for later analysis, depending on your CLI client.

Packet capture output is printed to your CLI display until you stop it by pressing CTRL + C, or until it reaches the number of packets that you have specified to capture.



Packet capture can be very resource intensive. To minimize the performance impact on your FortiManager unit, use packet capture only during periods of minimal traffic, with a serial console CLI connection rather than a Telnet or SSH CLI connection, and be sure to stop the command when you are finished.

## Syntax

```
diagnose sniffer packet <interface> <filter> <verbose> <count> <Timestamp format>
```

Variable	Description
<interface>	Enter the name of a network interface whose packets you want to capture, such as port1, or type any to capture packets on all network interfaces.
<filter>	<p>Enter either none to capture all packets, or type a filter that specifies which protocols and port numbers that you do or do not want to capture, such as 'tcp port 25'. Surround the filter string in quotes.</p> <p>The filter uses the following syntax:</p> <pre>'[[src dst] host {&lt;host1_fqdn&gt;   &lt;host1_ipv4&gt;}] [and or] [[src dst] host {&lt;host2_fqdn&gt;   &lt;host2_ipv4&gt;}] [and or] [[arp ip gre esp udp tcp] port &lt;port1_int&gt;] [and or] [[arp ip gre esp udp tcp] port &lt;port2_int&gt;]'</pre>

Variable	Description
	<p>To display only the traffic between two hosts, specify the IP addresses of both hosts. To display only forward or only reply packets, indicate which host is the source and which is the destination.</p> <p>For example, to display UDP port 1812 traffic between 1.example.com and either 2.example.com or 3.example.com, you would enter:</p> <pre>'udp and port 1812 and src host 1.example.com and dst \ ( 2.example.com or 2.example.com \)'</pre>
<verbose>	<p>Enter one of the following numbers indicating the depth of packet headers and payloads to capture:</p> <ul style="list-style-type: none"> <li>• 1: print header of packets (default)</li> <li>• 2: print header and data from IP of packets</li> <li>• 3: print header and data from ethernet of packets (if available)</li> </ul> <p>For troubleshooting purposes, Fortinet Technical Support may request the most verbose level (3).</p>
<count>	<p>Enter the number of packets to capture before stopping.</p> <p>If you do not specify a number, the command will continue to capture packets until you press CTRL + C.</p>
<Timestamp format>	<p>Enter the timestamp format.</p> <ul style="list-style-type: none"> <li>• a: absolute UTC time, yyyy-mm-dd hh:mm:ss.ms</li> <li>• l: absolute LOCAL time, yyyy-mm-dd hh:mm:ss.ms</li> <li>• otherwise: relative to the start of sniffing, ss.ms</li> </ul>

## Example 1

The following example captures the first three packets' worth of traffic, of any port number or protocol and between any source and destination (a filter of none), that passes through the network interface named port1. The capture uses a low level of verbosity (indicated by 1).

Commands that you would type are highlighted in bold; responses from the Fortinet unit are not in bold.

```
Packet capture can be very resource intensive. To minimize the performance impact on your
FortiManager unit, use packet capture only during periods of minimal traffic, with a serial
console CLI connection rather than a Telnet or SSH CLI connection, and be sure to stop the
command when you are finished.# diag sniffer packet port1 none 1 3
interfaces=[port1]
filters=[none]
0.918957 192.168.0.1.36701 -> 192.168.0.2.22: ack 2598697710
0.919024 192.168.0.2.22 -> 192.168.0.1.36701: psh 2598697710 ack 2587945850
0.919061 192.168.0.2.22 -> 192.168.0.1.36701: psh 2598697826 ack 2587945850
```

If you are familiar with the TCP protocol, you may notice that the packets are from the middle of a TCP connection. Because port 22 is used (highlighted above in bold), which is the standard port number for SSH, the packets might be from an SSH session.

## Example 2

The following example captures packets traffic on TCP port 80 (typically HTTP) between two hosts, 192.168.0.1 and 192.168.0.2. The capture uses a low level of verbosity (indicated by 1). Because the filter does not specify either host as the source or destination in the IPv4 header (src or dst), the sniffer captures both forward and reply traffic.

A specific number of packets to capture is not specified. As a result, the packet capture continues until the administrator presses the control key + C. The sniffer then confirms that five packets were seen by that network interface.

Commands that you would type are highlighted in bold; responses from the Fortinet unit are not in bold.

```
Packet capture can be very resource intensive. To minimize the performance impact on your
FortiManager unit, use packet capture only during periods of minimal traffic, with a serial
console CLI connection rather than a Telnet or SSH CLI connection, and be sure to stop the
command when you are finished.# diag sniffer packet port1 'host 192.168.0.2 or host
192.168.0.1 and tcp port 80' 1
192.168.0.2.3625 -> 192.168.0.1.80: syn 2057246590
192.168.0.1.80 -> 192.168.0.2.3625: syn 3291168205 ack 2057246591
192.168.0.2.3625 -> 192.168.0.1.80: ack 3291168206
192.168.0.2.3625 -> 192.168.0.1.80: psh 2057246591 ack 3291168206
192.168.0.1.80 -> 192.168.0.2.3625: ack 2057247265
5 packets received by filter
0 packets dropped by kernel
```

## Example 3

The following example captures all TCP port 443 (typically HTTPS) traffic occurring through port1, regardless of its source or destination IPv4 address. The capture uses a high level of verbosity (indicated by 3).

A specific number of packets to capture is not specified. As a result, the packet capture continues until the administrator presses the control key + C. The sniffer then confirms that five packets were seen by that network interface.

Verbose output can be very long. As a result, output shown below is truncated after only one packet.

Commands that you would type are highlighted in bold; responses from the Fortinet unit are not in bold.

```
Packet capture can be very resource intensive. To minimize the performance impact on your
FortiManager unit, use packet capture only during periods of minimal traffic, with a serial
console CLI connection rather than a Telnet or SSH CLI connection, and be sure to stop the
command when you are finished. # diag sniffer port1 'tcp port 443' 3
interfaces=[port1]
filters=[tcp port 443]
10.651905 192.168.0.1.50242 -> 192.168.0.2.443: syn 761714898
0x0000 0009 0f09 0001 0009 0f89 2914 0800 4500 .....E.
0x0010 003c 73d1 4000 4006 3bc6 d157 fede ac16 <s.@.@.;.W...
0x0020 0ed8 c442 01bb 2d66 d8d2 0000 0000 a002 ...B..-f.....
0x0030 16d0 4f72 0000 0204 05b4 0402 080a 03ab ..Or.....
0x0040 86bb 0000 0000 0103 0303 .....
```

Instead of reading packet capture output directly in your CLI display, you usually should save the output to a plain text file using your CLI client. Saving the output provides several advantages. Packets can arrive more rapidly than you may be able to read them in the buffer of your CLI display, and many protocols transfer data

using encoding other than US-ASCII. It is usually preferable to analyze the output by loading it into a network protocol analyzer application such as Wireshark (<http://www.wireshark.org/>).

For example, you could use PuTTY or Microsoft HyperTerminal to save the sniffer output. Methods may vary. See the documentation for your CLI client.

## Requirements

- terminal emulation software, such as [PuTTY](#)
- a plain text editor such as Notepad
- a [Perl](#) interpreter
- network protocol analyzer software, such as [Wireshark](#)

## To view packet capture output using PuTTY and Wireshark:

1. On your management computer, start PuTTY.
2. Use PuTTY to connect to the Fortinet appliance using either a local serial console, SSH, or Telnet connection.
3. Enter the packet capture command, such as:  
`diagnose sniffer packet port1 'tcp port 541' 3 100`  
but do not press Enter yet.
4. In the upper left corner of the window, click the PuTTY icon to open its drop-down menu, then select *Change Settings*. A dialog appears where you can configure PuTTY to save output to a plain text file.
5. In the *Category* tree on the left, go to *Session > Logging*.
6. In *Session logging*, select *Printable output*.
7. In *Log file name*, click the *Browse* button, then choose a directory path and file name such as `C:\Users\MyAccount\packet_capture.txt` to save the packet capture to a plain text file. (You do not need to save it with the `.log` file extension.)
8. Click *Apply*.
9. Press Enter to send the CLI command to the FortiMail unit, beginning packet capture.
10. If you have not specified a number of packets to capture, when you have captured all packets that you want to analyze, press the `control` key + `C` to stop the capture.
11. Close the PuTTY window.
12. Open the packet capture file using a plain text editor such as Notepad.
13. Delete the first and last lines, which look something like this:  

```
===== PuTTY log 2026.09.29 08:03:40 =====  
Fortinet-2000 #
```

These lines are a PuTTY timestamp and a command prompt, which are not part of the packet capture. If you do not delete them, they could interfere with the script in the next step.
14. Convert the plain text file to a format recognizable by your network protocol analyzer application. You can convert the plain text file to a format (`.pcap`) recognizable by Wireshark using the `fgt2eth.pl` Perl script. To download `fgt2eth.pl`, see the [Fortinet Knowledge Base](#) article [Using the FortiOS built-in packet sniffer](#).



The `fgt2eth.pl` script is provided as-is, without any implied warranty or technical support, and requires that you first install a Perl module compatible with your operating system.

---

To use `fgt2eth.pl`, open a command prompt, then enter a command such as the following:

```
fgt2eth.pl -in packet_capture.txt -out packet_capture.pcap
```

where:

- `fgt2eth.pl` is the name of the conversion script; include the path relative to the current directory, which is indicated by the command prompt
- `packet_capture.txt` is the name of the packet capture's output file; include the directory path relative to your current directory
- `packet_capture.pcap` is the name of the conversion script's output file; include the directory path relative to your current directory where you want the converted output to be saved

15. Open the converted file in your network protocol analyzer application. For further instructions, see the documentation for that application.

For additional information on packet capture, see the [Fortinet Knowledge Base article Using the FortiOS built-in packet sniffer](#).

## sql

Use this command to diagnose the SQL database.

## sql config

Use this command to show, set, or reset the SQL database configuration.

### Syntax

```
diagnose sql config auto-cache-delay [set <seconds>| reset]
diagnose sql config debug-filter [set | test] <daemon> <string>
diagnose sql config deferred-index-timespan [set <value>]
diagnose sql config dump
diagnose sql config hcache-agg-step [reset | set <integer>]
diagnose sql config hcache-auto-rebuild-status [reset | set <integer>]
diagnose sql config hcache-auto-rebuild-task-priority [reset | set <integer>]
diagnose sql config hcache-base-trim-interval [reset | set <integer>]
diagnose sql config hcache-max-base-row [reset | set <integer>]
diagnose sql config hcache-max-fv-row [reset | set <integer>]
diagnose sql config hcache-max-fv-row-per-timescale [reset | set <integer>]
diagnose sql config hcache-max-high-accu-row [reset | set <integer>]
diagnose sql config hcache-max-rpt-row [reset | set <integer>]
diagnose sql config sampling-max-row [reset | set <integer>]
diagnose sql config sampling-status [reset | set <integer>]
diagnose sql config sampling-type [reset | set <integer>]
diagnose sql config soc-fabric-max-fv-row [reset | set <integer>]
diagnose sql config soc-fabric-max-rpt-row [reset | set <integer>]
```

Variable	Description
auto-cache-delay [set <seconds>   reset]	Show, set, or reset the auto-cache delay, in seconds (default = 300).
debug-filter {set   test} <daemon> <string>	Show sqlplugind and sqlreportd debug filter. Enter sqlplugind, sqlreportd or both as the <daemon>. Enter the filter string.
deferred-index-timespan [set <value>]	View or set the time span for the deferred index (default = 10000).
dump	Show all sql config settings.
hcache-agg-step [reset   set <integer>]	Show, set, or reset the hcache aggregation step (default = 10).
hcache-auto-rebuild-status [reset   set <integer>]	Show, set, or reset the status of hcache auto rebuild task (0 - 1, default = 1). <ul style="list-style-type: none"> <li>• 0 = disable</li> <li>• 1 = enable</li> </ul>
hcache-auto-rebuild-task-priority [reset   set <integer>]	Show, set, or reset the priority of hcache auto rebuild task (0 - 2, default = 1). <ul style="list-style-type: none"> <li>• 0 = low</li> <li>• 1 = medium</li> <li>• 2 = high</li> </ul>
hcache-base-trim-interval [reset   set <integer>]	Show, set, or reset the hcache base trim interval (3600 - 2147483647, default = 172800).
hcache-max-base-row [reset   set <integer>]	Show, set, or reset the max row number for base cache (1000 - 1500000, default = 1000000).
hcache-max-fv-row [reset   set <integer>]	Show, set, or reset max row number for FortiView hcache (1000 - 400000, default = 50000).
hcache-max-fv-row-per-timescale [reset   set <integer>]	Show, set, or reset max row number per timescale for FortiView hcache (0 - 40000, default = 0).
hcache-max-high-accu-row [reset   set <integer>]	Show, set, or reset max row number for high-accuracy hcache (1000 - 1000000, default = 400000).
hcache-max-rpt-row [reset   set <integer>]	Show, set, or reset max row number for report hcache (1000 - 400000, default = 18000).
sampling-max-row [reset   set <integer>]	Show, set, or reset max row number for sampling (1000 - 10000000, default = 1000000).
sampling-status [reset   set <integer>]	Show, set, or reset the sampling status. Enter 0 for disabling and 1 for enabling the sample status (0 - 1, default = 1).
sampling-type [reset   set <integer>]	Show, set, or reset the type of sampling (0 - 1, default = 0).

Variable	Description
soc-fabric-max-fv-row [reset   set <integer>]	Show, set, or reset the max row number for FortiAnalyzer Fabric FortiView query.
soc-fabric-max-rpt-row [reset   set <integer>]	Show, set, or reset the max row number for FortiAnalyzer Fabric report query.

## sql debug

Use this command to show or update the SQL debug statuses.

### Syntax

```

diagnose sql debug chlog show [<filter>] [<NUM>]
diagnose sql debug chlog upload {ftp | sftp} <host> <dir> <user name> <password>
diagnose sql debug hcache-agg dbgoff
diagnose sql debug hcache-agg dbgon
diagnose sql debug hcache-agg delete
diagnose sql debug hcache-agg show [<filter>][<NUM>]
diagnose sql debug hcache-agg upload {ftp | sftp} <host> <dir> <user name> <password>
diagnose sql debug imexport dbgoff
diagnose sql debug imexport dbgon
diagnose sql debug imexport delete
diagnose sql debug imexport show [<filter>] [<NUM>]
diagnose sql debug imexport upload {ftp | sftp} <host> <dir> <user name> <password>
diagnose sql debug logview dbgoff
diagnose sql debug logview dbgon
diagnose sql debug logview delete
diagnose sql debug logview show [<filter>] [<NUM>]
diagnose sql debug logview upload {ftp | sftp} <host> <dir> <user name> <password>
diagnose sql debug pglog show [<filter>] [<NUM>]
diagnose sql debug pglog upload {ftp | sftp} <host> <dir> <user name> <password>
diagnose sql debug sqlqry auto-explain disable
diagnose sql debug sqlqry auto-explain enable <duration> <work-mem>
diagnose sql debug sqlqry dbgoff
diagnose sql debug sqlqry dbgon <level value>
diagnose sql debug sqlqry delete
diagnose sql debug sqlqry show [<filter>][<NUM>]
diagnose sql debug sqlqry upload {ftp | sftp} <host> <dir> <user name> <password>

```

Variable	Description
chlog show [<filter>] [<NUM>]	Show last lines of the Clickhouse log debug file. Set filter for debug file, and show last NUM lines of the debug file. The filter and NUM variables are optional.
chlog upload {ftp   sftp} <host> <dir> <user name> <password>	Upload Clickhouse log debug file to FTP or SFTP server. Enter host IP address, directory, user name, and password.

Variable	Description
hcache-agg dbgoff	Disable hcache-agg debug output.
hcache-agg dbg on	Enable hcache-agg debug output.
hcache-agg delete	Delete hcache-agg debug file.
hcache-agg show [<filter>] [<NUM>]	Show the last 10 lines of the hcache-agg debug file. Set filter for the debug file, and show the last NUM lines of the debug file. The filter and NUM variables optional.
hcache-agg upload {ftp   sftp} <host> <dir> <user name> <password>	Upload hcache-agg debug file to FTP or SFTP server. Enter host IP address, directory, user name, and password.
imexport dbgoff	Disable Report import/export debug output.
imexport dbg on	Enable Report import/export debug output.
imexport delete	Delete Report import/export debug file.
imexport show [<filter>] [<NUM>]	Show the last 10 lines of the Report import/export debug file. Set filter for debug file, and show last NUM lines of the debug file. The filter and NUM variables are optional.
imexport upload {ftp   sftp} <host> <dir> <user name> <password>	Upload Report import/export debug file to FTP or SFTP server. Enter host IP address, directory, user name, and password.
logview dbgoff	Disable log view debug output.
logview dbg on	Enable log view debug output.
logview delete	Delete log view debug file.
logview show [<filter>] [<NUM>]	Show the last 10 lines of the log view debug file. Set filter for debug file, and show last NUM lines of the debug file. The filter and NUM variables are optional.
logview upload {ftp   sftp} <host> <dir> <user name> <password>	Upload log view debug file to FTP or SFTP server. Enter host IP address, directory, user name, and password.
pglog show [<filter>] [<NUM>]	Show the last 10 lines of the Postgres log debug file. Set filter for debug file, and show last NUM lines of the debug file. The filter and NUM variables are optional.
pglog upload {ftp   sftp} <host> <dir> <user name> <password>	Upload Postgres log debug file to FTP or SFTP server. Enter host IP address, directory, user name, and password.
sqlqry auto-explain disable	Disable SQL query auto explain.
sqlqry auto-explain enable <duration> <work-mem>	Enable SQL query auto explain. Enter the duration in seconds and the local work_mem in MB.

Variable	Description
sqlqry dbgoff	Disable SQL query debug output.
sqlqry dbgon <level value>	Enable SQL query debug output. Set SQL query debug level (1-5). The default level is 1. <b>Note:</b> When the debug level is 5, the final SQL running in sqlreportd will show in the debug output as well.
sqlqry delete	Delete the SQL query debug file.
sqlqry show [<filter>] [<NUM>]	Show the last 10 lines of the SQL query debug file. Set filter for the debug file, and show the last NUM lines of the debug file. The filter and NUM variables are optional.
sqlqry upload {ftp   sftp} <host> <dir> <user name> <password>	Upload SQL query debug file to FTP or SFTP server. Enter host IP address, directory, user name, and password.

## sql hcache

Use this command to show or update the SQL hcache.

### Syntax

```

diagnose sql hcache add-task agg <spname> <norm-query-hash> <agg-level> <timestamp> <num-of-days>
diagnose sql hcache add-task agg-update <spname> <hid>
diagnose sql hcache dump-task <filter>
diagnose sql hcache list <spname> <query-hash/tag> <filter> <detail>
diagnose sql hcache plan <spname> <start-time> <end-time> <query-tag/norm-qry-hash/sql> <is-
  fortiview> <max-time-scale>
diagnose sql hcache rebuild-report <spname> <start-time> <end-time> <reset>
diagnose sql hcache rebuild-status
diagnose sql hcache show hcache <spname> <id>
diagnose sql hcache show hcache-query <spname> <norm-qry-hash>
diagnose sql hcache show hcache-res-tbl <spname> <res-tbl-id>
diagnose sql hcache show time <time> <time> <time> <time>
diagnose sql hcache status {all | <spname> | all-summary} <detail>
diagnose sql hcache test {all | <spname>} <item-id> <start-time> <end-time>

```

Variable	Description
add-task agg <spname> <norm-query-hash> <agg-level> <timestamp> <num-of-days>	Add an hcache agg task: <ul style="list-style-type: none"> <li>spname: The SP name.</li> <li>norm-query-hash: The normalized query hash.</li> <li>agg-level: The aggregation level.</li> <li>timestamp: The timestamp (format = yyyy-mm-dd hh:mm:ss).</li> <li>num-of-days: The number of days (1, 3, or 30).</li> </ul>

Variable	Description
add-task agg-update <sname> <hid>	Add an hcache agg update task: <ul style="list-style-type: none"> <li>sname: The SP name.</li> <li>hid: The hcache agg ID.</li> </ul>
dump-task <filter>	Dump hcache tasks. Enter the task filter.
list <sname> <query-hash/tag> <filter> <detail>	List hcaches: <ul style="list-style-type: none"> <li>sname: The SP name.</li> <li>query-hash/tag: The hash or tag filter query, or all for all hcaches.</li> <li>filter: Narrow down the hcache list search result by using a filter. The filter keywords include: <ul style="list-style-type: none"> <li>status: The hcache status. 0(Ready), 1(Ready-Loss), 2(In-Building), 3(Error), 4(Invalid-SQL ), 5(No-Data), 6(Not-Ready).</li> <li>fv_flag: List FortiView/report only. 1(fortiview), 0(report).</li> <li>sql: The SQL query match. '*' for wildcard, e.g. *select*.</li> <li>time_start: Start of the log time. format: yyyy-mm-dd hh:MM:ss.</li> <li>time_end: End of the log time. format: yyyy-mm-dd hh:MM:ss.</li> </ul> </li> </ul> <p>The following shows an example of the variable &lt;filter&gt;:</p> <ul style="list-style-type: none"> <li>"status=0,1,5 sql=\"*srcip, dstip*\" time_start&gt;=\"2020-11-01 00:00:00\" time_end&lt;=\"2020-11-30 23:59:59\"".</li> </ul> <p>Enter "" for no filter.</p> <ul style="list-style-type: none"> <li>detail: Show detailed information.</li> </ul>
plan <sname> <start-time> <end-time> <query-tag/norm-qry-hash/sql> <is-fortiview> <max-time-scale>	Plan hcaches: <ul style="list-style-type: none"> <li>sname: The SP name.</li> <li>start-time: The start time (format: yyyy-mm-dd hh:mm:ss).</li> <li>end-time: The end time (format: yyyy-mm-dd hh:mm:ss).</li> <li>query-tag/norm-qry-hash/sql: The query tag, normalized query hash, or sql statement.</li> <li>is-fortiview: Enter 1 for FortiView, or 0 for report.</li> <li>max-time-scale: Maximum timescale.</li> </ul>
rebuild-report <sname> <start-time> <end-time> <reset>	Rebuild hcache for report only. <ul style="list-style-type: none"> <li>sname: The SP name or all for all SPs.</li> <li>start-time: The start time (format: yyyy-mm-dd hh:mm:ss).</li> <li>end-time: The end time (format: yyyy-mm-dd hh:mm:ss).</li> <li>reset: Clean up all existing hcache tasks.</li> </ul>
rebuild-status	Show report hcache rebuild/check status.
show hcache <sname> <id>	Show hcache information. Enter the SP name and hcache ID.
show hcache-query <sname> <norm-qry-hash>	Show hcache query information. Enter the SP name and the normalized query hash.
show hcache-res-tbl <sname> <res-tbl-id>	Show hcache result table information. Enter the SP name and the result table ID.

Variable	Description
show time <time> <time> <time> <time>	Show hcache time. Enter up to four timestamps.
status {all   <spname>   all-summary} <detail>	Show hcache information per SP name, for all SPs, or display the summary. Enter detail to show detailed info.
test {all   <spname>} <item-id> <start-time> <end-time>	Run hcache health check per SP or for all SPs. <ul style="list-style-type: none"> <li>start-time: The start time (format: yyyy-mm-dd hh:mm:ss).</li> <li>end-time: The end time (format: yyyy-mm-dd hh:mm:ss).</li> </ul>

## sql process

Use this command to kill or list query processes in the the SQL database.

### Syntax

```
diagnose sql process kill <pid>
diagnose sql process list [full]
```

Variable	Description
kill <pid>	Kill a running query.
list [full]	List running query processes.

## sql remove

Use this command to remove from the SQL database.

### Syntax

```
diagnose sql remove {hcache <spname> <start-time> <end-time> | query-cache | rebuild-db-flag |
tmp-tabe}
```

Variable	Description
{hcache <spname> <start-time> <end-time>   query-cache   rebuild-db-flag   tmp-table}	Remove the selected information: <ul style="list-style-type: none"> <li>hcache: Remove the hcache tables created for the SQL report. <ul style="list-style-type: none"> <li>spname: The SPname.</li> <li>start-time: The start time (format: yyyy-mm-dd hh:mm:ss).</li> <li>end-time: The end time (format: yyyy-mm-dd hh:mm:ss).</li> </ul> </li> <li>query-cache: Remove the SQL query cache for log search.</li> <li>rebuild-db-flag: Remove the rebuild database flag. The system will</li> </ul>

Variable	Description
	exit the rebuild database state. <ul style="list-style-type: none"> <li>• <code>tmp-table</code>: Remove the SQL database temporary tables.</li> </ul>

## sql show

Use this command to show SQL database information.

### Syntax

```
diagnose sql show {db-size | hcache-size | log-filters | log-stfile <device-id> <vdom> | policy
info <adom> }
```

Variable	Description
{db-size   hcache-size   log-filters   log-stfile <device-id> <vdom>   policy-info <adom>}	Show the database, hcache size, log filters, or log status file: <ul style="list-style-type: none"> <li>• <code>db-size</code>: Show database size.</li> <li>• <code>hcache-size</code>: Show hcache size.</li> <li>• <code>log-filters</code>: Show log view searching filters.</li> <li>• <code>log-stfile</code>: Show logstatus file for the specified device (for HA cluster, input the member's serial number) and VDOM.</li> <li>• <code>policy-info</code>: Show policy uuid and name map.</li> </ul>

## sql status

Use this command to show statuses of the SQL database.

### Syntax

```
diagnose sql status {migrate-db | rebuild-db | run_sql_rpt | sqlplugind | sqlreportd | upgrade-
db}
```

Variable	Description
{rebuild-adom <adom>   rebuild-db   run_sql_rpt   sqlplugind   sqlreportd}	Show the status: <ul style="list-style-type: none"> <li>• <code>rebuild-adom &lt;adom&gt;</code>: Show SQL log database rebuild status of ADOMs.</li> <li>• <code>migrate-db</code>: Show log SQL database migrate status.</li> <li>• <code>rebuild-db</code>: Show SQL log database rebuild status.</li> <li>• <code>run-sql-rpt</code>: Show <code>run_sql_rpt</code> status.</li> <li>• <code>sqlplugind</code>: Show <code>sqlplugind</code> status.</li> <li>• <code>sqlreportd</code>: Show <code>sqlreportd</code> status.</li> <li>• <code>upgrade-db</code>: Show log SQL database upgrade status.</li> </ul>

## sql upload

Use this command to upload sqlplugind messages / pgsvr logs via FTP or SFTP.

### Syntax

```
diagnose sql upload {ftp | sftp} <host> <directory> <user_name> <password>
```

Variable	Description
{ftp   sftp} <host> <directory> <user_name> <password>	Upload sqlplugind messages / pgsvr logs with FTP or SFTP.

## svctools

Import or export the FortiAnalyzer configuration (when FortiAnalyzer features are enabled), and run JSON files.

### Syntax

```
diagnose svctools export local
diagnose svctools export remote <ip> <string> <username> <password>
diagnose svctools import local name <adom> <integer>
diagnose svctools import remote <ip> <string> <username> <password> <adom> <integer>
diagnose svctools run local filename
diagnose svctools run remote <ip> <string> <username> <password>
```

Variable	Description
export local	Export the configuration locally.
export remote <ip> <string> <username> <password>	Export the configuration to a remote FTP server.
import local name <adom> <integer>	Import a local configuration from the specified ADOM. Enable or disable upgrade mode.
import remote <ip> <string> <username> <password> <adom> <integer>	Import a remote configuration from an FTP server to the specified ADOM. Enable or disable upgrade mode.
run local filename	Run a local JSON file on the target.
run remote <ip> <string> <username> <password>	Run a remote file from an FTP server.

## Example

```
# diagnose svctools export local
Export FortiAnalyzer(121), 1 of 15 ADOM.
Export FortiAuthenticator(137), 2 of 15 ADOM.
Export FortiCache(125), 3 of 15 ADOM.
Export FortiCarrier(117), 4 of 15 ADOM.
Export FortiClient(127), 5 of 15 ADOM.
Export FortiDDoS(135), 6 of 15 ADOM.
Export FortiMail(119), 7 of 15 ADOM.
Export FortiManager(131), 8 of 15 ADOM.
Export FortiNAC(141), 9 of 15 ADOM.
Export FortiProxy(139), 10 of 15 ADOM.
Export FortiSandbox(133), 11 of 15 ADOM.
Export FortiWeb(123), 12 of 15 ADOM.
Export Syslog(129), 13 of 15 ADOM.
Export others(115), 14 of 15 ADOM.
Export root(3), 15 of 15 ADOM.
Exported to /var/tmp/svctools_export
```

## system

Use the following commands for system related settings.

## system admin-session

Use this command to view and kill log in sessions.

### Syntax

```
diagnose system admin-session kill <sid>
diagnose system admin-session list
diagnose system admin-session status
```

Variable	Description
kill <sid>	Kill a current session. <ul style="list-style-type: none"><li>• &lt;sid&gt;: Session ID</li></ul>
list	List log in sessions.
status	Show the current session.

## system aiserver

Use this command to view the FortiAI server.

### Syntax

```
diagnose system aiserver get
diagnose system aiserver test
```

Variable	Description
get	Get current FortiAI server.
test	Test FortiAI server connection.

## system csf

Use this command for Security Fabric diagnostics.

### Syntax

```
diagnose system csf authorization {accept | deny | pending-list} <SN> [name]
diagnose system csf downstream [-x] [-a]
diagnose system csf downstream-devices
diagnose system csf global
diagnose system csf resync-fmg-cluster
diagnose system csf upstream
```

Variable	Description
authorization {accept   deny   pending-list} <sn> [name]	Authorization requests and permits. <ul style="list-style-type: none"> <li>{accept   deny   pending-list}: <ul style="list-style-type: none"> <li>accept: Authorize device to join CSF tree.</li> <li>deny: Deny device from joining CSF tree.</li> <li>pending-list: List of pending requests to join security fabric.</li> </ul> </li> <li>&lt;SN&gt;: Serial number.</li> <li>[name]: Optional entry name (if not passed SN is used).</li> </ul>
downstream [-x] [-a]	Show connected downstream devices. <ul style="list-style-type: none"> <li>[-x]: Show encrypted tokens.</li> <li>[-a]: Show all devices.</li> </ul>
downstream-devices	Show downstream fabric device.
global	Show a summary of all connected members in Security Fabric.
resync-fmg-cluster	Resync "system csf trusted-list" with "system fmg-cluster peer".

Variable	Description
upstream	Show connected upstream devices.

## system disk

Use this command to view disk diagnostic information.



Only usage is available on FortiManager-VM. Other disk related commands are only available on the hardware-based FortiManager.

### Syntax

```
diagnose system disk attributes
diagnose system disk delete
diagnose system disk disable
diagnose system disk enable
diagnose system disk errors
diagnose system disk health
diagnose system disk info
diagnose system disk sed <sed-key>
diagnose system disk usage <parameter> <parameter> <parameter> <parameter> <parameter>
<parameter> <parameter> <parameter> <parameter> <parameter>
```

Variable	Description
attributes	Show vendor specific SMART attributes.
delete	Delete the disk.
disable	Disable SMART support.
enable	Enable SMART support.
errors	Show the SMART error logs.
health	Show the SMART health status.
info	Show the SMART information.
sed <sed-key>	<p>SED encryption key. The key requires 8-32 characters, and it must include upper case, lower case, number, and special character (excluding '\').</p> <p>Once the sed-key is set, you can use the following command to change it:  diagnose system disk sed &lt;new-sed-key&gt; &lt;old-sed-key&gt;</p> <p>This command is only available on hardware models that support self-encrypting drives. For more information, see the <a href="#">FortiManager Administration Guide</a>.</p>

Variable	Description																								
usage <parameter> ... <parameter>	Display the disk usage. Enter a parameter.																								
	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>-a</td> <td>Show file sizes.</td> </tr> <tr> <td>-L</td> <td>Follow all symlinks.</td> </tr> <tr> <td>-H</td> <td>Follow symlinks on the command line.</td> </tr> <tr> <td>-d N</td> <td>Limit output to directories (and files with -a) of depth &lt; N.</td> </tr> <tr> <td>-c</td> <td>Show the grand total.</td> </tr> <tr> <td>-l</td> <td>Count sizes many times if hard linked.</td> </tr> <tr> <td>-s</td> <td>Display only a total for each argument.</td> </tr> <tr> <td>-x</td> <td>Skip directories on different file systems.</td> </tr> <tr> <td>-h</td> <td>Sizes in human readable format (e.g., 1K 243M 2G).</td> </tr> <tr> <td>-m</td> <td>Sizes in megabytes.</td> </tr> <tr> <td>-k</td> <td>Sizes in kilobytes (default).</td> </tr> </tbody> </table>	Parameter	Description	-a	Show file sizes.	-L	Follow all symlinks.	-H	Follow symlinks on the command line.	-d N	Limit output to directories (and files with -a) of depth < N.	-c	Show the grand total.	-l	Count sizes many times if hard linked.	-s	Display only a total for each argument.	-x	Skip directories on different file systems.	-h	Sizes in human readable format (e.g., 1K 243M 2G).	-m	Sizes in megabytes.	-k	Sizes in kilobytes (default).
Parameter	Description																								
-a	Show file sizes.																								
-L	Follow all symlinks.																								
-H	Follow symlinks on the command line.																								
-d N	Limit output to directories (and files with -a) of depth < N.																								
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-h	Sizes in human readable format (e.g., 1K 243M 2G).																								
-m	Sizes in megabytes.																								
-k	Sizes in kilobytes (default).																								

## system export

Use this command to export logs.

### Syntax

```
diagnose system export autoupdatelog <ftp | sftp> <(s)ftp server> <username> <password>
  <directory> <filename>
diagnose system export crashlog <ftp | sftp> <(s)ftp server> <username> <password> <directory>
  <filename>
diagnose system export dminstallog <devid> <ftp server> <username> <password> <directory>
  <filename>
diagnose system export elog <sftp | ftp> / <Enter> <(s)ftp server> <username> <password>
  <directory> <filename>
diagnose system export fmwslog <ftp | sftp> <type> <(s)ftp server> <username> <password>
  <directory> <filename>
diagnose system export raidlog <ftp server> <username> <password> [remote path] [filename]
diagnose system export rpclog <ftp | sftp> <(s)ftp server> <username> <password> <directory>
  <filename>
diagnose system export umlog <ftp | sftp> <fdssvr | fgdlinkd | fgdsvr | update | misc | fwmsvr>
  <(s)ftp server> <username> <password> <directory> <filename>
diagnose system export upgradelog <ftp | sftp> <(s)ftp server> <username> <password> <directory>
  <filename>
diagnose system export vartmp <ftp | sftp> <(s)ftp server> <username> <password> <directory>
  <filename>
```

Variable	Description
autoupdatelog <ftp   sftp> <(s)ftp server> <username> <password> <directory> <filename>	Export autoupdate debug log files. For filename, enter the tgz filename. For example, backup.tgz.
crashlog <ftp   sftp> <(s)ftp server> <username> <password> <directory> <filename>	Export the crash log.
dminstallog <devid> <sftp   ftp> <(s)ftp server> <username> <password> <directory> <filename>	Export the deployment manager install log.
elog <sftp   ftp> / <Enter> <(s)ftp server> <username> <password> <directory> <filename>	Export or display elog (system log). You can display the elog (system log) by pressing Enter instead of selecting a sftp or ftp server. For example, enter the following: diagnose system export elog
fmwslog <ftp   sftp> <type> <(s)ftp server> <username> <password> <directory> <filename>	Export the web service log files. The type is the log file prefix and can be: SENT, RECV, or TEST.
raidlog <ftp server> <username> <password> [remote path] [filename]	Export the RAID log. This command is only available on devices that support RAID.
rpclog <ftp   sftp> <(s)ftp server> <username> <password> <directory> <filename>	Export RPC log files.
umlog {ftp   sftp} <ftp   sftp> <fdssvr   fgdlinkd   fgdsvr   update   misc   fwmsvr> <(s)ftp server> <username> <password> <directory> <filename>	Export the update manager and firmware manager log files.
upgradelog <ftp   sftp> <(s)ftp server> <username> <password> <directory> <filename>	Export the upgrade error log.
vartmp <ftp   sftp> <(s)ftp server> <username> <password> <directory> <filename>	Export the system log files in /var/tmp.

## system filesystem

Use this command to diagnose filesystem information.

### Syntax

```
diagnose system filesystem hash <path>
diagnose system filesystem list <path>
```

Variable	Description
hash <path>	Print hashes of files in the filesystem. <ul style="list-style-type: none"> <li>&lt;path&gt;: Enter the path to parent directory.</li> </ul>
list <path>	List files in the filesystem. <ul style="list-style-type: none"> <li>&lt;path&gt;: Enter the path to parent directory.</li> </ul>

## system flash

Use this command to diagnose the flash memory.

### Syntax

```
diagnose system flash list
```

Variable	Description
list	List flash images. The information displayed includes the image name, version, total size (KB), used (KB), percent used, boot image, and running image.

## system fsck

Use this command to check and repair the filesystem.

### Syntax

```
diagnose system fsck harddisk
diagnose system fsck reset-mount-count
```

Variable	Description
harddisk	Check and repair the file system, then reboot the system.
reset-mount-count	Reset the mount-count of the disk on the next reboot.

## system geoip

Use these commands to get geographic IP information.

FortiManager uses a [MaxMind GeoLite](#) database of mappings between geographic regions and all public IPv4 addresses that are known to originate from them.

## Syntax

```
diagnose system geoup dump
diagnose system geoup info
diagnose system geoup ip <ip>
```

Variable	Description
dump	Display all geographic IP information.
info	Display a brief geography IP information.
ip <ip>	Find the specified IP address' country.

## Example

Find the country of the IP address 4.3.2.1:

```
FMG-VM64 # diagnose system geoup ip 4.3.2.1
4.3.2.1 : US - United States
```

## system geoup-city

Use these commands to get geographic IP information at a city level.

### Syntax

```
diagnose system geoup-city info
diagnose system geoup-city ip <ip>
```

Variable	Description
info	Display geographic IP information.
ip <ip>	Find the specified IP address' city.

## system interface

Use this command to diagnose the interface.

### Syntax

```
diagnose system interface segmentation-offload <intf-name> <action>
```

Variable	Description
segmentation-offload <intf-name> <action>	Print/set segmentation-offload for all interfaces: <ul style="list-style-type: none"> <li>• &lt;intf-name&gt;: Enter the interface name (or enter <code>all</code> for all interfaces)</li> <li>• &lt;action&gt;: Enter one of <code>show/on/off</code> to show or switch on/off interfaces</li> </ul>

## system mapserver

Use this command to access the map server information.

### Syntax

```
diagnose system mapserver checksum
diagnose system mapserver clearcache
diagnose system mapserver get
diagnose system mapserver test
```

Variable	Description
checksum	Get map server checksum.
clearcache	Clear the map server cache.
get	Get the current map server.
test	Test the map server connection.

## system ntp

Use this command to list NTP server information.

### Syntax

```
diagnose system ntp status
```

Variable	Description
status	List NTP server information.

## system print

Use this command to print server information.

## Syntax

```

diagnose system print connector [adom] <server_type> <server> <tag>
diagnose system print cpuinfo
diagnose system print df [arg0] [arg1] [arg2] .... [arg9]
diagnose system print hosts
diagnose system print interface <interface>
diagnose system print ip6tables
diagnose system print ipcs
diagnose system print iptables
diagnose system print loadavg
diagnose system print netstat
diagnose system print partitions
diagnose system print route
diagnose system print rtcache
diagnose system print slabinfo
diagnose system print sockets
diagnose system print uptime

```

Variable	Description
connector [adom] <server_type> <server> <tag>	Print connector information. Enter the ADOM name, or Global, the server type (pxGrid, clearpass, or nsx), and then the server name.
cpuinfo	Print the CPU information.
df [arg0] [arg1] [arg2] .... [arg9]	Print the file system disk space usage. Optionally, enter arguments.
hosts	Print the static table lookup for host names.
interface <interface>	Print the specified interface's information.
ip6tables	Print network statistics.
ipcs	Print inter-process communication IPC information.
iptables	Print network statistics.
loadavg	Print the average load of the system.
netstat	Print the network statistics for active Internet connections (servers and established).
partitions	Print the disk partition information.
route	Print the main route list.
rtcache	Print the contents of the routing cache.
slabinfo	Print the slab allocator statistics.
sockets	Print the currently used socket ports.
uptime	Print how long the system has been running.

## system process

Use this command to view and kill processes.

### Syntax

```
diagnose system process fdlist <pid> [list]
diagnose system process kill <signal> <pid>
diagnose system process killall <signal> <module>
diagnose system process list [string]
```

Variable	Description
fdlist <pid> [list]	List all file descriptors that the process is using. <ul style="list-style-type: none"> <li>• &lt;pid&gt;: Process ID</li> <li>• [list]: Optionally, process fdlist detail. Enter ls or list.</li> </ul>
kill <signal> <pid>	Kill a process: <ul style="list-style-type: none"> <li>• &lt;signal&gt;: Signal name or number, such as -9 or -KILL</li> <li>• &lt;pid&gt;: Process ID</li> </ul>
killall <signal> <module>	Kill all the related processes. <ul style="list-style-type: none"> <li>• -&lt;signal&gt;: Signal name or number, such as -9 or -KILL</li> <li>• &lt;module&gt;: Scriptmgr/deploymgr/fgfm/httpd/securityconsole</li> </ul>
list [string]	List all processes running on the FortiManager. Optionally, enter a substring to match. The information displayed includes the PID, user, VSZ, stat, and command.

## system raid

Use this command to view RAID information.



This command is only available on FortiManager models that support RAID.

### Syntax

```
diagnose system raid hwinfom
diagnose system raid status
```

Variable	Description
hwinfom	Show RAID controller hardware information.
status	Show RAID status.

## system route

Use this command to help diagnose routes. The listed information includes the destination IP, gateway IP, netmask, flags, metric, reference, use, and interface for each IPv4 route.

The following flags can appear in the route list table:

- *U*: the route is up
- *G*: the route is to a gateway
- *H*: the route is to a host rather than a network
- *D*: the route was dynamically created by a redirect
- *M*: the route was modified by a redirect

### Syntax

```
diagnose system route list
```

## system route6

Use this command to help diagnose routes. The listed information includes the destination IP, gateway IP, netmask, flags, metric, reference, use, and interface for each IPv6 route.

For a list of flags that can appear in the route6 list table, see information for the `diagnose system route list` command above.

### Syntax

```
diagnose system route6 list
```

## system server

Use this command to start the FortiManager server.

### Syntax

```
diagnose system server start
```

## test

Use the following commands to test the FortiManager.

## test application

Use this command to test applications. Multiple variables can be entered for each command.

### Syntax

```
diagnose test application apiproxyd <integer> <integer> ... <integer>
diagnose test application archd <integer> <integer> ... <integer>
diagnose test application clusterd <integer> <integer> ... <integer>
diagnose test application csfd <integer> <integer> ... <integer>
diagnose test application execcmd <integer> <integer> ... <integer>
diagnose test application fabricsyncd <integer> <integer> ... <integer>
diagnose test application fazalertd <integer> <integer> ... <integer>
diagnose test application fazcfgd <integer> <integer> ... <integer>
diagnose test application fazincid <integer> <integer> ... <integer>
diagnose test application fazmaild <integer> <integer> ... <integer>
diagnose test application faznotify <integer> <integer> ... <integer>
diagnose test application fazsvcd <integer> <integer> ... <integer>
diagnose test application faztunnel <integer> <integer> ... <integer>
diagnose test application fazwatchd <integer> <integer> ... <integer>
diagnose test application filefwd <integer> <integer> ... <integer>
diagnose test application fileparsed <integer> <integer> ... <integer>
diagnose test application fortilogd <integer> <integer> ... <integer>
diagnose test application logfiled <integer> <integer> ... <integer>
diagnose test application logfwd <integer> <integer> ... <integer>
diagnose test application log-fetchd <integer> <integer> ... <integer>
diagnose test application miglogd <integer> <integer> ... <integer>
diagnose test application oftpd <integer> <integer> ... <integer>
diagnose test application pgsvrd <integer> <integer> ... <integer>
diagnose test application rptchkd <integer> <integer> ... <integer>
diagnose test application rptsched <integer> <integer> ... <integer>
diagnose test application scansched <integer> <integer> ... <integer>
diagnose test application sdnproxyd <integer> <integer> ... <integer>
diagnose test application siemagentd <integer> <integer> ... <integer>
diagnose test application siemdbd <integer> <integer> ... <integer>
diagnose test application snmpd <integer> <integer> ... <integer>
diagnose test application sqllogd <integer> <integer> ... <integer>
diagnose test application sqlplugind <integer> <integer> ... <integer>
diagnose test application sqlreportd <integer> <integer> ... <integer>
diagnose test application sqlrptcached <integer> <integer> ... <integer>
diagnose test application syncsched <integer> <integer> ... <integer>
diagnose test application uploadd <integer> <integer> ... <integer>
diagnose test application vmd <integer> <integer> ... <integer>
```

Variable	Description
apiproxyd <integer> ...	API proxy daemon test usage: <ul style="list-style-type: none"> <li>1: show PID</li> <li>2: show statistics and state</li> <li>20: fsa tracer log request</li> <li>21: fsa tracer log request</li> <li>99: restart daemon</li> </ul>

Variable	Description
archd <integer> ...	Archd daemon test usage: <ul style="list-style-type: none"> <li>• 1: usage</li> <li>• 2: display content subdir info file</li> <li>• 3: force scan to archive ips files</li> <li>• 4: force preen content files</li> <li>• 99: restart daemon</li> </ul>
clusterd <integer> ...	Clusterd daemon test usage: <ul style="list-style-type: none"> <li>• 1: Daemon info (PID, meminfo, backtrace ...)</li> <li>• 2: Thread pool status</li> <li>• 3: Log Cluster core</li> <li>• 4: Devices cache module</li> <li>• 5: Logging Topology module</li> <li>• 6: Avatar uploading module</li> <li>• 7: Meta-CSF uploading module</li> <li>• 9: Tunnel module</li> <li>• 10: oftpd file fwd module</li> <li>• 11: Service module</li> <li>• 12: HA nodes info module</li> <li>• 13: HA config module</li> <li>• 97: HA module</li> <li>• 98: Monitor status</li> <li>• 99: Restart clusterd</li> <li>• 100: Restart clusterd and clusterd-monitor</li> <li>• 102: Various tests...</li> <li>• 103: generate core dump (on or off) when cluster.monitor kills cluster.main</li> </ul>
csfd <integer> ...	Security Fabric daemon test usage. <ul style="list-style-type: none"> <li>• 1: Show stats</li> <li>• 2: Show plugin status</li> <li>• 4: Start csfd diagnostic stat collection</li> <li>• 5: Stop csfd diagnostic stat collection</li> <li>• 6: Toggle diagnostic collection type</li> <li>• 7: Print collected diagnostic stats</li> <li>• 10: Show query cache status</li> <li>• 30: Show worker processes information</li> <li>• 31: Kill/Recreate worker processes gracefully</li> <li>• 32: Kill/Recreate worker processes by force (May loose tasks)</li> <li>• 33: Run a test job</li> <li>• 40: Show Upstream Path</li> <li>• 41: Show list of pending downstream authorizations</li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>• 42: Show list of authorized downstream nodes</li> <li>• 43: Show auth mode</li> <li>• 44: Show upstream mgmt info</li> <li>• 50: Show key info</li> <li>• 63: Show config versions</li> <li>• 80: Send test message to upstream</li> <li>• 81: Send test message to first downstream</li> <li>• 82: List unconfirmed outgoing messages</li> <li>• 83: List partial incoming messages</li> <li>• 84: List unconfirmed confirmations with extra data</li> <li>• 85: Dump timeout information</li> <li>• 86: Flush all outgoing messages</li> <li>• 90: Dump Table Counts</li> <li>• 91: Print Known Processes</li> <li>• 92: Send test message to root's cli-test-listener process</li> <li>• 100: Show cached downstream list</li> <li>• 110: Dump file meory usage info</li> <li>• 999: Restart</li> </ul>
execcmd <integer> ...	Execcmd daemon test usage: <ul style="list-style-type: none"> <li>• 1: show PID</li> <li>• 2: show statistics and state</li> <li>• 3: reset statistics and state</li> <li>• 4: show statistics of cmd tool</li> <li>• 5: reset statistics of cmd tool</li> <li>• 99: restart daemon</li> </ul>
fabricsyncd <integer> ...	Fabricsyncd daemon test usage.
fazalertd <integer> ...	Fazalertd daemon test usage: <ul style="list-style-type: none"> <li>• 1: Daemon info (PID, meminfo, backtrace ...)</li> <li>• 2: show statistics and state</li> <li>• 4: show worker thread info</li> <li>• 5: show commit info</li> <li>• 99: restart daemon</li> <li>• 200: diag for event manager</li> <li>• 201: diag for alert parser</li> <li>• 203: diag for event engine debug settings</li> <li>• 204: diag for alert commit statistics</li> <li>• 205: diag for event engine</li> <li>• 206: diag for event engine scheduler</li> <li>• 207: diag for event engine rocksdb stats</li> <li>• 500: diag for event engine rocks db</li> </ul>

Variable	Description
fazcfgd <integer> ...	<p>Fazcfg daemon test usage:</p> <ul style="list-style-type: none"> <li>• 1: Daemon info (PID, meminfo, backtrace ...)</li> <li>• 2: show statistics</li> <li>• 3: show merged ca info</li> <li>• 40: DVM cache diag info</li> <li>• 41: CSF diag info</li> <li>• 42: IntfRole diag info</li> <li>• 43: reload csf info in devtable</li> <li>• 44: show log device group stats</li> <li>• 45: check log device group</li> <li>• 46: metadata table diag info [sub-module]</li> <li>• 48: test update link prefixes file</li> <li>• 49: test update webfilter categories description file</li> <li>• 50: test get app icon</li> <li>• 51: test update app logo files</li> <li>• 52: dvm call stats</li> <li>• 53: dvm call stats clear</li> <li>• 54: check ips/app meta-data update</li> <li>• 55: log disk readahead get</li> <li>• 56: log disk readahead toggle</li> <li>• 57: fix redis service</li> <li>• 58: check redis service</li> <li>• 59: test update faz license</li> <li>• 60: test fortigate restful api</li> <li>• 65: log aggregation server stats</li> <li>• 66: log aggregation server stats toggle (debug only)</li> <li>• 67: test redis security connect [port] [key] [value]</li> <li>• 82: list avatar meta-data</li> <li>• 83: rebuild avatar meta-data table</li> <li>• 84: rebuild ips meta-data table</li> <li>• 85: rebuild app meta-data table</li> <li>• 86: rebuild FortiClient Vulneribility meta-data table</li> <li>• 88: update ffdb meta-data</li> <li>• 90: use built-in TIDB package and disable updating it</li> <li>• 91: enable updating TIDB package</li> <li>• 92: disable updating TIDB package</li> <li>• 93: switch on/off adom default report schedule</li> <li>• 94: switch on/off report schedule by name</li> <li>• 97: set 'force_restore_data' flag for clickhouse start</li> <li>• 99: restart daemon</li> </ul> <p>This test is only functional when FortiAnalyzer features are enabled</p>

Variable	Description
fazincid <integer> ...	Fazincid daemon test usage.
fazmaild <integer> ...	<p>Fazmaild daemon test usage:</p> <ul style="list-style-type: none"> <li>• 1: show PID and daemon status</li> <li>• 2: show runtime status</li> <li>• 90: pause sending mail</li> <li>• 91: resume sending mail</li> <li>• 99: restart fazmaild daemon</li> </ul> <p>This test is only functional when FortiAnalyzer features are enabled</p>
faznotify <integer> ...	<p>Faznotify daemon test usage:</p> <ul style="list-style-type: none"> <li>• 1: Daemon info (PID, meminfo, backtrace ...)</li> <li>• 2: show faznotify statistics [clear]</li> <li>• 3: show faznotifyspecific connector statistics &lt;adom&gt; &lt;webhook-name&gt; [clear]</li> <li>• 10: send a faznotify &lt;adom&gt; &lt;id&gt; &lt;send-data&gt;</li> <li>• 20: show active channel</li> <li>• 29: delete active channel &lt;adom&gt; &lt;id&gt;</li> <li>• 30: pause active channel &lt;seconds&gt;</li> <li>• 40: test webhook server &lt;adom&gt; &lt;webhook-name&gt;</li> <li>• 41: test oauth2 token server &lt;adom&gt; &lt;webhook-name&gt;</li> <li>• 99: restart</li> </ul> <p>This test is only functional when FortiAnalyzer features are enabled</p>
fazsvcd <integer> ...	<p>Fazsvcd daemon test usage:</p> <ul style="list-style-type: none"> <li>• 1: Daemon info (PID, meminfo, backtrace ...)</li> <li>• 2: show daemon stats and status</li> <li>• 3: list async search threads</li> <li>• 4: dump async search slot info</li> <li>• 7: dump log search filters</li> <li>• 10: show database log stats aggregated per day</li> <li>• 11: show received log stats aggregated per day</li> <li>• 20: show avatar request stats</li> <li>• 52: enable or disable skip-index usage</li> <li>• 53: enable or disable agg group skip-index usage</li> <li>• 54: enable or disable search cache usage</li> <li>• 55: show current search caches</li> <li>• 57: Fazbroker stats</li> <li>• 58: Reset Fazbroker stats</li> <li>• 60: rawlog idx cache test</li> <li>• 61: logbrowse cache stats</li> <li>• 62: FortiView Session Stats</li> <li>• 70: show stats for device vdom cache</li> <li>• 71: show stats for remote fortiview and reports</li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>• 72: show filterable and sortable fields for fortiview. &lt;v3.0 view name&gt;</li> <li>• 73: show stats for the address object uuid2name cache</li> <li>• 74: clear the address object uuid2name cache</li> <li>• 75: data masking test. &lt;passwd&gt; &lt;plaint test&gt; &lt;1 0 (high secure)&gt; [do_unmasking]</li> <li>• 76: fazsvcd fabric service diagnostics</li> <li>• 77: Fabric of FAZ fabric remote request stats</li> <li>• 78: Fabric of FAZ session table list</li> <li>• 82: rebuild or dump [filter] logstat cache info</li> <li>• 90: SQL Rewriter pool stats</li> <li>• 91: faz fabric dvm diagnostics</li> <li>• 99: restart daemon</li> <li>• 100: log FAZ debugs</li> <li>• 101: Close FAZ debug log</li> <li>• 200: gui api test</li> <li>• 201: diag for jsonrpc ..</li> <li>• 202: faz fabric toggle trace debug</li> <li>• 203: faz fabric worker number config</li> <li>• 204: playbook session manager debug</li> <li>• 310: diag for incident attachment limits cache</li> </ul> <p>This test is only functional when FortiAnalyzer features are enabled</p>
faztunnel <integer> ...	<p>FortiAnalyzer faztunnel daemon test usage:</p> <ul style="list-style-type: none"> <li>• 1: Daemon info (PID, meminfo, backtrace ...)</li> <li>• 2: FAZ tunnel stats</li> <li>• 3: FAZ tunnel set debug level</li> <li>• 99: restart daemon</li> </ul>
fazwatchd <integer> ...	<p>Fazwatchd daemon test usage:</p> <ul style="list-style-type: none"> <li>• 1: show process summary and report stats</li> <li>• 2: show playbook stats</li> <li>• 4: show nac asset stats</li> <li>• 5: show playbook task log</li> <li>• 6: show ha command execution stats</li> <li>• 7: show casb metadata stats</li> <li>• 8: show ems metadata stats</li> <li>• 9: show pgsvr.log monitor stats</li> <li>• 10: show airflow status or reset airflow</li> <li>• 11: show iocha stats</li> <li>• 99: restart daemon</li> </ul> <p>This test is only functional when FortiAnalyzer features are enabled</p>

Variable	Description
filefwd <integer> ...	Filefwd daemon test usage: <ul style="list-style-type: none"> <li>• 1: show daemon PID</li> <li>• 2: show daemon stats</li> <li>• 3: show threads stats</li> <li>• 99: restart daemon</li> </ul>
fileparsed <integer> ...	Fileparsed daemon test usage: <ul style="list-style-type: none"> <li>• 1: show PID</li> <li>• 2: show statistics and state</li> <li>• 3: show devtable local cache status</li> <li>• 4: reload devtable local cache.</li> <li>• 11: show FortiGate interface cache status</li> <li>• 12: show FortiGate interface parsers status</li> <li>• 13: show FortiGate interface archived files disk usage</li> <li>• 14: show FortiGate interface archived files retention days</li> <li>• 15: show FortiGate interface info</li> <li>• 16: show total number of interfaces trimmed from database</li> <li>• 17: show FortiGate policy files process status</li> <li>• 18: show total number of policy records in database</li> <li>• 98: rebuild FortiGate interface SQL tables</li> <li>• 99: restart daemon</li> </ul>
fortilogd <integer> ...	Fortilogd Diag test usage: <ul style="list-style-type: none"> <li>• 1: Daemon info (PID, meminfo, backtrace ...)</li> <li>• 2: dump message status</li> <li>• 3: logstat status</li> <li>• 4: client devices status</li> <li>• 5: print log received</li> <li>• 6: switch on/off debug messages</li> <li>• 7: log forwarding prep status</li> <li>• 8: show logUID info</li> <li>• 9: device log cache reloading status</li> <li>• 10: dz_client cache status</li> <li>• 11: file stats</li> <li>• 12: stop/restart receiving logs</li> <li>• 14: show cached adom lograte status</li> <li>• 15: show cached adom log volume status</li> <li>• 16: show appevent logs receiving info</li> <li>• 17: show logging rate of the system and per-device</li> <li>• 18: show per-ADOM log rate and rate limit</li> <li>• 90: show or set fortilogd working status</li> <li>• 95: show runtime logs. option format: pid=0:current,-1:all,PID duration=DURA filter=STR</li> <li>• 98: memory check</li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>99: restart fortilogd</li> </ul>
logfiled <integer> ...	<p>Logfile daemon test usage:</p> <ul style="list-style-type: none"> <li>1: Daemon info (PID, meminfo, backtrace ...)</li> <li>2: show statistics and state</li> <li>4: show ADOM statistics ([adom-filter(adom-name or 'ALL' or oid in format of 'oid=123') [force-refresh   dev-filter]* [vd-filter]*])</li> <li>5: show device statistics ([devid-filter [vd-filter]*])</li> <li>6: show auto-del statistics</li> <li>7: show log file disk usage ([dev-filter]* [vd-filter]*)</li> <li>8: update, show log file disk usage ([devid [vd [from-ndays-ago [to-ndays-ago]])])</li> <li>9: show inode usage</li> <li>10: enable or disable debug filter of device and vdom</li> <li>11: du cache diag commands</li> <li>12: force to check the oldest log lifetime when trim log files.</li> <li>13: force to delete log files older than &lt;days&gt; to enforce deletion policy for uploaded log files (&lt;days&gt;).</li> <li>90: reset statistics and state</li> <li>91: force to preen content files info</li> <li>99: restart daemon</li> </ul>
logfwd <integer> ...	<p>Logfwd daemon test usage:</p> <ul style="list-style-type: none"> <li>1: Daemon info (PID, meminfo, backtrace ...)</li> <li>2: Dump thread-pool status</li> <li>3: Dump log-forward configurations</li> <li>4: Dump log-forwarding status</li> <li>5: Overall and converter stats</li> <li>6: Dump HA CID info</li> <li>7: show runtime logs. 'help' to show usage</li> <li>8: show cfile list status [all: for all cfiles]</li> <li>9: show max duration of loss in memory mode, 120 seconds default, 0 to disable memory mode</li> <li>10: Force logfwd to run in disk mode [1:enable, 0:disable]</li> <li>11: show fwdplugind ports info</li> <li>97: memory check</li> <li>98: Reset log-forwarding stats</li> <li>99: Restart logfwd</li> </ul>
log-fetchd <integer> ...	<p>Log-fetch daemon test usage:</p> <ul style="list-style-type: none"> <li>1: show PID</li> <li>2: show states</li> <li>3: show running sessions</li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>• 99: restart the daemon</li> </ul>
miglogd <integer> ...	<p>Miglogd daemon test usage:</p> <ul style="list-style-type: none"> <li>• 1: show PID</li> <li>• 2: dump memory pool</li> <li>• 99: restart daemon</li> </ul>
oftpd <integer> ...	<p>Oftpd daemon test usage:</p> <ul style="list-style-type: none"> <li>• 1: Daemon info (PID, meminfo, backtrace ...)</li> <li>• 2: show statistics and state</li> <li>• 3: show connected device name and IP</li> <li>• 4: show detailed session state</li> <li>• 5: show oftp request statistics</li> <li>• 6: show cmdb device cache [filter]</li> <li>• 7: show logfwd thread stats</li> <li>• 8: show tasklist statistics</li> <li>• 9: show unreg dev cache [filter]</li> <li>• 10: log cluster bridge stats</li> <li>• 11: show helper threads stats</li> <li>• 12: show HA group cache</li> <li>• 13: show file fwd stats</li> <li>• 14: show fct software inventory cache</li> <li>• 15: show fgt interface stats</li> <li>• 16: show fos-auto device dump. [dev] to dump device list</li> <li>• 17: show device logging rate &amp; rate-limit. [enable] to force tracking log-rate or [disable] to track only rate-limited devices. [config] to show config</li> <li>• 18: show fgt policy info, [dev] to dump device list</li> <li>• 19: show syslog receiving stats, [oversize] to print last received oversize syslogs</li> <li>• 20: show fgt epeu stats</li> <li>• 21: dump oftp-restapi-sched stats</li> <li>• 22: dump oftp-restapi-sched status</li> <li>• 23: dump oftp csf member status</li> <li>• 24: dump blacklisted devices</li> <li>• 25: show connection close logs. 'help' to show usage</li> <li>• 30: dump csf groups data in all adoms in json string</li> <li>• 31: show csf groups update stats</li> <li>• 32: reschedule all restapi task for designated devid</li> <li>• 40: show connections by last-request type</li> <li>• 43: manage fct-log-upload track [show all/fct-sn del fct-sn]</li> <li>• 50: display logtypes for all devid</li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>• 60: display login requests stats</li> <li>• 61: Fortiview feature list cache dump</li> <li>• 72: config high priority device</li> <li>• 80: set region</li> <li>• 81: show FAZ HA info</li> <li>• 90: reload un-reg device tree</li> <li>• 91: delete designated csf group</li> <li>• 92: reload reg dev cache</li> <li>• 93: filter incoming connections by source IP</li> <li>• 96: oftp packet sniffer</li> <li>• 95: debug output</li> <li>• 97: adjust REST APIs client device allowed to call.</li> <li>• 99: restart daemon</li> <li>• 101: schedule restart the daemon. [enable &lt;interval&gt; disable]</li> <li>• 102: oftpd monitor. [enable [timeout] enable-with-core [timeout] disable]</li> </ul>
pgsvrd <integer> ...	<p>FortiAnalyzer postgres service daemon test usage:</p> <ul style="list-style-type: none"> <li>• 1: Daemon info (PID, meminfo, backtrace ...)</li> <li>• 2: show postgres ha stats and status</li> <li>• 3: reset postgres HA stats</li> <li>• 4: config for HA config stability check times(1-10, default 3) &amp; interval (1-10, default 2 second)</li> <li>• 5: config for HA info stability check times(1-10, default 3) &amp; interval(1-10, default 3 second)</li> <li>• 6: config for HA info poll interval(1-600, default 5 second)</li> <li>• 11: PG database HA diagnostics</li> <li>• 99: restart daemon</li> </ul>
rptchkd <integer> ...	<p>Sqlrptcache daemon test usage:</p> <ul style="list-style-type: none"> <li>• 1: show PID</li> <li>• 2: show statistics and state</li> <li>• 3: reset statistics and state</li> <li>• 4: list adoms</li> <li>• 6: list schedules</li> <li>• 7: show statistics of sched-rpt dispatcher</li> <li>• 8: show track info of reports</li> <li>• 9: enable/disable report run-queue debug</li> <li>• 55: re-check an adom</li> <li>• 99: restart daemon</li> <li>• 910: enable rptchkd</li> <li>• 911: disable rptchkd</li> </ul>

Variable	Description
rptsched <integer> ...	Rptschedler daemon test usage: <ul style="list-style-type: none"> <li>• 1: show PID</li> <li>• 2: show statistics and state</li> <li>• 3: reset statistics and state</li> <li>• 99: restart daemon</li> </ul>
scansched <integer> ...	Scansched daemon test usage: <ul style="list-style-type: none"> <li>• 1: show PID</li> <li>• 2: show statistics and state</li> <li>• 3: reset statistics and state</li> <li>• 11: show ioc-rescan task status</li> <li>• 99: restart daemon</li> </ul>
sdnproxyd <integer> ...	SDN proxy daemon test usage.
siemagentd <integer> ...	Siemagentd daemon test usage: <ul style="list-style-type: none"> <li>• 1: show PID</li> <li>• 2: show daemon statistics</li> <li>• 3: show workers log stats</li> <li>• 4: show workers status stats</li> <li>• 5: show workers pools status</li> <li>• 6: siem workers reload config</li> <li>• 7: siem workers engine info dump</li> <li>• 20: show the siem stream storage info</li> <li>• 21: show the latest siem stream submitted in redis</li> <li>• 99: restart daemon</li> <li>• 200: diag for log based alert (event mgmt)</li> <li>• 201: diag for siemagentd configuration</li> </ul>
siemdbd <integer> ...	Siemdbd daemon test usage: <ul style="list-style-type: none"> <li>• 1: Daemon info (PID, meminfo, backtrace ...)</li> <li>• 2: show statistics and state</li> <li>• 3: show running processes</li> <li>• 4: show writers info</li> <li>• 5: show splitter info</li> <li>• 6: show Adom database info</li> <li>• 7: show trimmer info</li> <li>• 8: show the shared Materialized View disk usage info</li> <li>• 9: set/reset max memory usage ratio</li> <li>• 10: add or drop skip indices on SIEM table</li> <li>• 11: cleanup CH tmp_merge dir</li> <li>• 20: show fabric stats</li> <li>• 41: show writer 1 info</li> <li>• 42: show writer 2 info</li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>• 43: show writer 3 info</li> <li>• 44: show writer 4 info</li> <li>• 45: show writer 5 info</li> <li>• 46: show writer 6 info</li> <li>• 97: clear redis stream</li> <li>• 99: restart daemon</li> </ul>
snmpd <integer> ...	SNMP daemon test usage: <ul style="list-style-type: none"> <li>• 1: display daemon pid</li> <li>• 2: display snmp statistics</li> <li>• 3: clear snmp statistics</li> <li>• 4: generate test trap (cpu high)</li> <li>• 5: generate test traps (log alert, rate, data rate)</li> <li>• 6: generate test traps (licensed gb/day, device quota)</li> <li>• 99: restart daemon</li> </ul>
sqllogd <integer> ...	SqlLog daemon test usage: <ul style="list-style-type: none"> <li>• 1: Daemon info (PID, meminfo, backtrace ...)</li> <li>• 2: show statistics and state</li> <li>• 3: show worker init state</li> <li>• 4: show worker thread info</li> <li>• 5: show log device scan info, optionally filter by &lt;devid&gt;</li> <li>• 6: show batch file commit stat</li> <li>• 7: show ADOM device list by &lt;adom-name&gt;</li> <li>• 8: show logUID info</li> <li>• 9: show ADOM scan sync info, optionally filter by &lt;adom&gt;</li> <li>• 10: show FortiClient dev to sql-ID (SID) map</li> <li>• 11: show devtable cache info</li> <li>• 41: show worker 1 info</li> <li>• 51: show worker 1 registered log devices</li> <li>• 61: show worker 1 open log file cache</li> <li>• 70: show sql database building progress</li> <li>• 80: show daemon status flags</li> <li>• 81: show debug zone devices status</li> <li>• 82: show all adoms with member devices or filter by &lt;adom-name&gt;</li> <li>• 83: show all registered logdevs</li> <li>• 84: show all unreg logdevs</li> <li>• 85: show fazid map stats</li> <li>• 91: diag worker devvd loadbalance</li> <li>• 94: clear all redis queues for batch file commit</li> <li>• 95: request to rebuild SQL database for local event logs</li> <li>• 96: resend all pending batch files to commit queues</li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>• 97: rebuilding warm restart</li> <li>• 98: set worker assignment to policy 'round-robin' or 'adom-affinity', daemon will restart on policy change.</li> <li>• 99: restart daemon</li> <li>• 200: diag for log based alert (event mgmt) ..</li> <li>• 201: diag for UTM correlation cache ..</li> <li>• 203: diag for logstat ..</li> <li>• 204: diag for loC ..</li> <li>• 205: diag for endpoint and enduser ..</li> <li>• 206: diag for ueba ..</li> <li>• 207: diag for FSA scan session ..</li> <li>• 208: diag for audit report event process ..</li> <li>• 209: diag for shadow it info ..</li> <li>• 210: diag for fgt epeu info ..</li> <li>• 211: diag for dns info ..</li> <li>• 221: estimated browsing time stats</li> <li>• 222: fsa devmap cache info</li> <li>• 224: fgt lograte cache info</li> <li>• 225: dump enum field error cache</li> <li>• 226: reset enum field error cache</li> <li>• 227: dump tz field error cache</li> <li>• 228: reset tz field error cache</li> <li>• 229: diag archivers compression algorithm</li> <li>• 230: diag for ems enrich ..</li> <li>• 231: diag for geo-location lookup ..</li> </ul>
sqlplugind <integer> ...	<p>Sqlplugind daemon test usage:</p> <ul style="list-style-type: none"> <li>• 1: Daemon info (PID, meminfo, backtrace ...)</li> <li>• 2: show daemon stats</li> <li>• 3: show SIEM table stats</li> <li>• 6: show table slow upgrade info</li> <li>• 7: show faz fabric meta table stats</li> <li>• 8: show postgres table migrate stats</li> <li>• 91: scan hcache query templates and clean up unused</li> <li>• 92: scan metadata and update sql</li> <li>• 98: scan and clean zombie cstore files</li> <li>• 99: restart daemon</li> </ul>
sqlreportd <integer> ...	<p>Sqlreportd daemon test usage:</p> <ul style="list-style-type: none"> <li>• 1: Daemon info (PID, meminfo, backtrace ...)</li> <li>• 2: show daemon stats</li> <li>• 3: show restorable table schema</li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>• 4: show restorable table status</li> <li>• 5: delete SQL restorable table files in collector mode &lt;ADOM&gt;</li> <li>• 99: restart daemon</li> </ul>
sqlrptcached <integer> ...	<p>Sqlrptcache daemon test usage:</p> <ul style="list-style-type: none"> <li>• 1: Daemon info (PID, meminfo, backtrace ...)</li> <li>• 2: show statistics and state</li> <li>• 3: reset statistics and state</li> <li>• 5: dump auto-cache charts</li> <li>• 99: restart daemon</li> </ul>
synsched <integer> ...	<p>Synsched daemon test usage:</p> <ul style="list-style-type: none"> <li>• 1: Daemon info (PID, meminfo, backtrace ...)</li> <li>• 2: show report nodes states</li> <li>• 3: show report syncing state</li> <li>• 4: show ha sync peers</li> <li>• 5: reset ha sync queue</li> <li>• 6: show ha elog sync</li> <li>• 10: sync reports with peer</li> <li>• 11: fsync stat</li> <li>• 12: fsync reload</li> <li>• 13: trim sync dir</li> <li>• 14: trim sync dir stat</li> <li>• 99: restart daemon</li> </ul>
uploadd <integer> ...	<p>Uploadd daemon test usage:</p> <ul style="list-style-type: none"> <li>• 1: Daemon info (PID, meminfo, backtrace ...)</li> <li>• 2: show statistics and state</li> <li>• 3: reset statistics and state</li> <li>• 4: show uploadd queues content</li> <li>• 5: show upload server state</li> <li>• 6: show backup state</li> <li>• 50: clear log queue [mirror server1]</li> <li>• 51: clear log queue [mirror server2]</li> <li>• 52: clear log queue [mirror server3]</li> <li>• 53: clear log queue [backup]</li> <li>• 54: clear log queue [original request]</li> <li>• 55: clear log queues [all]</li> <li>• 56: clear report queue</li> <li>• 60: cloud storage get backlog info</li> <li>• 61: cloud storage get setting pending info &lt;setting name&gt;</li> <li>• 62: cloud storage test connector &lt;connector&gt; &lt;remote path&gt;</li> <li>• 63: cloud storage get usage info</li> </ul>

Variable	Description
	<ul style="list-style-type: none"> <li>99: restart daemon</li> </ul>
vmd <integer> ...	Cloud VM daemon test usage.

## test connection

Use this command to test connections.

### Syntax

```
diagnose test connection fortianalyzer <ip>
diagnose test connection mailserver <server-name> <mail-from> <mail-to> [adom]
diagnose test connection server <host/IP> <port>
diagnose test connection syslogserver <server-name> [adom]
```

Variable	Description
fortianalyzer <ip>	Test the connection to the FortiAnalyzer.
mailserver <server-name> <mail-from> <mail-to> [adom]	Test the connection to the mail server. Enter the email account which this test email will be sent from and to. Optionally, enter the ADOM name.
server <host/IP> <port>	Test the connection to a server by host or IP and port. Enter the server host or IP and the server port.
syslogserver <server-name> [adom]	Test the connection to the syslog server. Enter the syslog server name. Optionally, enter the ADOM name.

## test deploymanager

Use this command to test the deployment manager.

### Syntax

```
diagnose test deploymanager getcheckin <devid>
diagnose test deploymanager reloadconf <devid>
```

Variable	Description
getcheckin <devid>	Get configuration check-in information from the FortiGate.
reloadconf <devid>	Reload configuration from the FortiGate.

## test policy-check

Use this command to list or flush policy consistency checks.

### Syntax

```
diagnose test policy-check flush
diagnose test policy-check list
```

Variable	Description
flush	Flush all policy check sessions.
list	List all policy check sessions.

## test search

Use this command to test the search daemon.

### Syntax

```
diagnose test search flush
diagnose test search list
```

Variable	Description
flush	Flush all search sessions.
list	List all search sessions.

## test sftp

Use this command to test the secure file transfer protocol (SFTP) scheduled backup.

### Syntax

```
diagnose test sftp auth <sftp server> <username> <password> <directory>
```

Variable	Description
<sftp server>	SFTP server IP address.
<username>	SFTP server username.

Variable	Description
<password>	SFTP server password.
<directory>	The directory on the SFTP server where you want to put the file (default = /).

## upload

Use these commands to perform request related actions.

## upload clear

Use this command to clear the upload request.

### Syntax

```
diagnose upload clear log {all | original | backup | mirror 1 | mirror 2 | mirror 3}
diagnose upload clear report
```

Variable	Description
log {all   original   backup   mirror 1   mirror 2   mirror 3}	Clear log uploading requests. <ul style="list-style-type: none"> <li>• all: Clear all log uploading requests.</li> <li>• backup: Clear log uploading requests in the backup queue.</li> <li>• mirror 1: Clear log uploading requests in the mirror queue for server 1.</li> <li>• mirror 2: Clear log uploading requests in the mirror queue for server 2.</li> <li>• mirror 3: Clear log uploading requests in the mirror queue for server 3.</li> <li>• original: Clear log uploading requests in the original queue.</li> </ul>
report	Clear all report upload requests.

## upload status

Use this command to get the running status.

### Syntax

```
diagnose upload status
```

## vpn

Use this command to flush SAD entries and list tunnel information.

### Syntax

```
diagnose vpn tunnel flush-SAD  
diagnose vpn tunnel list
```

Variable	Description
flush-SAD	Flush the SAD entries.
list	List tunnel information.

# get

The `get` command displays all settings, even if they are still in their default state.



Although not explicitly shown in this section, for all `config` commands, there are related `get` and `show` commands that display that part of the configuration. `Get` and `show` commands use the same syntax as their related `config` command, unless otherwise specified.



CLI commands and variables are case sensitive.

The `get` command displays all settings, including settings that are in their default state.

Unlike the `show` command, `get` requires that the object or table whose settings you want to display are specified, unless the command is being used from within an object or table.

For example, at the root prompt, this command would be valid:

```
get system status
```

and this command would not:

```
get
```

fmupdate analyzer	fmupdate service	system fmg-cluster	system mail on page 345	system sql
fmupdate av-ips	system admin	system fortiview	system metadata	system status
fmupdate custom-url-list	system alert-console	system global	system ntp	system syslog
fmupdate disk-quota	system alertemail	system ha	system password-policy	system tablesize
fmupdate fct-services	system auto-delete	system ha-scheduled-check	system performance	system web-proxy
fmupdate fds-setting	system backup	system ha-status	system report	system workflow
fmupdate fgd-setting	system certificate	system interface	system route	
fmupdate fwm-setting	system connector	system local-in-policy	system route6	
fmupdate multilayer	system dm	system local-in-policy6	system saml	

fmupdate publicnetwork	system dns	system locallog	system sniffer
fmupdate server- access-priorities	system admin	system log	system snmp
fmupdate server- override-status	system fips	system loglimits on page 345	system soc-fabric

## fmupdate analyzer

Use this command to view forward virus report to FDS.

### Syntax

```
get fmupdate analyzer virusreport
```

## fmupdate av-ips

Use this command to view AV/IPS update settings.

### Syntax

```
get fmupdate av-ips advanced-log
```

## fmupdate custom-url-list

Use this command to view the custom URL database.

### Syntax

```
get fmupdate custom-url-list
```

## fmupdate disk-quota

Use this command to view the disk quota for the update manager.

### Syntax

```
get fmupdate disk-quota
```

### Example

This example shows the output for `get fmupdate disk-quota`:

```
value : 51200
```

## fmupdate fct-services

Use this command to view FortiClient update services configuration.

### Syntax

```
get fmupdate fct-services
```

### Example

This example shows the output for `get fmupdate fct-services`:

```
status : enable  
port : 80
```

## fmupdate fds-setting

Use this command to view FDS parameters.

### Syntax

```
get fmupdate fds-setting
```

## Example

This example shows the output for `get fmupdate fds-setting`:

```
User-Agent : Mozilla/5.0 (compatible; MSIE 9.0; Windows NT 6.1; Trident/5.0)
controller-contract-download: disable
fds-clt-ssl-protocol: tlsv1.2
fds-ssl-protocol : tlsv1.2
fmtr-log : info
fortiguard-anycast : disable
fortiguard-anycast-source: fortinet
linkd-log : info
max-av-ips-version : 20
max-work : 1
push-override:
push-override-to-client:
send_report : enable
send_setup : disable
server-override:
system-support-fai :
system-support-faz :
system-support-fct :
system-support-fdc :
system-support-fgt :
system-support-fml :
system-support-fsa :
system-support-fts :
umsvc-log : info
unreg-dev-option : add-service
update-schedule:
    time: 00:10 wanip-query-mode : disable
```

## fmupdate fgd-setting

Use this command to view FortiGuard run parameters.

### Syntax

```
get fmupdate fgd-setting
```

### Example

This example shows the output for `get fmupdate fgd-setting`:

```
as-cache : 300
as-log : nospam
as-preload : disable
av-cache : 300
av-log : novirus
av-preload : disable
```

```
av2-cache : 800
av2-log : noav2
av2-preload : disable
eventlog-query : disable
fgd-pull-interval : 10
fq-cache : 300
fq-log : nofilequery
fq-preload : disable
iot-cache : 300
iot-log : noiot
iot-preload : disable
iotv-preload : disable
linkd-log : debug
max-client-worker : 0
max-log-quota : 6144
max-unrated-site : 500
restrict-as1-dbver : (null)
restrict-as2-dbver : (null)
restrict-as4-dbver : (null)
restrict-av-dbver : (null)
restrict-av2-dbver : (null)
restrict-fq-dbver : (null)
restrict-iots-dbver : (null)
restrict-wf-dbver : (null)
server-override:
stat-log : disable
stat-log-interval : 60
stat-sync-interval : 60
update-interval : 6
update-log : enable
wf-cache : 600
wf-dn-cache-expire-time: 30
wf-dn-cache-max-number: 10000
wf-log : nourl
wf-preload : disable
```

## fmupdate fwm-setting

Use this command to view firmware management settings.

### Syntax

```
get fmupdate fwm-setting
```

### Example

This example shows the output for `get fmupdate fwm-setting`:

```
auto-scan-fgt-disk : enable
check-fgt-disk : enable
```

```
fds-failover-fmg : enable
fds-image-timeout : 1800
immx-source : fmg
log : fwm_dm
multiple-steps-interval : 60
retry-interval : 60
retry-max : 10
send-image-retry : 0
upgrade-timeout:
```

## fmupdate multilayer

Use this command to view multilayer mode configuration.

### Syntax

```
get fmupdate multilayer
```

## fmupdate publicnetwork

Use this command to view public network configuration.

### Syntax

```
get fmupdate publicnetwork
```

## fmupdate server-access-priorities

Use this command to view server access priorities.

### Syntax

```
get fmupdate server-access-priorities
```

### Example

This example shows the output for `get fmupdate server-access-priorities`:

get

---

```
access-public : disable
av-ips : disable
private-server:
web-spam : enable
```

## fmupdate server-override-status

Use this command to view server override status configuration.

### Syntax

```
get fmupdate server-override status
```

## fmupdate service

Use this command to view update manager service configuration.

### Syntax

```
get fmupdate service
```

### Example

This example shows the output for `get fmupdate service`:

```
avips : enable
geoip : enable
query-antispam : enable
query-antivirus : disable
query-filequery : disable
query-ioc : disable
query-iot : disable
query-outbreak-prevention: disable
query-webfilter : enable
webfilter-https-traversal: disable
```

## system admin

Use these commands to view admin configuration.

## Syntax

```
get system admin group [group name]
get system admin ldap [server entry name]
get system admin profile [profile ID]
get system admin radius [server entry name]
get system admin setting
get system admin tacacs [server entry name]
get system admin user [username]
```

## Example

This example shows the output for `get system admin setting`:

```
access-banner : disable
admin-httpd-keep-alive-timeout: 5
admin-https-redirect: enable
admin-login-max : 256
admin-scp : enable
admin_server_cert : server.crt
allow_register : disable
auth-addr : (null)
auth-port : 443
auto-update : enable
banner-message : (null)
central-ftgd-local-cat-id: disable
chassis-mgmt : disable
chassis-update-interval: 15
custom-session-label: disable
device_sync_status : enable
fgt-gui-proxy : enable
fgt-gui-proxy-port : 8082
firmware-upgrade-check: enable
fsw-ignore-platform-check: disable
gui-theme : jade
http_port : 80
https_port : 443
idle_timeout : 900
idle_timeout_api : 900
idle_timeout_gui : 900
idle_timeout_sso : 900
install-ifpolicy-only: disable
mgmt-addr : (null)
mgmt-fqdn :
object-threshold-limit: disable
objects-force-deletion: enable
offline_mode : disable
preferred-fgfm-intf : (null)
register_passwd : *
rtm-max-monitor-by-days: 180
rtm-max-monitor-by-size: 1000
rtm-temp-file-limit : 48
sdwan-monitor-history: disable
sdwan-skip-unmapped-input-device: disable
show-add-multiple : disable
```

```
show-adom-devman : enable
show-checkbox-in-table: disable
show-device-import-export: disable
show-fct-manager : disable
show-hostname : disable
show_automatic_script: disable
show_grouping_script: enable
show_schedule_script: disable
show_tcl_script : disable
traffic-shaping-history: disable
unreg_dev_opt : add_allow_service
webadmin_language : auto_detect
```

## system alert-console

Use this command to view alert console information.

### Syntax

```
get system alert-console
```

### Example

This example shows the output for `get system alert-console`:

```
period : 7
severity-level : emergency
```

## system alertemail

Use this command to view alert email configuration.

### Syntax

```
get system alertemail
```

### Example

This example shows the output for `get system alertemail`:

```
authentication : enable
fromaddress : (null)
fromname : (null)
```

```
smtppassword : *  
smtpport : 25  
smtpserver : (null)  
smtpuser : (null)
```

## system auto-delete

Use this command to view automatic deletion policies for logs, reports, DLP files, and quarantined files.

### Syntax

```
get system auto-delete
```

## system backup

Use the following commands to view backups:

### Syntax

```
get system backup all-settings  
get system backup status
```

### Example

This example shows the output for `get system backup status`:

```
All-Settings Backup  
  Last Backup: Tue Sep 29 08:03:35 2020  
  Next Backup: N/A
```

## system certificate

Use these commands to view certificate configuration.

### Syntax

```
get system certificate ca [certificate name]  
get system certificate crl [crl name]
```

```
get system certificate local [certificate name]
get system certificate oftp [certificate name]
get system certificate remote [certificate name]
get system certificate ssh [certificate name]
```

## Example

This example shows the output for `get system certificate local Fortinet_Local`:

```
name : Fortinet_Local
password : *
comment : Default local certificate
private-key :
certificate :
  Subject: C = US, ST = California, L = Sunnyvale, O = Fortinet, OU = FortiManager, CN = FMG-
    VM0A11000137, emailAddress = support@fortinet.com
  Issuer: C = US, ST = California, L = Sunnyvale, O = Fortinet, OU = Certificate Authority, CN =
    support, emailAddress = support@fortinet.com
  Valid from: 2011-01-07 26:58:75 GMT
  Valid to: 2031-02-21 31:88:05 GMT
  Fingerprint: 0A:--:--:--:--:--:--:--:--:--:--:--:--:--:--:--:--:0B
  Root CA: No
  Version: 3
  Serial Num:
    89
  Extensions:
    Name: X509v3 Basic Constraints
    Critical: no
    Content:
    CA:FALSE
csr :
```

## system connector

Use this command to view FSSO connector refresh intervals, in seconds.

### Syntax

```
get system connector
```

### Example

This example shows the output for `get system connector`:

```
cloud-orchest-refresh-interval: 300
conn-refresh-interval: 300
conn-ssl-protocol : follow-global-ssl-protocol
faznotify-msg-queue-max: 1000
faznotify-msg-timeout: 72
```

```
fsso-refresh-interval: 180
fsso-sess-timeout: 300
px-svr-timeout: 300
```

## system csf

Use this command to view CSF configuration.

### Syntax

```
get system csf
```

## system dm

Use this command to view device manager information on your FortiManager unit.

### Syntax

```
get system dm
```

### Example

This example shows the output for `get system dm`:

```
autoupdate-merge-revision: enable
concurrent-install-image-limit: 500
concurrent-install-limit: 480
concurrent-install-script-limit: 480
conf-merge-after-script: disable
discover-timeout : 6
dpm-logsize : 10000
fgfm-auto-retrieve-timeout: 1800
fgfm-install-refresh-count: 10
fgfm-sock-timeout : 360
fgfm_keepalive_itvl : 120
force-remote-diff : disable
fortiap-refresh-cnt : 500
fortiap-refresh-itvl: 10
fortiext-refresh-cnt: 50
handle-nonhasync-config: disable
install-fds-timeout : 10
install-image-timeout: 3600
install-tunnel-retry-itvl: 60
log-autoupdate : disable
```

```
max-revs : 100
nr-retry : 1
retry : enable
retry-intvl : 15
rollback-allow-reboot: disable
script-logsize : 100
skip-scep-check : disable
skip-tunnel-fcp-req : enable
verify-install : enable
```

## system dns

Use this command to view DNS configuration.

### Syntax

```
get system dns
```

### Example

This example shows the output for `get system dns`:

```
primary : 111.11.111.11
secondary : 111.11.111.12
ip6-primary : ::
ip6-secondary : ::
```

## system fips

Use this command to view FIPS configuration.

### Syntax

```
get system fips
```

## system fmg-cluster

Use this command to view Fortiview configuration.

## Syntax

```
get system fmg-cluster
```

## Example

```
fqdn : (null)
ip : (null)
mode : standalone
peer:
```

# system fortiview

Use this command to view Fortiview configuration.

## Syntax

```
get system fortiview auto-cache
get system fortiview setting
```

## Example

This example shows the output for `get system fortiview auto-cache`:

```
aggressive-fortiview: disable
incr-fortiview: disable
interval : 168
status : enable
```

# system global

Use this command to view global system settings.

## Syntax

```
get system global
```

## Example

This example shows the output for `get system global`:

```
admin-host: (null)
admin-lockout-duration: 60
admin-lockout-method: ip
admin-lockout-threshold: 3
admin-ssh-grace-time: 120
adom-mode : normal
adom-rev-auto-delete: by-revisions
adom-rev-max-backup-revisions: 5
adom-rev-max-revisions: 120
adom-status : disable
ai-mode : enable
apache-mode : event
apache-wsgi-processes: 10
api-ip-binding : enable
auth-dev-restapi-allowlist: disable
cli-auth : disable
clone-name-option : default
clt-cert-req : disable
console-output : standard
contentpack-fgt-install: disable
country-flag : enable
create-revision : disable
daylightsavetime : enable
debug-tool : disable
default-disk-quota : 1000
detect-unregistered-log-device: enable
device-view-mode : regular
dh-params : 2048
disable-module : none
enc-algorithm : high
fabric-storage-pool-quota: 50286
fabric-storage-pool-size: 20
faz-status : disable
fcp-cfg-service : disable
fgfm-allow-products : (null)
fgfm-allow-vm : disable
fgfm-ca-cert:
fgfm-cert-exclusive: disable
fgfm-deny-unknown : disable
fgfm-local-cert : (null)
fgfm-ssl-protocol : tlsv1.2
fortiservice-port : 8013
global-ssl-protocol : tlsv1.2
gui-ai-feature : enable
gui-curl-timeout: 30
gui-feature-visibility-mode: per-adom
gui-install-preview-concurrency 20
gui-max-objects-per-row: 5
gui-object-protect : disable
gui-object-search : disable
ha-member-auto-grouping: enable
hitcount-response-timeout: 60
hostname : FMG-VM64
http-extended-log : disable
httpd-ssl-protocol : tlsv1.3 tlsv1.2
import-ignore-addr-cmt: disable
jsonapi-log : disable
```

```
language : english
latitude : (null)
ldap-cache-timeout : 86400
ldapconntimeout : 60000
log-checksum : none
log-checksum-upload : disable
log-forward-cache-size : 0
longitude : (null)
management-ip : (null)
management-port : 443
mapclient-ssl-protocol: follow-global-ssl-protocol
max-running-reports : 1
multiple-steps-upgrade-in-autolink : disable
no-copy-permission-check: disable
no-vip-value-check : disable
normalized-intf-zone-only: disable
object-revision-db-max: 100000
object-revision-mandatory-note: enable
object-revision-object-max: 100
object-revision-status: enable
oftp-ssl-protocol : tlsv1.2
partial-install : disable
partial-install-rev : disable
perform-improve-by-ha: disable
policy-object-icon : disable
policy-object-in-dual-pane: disable
pre-login-banner : disable
private-data-encryption : disable
remoteauthtimeout : 10
rpc-log : enable
save-last-hit-in-adomdb: disable
search-all-adoms : disable
skip-ip-check-in-session: disable
ssh-enc-algo : chacha20-poly1305@openssh.com aes256-ctr aes256-gcm@openssh.com
ssh-hostkey-algo : ecdsa-sha2-nistp521 rsa-sha2-256 rsa-sha2-512 ssh-ed25519
ssh-kex-algo : diffie-hellman-group14-sha256 diffie-hellman-group16-sha512 diffie-hellman-
group18-sha512 diffie-hellman-group-exchange-sha256 curve25519-sha256@libssh.org ecdh-sha2-
nistp256 ecdh-sha2-nistp384 ecdh-sha2-nistp521
ssh-mac-algo : hmac-sha2-256 hmac-sha2-256-etm@openssh.com hmac-sha2-512 hmac-sha2-512-
etm@openssh.com
ssl-low-encryption : disable
ssl-static-key-ciphers: enable
storage-age-limit: 0
table-entry-blink: enable
task-list-size : 2000
timezone : (GMT-8:00) Pacific Time (US & Canada).
tunnel-mtu : 1500
usg : disable
vdom-mirror : disable
workspace-mode : disabled
```

## system ha

Use this command to view HA configuration.

### Syntax

```
get system ha
```

### Example

This example shows the output for `get system ha`:

```
clusterid : 1
failover-mode : manual
file-quota : 4096
hb-interval : 10
hb-lost-threshold : 30
local-cert : (null)
mode : standalone
password : *
peer:
```

## system ha-scheduled-check

Use this command to view HA integrity check configuration.

### Syntax

```
get system ha-scheduled-check
```

### Example

This example shows the output for `get system ha-scheduled-check`:

```
status : disable
time : (null)
```

## system ha-status

Use this command to view additional HA configuration.

## Syntax

```
get system ha-status
```

## Example

This example shows the output for `get system ha-status`:

```
Cluster-ID : 1
Debug : off
File-Quota : 4096
HA Health Status : OK
HA Role : Primary
FMG-HA Status : Never Synchronized State
Model : FortiManager-VM64
HB-Interval : 10
HB-Lost-Threshold : 30
HA Primary Uptime : Wed Jul 7 06:33:35 2021
HA Primary state change timestamp :
HB-Lost-Threshold : 30
Primary : FMG-VM64, FMG-VM0000000000,
System Usage stats :
  FMG-VM0000000000(updated 0 seconds ago):
    average-cpu-user/nice/system/idle=0.05%/0.00%/0.00%/99.95%, memo ry=14.56%
```

# system interface

Use this command to view interface configuration.

## Syntax

```
get system interface [interface name]
```

## Example

This example shows the output for `get system interface`:

```
== [ port1 ]
name: port1 status: enable mode : static ip: 172.172.172.222 255.255.0.0 speed: auto
== [ port2 ]
name: port2 status: enable mode : static ip: 0.0.0.0 0.0.0.0 speed: auto
== [ port3 ]
name: port3 status: enable mode : static ip: 0.0.0.0 0.0.0.0 speed: auto
== [ port4 ]
name: port4 status: enable mode : static ip: 1.1.1.1 255.255.255.255 speed: auto
```

This example shows the output for `get system interface port1`:

```
name : port1
```

```
status : enable
mode: static
ip : 172.172.172.222 255.255.255.0
allowaccess : ping https ssh snmp soc-fabric http webservice
lldp-reception : disable
lldp-transmission : disable
serviceaccess :
speed : auto
description : (null)
alias : (null)
mtu : 1500
type : physical
ipv6:
  ip6-address: ::/0 ip6-allowaccess: ip6-autoconf: enable
```

## system local-in-policy

Use this command to view the IPv4 local-in policy configuration.

### Syntax

```
get system local-in-policy
```

## system local-in-policy6

Use this command to view the IPv6 local-in policy configuration.

### Syntax

```
get system local-in-policy6
```

## system locallog

Use these commands to view local log configuration.

### Syntax

```
get system locallog disk filter
```

```
get system locallog disk setting
get system locallog [fortianalyzer | fortianalyzer2 | fortianalyzer3] filter
get system locallog [fortianalyzer | fortianalyzer2 | fortianalyzer3] setting
get system locallog memory filter
get system locallog memory setting
get system locallog [syslogd | syslogd2 | syslogd3] filter
get system locallog [syslogd | syslogd2 | syslogd3] setting
get system locallog tacacs+accounting filter
get system locallog tacacs+accounting setting
```

## Examples

This example shows the output for `get system locallog disk setting`:

```
status : enable
severity : information
upload : disable
server-type : FTP
max-log-file-size : 100
max-log-file-num : 10000
roll-schedule : none
diskfull : overwrite
log-disk-full-percentage: 80
log-disk-quota : 0
log-rate-limit : 1000
log-max-days : 0
```

This example shows the output for `get system locallog syslogd3 filter`:

```
controller : enable
event : enable
devcfg : enable
devops : enable
diskquota : enable
dm : enable
dvm : enable
ediscovery : enable
epmgr : enable
eventmgmt : enable
faz : enable
fazsys : enable
fgd : enable
fgfm : enable
fmgws : enable
fmlmgr : enable
fmwmgr : enable
fortism : enable
fortiview : enable
glbcfg : enable
ha : enable
hcache : enable
http : enable
incident: enable
iolog : enable
logd : enable
logdb : enable
logdev : enable
```

```
logfile : enable
logging : enable
lrmgr : enable
objcfg : enable
report : enable
rev : enable
rtmon : enable
scfw : enable
scply : enable
scrmgr : enable
scvpn : enable
system : enable
webport : enable
```

## system log

Use these commands to view log configuration.

### Syntax

```
get system log alert
get system log api-ratelimit
get system log device-disable
get system log fos-policy-stats
get system log interface-stats
get system log ioc
get system log mail-domain <id>
get system log ratelimit
get system log settings
get system log topology
```

### Example

This example shows the output for `get system log settings`:

```
FAC-custom-field1 : (null)
FCH-custom-field1 : (null)
FCT-custom-field1 : (null)
FDD-custom-field1 : (null)
FGT-custom-field1 : (null)
FML-custom-field1 : (null)
FPX-custom-field1 : (null)
FSA-custom-field1 : (null)
FWB-custom-field1 : (null)
browse-max-logfiles : 10000
client-cert-auth:
device-auto-detect : enable
dns-resolve-dstip : disable
download-max-logs : 100000
ha-auto-migrate : disable
```

```
import-max-logfiles : 10000
keep-dev-logs : disable
legacy-auth-mode : enable
log-file-archive-name: basic
log-process-fast-mode: disable
rolling-regular:
sync-search-timeout : 60
unencrypted-logging-tcp: disable
unencrypted-logging-udp: disable
```

## system loglimits

Use this command to view log limits on your FortiManager unit.

### Syntax

```
get system loglimits
```

### Example

This example shows the output for `get system loglimits`:

```
GB/day : 50
Peak Log Rate : 2100
Sustained Log Rate : 1400
```

Where:

GB/day	Number of gigabytes used per day.
Peak Log Rate	Peak time log rate.
Sustained Log Rate	Average log rate.

## system mail

Use this command to view alert email configuration.

### Syntax

```
get system mail [mail service id]
```

## Example

This example shows the output for an alert email named Test:

```
id : Test
auth : disable
auth-type : psk
passwd : *
port : 25
secure-option : default
server : mailServer
ssl-protocol : follow-global-ssl-protocol
user : mailperson@mailServer.com
```

## system metadata

Use this command to view metadata settings.

### Syntax

```
get system metadata admins [fieldname]
```

### Example

This example shows the output for `get system metadata admins 'Contact Email'`:

```
fieldname : Contact Email
fieldlength : 50
importance : optional
status : enabled
```

## system ntp

Use this command to view NTP configuration.

### Syntax

```
get system ntp
```

### Example

This example shows the output for `get system ntp`:

```
ntpserver:
  == [ 1 ]
  id: 1
  status : enable
```

## system password-policy

Use this command to view the system password policy.

### Syntax

```
get system password-policy
```

### Example

This example shows the output for `get system password-policy`:

```
status : enable
minimum-length : 11
must-contain : upper-case-letter lower-case-letter number non-alphanumeric
change-4-characters : disable
expire : 30
password-history : 0
login-lockout-upon-downgrade: disable
```

## system performance

Use this command to view performance statistics on your FortiManager unit.

### Syntax

```
get system performance
```

### Example

This example shows the output for `get system performance`:

```
CPU:
  Used: 4.89%
  Used(Excluded NICE): 4.89%
  %used %user %nice %sys %idle %iowait %irq %softirq
  CPU0 4.89 2.85 0.00 2.04 95.11 0.00 0.00 0.00
Memory:
```

```
Total: 4,134,728 KB
Used: 2,011,824 KB 48.7%
Hard Disk:
Total: 82,434,456 KB
Used: 44,018,112 KB 53.4%
IOStat: tps r_tps w_tps r_kB/s w_kB/s queue wait_ms svc_ms %util sampling_sec
        6.9 5.5 1.4 193.4 195.4 0.0 5.1 0.7 0.5 108708.57
Flash Disk:
Total: 499,656 KB
Used: 113,504 KB 22.7%
IOStat: tps r_tps w_tps r_kB/s w_kB/s queue wait_ms svc_ms %util sampling_sec
        0.0 0.0 0.0 0.0 0.0 0.0 1.4 0.6 0.0 108708.62
```

## system report

Use this command to view report configuration.

### Syntax

```
get system report auto-cache
get system report est-browse-time
get system report group [group id]
get system report setting
```

### Example

This example shows the output for `get system report setting`:

```
aggregate-report : disable
ldap-cache-timeout : 60
max-table-rows : 1000000
max-pdf-rows : 10000
report-priority : auto
template-auto-install: default
week-start : sun
```

## system route

Use this command to view IPv4 routing table configuration.

### Syntax

```
get system route [seq_num]
```

## Example

This example shows the output for `get system route 66`:

```
seq_num : 66
device  : port5
dst     : 0.0.0.0 0.0.0.0
gateway : 10.111.1.16
```

## system route6

Use this command to view IPv6 routing table configuration.

### Syntax

```
get system route6 [seq_num]
```

## system saml

Use this command to view SAML configuration.

### Syntax

```
get system saml
```

### Example

This example shows the output for `get system saml`:

```
status           : enable
role             : SP
cert             : (null)
server-address   : xxx-fmg800.xxx.fortinet.com:13006
want-assertions-signed: disable
auth-request-signed : disable
logout-request-signed: disable
logout-response-signed: disable
signature-algorithm : rsa-sha256
digest-method    : sha256
login-auto-redirect : disable
entity-id        : http://xxx-fmg800.xxx.fortinet.com:13006/metadata/
```

```
acs-url           : https://xxx-fmg800.xxx.fortinet.com:13006/saml/?acs
sls-url           : https://xxx-fmg800.xxx.fortinet.com:13006/saml/?sls
idp-entity-id    : http://xxx-fmg800.xxx.fortinet.com:13003/saml-idp/xxx/metadata/
idp-single-sign-on-url: https://xxx-fmg800.xxx.fortinet.com:13003/saml-idp/xxx/login/
idp-single-logout-url: https://xxx-fmg800.xxx.fortinet.com:13003/saml-idp/xxx/logout/
idp-cert         : Remote_Cert_2
default-profile  : No_Permission_User
forticloud-sso   : disable
user-auto-create : disable
```

## system sniffer

Use this command to view the packet sniffer configuration.

### Syntax

```
get system sniffer
```

## system snmp

Use these commands to view SNMP configuration.

### Syntax

```
get system snmp community [community ID]
get system snmp sysinfo
get system snmp user [SNMP user name]
```

### Example

This example shows the output for `get system snmp sysinfo`:

```
contact_info : (null)
description  : Test FMG
engine-id   : (null)
location    : (null)
status      : enable
trap-cpu-high-exclude-nice-threshold: 80
trap-high-cpu-threshold: 80
trap-low-memory-threshold: 80
```

## system soc-fabric

Use this command to view the SOC Fabric configuration.

### Syntax

```
get system soc-fabric
```

### Example

This example shows the output for `get system soc-fabric`:

```
status : disable
```

## system sql

Use this command to view SQL configuration.

### Syntax

```
get system sql
```

### Example

This example shows the output for `get system sql`:

```
custom-index:  
prompt-sql-upgrade : enable  
status : local  
text-search-index : disable  
ts-index-field:  
  == [ FGT-app-ctrl ]  
  category: FGT-app-ctrl value: user,group,srcip,dstip,dstport,service,app,action,hostname  
  == [ FGT-attack ]  
  category: FGT-attack value: severity,srcip,dstip,action,user,attack  
  == [ FGT-content ]  
  category: FGT-content value: from,to,subject,action,srcip,dstip,hostname,status  
  == [ FGT-dlp ]  
  category: FGT-dlp value: user,srcip,service,action,filename  
  == [ FGT-emailfilter ]  
  category: FGT-emailfilter value: user,srcip,from,to,subject  
  == [ FGT-event ]  
  category: FGT-event value: subtype,ui,action,msg  
  == [ FGT-traffic ]  
  category: FGT-traffic value: user,srcip,dstip,service,app,utmaction
```

```
== [ FGT-virus ]
category: FGT-virus value: service,srcip,dstip,action,filename,virus,user
== [ FGT-voip ]
category: FGT-voip value: action,user,src,dst,from,to
== [ FGT-webfilter ]
category: FGT-webfilter value: user,srcip,dstip,service,action,catdesc,hostname
== [ FGT-netscan ]
category: FGT-netscan value: user,dstip,vuln,severity,os
== [ FGT-fct-event ]
category: FGT-fct-event value: (null)
== [ FGT-fct-traffic ]
category: FGT-fct-traffic value: (null)
== [ FGT-fct-netscan ]
category: FGT-fct-netscan value: (null)
== [ FGT-waf ]
category: FGT-waf value: user,srcip,dstip,service,action
== [ FGT-gtp ]
category: FGT-gtp value: msisdn,from,to,status
== [ FGT-dns ]
category: FGT-dns value: (null)
== [ FGT-ssh ]
category: FGT-ssh value: (null)
== [ FML-emailfilter ]
category: FML-emailfilter value: client_name,dst_ip,from,to,subject
== [ FML-event ]
category: FML-event value: subtype,msg
== [ FML-history ]
category: FML-history value: classifier,disposition,from,to,client_name,direction,domain,virus
== [ FML-virus ]
category: FML-virus value: src,msg,from,to
== [ FWB-attack ]
category: FWB-attack value: http_host,http_url,src,dst,msg,action
== [ FWB-event ]
category: FWB-event value: ui,action,msg
== [ FWB-traffic ]
category: FWB-traffic value: src,dst,service,http_method,msg
background-rebuild : enable
compress-table-min-age : 7
database-type : postgres
device-count-high : disable
event-table-partition-time: 0
fct-table-partition-time: 360
start-time : 00:00 2000/01/01
traffic-table-partition-time: 0
utm-table-partition-time: 0
```

## system status

Use this command to view the status of your FortiManager unit.

## Syntax

```
get system status
```

## Example

This example shows the output for `get system status`:

```
Platform Type : FMG-VM64
Platform Full Name : FortiManager-VM64
Version : v6.0.1-build0150 180606 (GA)
Serial Number : F-----7
BIOS version : 04000002
Hostname : FMG-VM64
Max Number of Admin Domains : 1000000000
Max Number of Device Groups : 1000000000
Admin Domain Configuration : Enabled
HA Mode : Stand Alone
Branch Point : 0150
Release Version Information : GA
Current Time : Tue Sep 29 08:09:05 PDT 2020
Daylight Time Saving : Yes
Time Zone : (GMT-8:00) Pacific Time (US & Canada).
x86-64 Applications : Yes
Disk Usage : Free 36.62GB, Total 78.62GB
File System : Ext4
License Status : Valid
```

## system syslog

Use this command to view syslog information.

## Syntax

```
get system syslog [syslog server name]
```

## Example

This example shows the output for an syslog server named Test:

```
name : Test
ip : 10.10.10.1
port : 514
reliable : disable
```

# system tablesize

Use this command to view the the system table sizes.

## Syntax

```
get system tablesize
```

## Example

This example shows the output for `get system tablesize`:

```
system.global:ssl-cipher-suites: 256
system.global:mc-policy-disabled-adoms: 256
system.interface: 256
system.interface:member: 256
system.local-in-policy: 256
system.local-in-policy:intf: 256
system.local-in-policy:src: 256
system.local-in-policy:dst: 256
system.local-in-policy:dport: 256
system.local-in-policy6: 256
system.local-in-policy6:intf: 256
system.local-in-policy6:src: 256
system.local-in-policy6:dst: 256
system.local-in-policy6:dport: 256
system.snmp.community: 256
system.snmp.community:hosts: 256
system.snmp.community:hosts6: 256
system.snmp.user: 256
system.route: 256
system.route6: 256
system.ha:monitored-interfaces: 256
system.ha:monitored-ips: 256
system.ha:peer: 256
system.fmg-cluster:peer: 256
system.certificate.ca: 256
system.certificate.local: 256
system.certificate.crl: 256
system.certificate.remote: 256
system.certificate.ssh: 256
system.saml:service-providers: 256
system.saml:fabric-idp: 256
system.ntp:ntpserver: 256
system.metadata.admins: 256
system.admin.profile: 256
system.admin.profile:write-passwd-user-list: 256
system.admin.profile:write-passwd-profiles: 256
```

```
system.admin.profile:datamask-custom-fields: 256
system.admin.radius: 256
system.admin.ldap: 256
system.admin.ldap:adom: 256
system.admin.tacacs: 256
system.admin.group: 256
system.admin.group:member: 256
system.admin.user: 1024
system.admin.user:adom: 20
system.admin.user:web-filter: 256
system.admin.user:ips-filter: 256
system.admin.user:app-filter: 256
system.admin.user:policy-package: 256
system.admin.user:policy-block: 256
system.admin.user:meta-data: 256
system.admin.user:dashboard-tabs: 256
system.admin.user:dashboard: 256
system.syslog: 256
system.mail: 256
system.alert-event: 256
system.alert-event:alert-destination: 256
system.workflow.approval-matrix: 20
system.workflow.approval-matrix:approver: 256
system.sniffer: 256
system.csf:trusted-list: 256
system.csf:fabric-connector: 256
system.log.mail-domain: 256
system.log.device-selector: 256
system.log.ratelimit:ratelimits: 256
system.sql:custom-index: 256
system.sql:custom-skipidx: 256
system.sql:ts-index-field: 256
system.report.group: 256
system.report.group:group-by: 256
system.report.group:chart-alternative: 256
system.soc-fabric:trusted-list: 256
fmupdate.server-access-priorities:private-server: 256
fmupdate.fgd-setting:server-override:servlist: 256
fmupdate.fds-setting:push-override-to-client:announce-ip: 256
fmupdate.fds-setting:server-override:servlist: 256
```

## system web-proxy

Use this command to view the system web proxy.

### Syntax

```
get system web-proxy
```

## Example

This example shows the output for `get system web-proxy`:

```
status : disable
mode : tunnel
address : (null)
port : 1080
username : (null)
password : *
```

## system workflow

Use this command to view workflow approval matrix information.

### Syntax

```
get system workflow approval-matrix [adom]
```

# show

The show commands display a part of your unit's configuration in the form of the commands that are required to achieve that configuration from the firmware's default state.



Although not explicitly shown in this section, for all config commands, there are related show commands that display that part of the configuration. The show commands use the same syntax as their related config command.



CLI commands and variables are case sensitive.

---

Unlike the get command, show does not display settings that are in their default state.

## Example

```
FMG-VM64 # show sys glob
config system global
    set adom-status enable
    set create-revision enable
    set detect-unregistered-log-device disable
    set device-view-mode tree
    set hostname "FMG-VM64"
end
```

# Appendix A - CLI Error Codes

Some FortiManager CLI commands issue numerical error codes. The following table lists the error codes and descriptions.

Error Code	Description
0	Success
1	Function called with illegal parameters
2	Unknown protocol
3	Failed to connect host
4	Memory failure
5	Session failure
6	Authentication failure
7	Generic file transfer failure
8	Failed to access local file
9	Failed to access remote file
10	Failed to read local file
11	Failed to write local file
12	Failed to read remote file
13	Failed to write remote file
14	Local directory failure
15	Remote directory failure



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