FortiManager v5.0 Patch Release 5

CLI Reference

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Change Log

Date	Change Description
2012-11-16	Initial release.
2013-04-02	Provisional update for v5.0 Patch Release 2. Changed all instances of fmsystem/fasystem to system.
2013-07-19	Provisional update for v5.0 Patch Release 3.
2013-09-13	Provisional update for v5.0 Patch Release 4.
2013-11-12	Provisional update for v5.0 Patch Release 5.

Introduction

FortiManager centralized management appliances deliver the essential tools needed to effectively manage your Fortinet-based security infrastructure.

Using the FortiManager system, you can:

- configure and manage multiple FortiGate, FortiCarrier, and FortiSwitch devices,
- configure logging for FortiGate, FortiCarrier, FortiMail, FortiWeb devices and FortiClient endpoint security agents,
- segregate management of large deployments easily and securely by grouping devices and agents into geographic or functional administrative domains (ADOMs),
- configure and manage VPN policies,
- monitor the status of these units,
- view device logs,
- update the antivirus and attack engine and signatures,
- provide web filtering and email filtering service to supported licensed devices as a local FortiGuard Distribution Server (FDS),
- provide vulnerability and compliance management updates, and
- update the firmware images of managed devices.

The FortiManager system scales to manage up to 10000 devices and administrative domains (ADOMs). It is designed for medium to large enterprises and managed security service providers. FortiManager system architecture emphasizes reliability, scalability, ease of use, and easy integration with third-party systems.

This chapter contains following topics:

About the FortiManager system

The FortiManager system is a security-hardened appliance with simplified installation, and improved system reliability and security. You can install a second peer FortiManager system for database backups.

The FortiManager system manages communication between the managed devices and the FortiManager Web-based Manager.

The FortiManager system stores and manages all managed devices’ configurations.

It can also act as a local FDS server for the managed devices to download virus and attack signatures, and to use the web filtering and email filtering service. This will reduce network delay and usage, compared with the managed devices’ connection to an FDS server over the Internet.

Web-based Manager

You can use the FortiManager Web-based Manager to configure the managed devices and to view the device configuration, device status, system health, and logs. The FortiManager Web-based Manager supports role-based administration. Permissions and device access can be set individually for each manager account added to the FortiManager Web-based Manager.

Administrators with read and write access can view the configuration, health status, and logs, and can change the configurations of the devices assigned to them. The FortiManager Web-based Manager also allows these users to remotely upgrade device firmware, and virus and attack definitions.

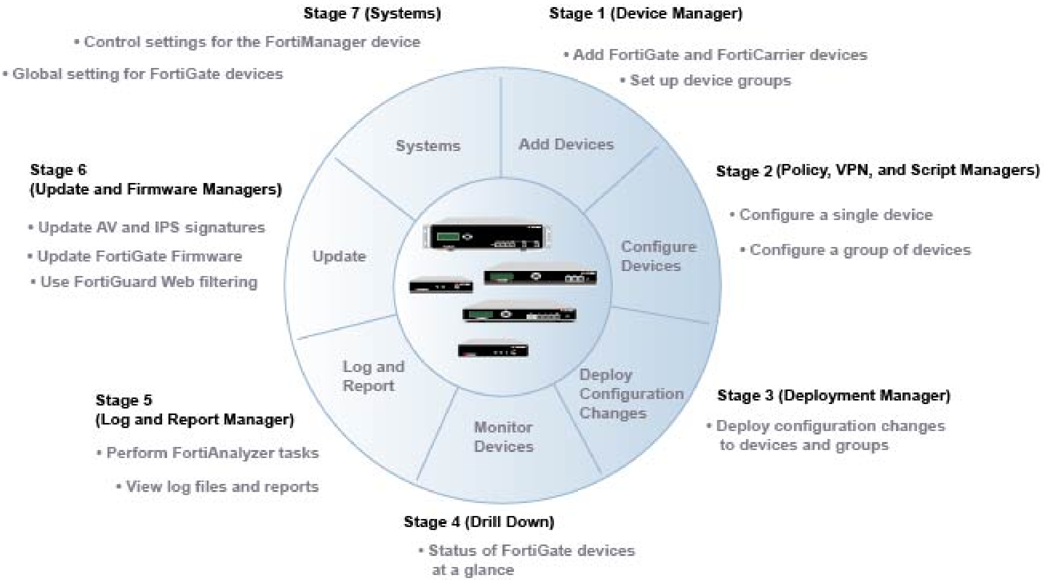
Administrators with read only access can view the configuration, device status, system health, and logs of the devices assigned to them.

FortiManager system product life cycle

The FortiManager system allows you to manage devices through their entire product life cycle:

Deployment	Complete device configuration after initial installation.
Monitoring	Drill down device status and health.
Maintenance	Continuous, incremental configuration and updates.
Updates	Updates of virus definitions, attack definitions, web filtering service, email filter service, and firmware images.

Figure 1: FortiManager system product life cycle


Stage 7 (Systems)
• Control settings for the FortiManager device
• Global setting for FortiGate devices
Stage 1 (Device Manager)
• Add FortiGate and FortiCarrier devices
• Set up device groups
Systems
Add Devices
Stage 6
(Update and Firmware Managers)
• Update AV and IPS signatures
• Update FortiGate Firmware
• Use FortiGuard Web filtering
Update
Configure Devices
Stage 2 (Policy, VPN, and Script Managers)
• Configure a single device
• Configure a group of devices
Log and Report
Deploy Configuration Changes
Monitor Devices
Stage 5
(Log and Report Manager)
• Perform FortiAnalyzer tasks
• View log files and reports
Stage 3 (Deployment Manager)
• Deploy configuration changes to devices and groups
Stage 4 (Drill Down)
• Status of FortiGate devices at a glance

FortiManager documentation

The following FortiManager product documentation is available:

- *FortiManager v5.0 Patch Release 5 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 FortiGuard Distribution Server (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 these document to install and begin working with the FortiManager system and FortiManager Web-based Manager.

- *FortiManager online help*

  You can get online help from the FortiManager Web-based Manager. FortiManager online help contains detailed procedures for using the FortiManager Web-based Manager to configure and manage FortiGate units.

- *FortiManager v5.0 Patch Release 5 CLI Reference*

  This document describes how to use the FortiManager Command Line Interface (CLI) and contains references for all FortiManager CLI commands.

- *FortiManager v5.0 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 v5.0 Log Message Reference*

  This document describes the structure of FortiManager log messages and provides information about the log messages that are generated by the FortiManager system.

This is a provisional document.

What’s New in FortiManager v5.0

FortiManager v5.0 Patch Release 5

The table below lists commands which have changed in v5.0 Patch Release 5.

Command	Change

`config system global`	Added new variables:
	`partial-install`
	`search-all-adoms`
	`faz-status`
	`unregister-pop-up`

`config fmupdate web-spam fgd-setting`	Added new variables:
	`fq-cache`
	`fq-log`
	`fq-preload`
	`restrict-fq-dbver`

`config fmupdate service`	Added new variable: `query-filequery`

`diagnose fmupdate`	Variables removed:
	`fgd-delwfdb`
	`fgd-delasdb`
	`fgd-delavquerydb`

`config system log settings`	Added new variables:
	`FAZ-custom-field1`
	`FAZ-custom-field2`
	`FAZ-custom-field3`
	`FAZ-custom-field4`
	`FAZ-custom-field5`

`execute backup`	Added new variable: `logs-rescue`

FortiManager v5.0 Patch Release 4

The table below lists commands which have changed in v5.0 Patch Release 4.

Command	Change
`config system auto-delete`	New command added for automatic deletion policy for logs, reports, archived, and quarantine files.

`config system global`
`set log-checksum {md5 | md5-auth | none}`
	New set command added to record the log file hash value, timestamp, and authentication code at transmission or rolling.

`config system log setting`
`config rolling-regular`
`set upload-mode backup`
	Added variables to allow up to three servers to be configured for log upload.

`config system sql`
`set text-search-index`
`config ts-index-field`
	New command and sub-command added to configure SQL text search index fields.

`config system report auto-cache`
`set aggressive-drilldown`
`set drilldown-interval`
`set status`
	New command and variables added for report auto-cache settings.

`config system report est-browse time`
`set max-num-user`
`set status`
	New command and variables added for report estimated browse time settings.

`execute log device permissions`	New command added to set log device permissions.
`execute log import`	New command added to allow import of logs and replace the log device ID.
`execute log-integrity`	New command added to query the log file's MD5 checksum and timestamp.
`diagnose sql auto-hcache`	Command removed.

`diagnose report status`
`diagnose report clean`
`diagnose report maintain`
	Added new commands to cleanup, maintain, and get the status of the report queue.

`diagnose sql show log-filters`	New command added to show log view searching filters.

FortiManager v5.0 Patch Release 3

The table below lists commands which have changed in v5.0 Patch Release 3.

Command	Change

`config system admin profile`	Added new variables:
	`fgd_center`
	`reports`
	`logs`
	Variable removed:
	`forticonsole`

`config system admin setting`	Added new variables:
	`show_adom_forticonsole_button`
	`show_adom_implicit_id_based_policy`
	`show_schedule_script`

`config system admin user`	Added new variables:
	`ip_trustedhost4 to ipvtrusthost10`
	`ipv6_trustedhost4 to ipv6_trusthost10`
	`group`
	`password-expire`
	`force-password-change`
	`subject`
	`ca`
	`two-factor-auth`
	`dashboard > log-rate-type`
	`dashboard > log-rate-topn`
	`dashboard > log-rate-period`
	`dashboard > res-view-type`
	`dashboard > res-period`
	`dashboard > res-cpu-display`
	`num-entries`

`config system certificate crl`	Command added with variables:
	`comment`
	`crl`

`config system dm`	Added new variable: `fortiap-refresh-itvl`

Command	Change

`config system global`	Added new variables:
	`adom-rev-max-days`
	`adom-rev-max-revisions`
	`dh-params`
	`lock-preempt`
	`pre-login-banner-message`

`config system locallog ... filter`	Added new variable: `fmgws`

`config system log settings`	Added new variables:
	`FCH-custom-field1 to 5`
	`FCT-custom-field1 to 5`
	`FGT-custom-field1 to 5`
	`FML-custom-field1 to 5`
	`FWB-custom-field1 to 5`
	Added rolling-regular command with variables:
	`day`
	`del-files`
	`directory`
	`file-size`
	`gzip-format`
	`hour`
	`ip`
	`log-format`
	`min`
	`password`
	`server-type`
	`upload`
	`upload-hour`
	`upload-trigger`
	`username`
	`when`

`config system report`	Command added.
`config system snmp sysinfo`	Added new variable: `trap-cpu-high-exclude-nice-threshold`

Command	Change

`config system snmp user`	Added new variable keywords to the `events` variable:
	`cpu-high-exclude-nice`
	`lic-dev-quota`
	`lic-gbday`
	`log-alert`
	`log-data-rate`
	`log-rate`

`config system sql`	Added new variables:
	`database-name`
	`event-table-partition-time`
	`event-table-partition-time-max`
	`event-table-partition-time-min`
	`reset`
	`resend-device`
	`server`
	`table-partition-mode`
	`traffic-table-partition-time`
	`traffic-table-partition-time-max`
	`traffic-table-partition-time-min`
	`username`
	`utm-table-partition-time`
	`utm-table-partition-time-max`
	`utm-table-partition-time-min`
	Added custom-index command, with variables:
	`device-type`
	`log-type`
	`index-field`

`config fmupdate service`	Added new variables:
	`query-antispam`
	`query-antivirus`
	`query-webfilter`

`config fmupdate web-spam fgd-setting`	Added new variables:
	`linkd-log`
	`max-unrated-size`
	`restrict-as1-dbver`
	`restrict-as2-dbver`
	`restrict-as4-dbver`
	`restrict-av-dbver`
	`restrict-wf-dbver`
	`stat-sync-interval`

Command	Change

`execute backup`	Added new commands:
	`logs`
	`logs-only`
	`reports`
	`reports-config`

`diagnose debug service`	Command added.
`diagnose dlp-archives`	Command added.
`diagnose dvm capability`	Command added.
`diagnose dvm device`	Variable removed: `deps`

`diagnose fmupdate`	Added new commands:
	`dellog`
	`fgd-wfserver-stat`
	`show-dev-obj`
	Removed command:
	`fml-bandwidth`

`diagnose pm2`	Command added.
`diagnose rtm`	Command removed.
`diagnose sql`	Added new commands: `upload`

`diagnose system`	Added new commands:
	`admin-session > kill`
	`export > fmwslog`
	`geoip`
	Removed commands:
	`disk`
	`logtoconsole`
	`raid`

`diagnose test application`	Added new commands: `fazsvcd`
`diagnose test connection`	Command added.
`get system report`	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 {https ping}
  ```

  You can enter any of the following:

  ```
  set allowaccess ping
  set allowaccess https ping
  set allowaccess http https ping snmp ssh telnet webservice
  ```

  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 or SSH to connect to the FortiManager CLI.

- 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 Web-based Manager

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 the FortiManager unit is powered on.
3. Start HyperTerminal, enter a name for the connection, and select OK.
4. Configure HyperTerminal to connect directly to the communications port on the computer to which you have connected the FortiManager console port.
5. Select *OK*.
6. Select the following port settings and select *OK*.

Bits per second	115200
Data bits	8
Parity	None
Stop bits	1
Flow control	None

7. Press `Enter` to connect to the FortiManager CLI.

   A prompt similar to the following appears (shown for the FMG-400C):

   ```
   FMG400C login:
   ```
8. Type a valid administrator name and press `Enter`.
9. Type the password for this administrator and press `Enter`.

   A prompt similar to the following appears (shown for the FMG-400C):

   ```
   FMG400C #
   ```

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 Web-based Manager, you need HTTPS access.

To use the Web-based Manager to configure FortiManager interfaces for SSH access, see the *FortiManager v5.0 Patch Release 5 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.

A maximum of 5 SSH connections can be open at the same time.

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. Type a valid administrator name and press `Enter`.
4. Type 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 Web-based Manager

The Web-based Manager also provides a CLI console window.

To connect to the CLI using the Web-based Manager:

1. Connect to the Web-based Manager and log in.

   For information about how to do this, see the *FortiManager v5.0 Patch Release 5 Administration Guide*.
2. Go to *System Settings > Dashboard*
3. Click inside the CLI Console widget. If the widget is not available, select *Add Widget* to add the widget to the dashboard.

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.

Table 1: CLI objects

fmupdate	Configures settings related to FortiGuard service updates and the FortiManager unit's built-in FDS. See "fmupdate" on page 107.
system	Configures options related to the overall operation of the FortiManager unit, such as interfaces, virtual domains, and administrators. See "system" on page 40.

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:

- config branch
- get branch
- show branch
- execute branch
- diagnose branch

Examples showing how to enter command sequences within each branch are provided in the following sections. See also "Example command sequences" on page 31.

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:

delete	Remove an entry from the FortiManager configuration. For example in the `config system admin` shell, type `delete newadmin` and press `Enter` to delete the administrator account named `newadmin`.
edit	Add an entry to the FortiManager configuration or edit an existing entry. For example in the `config system admin` shell: • type `edit admin` and press `Enter` to edit the settings for the default admin administrator account. • type `edit newadmin` and press `Enter` to create a new administrator account with the name `newadmin` and to edit the default settings for the new administrator account.
end	Save the changes you have made in the current shell and leave the shell. Every `config` command must be paired with an `end` command. You return to the root FortiManager CLI prompt. The `end` command is also used to save `set` command changes and leave the shell.
get	List the configuration. In a table shell, `get` lists the table members. In an edit shell, `get` lists the keywords and their values.
purge	Remove all entries configured in the current shell. For example in the `config user local` shell: • type `get` to see the list of user names added to the FortiManager configuration, • type `purge` and then `y` to confirm that you want to purge all the user names, • 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:

abort	Exit an edit shell without saving the configuration.
config	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.
end	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.
get	List the configuration. In a table shell, `get` lists the table members. In an edit shell, `get` lists the keywords and their values.
next	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 `config system admin user` shell. • Type `edit User1` and press `Enter`. • Use the `set` commands to configure the values for the new admin account. • Type `next` to save the configuration for User1 without leaving the `config system admin user` shell. • Continue using the `edit`, `set`, and `next` commands to continue adding admin user accounts. • type `end` and press `Enter` to save the last configuration and leave the shell.
set	Assign values. For example from the `edit admin` command shell, typing `set passwd newpass` changes the password of the admin administrator account to `newpass`. Note: 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.
show	Show changes to the default configuration in the form of configuration commands.
unset	Reset values to defaults. For example from the `edit admin` command shell, typing `unset passwd` 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
password               : *
trusthost1             : 0.0.0.0 0.0.0.0
trusthost2             : 0.0.0.0 0.0.0.0
trusthost3             : 0.0.0.0 0.0.0.0
trusthost4             : 0.0.0.0 0.0.0.0
trusthost5             : 0.0.0.0 0.0.0.0
trusthost6             : 0.0.0.0 0.0.0.0
trusthost7             : 0.0.0.0 0.0.0.0
trusthost8             : 0.0.0.0 0.0.0.0
trusthost9             : 0.0.0.0 0.0.0.0
trusthost10            : 127.0.0.1 255.255.255.255
ipv6_trusthost1        : ::/0
ipv6_trusthost2        : ::/0
ipv6_trusthost3        : ::/0
ipv6_trusthost4        : ::/0
ipv6_trusthost5        : ::/0
ipv6_trusthost6        : ::/0
ipv6_trusthost7        : ::/0
ipv6_trusthost8        : ::/0
ipv6_trusthost9        : ::/0
```

```
ipv6_trusthost10    : ::1/128
profileid           : Super_User
adom:
    == [ all_adoms ]
    adom-name: all_adoms
policy-package:
    == [ all_policy_packages ]
    policy-package-name: all_policy_packages
restrict-access     : disable
restrict-dev-vdom:
description         : (null)
user_type           : local
ssh-public-key1     :
ssh-public-key2     :
ssh-public-key3     :
meta-data:
last-name           : (null)
first-name          : (null)
email-address       : (null)
phone-number        : (null)
mobile-number       : (null)
pager-number        : (null)
hidden              : 0
dashboard-tabs:
dashboard:
    == [ 6 ]
    moduleid: 6
    == [ 1 ]
    moduleid: 1
    == [ 2 ]
    moduleid: 2
    == [ 3 ]
    moduleid: 3
    == [ 4 ]
    moduleid: 4
    == [ 5 ]
    moduleid: 5
```

Example

You want to confirm the IP 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               : up
ip                   : 10.2.115.5 255.255.0.0
allowaccess          : ping https ssh snmp telnet http webservice
serviceaccess        : fgtupdates webfilter-antispam webfilter
     antispam
speed                : auto
description          : (null)
alias                : (null)
ipv6:
    ip6-address: ::/0           ip6-allowaccess:
```

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 10.2.115.5 255.255.0.0
    set allowaccess ping https ssh snmp telnet http webservice
    set serviceaccess fgtupdates webfilter-antispam webfilter
         antispam
  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 65.39.139.53
  set secondary 65.39.139.63
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. Type `set ?`

   The following options are displayed:

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

CLI basics

This section includes:

- Command help
- Command tree
- Command completion
- Recalling commands
- Editing commands
- Line continuation
- Command abbreviation
- Environment variables
- Encrypted password support
- Entering spaces in strings
- Entering quotation marks in strings
- Entering a question mark (?) in a string
- International characters
- Special characters
- IP address formats
- Editing the configuration file
- Changing the baud rate
- Debug log levels

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.
- Type 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.
- Type 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

Type `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 Table 2, to edit the command.

Table 2: Control keys for editing commands

Function	Key combination
Beginning of line	CTRL+A
End of line	CTRL+E
Back one character	CTRL+B
Forward one character	CTRL+F
Delete current character	CTRL+D
Previous command	CTRL+P
Next command	CTRL+N
Abort the command	CTRL+C
If used at the root prompt, exit the CLI	CTRL+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 IP address of the logged in administrator.
$USERNAME	The user account name of the logged in administrator.
$SerialNum	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 UAGUDZ1yEaG30620s6afD3Gac1FnOT0BC1
         rVJmMFc9ubLlW4wEvHcqGVq+ZnrgbudK7aryyf1scXcXdnQxskRcU3E9Xq
         Oit82PgScwzGzGuJ5a9f
    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`.

Type:

```
edit user1
```

then press `Enter`.

Type:

```
set password ENC UAGUDZ1yEaG30620s6afD3Gac1FnOT0BC1rVJmMF
     c9ubLlW4wEvHcqGVq+ZnrgbudK7aryyf1scXcXdnQxskRcU3E9XqOit82PgScwz
     GzGuJ5a9f
```

then press `Enter`.

Type:

```
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.

IP address formats

You can enter an IP 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 IP address is displayed in the configuration file in dotted decimal format.

Editing the configuration file

You can change the FortiManager configuration by backing up the configuration file to an FTP, SCP, or SFTP server. You can then make changes to the file and restore it to the FortiManager unit.

1. Use the `execute backup all-settings` command to back up the configuration file to a TFTP server. For example:

   ```
   execute backup all-settings ftp 10.10.0.1 mybackup.cfg myid mypass
   ```

2. Edit the configuration file using a text editor.

   Related commands are listed together in the configuration file. You can edit the configuration by adding, changing, or deleting the CLI commands in the configuration file.

   The first line of the configuration file contains information about the firmware version and FortiManager model. Do not edit this line. If you change this information the FortiManager unit will reject the configuration file when you attempt to restore it.

3. Use the `execute restore all-settings` command to copy the edited configuration file back to the FortiManager unit. For example:

   ```
   execute restore all-settings ftp 10.10.0.1 mybackup.cfg myid mypass
   ```

   The FortiManager unit receives the configuration file and checks to make sure the firmware version and model information is correct. If it is, the FortiManager unit loads the configuration file and checks each command for errors. If the FortiManager unit finds an error, an error message is displayed after the command and the command is rejected. The FortiManager unit then restarts and loads the new configuration.

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.

Table 3: Debug log levels

Level	Type	Description
0	Emergency	Emergency the system has become unusable.
1	Alert	Alert immediate action is required.
2	Critical	Critical Functionality is affected.
3	Error	Error an erroneous condition exists and functionality is probably affected.
4	Warning	Warning function might be affected.
5	Notification	Notification of normal events.
6	Information	Information General information about system operations.
7	Debug	Debugging Detailed information useful for debugging purposes.
8	Maximum	Maximum log level.

Administrative Domains

This chapter provides information about the ADOM functionality in FortiManager.

This chapter includes the following sections:

- ADOMs overview
- Configuring ADOMs

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 38.

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

Table 4: Number of Administrative Domains/Network Devices per FortiManager model

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-4000D	4000/4000
FMG-5001A	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

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 v5.0 Patch Release 3 or 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 Web-based Manager.

To enable or 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 a reduced operation mode and 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 or 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.

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:

```
config system global
  set workspace enable
end
```

To disable ADOM locking and enable concurrent ADOM access:

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

system

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

FortiManager CLI commands and variables are case sensitive.

This chapter contains following sections:

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 <name>
    set <member>
end
```

where `name` is the name of the group you are editing, and `member` are the group members.

admin ldap

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

Syntax

```
config system admin ldap
  edit <name>
    set server {name_str | ip_str}
    set cnid <string>
    set dn <string>
    set port <integer>
    set type {anonymous | regular | simple}
    set username <string>
    set password <string>
    set group <string>
    set filter <query_string>
    set secure {disable | ldaps | starttls}
end
```

Variable	Description
`<name>`	Enter the name of the LDAP server or enter a new name to create an entry.
`server {name_str | ip_str}`	Enter the LDAP server domain name or IP address. Enter a new name to create a new entry.
`cnid <string>`	Enter the common name identifier. Default: cn
`dn <string>`	Enter the distinguished name.
`port <integer>`	Enter the port number for LDAP server communication. Default: 389
`type {anonymous | regular | simple}`	Set a binding type: • `anonymous`: Bind using anonymous user search • `regular`: Bind using username/password and then search • `simple`: Simple password authentication without search Default: simple
`username <string>`	Enter a username. This variable appears only when `type` is set to `regular`.
`password <string>`	Enter a password for the username above. This variable appears only when `type` is set to `regular`.
`group <string>`	Enter an authorization group. The authentication user must be a member of this group (full DN) on the server.

Variable	Description
filter <query_string>	Enter content for group searching. For example: • (&(objectcategory=group)(member=*)) • (&(objectclass=groupofnames)(member=*)) • (&(objectclass=groupofuniquenames)(uniquemember=*)) • (&(objectclass=posixgroup)(memberuid=*))
secure {disable | ldaps | starttls}	Set the SSL connection type: • disable: no SSL • ldaps: use LDAPS • starttls: use STARTTLS

Example

This example shows how to add the LDAP user user1 at the IP 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.

Syntax

```
config system admin profile
  edit <profile>
    set description <text>
    set scope <adom | global>
    set system-setting {none | read | read-write}
    set adom-switch {none | read | read-write}
    set global-policy-packages {none | read | read-write}
    set global-objects {none | read | read-write}
    set assignment {none | read | read-write}
    set read-passwd {none | read | read-write}
    set device-manager {none | read | read-write}
    set device-config {none | read | read-write}
    set device-op {none | read | read-write}
    set device-profile {none | read | read-write}
    set policy-objects {none | read | read-write}
    set deploy-management {none | read | read-write}
```

```
        set config-retrieve {none | read | read-write}
        set term-access {none | read | read-write}
        set adom-policy-packages {none | read | read-write}
        set adom-policy-objects {none | read | read-write}
        set vpn-manager {none | read | read-write}
        set realtime-monitor {none | read | read-write}
        set consistency-check {none | read | read-write}
        set faz-management {none | read | read-write}
        set log-viewer {none | read | read-write}
        set report-viewer {none | read | read-write}
        set fgd_center {none | read | read-write}
        set network {none | read | read-write}
        set admin {none | read | read-write}
        set system {none | read | read-write}
        set devices {none | read | read-write}
        set alerts {none | read | read-write}
        set dlp {none | read | read-write}
        set quar {none | read | read-write}
        set net-monitor {none | read | read-write}
        set vuln-mgmt {none | read | read-write}
        set reports {none | read | read-write}
        set logs {none | read | read-write}
    end
```

Variable	Description
`<profile>`	Edit the access profile. Enter a new name to create a new profile. The pre-defined access profiles are Super_User, Standard_User, Restricted_User, and Package_User.
`description <text>`	Enter a description for this access profile. Enclose the description in quotes if it contains spaces.
`scope <adom | global>`	Set the scope for this access profile to either ADOM or Global. Default: global
`system-setting {none | read | read-write}`	Configure system settings permissions for this profile.
`adom-switch {none | read | read-write}`	Configure administrative domain (ADOM) permissions for this profile.
`global-policy-packages {none | read | read-write}`	Configure global policy package permissions for this profile.
`global-objects {none | read | read-write}`	Configure global objects permissions for this profile.
`assignment {none | read | read-write}`	Configure assignment permissions for this profile.
`read-passwd {none | read | read-write}`	Add the capability to view the authentication password in clear text to this profile.

Variable	Description
`device-manager {none | read | read-write}`	Enter the level of access to device manager settings for this profile.
`device-config {none | read | read-write}`	Enter the level of access to device configuration settings for this profile.
`device-op {none | read | read-write}`	Add the capability to add, delete, and edit devices to this profile.
`device-profile {none | read | read-write}`	Configure device profile permissions for this profile.
`policy-objects {none | read | read-write}`	Configure policy objects permissions for this profile.
`deploy-management {none | read | read-write}`	Enter the level of access to the deployment management configuration settings for this profile.
`config-retrieve {none | read | read-write}`	Set the configuration retrieve settings for this profile.
`term-access {none | read | read-write}`	Set the terminal access permissions for this profile.
`adom-policy-packages {none | read | read-write}`	Enter the level of access to ADOM policy packages for this profile.
`adom-policy-objects {none | read | read-write}`	Enter the level of access to ADOM policy objects for this profile.
`vpn-manager {none | read | read-write}`	Enter the level of access to VPN console configuration settings for this profile.
`realtime-monitor {none | read | read-write}`	Enter the level of access to the Real-Time monitor configuration settings for this profile.
`consistency-check {none | read | read-write}`	Configure consistency check permissions for this profile.
`faz-management {none | read | read-write}`	Enter the level of access to FortiAnalyzer configuration management settings for this profile.
`log-viewer {none | read | read-write}`	Set the log viewer permission.
`report-viewer {none | read | read-write}`	Set the report viewer permission.
`fgd_center {none | read | read-write}`	Set the FortiGuard Center permission.
`network {none | read | read-write}`	CLI command is not in use.
`admin {none | read | read-write}`	CLI command is not in use.
`system {none | read | read-write}`	CLI command is not in use.

Variable	Description
`devices {none | read | read-write}`	CLI command is not in use.
`alerts {none | read | read-write}`	CLI command is not in use.
`dlp {none | read | read-write}`	CLI command is not in use.
`quar {none | read | read-write}`	CLI command is not in use.
`net-monitor {none | read | read-write}`	CLI command is not in use.
`vuln-mgmt {none | read | read-write}`	CLI command is not in use.
`reports {none | read | read-write}`	CLI command is not in use.
`logs {none | read | read-write}`	CLI command is not in use.

admin radius

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

Syntax

```
config system admin radius
  edit <server>
    set auth-type <auth_prot_type>
    set nas-ip <ip>
    set port <integer>
    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.
`auth-type <auth_prot_type>`	Enter the authentication protocol the RADIUS server will use. • `any`: use any supported authentication protocol • `mschap2` • `chap` • `pap`
`nas-ip <ip>`	Enter the NAS IP address.
`port <integer>`	Enter the RADIUS server port number. Default: 1812
`secondary-secret <passwd>`	Enter the password to access the RADIUS secondary-server.

Variable	Description
secondary-server <string>	Enter the RADIUS secondary-server DNS resolvable domain name or IP address.
secret <passwd>	Enter the password to access the RADIUS server.
server <string>	Enter the RADIUS server DNS resolvable domain name or IP address.

Example

This example shows how to add the RADIUS server RAID1 at the IP 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
  set admin_server_cert <admin_server_cert>
  set allow_register {enable | disable}
  set auto-update {enable | disable}
  set banner-message <string>
  set chassis-mgmt {enable | disable}
  set chassis-update-interval <integer>
  set demo-mode {enable | disable}
  set device_sync_status {enable | disable}
  set http_port <integer>
  set https_port <integer>
  set idle_timeout <integer>
  set install-ifpolicy-only {enable | disable}
  set mgmt-addr <string>
  set mgmt-fqdn <string>
  set offline_mode {enable | disable}
  set register_passwd <password>
  set show-add-multiple {enable | disable}
  set show-adom-central-nat-policies {enable | disable}
  set show-adom-devman {enable | disable}
  set show-adom-dos-policies {enable | disable}
  set show-adom-dynamic-objects {enable | disable}
  set show-adom-icap-policies {enable | disable}
```

```
    set show-adom-implicit-policy {enable | disable}
    set show-adom-implicit-id-based-policy {enable | disable}
    set show-adom-ipv6-settings {enable | disable}
    set show-adom-policy-consistency-button {enable | disable}
    set show-adom-rtmlog {enable | disable}
    set show-adom-sniffer-policies {enable | disable}
    set show-adom-taskmon-button {enable | disable}
    set show-adom-terminal-button {enable | disable}
    set show-adom-voip-policies {enable | disable}
    set show-adom-vpnman {enable | disable}
    set show-adom-web-portal {enable | disable}
    set show-device-import-export {enable | disable}
    set show-foc-settings {enable | disable}
    set show-fortimail-settings {enable | disable}
    set show-fsw-settings {enable | disable}
    set show-global-object-settings {enable | disable}
    set show-global-policy-settings {enable | disable}
    set show_automatic_script {enable | disable}
    set show_grouping_script {enable | disable}
    set show_schedule_script {enable | disable}
    set show_tcl_script {enable | disable}
    set unreg_dev_opt {add_allow_service | add_no_service | ignore}
    set webadmin_language {auto_detect | english | japanese | korean |
        simplified_chinese | traditional_chinese}
end
```

Variable	Description
`access-banner`	Enable/disable the access banner. Default: disable
`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 an unregistered device to be registered. Default: disable
`auto-update {enable | disable}`	Enable or disable device config auto update.
`banner-message <string>`	Enable the banner messages. Maximum of 255 characters. Default: none
`chassis-mgmt {enable | disable}`	Enable/disable chassis management. Default: disable
`chassis-update-interval <integer>`	Set the chassis background update interval (4 - 1440 minutes). Default: 15
`demo-mode {enable | disable}`	Enable demo mode. Default: disable

Variable	Description
`device_sync_status {enable | disable}`	Enable or disable device synchronization status indication. Default: enable
`http_port <integer>`	Enter the HTTP port number for web administration. Default: 80
`https_port <integer>`	Enter the HTTPS port number for web administration. Default: 443
`idle_timeout <integer>`	Enter the idle timeout value. The range is from 1 to 480 minutes. Default: 5
`install-ifpolicy-only {enable | disable}`	Enable to allow only the interface policy to be installed. Default: disable
`mgmt-addr <string>`	GQDN/IP of FortiManager used by FGFM.
`mgmt-fqdn <string>`	FQDN of FortiManager used by FGFM.
`offline_mode {enable | disable}`	Enable offline mode to shut down the protocol used to communicate with managed devices. Default: disable
`register_passwd <password>`	Enter the password to use when registering a device.
`show-add-multiple {enable | disable}`	Show the add multiple button.
`show-adom-central-nat-policies {enable | disable}`	Show ADOM central NAT policy settings on the Web-based Manager. Default: disable
`show-adom-devman {enable | disable}`	Show ADOM device manager tools on the Web-based Manager. Default: disable
`show-adom-dos-policies {enable | disable}`	Show ADOM DOS policy settings on the Web-based Manager. Default: disable
`show-adom-dynamic-objects {enable | disable}`	Show ADOM dynamic object settings on the Web-based Manager. Default: enable
`show-adom-icap-policies {enable | disable}`	Show the ADOMICAP policy settings in the Web-based Manager.
`show-adom-implicit-policy {enable | disable}`	Show the ADOM implicit policy settings in the Web-based Manager.
`show-adom-implicit-id-based-policy {enable | disable}`	Show the ADOM implicit ID based policy settings in the Web-based Manager.

Variable	Description
`show-adom-ipv6-settings {enable | disable}`	Show ADOM IPv6 settings in the Web-based Manager. Default: disable
`show-adom-policy-consistency-button {enable | disable}`	Show ADOM banner button Policy Consistency in the Web-based Manager. Default: disable
`show-adom-rtmlog {enable | disable}`	Show ADOM RTM device log in the Web-based Manager. Default: disable
`show-adom-sniffer-policies {enable | disable}`	Show ADOM sniffer policy settings in the Web-based Manager. Default: disable
`show-adom-taskmon-button {enable | disable}`	Show ADOM banner butter Task Monitor in the Web-based Manager. Default: enable
`show-adom-terminal-button {enable | disable}`	Show ADOM banner button Terminal in the Web-based Manager. Default: enable
`show-adom-voip-policies {enable | disable}`	Show ADOM VoIP policy settings in the Web-based Manager.
`show-adom-vpnman {enable | disable}`	Show ADOM VPN manager in the Web-based Manager. Default: enable
`show-adom-web-portal {enable | disable}`	Show ADOM web portal settings in the Web-based Manager. Default: disable
`show-device-import-export {enable | disable}`	Enable import/export of ADOM, device, and group lists.
`show-foc-settings {enable | disable}`	Show FortiCarrier settings in the Web-based Manager. Default: disable
`show-fortimail-settings {enable | disable}`	Show FortiMail settings in the Web-based Manager. Default: disable
`show-fsw-settings {enable | disable}`	Show FortiSwitch settings in the Web-based Manager. Default: disable
`show-global-object-settings {enable | disable}`	Show global object settings in the Web-based Manager. Default: enable
`show-global-policy-settings {enable | disable}`	Show global policy settings in the Web-based Manager. Default: enable
`show_automatic_script {enable | disable}`	Enable or disable automatic script.
`show_grouping_script {enable | disable}`	Enable or disable grouping script.

Variable	Description
`show_schedule_script {enable	disable}`	Enable or disable schedule script.
`show_tcl_script {enable	disable}`	Enable or disable TCL script.
`unreg_dev_opt {add_allow_service	add_no_service	ignore}`	Select action to take when an unregistered device connects to FortiManager. • `add_allow_service`: Add unregistered devices and allow service requests. • `add_no_service`: Add unregistered devices and deny service requests. • `ignore`: Ignore unregistered devices. Default: add_allow_service
`webadmin_language {auto_detect	english	japanese	korean	simplified_chinese	traditional_chinese}`	Enter the language to be used for web administration. Default: auto_detect

admin tacacs

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

Syntax

```
config system admin tacacs
  edit <name>
    set authen-type <auth_prot_type>
    set authorization {enable | disable}
    set key <passw>
    set port <integer>
    set secondary-key <passw>
    set secondary-server <string>
    set server <string>
    set tertiary-key <passw>
    set tertiary-server <string>
end
```

Variable	Description
`<name>`	Enter the name of the TACACS+ server or enter a new name to create an entry.
`authen-type <auth_prot_type>`	Choose which authentication type to use. Default: auto
`authorization {enable	disable}`	Enable/disable TACACS+ authorization.
`key <passw>`	Key to access the server.
`port <integer>`	Port number of the TACACS+ server.

Variable	Description
secondary-key <passw>	Key to access the secondary server.
secondary-server <string>	Secondary server domain name or IP.
server <string>	The server domain name or IP.
tertiary-key <passw>	Key to access the tertiary server.
tertiary-server <string>	Tertiary server domain name or IP.

Example

This example shows how to add the TACACS+ server TAC1 at the IP 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.

Use the admin account or an account with System Settings read and write privileges to add new 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. For information about ADOMs, see "Administrative Domains" on page 37.

You can create meta-data fields for administrator accounts. These objects must be created using the FortiManager Web-based Manager. 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 v5.0 Patch Release 5 Administration Guide*.

Syntax

```
config system admin user
  edit <name_str>
    set password <password>
    set trusthost1 <ip_mask>
    set trusthost2 <ip_mask>
    set trusthost3 <ip_mask>
    ...
    set trusthost10 <ip_mask>
    set ipv6_trusthost1 <ip_mask>
    set ipv6_trusthost2 <ip_mask>
    set ipv6_trusthost3 <ip_mask>
    ...
    set ipv6_trusthost10 <ip_mask>
    set profileid <profile-name>
    set adom <adom_name(s)>
    set policy-package {<adom name>: <policy package id>
         <adom policy folder name>/ <package name> |
         all_policy_packages}
    set restrict-access {enable | disable}
    set description <string>
    set user_type <group | ldap | local | pki-auth | radius |
         tacacs-plus>
    set 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 wildcard <enable | disable>
    set radius-accprofile-override <enable | disable>
    set radius-adom-override <enable | disable>
    set radius-group-match <string>
    set password-expire <yyyy-mm-dd>
    set force-password-change {enable | disable}
    set subject <string>
    set ca <string>
    set two-factor-auth {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>
  end
  config meta-data
    edit <fieldname>
      set fieldlength
      set fieldvalue <string>
      set importance
      set status
    end
  end
  config dashboard-tabs
    edit tabid <integer>
      set name <string>
    end
  end
  config dashboard
    edit moduleid
      set name <string>
```

```
                    set column <column_pos>
                    set refresh-inverval <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>
                end
            end
            config restrict-dev-vdom
                edit dev-vdom <string>
            end
        end
```

Variable	Description
`password <password>`	Enter a password for the administrator account. For improved security, the password should be at least 6 characters long. This variable is available only if `user_type` is `local`.

`trusthost1 <ip_mask>`
`trusthost2 <ip_mask>`
`trusthost3 <ip_mask>`
`...`
`trusthost10 <ip_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. For more information, see “Using trusted hosts” on page 57.
	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 <ip_mask>`
`ipv6_trusthost2 <ip_mask>`
`ipv6_trusthost3 <ip_mask>`
`...`
`ipv6_trusthost10 <ip_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. For more information, see “Using trusted hosts” on page 57.
	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. Access profiles control administrator access to FortiManager features. Default: `Restricted_User`

Variable	Description
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 Web-based Manager. For more information, see “Administrative Domains” on page 37.
policy-package {<adom name>: <policy package id> <adom policy folder name>/ <package name> | all_policy_packages}	Policy package access
restrict-access {enable | disable}	Enable/disable restricted access to the development VDOM (dev-vdom). Default: disable
description <string>	Enter a description for this administrator account. When using spaces, enclose description in quotes.
user_type <group | ldap | local | pki-auth | radius | tacacs-plus>	Enter local if the FortiManager system verifies the administrator’s password. Enter radius if a RADIUS server verifies the administrator’s password. Default: local
set group <string>	Enter the group name.
ldap-server <string>	Enter the LDAP server name if the user type is set to LDAP.
radius_server <string>	Enter the RADIUS server name if the user type is set t o RADIUS.
tacacs-plus-server <string>	Enter the TACACS+ server name if the user type is set to TACACS+.
ssh-public-key1 <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.
ssh-public-key2 <key-type>, <key-value>	
ssh-public-key3 <key-type> <key-value>	
wildcard <enable | disable>	Enable/disable wildcard remote authentication
radius-accprofile-override <enable | disable>	Allow access profile to be overridden from RADIUS.
radius-adom-override <enable | disable>	Allow ADOM to be overridden from RADIUS
radius-group-match <string>	Only admin that belong to this group are allowed to login.
password-expire <yyyy-mm-dd>	When enforcing the password policy, enter the date that the current password will expire.

Variable	Description
`force-password-change {enable	disable}`	Enable or disable force password change on next login.
`subject <string>`	PKI user certificate name constraints. This command is available when a PKI administrator account is configured.
`ca <string>`	PKI user certificate CA (CA name in local). This command is available when a PKI administrator account is configured.
`two-factor-auth {enable	disable}`	Enable or disable two-factor authentication (certificate + password). This command is available when a PKI administrator account is configured.
`last-name <string>`	Administrators last name.
`first-name <string>`	Administrators first name.
`email-address <string>`	Administrators email address.
`phone-number <string>`	Administrators phone number.
`mobile-number <string>`	Administrators mobile phone number.
`pager-number <string>`	Administrators pager number.
Variable for `config meta-data` **subcommand:** Note: This subcommand can only change the value of an existing field. To create a new metadata field, use the `config metadata` command.	
`fieldname`	The label/name of the field. Read-only. Default: 50
`fieldlength`	The maximum number of characters allowed for this field. Read-only.
`fieldvalue <string>`	Enter a pre-determined value for the field. This is the only value that can be changed with the `config meta-data` subcommand.
`importance`	Indicates whether the field is compulsory (`required`) or optional (`optional`). Read-only. Default: optional
`status`	For display only. Value cannot be changed. Default: enable
Variable for `config dashboard-tabs` **subcommand:**	
`tabid <integer>`	Tab ID.

Variable	Description
`name <string>`	Tab name.
Variable for `config dashboard` **subcommand:**	
`moduleid`	Widget ID. - 1: System Information - 2: System Resources - 3: License Information - 4: Unit Operation - 5: Alert Message Console - 6: CLI Console - 7: Log Receive Monitor - 8: Statistics - 9: Logs/Data Received
`name <string>`	Widget name.
`column <column_pos>`	Widget’s column ID. Default: 0
`refresh-inverval <integer>`	Widget’s refresh interval. Default: 300
`status {close | open}`	Widget’s opened/closed status. Default: open
`tabid <integer>`	ID of the tab where the widget is displayed. Default: 0
`widget-type <string>`	Widget type.
`log-rate-type {device | log}`	Log receive monitor widget’s statistics breakdown options.
`log-rate-topn {1 | 2 | 3 | 4 | 5}`	Log receive monitor widgets’s number of top items to display.
`log-rate-period {1hour | 2min | 6hours}`	Log receive monitor widget’s data period.
`res-view-type {history | real-time}`	Widget’s data view type.
`res-period {10min | day | hour}`	Widget’s data period.
`res-cpu-display {average | each}`	Widget’s CPU display type.
`num-entries <integer>`	Number of entries.
Variable for `config restrict-dev-vdom` **subcommand:**	
`dev-vdom <string>`	Enter device or VDOM to edit.

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 IP address if you define only one trusted host IP 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 Web-based Manager 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 IP 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 Web-based Manager.

Syntax

```
config system alert-console
  set period <integer>
  set severity-level {information | notify | warning | error |
       critical | alert | emergency}
end
```

Variable	Description
`period <integer>`	Enter the number of days to keep the alert console information on the dashboard in days between 1 and 7. Default: 7
`severity-level {information	notify	warning	error	critical	alert	emergency}`	Enter the severity level to display on the alert console on the dashboard.

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
```

Related topics

- alertemail

alert-event

Use `alert-event` commands to configure the FortiManager unit to monitor logs for log messages with certain severity levels, or information within the logs. If the message appears in the logs, the FortiManager unit sends an email or SNMP trap to a predefined recipient(s) of the log message encountered. Alert event messages provide immediate notification of issues occurring on the FortiManager unit.

When configuring an alert email, you must configure at least one DNS server. The FortiGate unit uses the SMTP server name to connect to the mail server and must look up this name on your DNS server. name

Syntax

```
config system alert-event
  edit <name_string>
  config alert-destination
    edit destination_id <integer>
      set type {mail | snmp | syslog}
      set from <email_addr>
      set to <email_addr>
      set smtp-name <server_name>
      set snmp-name <server_name>
      set syslog-name <server_name>
    end
    set enable-generic-text {enable | disable}
    set enable-severity-filter {enable | disable}
    set event-time-period {0.5 | 1 | 3 | 6 | 12 | 24 | 72 | 168}
    set generic-text <string>
    set num-events {1 | 5 | 10 | 50 | 100}
    set severity-filter {high | low | medium | medium-high |
        medium-low}
    set severity-level-comp {>= | = | <=}
    set severity-level-logs {no-check | information | notify |
        warning |error | critical | alert | emergency}
```

```
            end
```

Variable	Description
`<name_string>`	Enter a name for the alert event.
`destination_id <integer>`	Enter the table sequence number, beginning at 1.
`type {mail | snmp | syslog}`	Select the alert event message method of delivery. Default: mail
`from <email_addr>`	Enter the email address of the sender of the message. This is available when the `type` is set to `mail`.
`to <email_addr>`	Enter the recipient of the alert message. This is available when the `type` is set to `mail`.
`smtp-name <server_name>`	Enter the name of the mail server. This is available when the `type` is set to `mail`.
`snmp-name <server_name>`	Enter the snmp server name. This is available when the `type` is set to `snmp`.
`syslog-name <server_name>`	Enter the syslog server name or IP address. This is available when the `type` is set to `syslog`.
`enable-generic-text {enable | disable}`	Enable the text alert option. Default: disable
`enable-severity-filter {enable | disable}`	Enable the severity filter option. Default: disable
`event-time-period {0.5 | 1 | 3 | 6 | 12 | 24 | 72 | 168}`	The period of time in hours during which if the threshold number is exceeded, the event will be reported.
`generic-text <string>`	Enter the text the alert looks for in the log messages.
`num-events {1 | 5 | 10 | 50 | 100}`	Set the number of events that must occur in the given interval before it is reported.
`severity-filter {high | low | medium | medium-high | medium-low}`	Set the alert severity indicator for the alert message the FortiManager unit sends to the recipient.
`severity-level-comp {>= | = | <=}`	Set the severity level in relation to the log level. Log messages are monitored based on the log level. For example, alerts may be monitored if the messages are greater than, and equal to (>=) the Warning log level.
`severity-level-logs {no-check | information | notify | warning |error | critical | alert | emergency}`	Set the log level the FortiManager looks for when monitoring for alert messages.

Example

In the following example, the alert message is set to send an email to the administrator when 5 warning log messages appear over the span of three hours.

```
config system alert-event
  edit warning
    config alert-destination
      edit 1
        set type mail
        set from fmgr@exmample.com
        set to admin@example.com
        set smtp-name mail.example.com
      end
      set enable-severity-filter enable
      set event-time-period 3
      set severity-level-log warning
      set severity-level-comp =
      set severity-filter medium
  end
```

Related topics

- alert-console
- alertemail

alertemail

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

All variables are required if `authentication` is enabled.

Syntax

```
config system alertemail
  set authentication {enable | disable}
  set fromaddress <email-addr_str>
  set fromname <name_str>
  set smtppassword <pass_str>
  set smtpport <port_int>
  set smtpserver {<ipv4>|<fqdn_str>}
  set smtpuser <username_str>
end
```

Variable	Description
`authentication {enable | disable}`	Enable or disable alert email authentication. Default: enable
`fromaddress <email-addr_str>`	The email address the alertmessage is from. This is a required variable.

Variable	Description
fromname <name_str>	The SMTP name associated with the email address. To enter a name that includes spaces, enclose the whole name in quotes.
smtppassword <pass_str>	Set the SMTP server password.
smtpport <port_int>	The SMTP server port. Default: 25
smtpserver {<ipv4>|<fqdn_str>}	The SMTP server address. Enter either a DNS resolvable host name or an IP address.
smtpuser <username_str>	Set the SMTP server username.

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 IP 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 status {enable | disable}
    set value <integer>
    set when {days | hours | months | weeks}
  end
  config quarantine-files-auto-deletion
    set status {enable | disable}
    set value <integer>
    set when {days | hours | months | weeks}
  end
  config regular-auto-deletion
    set status {enable | disable}
    set value <integer>
    set when {days | hours | months | weeks}
  end
```

```
    config report-auto-deletion
      set status {enable | disable}
      set value <integer>
      set when {days | hours | months | weeks}
    end
  end
```

Variable	Description
`dlp-files-auto-deletion`	Automatic deletion policy for DLP archives.
`quarantine-files-auto-deletion`	Automatic deletion policy for quarantined files.
`regular-auto-deletion`	Automatic deletion policy for device logs.
`report-auto-deletion`	Automatic deletion policy for reports.
`status {enable | disable}`	Enable or disable automatic deletion.
`value <integer>`	Set the value integer.
`when {days | hours | months | weeks}`	Auto-delete data older that <value> days, hours, months, weeks.

backup

backup all-settings

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

Syntax

```
config system backup all-settings
  set status {enable | disable}
  set server {<ipv4>|<fqdn_str>}
  set user <username_str>
  set directory <dir_str>
  set week_days {monday tuesday wednesday thursday friday saturday
      sunday}
  set time <hh:mm:ss>
  set protocol {ftp | scp | sftp}
  set passwd <pass_str>
  set cert <string>
  set crptpasswd <pass_str>
end
```

Variable	Description
`status {enable | disable}`	Enable or disable scheduled backups. Default: disable
`server {<ipv4>|<fqdn_str>}`	Enter the IP address or DNS resolvable host name of the backup server.

Variable	Description
`user <username_str>`	Enter the user account name for the backup server.
`directory <dir_str>`	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 days of the week on which to perform backups. You may enter multiple days.
`time <hh:mm:ss>`	Enter 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 <pass_str>`	Enter the password for the backup server.
`cert <string>`	SSH certificate for authentication. Only available if the protocol is set to scp.
`crptpasswd <pass_str>`	Optional password to protect backup content

Example

This example shows a whack where backup server is 172.20.120.11 using the admin account with no password, saving to the `/usr/local/backup` directory. Backups are done on Mondays at 1:00pm using ftp.

```
config system backup all-settings
  set status enable
  set server 172.20.120.11
  set user admin
  set directory /usr/local/backup
  set week_days monday
  set time 13:00:00
  set protocol ftp
end
```

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 <cert>
    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.
`ca <cert>`	Enter or retrieve the CA certificate in PEM format.
`comment <string>`	Optionally, enter a descriptive comment.

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.
`crl <crl>`	Enter or retrieve the CRL in PEM format.
`comment <string>`	Optionally, enter a descriptive comment for this CRL.

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 <cert_password>
    set comment <comment_text>
    set certificate <cert_PEM>
    set private-key <prkey>
    set csr <csr_PEM>
  end
```

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

```
get system certificate local [cert_name]
```

Variable	Description
`<cert_name>`	Enter the local certificate name.
`password <cert_password>`	Enter the local certificate password.
`comment <comment_text>`	Enter any relevant information about the certificate.
`certificate <cert_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 ssh

Use this command to install SSH certificates.

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 certificate <certificate>
    set private-key <key>
  end
```

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

```
get system certificate ssh [cert_name]
```

Variable	Description
`<name>`	Enter the SSH certificate name.
`comment <comment_text>`	Enter any relevant information about the certificate.
`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.

dm

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

Syntax

```
config system dm
  set concurrent-install-limit <installs_int>
  set concurrent-install-script-limit <scripts_int>
  set discover-timeout <integer>
  set dpm-logsize <kbytes_int>
  set fgfm-sock-timeout <sec_int>
  set fgfm_keepalive_itvl <sec_int>
  set force-remote-diff {enable | disable}
```

```
          set max-revs <revs_int>
          set nr-retry <retries_int>
          set retry {enable | disable}
          set retry-intvl <sec_int>
          set rollback-allow-reboot {enable | disable}
          set script-logsize <integer>
          set verify-install {enable | disable}
          set fortiap-refresh-itvl <integer>
        end
```

Variable	Description
`concurrent-install-limit <installs_int>`	The maximum number of concurrent installs. The range can be from 5 to 100. Default: 60
`concurrent-install-script-limit <scripts_int>`	The maximum number of concurrent install scripts. The range can be from 5 to 100. Default: 60
`discover-timeout <integer>`	Check connection timeout when discovering a device (3-15)
`dpm-logsize <kbytes_int>`	The maximum `DPM` log size per device in kB. The range can be from 1 to 10000kB. Default: 10000
`fgfm-sock-timeout <sec_int>`	The maximum FortiManager/FortiGate communication socket idle time. The interval can be from 90 to 1800 seconds. Default: 900
`fgfm_keepalive_itvl <sec_int>`	The interval at which the FortiManager will send a keepalive signal to a FortiGate unit to keep the FortiManager/FortiGate communication protocol active. The interval can be from 30 to 600 seconds. Default: 300
`force-remote-diff {enable | disable}`	Enable to always use `remote diff` when installing. Default: disable
`max-revs <revs_int>`	The maximum number of revisions saved. Valid numbers are from 1 to 250. Default: 100
`nr-retry <retries_int>`	The number of times the FortiManager unit will retry. Default: 1
`retry {enable | disable}`	Enable or disable configuration installation retries. Default: enable
`retry-intvl <sec_int>`	The interval between attempting another configuration installation following a failed attempt. Default: 15

Variable	Description
`rollback-allow-reboot {enable | disable}`	Enable to allow a FortiGate unit to reboot when installing a script or configuration. Default: disable
`script-logsize <integer>`	Enter the maximum script log size per device (1-10000kB).
`verify-install {enable | disable}`	Enable to verify install against remote configuration. Default: enable
`fortiap-refresh-itvl <integer>`	Set the auto refresh FortiAP status interval, from 1-1440 minutes.

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 this command to set the DNS server addresses. Several FortiManager functions, including sending alert email, use DNS.

Syntax

```
config system dns
  set primary <ip>
  set secondary <ip>
end
```

Variable	Description
`primary <ip>`	Enter the primary DNS server IP address.
`secondary <ip>`	Enter the secondary DNS IP server address.

Example

This example shows how to set the primary FortiManager DNS server IP address to `172.20.120.99` and the secondary FortiManager DNS server IP 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 set the FIPS status. Federal Information Processing Standards (FIPS) mode is an enhanced security option for some FortiManager models.

Syntax

```
config system fips
  set
end
```

global

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

Syntax

```
config system global
  set admin-https-pki-required {disable | enable}
  set admin-lockout-duration <integer>
  set admin-lockout-threshold <integer>
  set admin-maintainer {disable | enable}
  set admintimeout <integer>
  set adom-mode {advanced | normal}sh
  set adom-rev-auto-delete {by-days | by-revisions | disable}
  set adom-rev-max-days <integer>
  set adom-rev-max-revisions <integer>
  set adom-status {enable | disable}
  set clt-cert-req {disable | enable}
  set console-output {more | standard}
  set daylightsavetime {enable | disable}
  set default-disk-quota <integer>
  set dh-params < >
  set faz-status {enable | disable}
  set enc-algorithm {default | high | low}
  set hostname <string>
  set language {english | japanese | simch | trach}
  set ldapconntimeout <integer>
  set lcdpin <integer>
  set lock-preempt {enable | disable}
  set log-checksum {md5 | md5-auth | none}
  set max-concurrent-users <integer>
  set max-running-reports <integer>
  set partial-install {enable | disable}
  set unregister-pop-up {enable | disable}
  set pre-login-banner {disable | enable}
  set pre-login-banner-message <string>
  set remoteauthtimeout <integer>
  set ssl-low-encryption {enable | disable}
```

```
     set ssl-low-encryption {enable | disable}
     set swapmem {enable | disable}
     set timezone <timezone_int>
     set vdom-mirror {enable | disable}
     set web-service-support-sslv3 {disable | enable}
     set workspace {enable | disable}
   end
```

Variable	**Description**
`admin-https-pki-required {disable | enable}`	Enable or disable HTTPS login page when PKI is enabled.
`admin-lockout-duration <integer>`	Set the lockout duration (seconds) for FortiManager administration. Default: 60
`admin-lockout-threshold <integer>`	Set the lockout threshold for FortiManager administration (1 to 10). Default: 3
`admin-maintainer {disable | enable}`	Enable or disable the special user maintainer account.
`admintimeout <integer>`	Set the administrator idle timeout (in minutes). Default: 5
`adom-mode {advanced | normal}`	Set the ADOM mode.
`adom-rev-auto-delete {by-days | by-revisions | disable}`	Auto delete features for old ADOM revisions.
`adom-rev-max-days <integer>`	The maximum number of days to keep old ADOM revisions.
`adom-rev-max-revisions <integer>`	The maximum number of ADOM revisions to keep.
`adom-status {enable | disable}`	Enable or disable administrative domains (ADOMs). Default: disable
`clt-cert-req {disable | enable}`	Require client certificate for Web-based Manager login.
`console-output {more | standard}`	Select how the output is displayed on the console. Select `more` to pause the output at each full screen until keypress. Select `standard` for continuous output without pauses. Default: standard
`daylightsavetime {enable | disable}`	Enable or disable daylight saving time. If you enable daylight saving time, the FortiManager unit automatically adjusts the system time when daylight saving time begins or ends. Default: enable
`default-disk-quota <integer>`	Default disk quota (MB) for registered device.
`dh-params < >`	

Variable	Description
`faz-status {enable | disable}`	Enable or disable FortiAnalyzer status.
`enc-algorithm {default | high | low}`	Set SSL communication encryption algorithms. Default: default
`hostname <string>`	FortiManager host name.
`language {english | japanese | simch | trach}`	Web-based Manager language. Select from English, Japanese, Simplified Chinese, or Traditional Chinese. Default: English
`ldapconntimeout <integer>`	LDAP connection timeout (in milliseconds). Default: 60000
`lcdpin <integer>`	Set the 6-digit PIN administrators must enter to use the LCD panel.
`lock-preempt {enable | disable}`	Enable or disable the ADOM lock override.
`log-checksum {md5 | md5-auth | none}`	Record log file hash value, timestamp, and authentication code at transmission or rolling. Select one of the following: • md5: Record log file's MD5 hash value only • md5-auth: Record log file's MD5 hash value and authentication code none: Do not record the log file checksum
`max-concurrent-users <integer>`	Maximum number of concurrent administrators. Default: 20
`max-running-reports <integer>`	Maximum running reports number. (Min:1, Max: 10)
`partial-install {enable | disable}`	Enable or disable partial install (install only some objects).
`unregister-pop-up {enable | disable}`	Enable or disable unregistered device popup messages in the Web-based Manager.
`pre-login-banner {disable | enable}`	Enable or disable pre-login banner.
`pre-login-banner-message <string>`	Set the pre-login banner message.
`remoteauthtimeout <integer>`	Remote authentication (RADIUS/LDAP) timeout (in seconds). Default: 10
`search-all-adoms {enable | disable}`	Enable or disable search all ADOMs for where-used queries.
`ssl-low-encryption {enable | disable}`	Enable or disable low-grade (40-bit) encryption. Default: enable
`swapmem {enable | disable}`	Enable or disable virtual memory.
`timezone <timezone_int>`	The time zone for the FortiManager unit. Default: (GMT-8)Pacific Time(US & Canada)

Variable	Description
`vdom-mirror {enable | disable}`	Enable or disable VDOM mirror.
`web-service-support-sslv3 {disable | enable}`	Enable or disable SSLv3 protocol support for web service TLS/SSL connections.
`workspace {enable | disable}`	Enable or disable Workspace (ADOM locking).

Example

The following command turns on daylight saving time, sets the FortiManager unit name to FMG3k, sets the LCD password to 123856, and chooses the Eastern time zone for US & Canada.

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

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 or master 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).

Administrators connect to the primary unit Web-Based Manager 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 IP 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.

To configure a cluster, use the `config system ha` command to set the HA operation mode (`mode`) to `ha` and set the local IP1 (`local-ip1`), peer IP1 (`peer-ip1`) and the first synchronization interface (also called synchronization port) (`synchport1`) of both FortiManager units in the cluster. The local IP1 IP address of both FortiManager units must match the peer IP1 IP address of the other FortiManager unit. Both units should also have the same first synchronization interface.

Syntax

```
config system ha
  set clusterid <clusert_ID_int>
  set hb-interval <time_interval_int>
  set hb-lost-threshold <lost_heartbeats_int>
  set mode {master | slave | standalone}
  set password <password_str>
  config peer
    edit <peer_id_int>
      set ip <peer_ip_ipv4>
      set serial-number <peer_serial_str>
      set status <peer_status>
    end
end
```

Variable	Description
`clusterid <clusert_ID_int>`	A number between 0 and 64 that identifies the HA cluster. All members of the HA cluster must have the same `clusterid`. If you have more than one FortiManager HA cluster on the same network, each HA cluster must have a different group ID.
`hb-interval <time_interval_int>`	The time in seconds that a cluster unit waits between sending heartbeat packets. 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. The default heartbeat interval is 5 seconds. The default heartbeat interval is 5 seconds. The heartbeat interval range is 1 to 255 seconds.
`hb-lost-threshold <lost_heartbeats_int>`	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. The default failover threshold is 3. The failover threshold range is 1 to 255. In most cases you do not have to change the heartbeat interval or failover threshold. The default settings mean that if the a unit fails, the failure is detected after 3 x 5 or 15 seconds; resulting in a failure detection time of 15 seconds. 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 that 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. 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.

Variable	Description
`mode {master | slave | standalone}`	Select `master` to configure the FortiManager unit to be the primary unit in a cluster. Select `slave` to configure the FortiManager unit to be a backup unit in a cluster. Select `standalone` to stop operating in HA mode.
`password <password_str>`	A group password for the HA cluster. All members of the HA cluster must have the same group password. The maximum password length is 19 characters. If you have more than one FortiManager HA cluster on the same network, each HA cluster must have a different password.
`peer`	Add peers to the HA configuration of the FortiManager unit. You add all of the backup units as peers to the primary unit (up to four). For each backup unit you add the primary unit.
`<peer_id_int>`	Add a peer and add the peer's IP address and serial number.
`ip <peer_ip_ipv4>`	Enter the IP address of the peer FortiManager unit.
`serial-number <peer_serial_str>`	Enter the serial number of the peer FortiManager unit.
`status <peer_status>`	Enter the status of the peer FortiManager unit.

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 master
  set password <password_str>
  set clusterid 10
    config peer
      edit 1
        set ip <peer_ip_ipv4>
        set serial-number <peer_serial_str>
      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 slave
  set password <password_str>
  set clusterid 10
    config peer
      edit 1
        set ip <peer_ip_ipv4>
        set serial-number <peer_serial_str>
      next
  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.

interface

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

Syntax

```
config system interface
  edit <port_str>
    set status {up | down}
    set ip <ipv4_mask>
    set allowaccess {http https ping snmp ssh telnet webservice}
    set serviceaccess {fclupdates fgtupdates webfilter-antispam}
    set speed {1000full 100full 100half 10full 10half auto}
    set description <string>
    set alias <string>
    config <ipv6>
      set ip6-address <IPv6 prefix>
      set ip6-allowaccess {http https ping snmp ssh telnet
          webservice}
    end
  end
```

Variable	Description
`<port_str>`	`<port_str>` can be set to a port number such as port1, port2, port3, or port4. Different FortiManager models have different numbers of ports.
`status {up | down}`	Start or stop the interface. If the interface is stopped it does not accept or send packets. If you stop a physical interface, VLAN interfaces associated with it also stop. Default: up

Variable	Description
`ip <ipv4_mask>`	Enter the interface IP address and netmask. The IP address cannot be on the same subnet as any other interface.
`allowaccess {http https ping snmp ssh telnet webservice}`	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.
`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.
`speed {1000full 100full 100half 10full 10half auto}`	Enter the speed and duplexing the network port uses. Enter `auto` to automatically negotiate the fastest common speed. Default: auto
`description <string>`	Enter a description of the interface.
`alias <string>`	Enter an alias for the interface.
`<ipv6>`	Configure the interface IPv6 settings.
`ip6-address <IPv6 prefix>`	IPv6 address/prefix of interface.
`ip6-allowaccess {http https ping snmp ssh telnet webservice}`	Allow management access to the interface.

Example

This example shows how to set the FortiManager port1 interface IP address and network mask to `192.168.100.159 255.255.255.0`, 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 up
  end
```

locallog

Use the following commands to configure local log settings.

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 <size_int>
  set roll-schedule {none | daily | weekly}
  set roll-day <string>
  set roll-time <hh:mm>
  set diskfull {nolog | overwrite}
  set log-disk-full-percentage <integer>
  set upload {disable | enable}
  set uploadip <ipv4>
  set server-type {FAZ | FTP | SCP | SFTP}
  set uploadport <port_int>
  set uploaduser <user_str>
  set uploadpass <passwd_str>
  set uploaddir <dir_str>
  set uploadtype <event>
  set uploadzip {disable | enable}
  set uploadsched {disable | enable}
  set upload-time <hh:mm>
  set upload-delete-files {disable | enable}
end
```

Variable	Description
status {enable | disable}	Enter enable to begin logging. Default: disable

Variable	Description
`severity {alert | critical | debug | emergency | error | information | notification | warning}`	Select the logging severity level. The FortiManager unit logs all messages at and above the logging severity level you select. For example, if you select `critical`, the unit logs `critical`, `alert` and `emergency` level messages. Default: alert The logging levels in descending order are: • emergency: The unit is unusable. • alert: Immediate action is required. • critical: Functionality is affected. • error: Functionality is probably affected. • warning: Functionality might be affected. • notification: Information about normal events. • information: General information about unit operations. • debug: Information used for diagnosis or debugging.
`max-log-file-size <size_int>`	Enter the size at which the log is rolled. The range is from 1 to 1024 megabytes. Default: 100
`roll-schedule {none | daily | weekly}`	Enter the period for the scheduled rolling of a log file. If `roll-schedule` is `none`, the log rolls when `max-log-file-size` is reached. Default: none
`roll-day <string>`	Enter the day for the scheduled rolling of a log file.
`roll-time <hh:mm>`	Enter the time for the scheduled rolling of a log file.
`diskfull {nolog | overwrite}`	Enter action to take when the disk is full: • `nolog:` stop logging • `overwrite:` overwrites oldest log entries Default: overwrite
`log-disk-full-percentage <integer>`	Enter the percentage at which the log disk will be considered full (50-90%).
`upload {disable | enable}`	Enable to permit uploading of logs. Default: disable
`uploadip <ipv4>`	Enter IP address of the destination server. Default: 0.0.0.0
`server-type {FAZ | FTP | SCP | SFTP}`	Enter the type the server to use to store the logs.
`uploadport <port_int>`	Enter the port to use when communicating with the destination server. Default: 21

Variable	Description
`uploaduser <user_str>`	Enter the user account on the destination server.
`uploadpass <passwd_str>`	Enter the password of the user account on the destination server.
`uploaddir <dir_str>`	Enter the destination directory on the remote server.
`uploadtype <event>`	Enter to upload the event log files. Default: event
`uploadzip {disable | enable}`	Enable to compress uploaded log files. Default: disable
`uploadsched {disable | enable}`	Enable to schedule log uploads.
`upload-time <hh:mm>`	Enter to configure when to schedule an upload.
`upload-delete-files {disable | enable}`	Enable to delete 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 [memory| disk | fortianalyzer | syslogd |
     syslogd2 | syslogd3] filter
  set devcfg {disable | enable}
  set dm {disable | enable}
  set dvm {disable | enable}
  set epmgr {disable | enable}
  set event {disable | enable}
  set fgd {disable | enable}
  set fgfm {disable | enable}
  set fmgws {disable | enable}
  set fmlmgr {disable | enable}
  set fmwmgr {disable | enable}
  set glbcfg {disable | enable}
  set ha {disable | enable}
  set iolog {disable | enable}
  set lrmgr {disable | enable}
  set objcft {disable | enable}
  set rev {disable | enable}
  set rtmon {disable | enable}
  set scfw {disable | enable}
  set scply {disable | enable}
  set scrmgr {disable | enable}
  set scvpn {disable | enable}
  set system {disable | enable}
  set webport {disable | enable}
end
```

Variable	Description
`devcfg {disable | enable}`	Enable to log device configuration messages.
`dm {disable | enable}`	Enable to log deployment manager messages. Default: disable
`dvm {disable | enable}`	Enable to log device manager messages. Default: disable
`epmgr {disable | enable}`	Enable to log endpoint manager messages. Default: disable
`event {disable | enable}`	Enable to configure log filter messages. Default: disable

Variable	Description
`fgd {disable | enable}`	Enable to log FortiGuard service messages. Default: disable
`fgfm {disable | enable}`	Enable to log FortiGate/FortiManager communication protocol messages. Default: disable
`fmgws {disable | enable}`	Enable to log web service messages. Default: disable
`fmlmgr {disable | enable}`	Enable to log FortiMail manager messages. Default: disable
`fmwmgr {disable | enable}`	Enable to log firmware manager messages. Default: disable
`glbcfg {disable | enable}`	Enable to log global database messages. Default: disable
`ha {disable | enable}`	Enable to log high availability activity messages. Default: disable
`iolog {disable | enable}`	Enable input/output log activity messages. Default: disable
`lrmgr {disable | enable}`	Enable to log log and report manager messages. Default: disable
`objcft {disable | enable}`	Enable to log object configuration. Default: disable
`rev {disable | enable}`	Enable to log revision history messages. Default: disable
`rtmon {disable | enable}`	Enable to log real-time monitor messages. Default: disable
`scfw {disable | enable}`	Enable to log firewall objects messages. Default: disable
`scply {disable | enable}`	Enable to log policy console messages. Default: disable
`scrmgr {disable | enable}`	Enable to log script manager messages. Default: disable
`scvpn {disable | enable}`	Enable to log VPN console messages. Default: disable

Variable	Description
`system {disable | enable}`	Enable to log system manager messages. Default: disable
`webport {disable | enable}`	Enable to log web portal messages. Default: disable

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 setting

Use this command to enable or disable, and select the severity threshold of, remote logging to the FortiAnalyzer unit entered in `system log fortianalyzer.` Refer to "locallog filter" on page 80.

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 setting
  set severity {emergency | alert | critical | error | warning |
      notification | information | debug}
  set status {disable | enable}
end
```

Variable	Description
`severity {emergency | alert | critical | error | warning | notification | information | debug}`	Enter the severity threshold that a log message must meet or exceed to be logged to the unit. For details on severity levels, see page 78. Default: alert
`status {disable | enable}`	Enable or disable remote logging to the FortiAnalyzer unit. Default: disable

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. Refer to "locallog filter" on page 80.

Syntax

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

Variable	Description
`diskfull {nolog | overwrite}`	Enter the action to take when the disk is full: • `nolog`: Stop logging when disk full • `overwrite`: Overwrites oldest log entries
`severity {emergency | alert | critical | error | warning | notification | information | debug}`	Enter to configure the severity level to log files. See page 78 for more information on the severity levels. Default: alert
`status <disable | enable>`	Enable or disable the memory buffer log. 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 {disable | enable}
  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 port <port_int>
  set server <address_ipv4>
  set severity {emergency | alert | critical | error | warning |
      notification | information | debug}
  set status {enable | disable}
end
```

Variable	Description
`csv {disable | enable}`	Enable to produce the log in comma separated value (CSV) format. If you do not enable CSV format the FortiManager unit produces space separated log files. Default: disable

Variable	Description
`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. `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. Available facility types are: • `alert:` log alert • `audit`: log audit • `auth`: security/authorization messages • `authpriv:` security/authorization messages (private) • `clock`: clock daemon • `cron`: cron daemon performing scheduled commands • `daemon:` system daemons running background system processes • `ftp`: File Transfer Protocol (FTP) daemon • `kernel:` kernel messages • `local0`: `local7` — reserved for local use • `lpr`: line printer subsystem • `mail:` email system • `news`: network news subsystem • `ntp`: Network Time Protocol (NTP) daemon • `syslog:` messages generated internally by the syslog daemon Default: local7
`port <port_int>`	Enter the port number for communication with the syslog server. Default: 514
`server <address_ipv4>`	Enter the IP address of the syslog server that stores the logs.
`severity {emergency | alert | critical | error | warning | notification | information | debug}`	Select the logging severity level. The FortiManager unit logs all messages at and above the logging severity level you select. For example, if you select `critical`, the unit logs `critical`, `alert` and `emergency` level messages. The logging levels in descending order are: • emergency: The unit is unusable. • alert: Immediate action is required. • critical: Functionality is affected. • error: Functionality is probably affected. • warning: Functionality might be affected. • notification: Information about normal events. • information: General information about unit operations. • debug: Information used for diagnosis or debugging.
`status {enable | disable}`	Enter `enable` to begin logging.

Example

In this example, the logs are uploaded to a syslog server at IP address 10.10.10.8. The FortiManager unit is identified as facility local0.

```
config system locallog syslogd setting
  set facility local0
  set server 10.10.10.8
  set status enable
  set severity information
end
```

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>
end
```

Variable	Description
max-alert-count <integer>	The alert count range, between 100 and 1000.

log fortianalyzer

Use this command to configure a connection with the FortiAnalyzer unit which will be used as the FortiManager's remote log server. You must configure the FortiAnalyzer unit to accept web service connections. Refer to "locallog filter" on page 80 for details of the filters.

Syntax

```
config system log fortianalyzer
  set status {disable | enable}
  set ip <ipv4>
  set secure_connection {disable | enable}
  set localid <string>
  set psk <passwd>
  set username <username_str>
  set passwd <pass_str>
  set auto_install {enable | disable}
end
```

Variable	Description
`status {disable | enable}`	Enable or disable to configure the connection to the FortiAnalyzer unit. Default: disable
`ip <ipv4>`	Enter the IP address of the FortiAnalyzer unit.
`secure_connection {disable | enable}`	Enable/disable secure connection with the FortiAnalyzer unit.
`localid <string>`	Enter the local ID.
`psk <passwd>`	Enter the preshared key with the FortiAnalyzer unit.
`username <username_str>`	Enter the FortiAnalyzer administrator login that the FortiManager unit will use to administer the FortiAnalyzer unit.
`passwd <pass_str>`	Enter the FortiAnalyzer administrator password for the account specified in `username`.
`auto_install {enable | disable}`	Enable to automatically update the FortiAnalyzer settings as they are changed on the FortiManager unit. Default: disable

Example

You can configure a secure tunnel for logs and other communications with the FortiAnalyzer unit.

```
config system log fortianalyzer
  set status enable
  set ip 192.168.1.100
  set username admin
  set passwd wert5W34bNg
end
```

log settings

Use this command to configure settings for logs.

Syntax

```
config system log settings
  set FCH-custom-field1 <string>
  set FCH-custom-field2 <string>
  set FCH-custom-field3 <string>
  set FCH-custom-field4 <string>
  set FCH-custom-field5 <string>
  set FCT-custom-field1 <string>
  set FCT-custom-field2 <string>
  set FCT-custom-field3 <string>
  set FCT-custom-field4 <string>
  set FCT-custom-field5 <string>
  set FGT-custom-field1 <string>
  set FGT-custom-field2 <string>
  set FGT-custom-field3 <string>
  set FGT-custom-field4 <string>
  set FGT-custom-field5 <string>
  set FML-custom-field1 <string>
  set FML-custom-field2 <string>
  set FML-custom-field3 <string>
  set FML-custom-field4 <string>
  set FML-custom-field5 <string>
  set FWB-custom-field1 <string>
  set FWB-custom-field2 <string>
  set FWB-custom-field3 <string>
  set FWB-custom-field4 <string>
  set FWB-custom-field5 <string>
  set FAZ-custom-field1 <string>
  set FAZ-custom-field2 <string>
  set FAZ-custom-field3 <string>
  set FAZ-custom-field4 <string>
  set FAZ-custom-field5 <string>
  config rolling-regular
    set days {fri | mon| sat | sun | thu | tue | wed}
    set del-files {disable | enable}
    set directory <string>
    set file-size <integer>
    set gzip-format {disable | enable}
    set hour <integer>
    set ip <ip>
    set ip2 <ip>
    set ip3 <ip>
    set log-format {csv | native | text}
    set min <integer>
    set password <string>
```

```
            set password2 <string>
            set password3 <string>
            set server-type {ftp | scp | sftp}
            set upload {disable | enable}
            set upload-hour <integer>
            set upload-mode backup
            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
FCH-custom-field1 <string>	Enter a name of the custom log field to index.
FCH-custom-field2 <string>	Enter a name of the custom log field to index.
FCH-custom-field3 <string>	Enter a name of the custom log field to index.
FCH-custom-field4 <string>	Enter a name of the custom log field to index.
FCH-custom-field5 <string>	Enter a name of the custom log field to index.
FCT-custom-field1 <string>	Enter a name of the custom log field to index.
FCT-custom-field2 <string>	Enter a name of the custom log field to index.
FCT-custom-field3 <string>	Enter a name of the custom log field to index.
FCT-custom-field4 <string>	Enter a name of the custom log field to index.
FCT-custom-field5 <string>	Enter a name of the custom log field to index.
FGT-custom-field1 <string>	Enter a name of the custom log field to index.
FGT-custom-field2 <string>	Enter a name of the custom log field to index.
FGT-custom-field3 <string>	Enter a name of the custom log field to index.
FGT-custom-field4 <string>	Enter a name of the custom log field to index.
FGT-custom-field5 <string>	Enter a name of the custom log field to index.
FML-custom-field1 <string>	Enter a name of the custom log field to index.
FML-custom-field2 <string>	Enter a name of the custom log field to index.
FML-custom-field3 <string>	Enter a name of the custom log field to index.
FML-custom-field4 <string>	Enter a name of the custom log field to index.
FML-custom-field5 <string>	Enter a name of the custom log field to index.
FWB-custom-field1 <string>	Enter a name of the custom log field to index.

Variable	Description
`FWB-custom-field2 <string>`	Enter a name of the custom log field to index.
`FWB-custom-field3 <string>`	Enter a name of the custom log field to index.
`FWB-custom-field4 <string>`	Enter a name of the custom log field to index.
`FWB-custom-field5 <string>`	Enter a name of the custom log field to index.
`FAZ-custom-field1 <string>`	Enter a name of the custom log field to index.
`FAZ-custom-field2 <string>`	Enter a name of the custom log field to index.
`FAZ-custom-field3 <string>`	Enter a name of the custom log field to index.
`FAZ-custom-field4 <string>`	Enter a name of the custom log field to index.
`FAZ-custom-field5 <string>`	Enter a name of the custom log field to index.
Variables for `config rolling-regular` **subcommand:**	
`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 {disable | enable}`	Enable or disable log file deletion after uploading.
`directory <string>`	The upload server directory.
`file-size <integer>`	Roll log files when they reach this size (MB).
`gzip-format {disable | enable}`	Enable or disable compression of uploaded log files.
`hour <integer>`	Log files rolling schedule (hour).

`ip <ip>`
`ip2 <ip>`
`ip3 <ip>`
	Upload server IP addresses. Configure up to three servers.

`log-format {csv | native | text}`	Format of uploaded log files.
`min <integer>`	Log files rolling schedule (minutes).

`password <string>`
`password2 <string>`
`password3 <string>`
	Upload server login passwords.

`server-type {ftp | scp | sftp}`	Upload server type.
`upload {disable | enable}`	Enable or disable log file uploads.
`upload-hour <integer>`	Log files upload schedule (hour).
`upload-mode backup`	Configure upload mode with multiple servers. Servers are attempted and used one after the other upon failure to connect.

Variable	Description
`upload-trigger {on-roll	on-schedule}`	Event triggering log files upload: • `on-roll`: Upload log files after they are rolled. • `on-schedule`: Upload log files daily.

`username <string>`
`username2 <string>`
`username3 <string>`
	Upload server login usernames.

`when {daily	none	weekly}`	Roll log files periodically.

mail

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

Syntax

```
config system mail
  edit <server>
    set auth {enable | disable}
    set passwd <passwd>
    set port <port>
    set user <string>
  end
```

Variable	Description
`<server>`	Enter the name of the mail server.
`auth {enable	disable}`	Enable or disable authentication.
`passwd <passwd>`	Enter the SMTP account password value.
`port <port>`	Enter the SMTP server port.
`user <string>`	Enter the SMTP account user name.

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 {enable | disable}
  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: 20, 50, or 255. Default: 50
`importance {optional | required}`	Select if this field is required or optional when entering standard information. Default: optional
`status {enable | disable}`	Enable or disable the metadata. Default: disable

ntp

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

Syntax

```
config system ntp
  set status {enable | disable}
  set sync_interval <min_str>
  config ntpserver
    edit <id>
      set ntpv3 {disable | enable}
      set server {<ipv4> | <fqdn_str>}
      set authentication {disable | enable}
      set key <passwd>
      set key-id <integer>
  end
end
```

Variable	Description
`status {enable | disable}`	Enable or disable NTP time setting. Default: disable

Variable	Description
`sync_interval <min_str>`	Enter time, in minutes, how often the FortiManager unit synchronizes its time with the NTP server. Default: 60
Variables for `config ntpserver` **subcommand:**	
`ntpv3 {disable | enable}`	Enable/disable NTPV3. Default: disable
`server {<ipv4> | <fqdn_str>}`	Enter the IP address or fully qualified domain name of the NTP server.
`authentication {disable | enable}`	Enable/disable MD5 authentication. Default: disable
`key <passwd>`	The authentication key.
`key-id <integer>`	The key ID for authentication. Default: 0

password-policy

Use this command to configure access password policies.

Syntax

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

Variable	Description
`status {disable | enable}`	Enable/disable the password policy. Default: enable
`minimum-length <integer>`	Set the password’s minimum length. Must contain between 8 and 256 characters. Default: 8

Variable	Description
`must-contain <lower-case-letter	non-alphanumeric	number	upper-case-letter>`	Characters that a password must contain. • `lower-case-letter`: the password must contain at least one lower case letter • `non-alphanumeric`: the password must contain at least one non-alphanumeric characters • `number`: the password must contain at least one number • `upper-case-letter`: the password must contain at least one upper case letter.
`change-4-characters {disable	enable}`	Enable/disable changing at least 4 characters for a new password. Default: disable
`expire <integer>`	Set the number of days after which admin users' password will expire; 0 means never. Default: 0

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-drilldown {enable | disable}
  set drilldown-interval <integer>
  set status {enable | disable}
end
```

Variable	Description
`aggressive-drilldown {enable	disable}`	Enable or disable the aggressive drill-down auto-cache.
`drilldown-interval <integer>`	The time interval in hours for drill-down auto-cache.
`status {enable	disable}`	Enable or disable the SQL report auto-cache.

report est-browse-time

Use this command to view or configure report settings.

Syntax

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

Variable	Description
max-num-user <integer>	Set the maximum number of users to estimate browse time.
status {enable | disable}	Enable or disable estimating browse time.

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_str>
    set dst <dst_ipv4mask>
    set gateway <gateway_ipv4>
  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_str>	Enter the port used for this route.
dst <dst_ipv4mask>	Enter the IP address and mask for the destination network.
gateway <gateway_ipv4>	Enter the default gateway IP 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 addr>
  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 used for this route.
`dst <IPv6 prefix>`	Enter the IP address and mask for the destination network.
`gateway <IPv6 addr>`	Enter the default gateway IP address for this network.

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 IP address and interface that connects it to the FortiManager unit.

For more information on SNMP traps and variables see the FortiManager v5.0 Patch Release 5 Administration Guide, or the Fortinet Knowledge Base online.

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 FortiManager unit as well.

Syntax

```
config system snmp community
  edit <index_number>
    set events <events_list>
    set name <community_name>
    set query-v1-port <port_number>
    set query-v1-status {enable | disable}
    set query-v2c-port <port_number>
    set query-v2c-status {enable | disable}
    set status {enable | disable}
    set trap-v1-rport <port_number>
    set trap-v1-status {enable | disable}
    set trap-v2c-rport <port_number>
    set trap-v2c-status {enable | disable}
    config hosts
      edit <host_number>
        set interface <if_name>
        set ip <address_ipv4>
      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>`	Enable the events for which the FortiManager unit should send traps to the SNMP managers in this community. • `cpu_high`: The CPU usage is too high. • `disk_low`: The log disk is getting close to being full. • `ha_switch`: A new unit has become the HA master. • `intf_ip_chg`: An interface IP address has changed. • `mem_low`: The available memory is low. • `sys_reboot`: The FortiManager unit has rebooted. Default: All events enabled
`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. For example the Logging and Reporting group would be interested in the `disk_low` events, but likely not the other events. The name is included in SNMP v2c trap packets to the SNMP manager, and is also present in query packets from, the SNMP manager.
`query-v1-port <port_number>`	Enter the SNMP v1 query port number used when SNMP managers query the FortiManager unit. Default: 161

Variable	Description
`query-v1-status {enable | disable}`	Enable or disable SNMP v1 queries for this SNMP community. Default: enable
`query-v2c-port <port_number>`	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. Default: 161
`query-v2c-status {enable | disable}`	Enable or disable SNMP v2c queries for this SNMP community. Default: enable
`status {enable | disable}`	Enable or disable this SNMP community. Default: enable
`trap-v1-rport <port_number>`	Enter the SNMP v1 remote port number used for sending traps to the SNMP managers. Default: 162
`trap-v1-status {enable | disable}`	Enable or disable SNMP v1 traps for this SNMP community. Default: enable
`trap-v2c-rport <port_number>`	Enter the SNMP v2c remote port number used for sending traps to the SNMP managers. Default: 162
`trap-v2c-status {enable | disable}`	Enable or disable SNMP v2c traps for this SNMP community. SNMP v2c traps sent out to SNMP managers include the community name. Default: enable
hosts variables	
`<host_number>`	Enter the index number of the host in the table. Enter an unused index number to create a new host.
`interface <if_name>`	Enter the name of the FortiManager unit that connects to the SNMP manager.
`ip <address_ipv4>`	Enter the IP address of the SNMP manager. Default: 0.0.0.0

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 IP 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
          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 *FortiManager v5.0 Patch Release 5 Administration Guide*, or the Fortinet Knowledge Base online.

Syntax

```
config system snmp sysinfo
  set contact-info <info_str>
  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 <info_str>`	Add the contact information for the person responsible for this FortiManager unit. The contact information can be up to 35 characters long.
`description <description>`	Add a name or description of the FortiManager unit. The description can be up to 35 characters long.
`engine-id <string>`	Local SNMP engine ID string (maximum 24 characters).
`location <location>`	Describe the physical location of the FortiManager unit. The system location description can be up to 35 characters long.
`status {enable | disable}`	Enable or disable the FortiManager SNMP agent. Default: disable
`trap-high-cpu-threshold <percentage>`	CPU usage when trap is set. Default: 80

Variable	Description
`trap-low-memory-threshold <percentage>`	Memory usage when trap is set. Default: 80
`trap-cpu-high-exclude-nice-threshold <percentage>`	CPU high usage excludes nice when the trap is sent.

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
```

Related topics

- snmp community
- snmp user

snmp user

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

For more information on SNMP traps and variables, see the FortiManager v5.0 Patch Release 5 Administration Guide, or the Fortinet Knowledge Base online.

Syntax

```
config system snmp user
  edit <name>
    set auth-proto {md5 | sha}
    set auth-pwd <passwd>
    set events <events_list>
    set notify-hosts <ip>
    set priv-proto {aes | des}
    set priv-pwd <passwd>
    set queries {enable | disable}
    set query-port <port_number>
    set security-level <level>
  end
end
```

Variable	Description
`<name>`	User name.
`auth-proto {md5 | sha}`	Authentication protocol. Default: sha
`auth-pwd <passwd>`	Password for the authentication protocol.
`events <events_list>`	Enable the events for which the FortiManager unit should send traps to the SNMP managers in this community. • `cpu-high-exclude-nice`: CPU usage exclude nice threshold. • `cpu_high`: The CPU usage is too high. • `disk_low`: The log disk is getting close to being full. • `ha_switch`: A new unit has become the HA master. • `intf_ip_chg`: An interface IP address has changed. • `lic-dev-quota`: High licensed device quota detected. • `lic-gbday`: High licensed log GB/Day detected. • `log-alert`: Log base alert message. • `log-data-rate`: High incoming log data rate detected. • `log-rate`: High incoming log rate detected. • `mem_low`: The available memory is low. • `sys_reboot`: The FortiManager unit has rebooted. Default: All events enabled.
`notify-hosts <ip>`	Hosts to send notifications (traps) to.

Variable	Description
`priv-proto {aes	des}`	Privacy (encryption) protocol. Default: aes
`priv-pwd <passwd>`	Password for the privacy (encryption) protocol.
`queries {enable	disable}`	Enable/disable queries for this user. Default: enable
`query-port <port_number>`	SNMPv3 query port Default: 161
`security-level <level>`	Security level for message authentication and encryption. • `auth-no-priv`: Message with authentication but no privacy (encryption). • `auth-priv`: Message with authentication and privacy (encryption). • `no-auth-no-priv`: Message with no authentication and no privacy (encryption). Default: `no-auth-no-priv`

sql

Configure Structured Query Language (SQL) settings.

Syntax

```
config system sql
  set auto-table-upgrade {enable | disable}
  set database-name <string>
  set database-type <mysql>
  set event-table-partition-time <integer>
  set event-table-partition-time-max <integer>
  set event-table-partition-time-min <integer>
  set logtype {none | app-ctrl | attack | content | dlp | emailfilter
      | event | generic | history | traffic | virus | voip
      | webfilter | netscan}
  set password <passwd>
  set prompt-sql-upgrade {enable | disable}
  set resend-device < >
  set reset < >
  set server <string>
  set start-time <hh>:<mm> <yyyy>/<mm>/<dd>
  set status {disable | local | remote}
  set table-partition-mode {auto | manual}
  set text-search-index {disable | enable}
  set traffic-table-partition-time <integer>
  set traffic-table-partition-time-max <integer>
```

```
          set traffic-table-partition-time-min <integer>
          set utm-table-partition-time <integer>
          set utm-table-partition-time-max <integer>
          set utm-table-partition-time-min <integer>
          set username <string>
          config custom-index
            edit <id>
              set device-type {FortiGate | FortiMail | FortiWeb}
              set index-field <Field-Name>
              set log-type {none | app-ctrl | attack | content | dlp
                   | emailfilter | event | generic | netscan | history
                   | traffic | virus | voip | webfilter}
            end
          config ts-index-field
            edit <category>
              set <value> <string>
            end
        end
```

Variable	Description
`auto-table-upgrade {enable	disable}`	Upgrade log tables if applicable at start time.
`database-name <string>`	Database name. Command only available when `status` is set to `remote`.
`database-type <mysql>`	Database type. Command only available when `status` is set to `local` or `remote`.
`event-table-partition-time <integer>`	SQL database table partitioning time range in seconds, between 10 and 31536000, for event logs.
`event-table-partition-time-max <integer>`	Maximum SQL database table partitioning time range in seconds for event logs.
`event-table-partition-time-min <integer>`	Minimum SQL database table partitioning time range in seconds for event logs.
`logtype {none	app-ctrl	attack	content	dlp	emailfilter	event	generic	history	traffic	virus	voip	webfilter	netscan}`	Log type. Command only available when `status` is set to `local` or `remote`.
`password <passwd>`	The password that the Fortinet unit will use to authenticate with the remote database. Command only available when `status` is set to `remote`.
`prompt-sql-upgrade {enable	disable}`	Prompt to convert log database into SQL database at start time on GUI.
`resend-device < >`	
`reset < >`	

Variable	Description
server <string>	Set the database ip or hostname.
start-time <hh>:<mm> <yyyy>/<mm>/<dd>	Start date and time <hh:mm yyyy/mm/dd>. Command only available when status is set to local or remote.
status {disable | local | remote}	SQL database status.
table-partition-mode {auto | manual}	SQL database table partitioning mode: • auto: automatically adjust the time-partition-time-range • manual: manually set the time-partition-time-range.
text-search-index {disable | enable}	Disable or enable the text search index.
traffic-table-partition-time <integer>	SQL database table partitioning time range in seconds, between 10 and 31536000, for traffic logs.
traffic-table-partition-time-max <integer>	Maximum SQL database table partitioning time range in seconds for traffic logs.
traffic-table-partition-time-min <integer>	Minimum SQL database table partitioning time range in seconds for traffic logs.
utm-table-partition-time <integer>	SQL database table partitioning time range in seconds, between 10 and 31536000, for UTM logs.
utm-table-partition-time-max <integer>	Maximum SQL database table partitioning time range in seconds for UTM logs.
utm-table-partition-time-min <integer>	Minimum SQL database table partitioning time range in seconds for UTM logs.
username <string>	User name for login remote database.
Variables for config custom-index **subcommand:**	
device-type {FortiGate | FortiMail | FortiWeb}	Set the device type. Select one of the following: FortiGate, FortiMail, or FortiWeb.
index-field <Field-Name>	Enter a valid field name. Examples include: dtime, cluster_id, ebtime, logid, type, subtype, level, devid, status, trandisp, srcip, srcname, srcport, dstip, dstname, dstport, tranip, tranport, proto, duration, policyid, sentbyte, rcvdbyte, sentpkt, rcvdpkt, vpn, srcintf, dstintf, sessionid, user, group, custom_field1, custom_field2, custom_field3, custom_field4, custom_field5, wanoptapptype, wanin, wanout, lanin, lanout, app, appcat, shaperdropsentbyte, shaperdroprcvdbyte, shaperperipdropbyte, shapersentname, shaperrcvdname, shaperperipname, identidx, transip, transport, dstcountry, vpntype.

Variable	Description
`log-type {none | app-ctrl | attack | content | dlp | emailfilter | event | generic | netscan | history | traffic | virus | voip | webfilter}`	Set the log type.
Variables for `config ts-index-field` **subcommand:**	
`<category>`	Category of the text search index fields. The following is the list of categories and their default fields. Select one of the following: • `FGT-app-ctrl: user, group, srcip, dstip, dstport, service, app, action, status, hostname` • `FGT-attack: severity, srcip, proto, user, attackname` • `FGT-content: from, to, subject, action, srcip, dstip, hostname, status` • `FGT-dlp: user, srcip, service, action, file` • `FGT-emailfilter: user, srcip, from, to, subject` • `FGT-event: subtype, ui, action, msg` • `FGT-traffic: user, srcip, dstip, service, app, utmaction, utmevent` • `FGT-virus: service, srcip, file, virus, user` • `FGT-voip: action, user, src, dst, from, to` • `FGT-webfilter: user, srcip, status, catdesc` • `FGT-netscan: user, dstip, vuln, severity, os` • `FML-emailfilter: client_name, dst_ip, from, to, subject` • `FML-event: subtype, msg` • `FML-history: classifier, disposition, from, to, client_name, direction, domain, virus` • `FML-virus: src, msg, from, to` • `FWB-attack: http_host, http_url, src, dst, msg, action` • `FWB-event: ui, action, msg` • `FWB-traffic: src, dst, service, http_method, msg`

Variable	Description
`<value>`	Fields of the text search filter.
`<string>`	Select one or more field names separated with a comma. Field names include: `itime, dtime, cluster_id, logid, type, subtype, level, devid, user, group, kind, profile, direction, srcip, srcport, srcintf, dstip, dstport, dstintf, srcname, dstname, proto, service, policyid, sessionid, applist, apptype, app, action, status, count, filename, filesize, immsg, content, reason, req, phone, msg, vd, custom_field1, custom_field2, custom_field3, custom_field4, custom_field5, attackid, profiletype, profilegroup, identidx, hostname, url, agent, dstuser, srcuser, osname, osversion, unauthuser, unauthusersource, filteridx, eventtype`.

syslog

Use this command to configure syslog servers.

Syntax

```
config system syslog
  edit <name>
    set ip <string>
    set port <integer>
  end
end
```

Variable	Description
`ip <string>`	Syslog server IP address or hostname.
`port <integer>`	Syslog server port.

fmupdate

Use `fmupdate` to configure settings related to FortiGuard service updates and the FortiManager unit’s built-in FortiGuard Distribution Server (FDS).

FortiManager CLI commands and variables are case sensitive.

This chapter contains following sections:

analyzer

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
`status {enable | disable}`	Enable or 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

Use the following commands to configure antivirus and IPS related settings.

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 FortiGuard Distribution Server (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 or disable logging of FortiGuard antivirus and IPS service updates of FortiGate devices. Default: disable
`log-server {enable | disable}`	Enable or disable logging of update packages received by the built-in FDS server. Default: disable

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
```

av-ips fct server-override

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

Syntax

```
config fmupdate av-ips fct server-override
  set status {enable | disable}
  config servlist
    edit <id>
      set ip <xxx.xxx.xxx.xxx>
      set port <integer>
    end
```

```
        end
```

Variable	Description
`status {enable | disable}`	Enable or disable the override. Default: disable
Variable for `config servlist` **subcommand:**	
`<id>`	Override server ID (1-10).
`ip <xxx.xxx.xxx.xxx>`	Enter the IP address of the override server address. Default: 0.0.0.0
`port <integer>`	Enter the port number to use when contacting the FDS. Default: 443

Example

You could configure the FortiManager unit’s built-in FDS to use a specific FDS server and a different port when retrieving FortiGuard antivirus updates for FortiClient from the FDS.

```
config fmupdate av-ips fct server-override
  set status enable
  config servlist
    edit 1
      set ip 192.168.25.152
      set port 80
    end
  end
```

av-ips fgt server-override

Use this command to override the default IP address and port that the built-in FDS contacts when requesting FortiGuard antivirus and IPS updates for FortiGate units from the FDS.

Syntax

```
config fmupdate av-ips fgt server-override
  set status {enable | disable}
  config servlist
  edit <id>
    set ip <xxx.xxx.xxx.xxx>
    set port <integer>
  end
end
```

Variable	Description
`status {enable | disable}`	Enable or disable the override. Default: disable
Variable for `config servlist` **subcommand:**	

Variable	Description
`<id>`	Override server ID (1-10)
`ip <xxx.xxx.xxx.xxx>`	Enter the IP address of the override server address. Default: 0.0.0.0
`port <integer>`	Enter the port number to use when contacting the FDS. Default: 443

Example

You could configure the FortiManager unit's built-in FDS to use a specific FDS server and a different port when retrieving FortiGuard antivirus and IPS updates for FortiGate units from the FDS.

```
config fmupdate av-ips fgt server-override
  set status enable
  config servlist
    edit 1
      set ip 172.27.152.144
      set port 8890
    end
  end
```

av-ips 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 av-ips push-override
  set ip <recipientaddress_ipv4>
  set port <recipientport_int>
  set status {enable | disable}
end
```

Variable	Description
`ip <recipientaddress_ipv4>`	Enter the external or virtual IP address of the NAT device that will forward push messages to the FortiManager unit. Default: 0.0.0.0
`port <recipientport_int>`	Enter the receiving port number on the NAT device. Default: 9443
`status {enable | disable}`	Enable or 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 av-ips push-override
  set status enable
  set ip 172.16.124.135
  set port 9000
end
```

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

av-ips push-override-to-client

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 command 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 av-ips push-override-to-client
  set status {enable | disable}
  config <announce-ip>
    edit <id>
      set ip <xxx.xxx.xxx.xxx>
      set port <recipientport_int>
    end
  end
```

Variable	Description
`status {enable | disable}`	Enable or disable the push updates. Default: disable
`<announce-ip>`	Config the IP information of the device.
`<id>`	Edit the announce IP ID.
`ip <xxx.xxx.xxx.xxx>`	Enter the announce IP address. Default: 0.0.0.0
`port <recipientport_int>`	Enter the announce IP port. Default: 9443

av-ips update-schedule

Use this command to configure the built-in FDS to retrieve FortiGuard antivirus and IPS updates at a specified day and time.

Syntax

```
config fmupdate av-ips 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
```

Variable	Description
`day {Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday}`	Enter the day of the week when the update will begin. This option only appears when the `frequency` is `weekly`.
`frequency {every | daily | weekly}`	Enter to configure the frequency of the updates. Default: every
`status {enable | disable}`	Enable or disable regularly scheduled updates. Default: enable
`time <hh:mm>`	Enter to configure the time or interval when the update will begin. For example, if you want to schedule an update every day at 6:00 PM, enter `18:00`. The time period format is the 24-hour clock: hh=0-23, mm=0-59. If the minute is `60`, the updates will begin at a random minute within the hour. If the `frequency` is `every`, the time is interpreted as an hour and minute interval, rather than a time of day. Default: 01:60

Example

You could schedule the built-in FDS to request the latest FortiGuard antivirus and IPS updates every five hours, at a random minute within the hour.

```
config fmupdate av-ips udpate-schedule
  set status enable
  set frequency every
  set time 05:60
end
```

av-ips web-proxy

Use this command to configure a web proxy if FortiGuard antivirus and IPS updates must be retrieved through a web proxy.

Syntax

```
config fmupdate av-ips web-proxy
  set ip <proxy_ipv4>
  set mode {proxy | tunnel}
  set password <passwd_str>
  set port <port_int>
  set status {enable | disable}
  set username <username_str>
end
```

Variable	Description
`ip <proxy_ipv4>`	Enter the IP address of the web proxy. Default: 0.0.0.0
`mode {proxy | tunnel}`	Enter the web proxy mode.
`password <passwd_str>`	If the web proxy requires authentication, enter the password for the user name.
`port <port_int>`	Enter the port number of the web proxy. Default: 80
`status {enable | disable}`	Enable or disable connections through the web proxy. Default: disable
`username <username_str>`	If the web proxy requires authentication, enter the user name.

Example

You could enable a connection through a non-transparent web proxy on an alternate port.

```
config fmupdate av-ips web-proxy
  set status enable
  set mode proxy
  set ip 10.10.30.1
  set port 8890
  set username avipsupdater
  set password cvhk3rf3u9jvsYU
end
```

custom-url-list

Use this command to configure the URL list.

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 URL database. • `both`: Support both custom-url and FortiGuard database • `custom-url`: Customer imported URL list • `fortiguard-db`: FortiGuard database.

device-version

Use this command to configure the correct firmware version of the device or devices connected or will be connecting to the FortiManager unit. You should verify what firmware version is currently running on the device before using this command.

Syntax

```
config fmupdate device-version
  set faz <firmware_version>
  set fct <firmware_version>
  set fgt <firmware_version>
  set fml <firmware_version>
  set fsw <firmware_version>
end
```

Variable	Description
`faz <firmware_version>`	Enter the correct firmware version that is currently running on the FortiAnalyzer units. Select one of the following: • 3.0: Support version 3.0 • 4.0: Support version 4.0 • 5.0: Support version 5.0 • 6.0: Support version greater than 5.0
`fct <firmware_version>`	Enter the firmware version that is currently running for FortiClient agents. Select one of the following: • 3.0: Support version 3.0 • 4.0: Support version 4.0 • 5.0: Support version 5.0 • 6.0: Support version greater than 5.0

Variable	Description
`fgt <firmware_version>`	Enter the firmware version that is currently running for FortiGate units. Select one of the following: • 3.0: Support version 3.0 • 4.0: Support version 4.0 • 5.0: Support version 5.0 • 6.0: Support version greater than 5.0
`fml <firmware_version>`	Enter the firmware version that is currently running for the FortiMail units. Select one of the following: • 3.0: Support version 3.0 • 4.0: Support version 4.0 • 5.0: Support version 5.0 • 6.0: Support version greater than 5.0
`fsw <firmware_version>`	Enter the firmware version that is currently running for the FortiSwitch units. Select one of the following: • 3.0: Support version 3.0 • 4.0: Support version 4.0 • 5.0: Support version 5.0 • 6.0: Support version greater than 5.0

Example

In the following example, the FortiGate units, including FortiClient agents, are configured with the firmware version 5.0.

```
config fmupdate device-version
  set faz 4.0
  set fct 5.0
  set fgt 5.0
end
```

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
```

Use `value` to set the size of the Upgrade Manager disk quota in megabytes (MB). The default size is 10 gigabytes (GB). 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 <port_int>
end
```

Variable	Description
status {enable | disable}	Enable or disable built-in FDS service to FortiClient installations. Default: enable
port <port_int>	Enter the port number on which the built-in FDS should provide updates to FortiClient installations. 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-settings
  set fds-pull-interval <integer>
  set max-av-ips-version <integer>
end
```

Variable	Description
fds-pull-interval <integer>	Time interval FortiManager may pull updates from FDS (1 - 120 minutes).
max-av-ips-version <integer>	The maximum number of AV/IPS full version downloadable packages (1-1000).

multilayer

Use this command to set multilayer mode configuration.

Syntax

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

Variable	Description
`webspam-rating {disable | enable}`	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 {disable | enable}
end
```

Variable	Description
`status {disable | enable}`	Enable or disable the public network. Default: enable

Example

The following example shows how to enable public network.

```
config fmupdate publicnetwork
  (publicnetwork) # set status enable
end
```

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.

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 FortiManager unit.

Syntax

```
config fmupdate server-access-priorities
  set access-public {disable | enable}
  set av-ips {disable | enable}
  set web-spam {disable | enable}
end
```

Variable	Description
`access-public {disable | enable}`	Disable to prevent FortiManager default connectivity to public FDS and FortiGuard servers. Default: enable
`av-ips {disable | enable}`	Enable to allow the FortiGate unit to get antivirus updates from other FortiManager units or private FDS servers. Default: disable
`web-spam {disable | enable}`	Enable or disable private server in web-spam.

config private-server

Use this command to configure multiple FortiManager units and private servers.

Syntax

```
config fmupdate server-access-priorities
  config private-server
    edit <id>
      set ip <xxx.xxx.xxx.xxx>
      set time_zone <integer>
    end
  end
```

Variable	Description
`<id>`	Enter a number to identify the FortiManager unit or private server (1 to 10).
`ip <xxx.xxx.xxx.xxx>`	Enter the IP address of the FortiManager unit or private server.
`time_zone <integer>`	Enter the correct time zone of the private server. Using -24 indicates that the server is using the local time zone.

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
```

server-override-status

Syntax

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

Variable	Description
`mode {loose | strict}`	Set the server override mode. • `loose`: allow access other servers • `strict`: access override server only. Default: `loose`

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 query-antispam {disable | enable}
  set query-antivirus {disable | enable}
  set query-filequery {disable | enable}
  set query-webfilter {disable | enable}
  set use-cert {BIOS | FortiGuard}
end
```

Variable	Description
`avips {enable | disable}`	Enable the built-in FDS to provide FortiGuard antivirus and IPS updates. Default: disable
`query-antispam {disable | enable}`	Enable or disable antispam service.

Variable	Description
`query-antivirus {disable | enable}`	Enable or disable antivirus service.
`query-filequery {disable | enable}`	Enable or disable file query service.
`query-webfilter {disable | enable}`	Enable or disable web filter service.
`use-cert {BIOS | FortiGuard}`	Choose local certificate. • `BIOS`: Use default certificate in BIOS. • `FortiGuard`: Use default certificate as FortiGuard. Default: `BIOS`

Example

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

support-pre-fgt43

Use this command to support FortiOS v4.0 MR2 and FortiMail v4.0 MR2 devices for FortiGuard Center updates.

Syntax

```
config fmupdate support-pre-fgt43
  set status {enable | disable}
  end
end
```

Variable	Description
`status {enable | disable}`	Enable or disable update support. Default: disable

web-spam

Use the following commands to configure FortiGuard antispam related settings.

web-spam fct server-override

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

Syntax

```
config fmupdate web-spam fct server-override
  set status {enable | disable}
  config servlist
    edit <id>
```

```
            set ip <xxx.xxx.xxx.xxx>
            set port <port_int>
         end
      end
```

Variable	Description
`status {enable | disable}`	Enable or disable the override. Default: disable
Variable for `config servlist` **subcommand:**	
`<id>`	Override server ID (1-10).
`ip <xxx.xxx.xxx.xxx>`	Enter the IP address of the override server address. Default: 0.0.0.0
`port <port_int>`	Enter the port number to use when contacting the FDS. Default: 443

web-spam fgd-log

Use this command to configure the FortiGuard web-spam log settings.

Syntax

```
config fmupdate web-spam fgd-log
   set spamlog {all | disable | nospam}
   set status {disable | enable}
   set urllog {all | disable | miss}
end
```

Variable	Description
`spamlog {all | disable | nospam}`	Configure the anti spam log settings. • `all`: Log all Spam lookups • `disable`: Disable Spam log • `nospam`: Log Non-spam events.
`status {disable | enable}`	Enable or disable the FortiGuard server event log status.
`urllog {all | disable | miss}`	Configure the web filter log setting. • `all`: Log all URL lookups • `disable`: Disable URL log • `miss`: Log URL rating misses.

web-spam fgd-setting

Use this command to configure FortiGuard run parameters.

Syntax

```
config fmupdate web-spam fgd-setting
  set as-cache <integer>
  set as-log {all | disable | nospam}
  set as-preload {disable | enable}
  set av-cache <integer>
  set av-log {all | disable | novirus}
  set av-preload {disable | enable}
  set eventlog-query {disable | enable}
  set fq-cache <integer>
  set fq-log {all | disable | nofilequery}
  set fq-preload {disable | enable}
  set linkd-log {disable | enable}
  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-fq-dbver <string>
  set restrict-wf-dbver <string>
  set stat-log-interval <integer>
  set stat-sync-interval <integer>
  set update-interval <integer>
  set update-log {disable | enable}
  set wf-cache <integer>
  set wf-log {all | disable | nourl}
  set wf-preload {disable | enable}
end
```

Variable	Description
`as-cache <integer>`	Set the antispam service maximum memory usage (100 to 2800MB).
`as-log {all | disable | nospam}`	Antispam log setting.
`as-preload {disable | enable}`	Enable or disable preloading the antispam database into memory.
`av-cache <integer>`	Set the web filter service maximum memory usage (100 to 500MB).
`av-log {all | disable | novirus}`	Antivirus log settings.
`av-preload {disable | enable}`	Enable or disable preloading the antivirus database into memory.

Variable	Description
`eventlog-query {disable | enable}`	Record query to event-log besides fgd-log.
`fq-cache <integer>`	Set the file query service maximum memory usage (100 to 500MB).
`fq-log {all | disable | nofilequery}`	Filequery log settings.
`fq-preload {disable | enable}`	Enable or disable preloading the filequery database to memory.
`linkd-log {disable | enable}`	Enable or disable the linkd log.
`max-log-quota <integer>`	Maximum log quota setting (100-20480MB).
`max-unrated-size <integer>`	Maximum number of unrated site in memory, from 10 to 5120K. The default is 500K.
`restrict-as1-dbver <string>`	Restrict the system update to indicated the antispam(1) database version.
`restrict-as2-dbver <string>`	Restrict the system update to indicated the antispam(2) database version.
`restrict-as4-dbver <string>`	Restrict the system update to indicated the antispam(4) database version.
`restrict-av-dbver <string>`	Restrict the system update to indicated the antivirus database version.
`restrict-fq-dbver <string>`	Restrict the system update to indicated filequery database version.
`restrict-wf-dbver <string>`	Restrict the system update to indicated the webfilter database version.
`stat-log-interval <integer>`	Statistic log interval setting (1-1440 minutes).
`stat-sync-interval <integer>`	Synchronization interval for statistics of unrated sites, from 1 to 60 minutes.
`update-interval <integer>`	Set the FortiGuard database update wait time if there are not enough delta files (2 to 24 hours).
`update-log {disable | enable}`	Update log setting.
`wf-cache <integer>`	Set the web filter service maximum memory usage (100 to 2800MB).
`wf-log {all | disable | nourl}`	Web filter log setting.
`wf-preload {disable | enable}`	Enable or disable preloading the web filter database into memory.

web-spam fgt server-override

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

Syntax

```
config fmupdate web-spam fgt server-override
  set status {enable | disable}
  config servlist
    edit <id>
      set ip <xxx.xxx.xxx.xxx>
      set port <port_int>
    end
  end
```

Variable	Description
`status {enable | disable}`	Enable or disable the override. Default: disable
Variable for `config servlist` **subcommand:**	
`<id>`	Override server ID (1-10).
`ip <xxx.xxx.xxx.xxx>`	Enter the IP address of the override server address. Default: 0.0.0.0
`port <port_int>`	Enter the port number to use when contacting the FDS. Default: 443

web-spam poll-frequency

Use this command to configure the web-spam poll frequency.

Syntax

```
config fmupdate web-spam poll-frequency
  set time <hh:mm>
end
```

Variable	Description
`time <hh:mm>`	Enter the poll frequency time interval

web-spam web-proxy

Use this command to configure the web-spam web-proxy.

Syntax

```
config fmupdate web-spam web-proxy
  set time <hh:mm>
  set ip <proxy_ipv4>
```

```
    set mode {proxy | tunnel}
    set password <passwd>
    set port <integer>
    set status {disable | enable}
  end
```

Variable	Description
`ip <proxy_ipv4>`	Enter the IP address of the web proxy. Default: 0.0.0.0
`mode {proxy | tunnel}`	Enter the web proxy mode.
`password <passwd>`	If the web proxy requires authentication, enter the password for the user name.
`port <integer>`	Enter the port number of the web proxy. Default: 80
`status {disable | enable}`	Enable or disable connections through the web proxy. Default: disable
`username <string>`	If the web proxy requires authentication, enter the user name.

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.

This chapter contains following sections:

add-vm-license

Add a VM license to the FortiManager.

Syntax

```
execute add-vm-license <vm license>
```

This command is only available on FortiManager VM models.

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.

Syntax

```
execute backup all-settings {ftp | scp | sftp} <ip> <string>
     <username> <password> <ssh-cert> <crptpasswd>
execute backup logs <device name(s)> {ftp | scp | sftp} <ip>
     <username> <password> <directory>
execute backup logs-only <device name(s)> {ftp | scp | sftp} <ip>
     <username> <password> <directory>
execute backup logs-rescue <device serial number(s)> {ftp | scp |
     sftp} <ip> <username> <password> <directory>
execute backup reports <report schedule name(s)> {ftp | scp | sftp}
     <ip> <username> <password> <directory>
execute backup reports-config <adom name(s)> {ftp | scp | sftp} <ip>
     <username> <password> <directory>
```

Variable	Description
`all-settings`	Backup all FortiManager settings to a file on a server.
`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.

Variable	Description
`<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.
`<ip>`	Enter the server IP address.
`<string>`	Enter the path and file name for the backup.
`<username>`	Enter username to use to log on the backup server.
`<password>`	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.
`<directory>`	Enter the path to where the file will be backed up to on the backup server.

Example

This example shows how to backup the FortiManager unit system settings to a file named `fmg.cfg` on a server at IP address 192.168.1.23 using the admin username, a password of 123456.

```
execute backup all-settings ftp 192.168.1.23 fmd.cfg admin 123456
Starting backup all settings...
Starting transfer the backup file to FTP server...
```

Related topics

- restore

bootimage

Use this command to set the boot image partition.

Syntax

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

This command is only available on FortiManager hardware models.

certificate

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>|<import>} <cert_name> <tftp_ip>
```

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

certificate local

Use these commands to list local certificates, and to import or export local certificates. To generate a certificate request, see “certificate local generate” on page 130.

Syntax

To list the local certificates installed on the FortiManager unit:

```
execute certificate local list
```

To export or import local certificates:

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

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

certificate local generate

Use this command to generate a certificate request.

Syntax

```
execute certificate local generate <certificate-name_str> <subject>
     <number> [<optional_information>]
```

Variable	Description
`<certificate-name_str>`	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.
`<number>`	Enter 512, 1024, 1536 or 2048 for the size in bits of the encryption key.
`<subject>`	Enter one of the following pieces of information to identify the FortiManager unit being certified: • the FortiManager unit IP address • the fully qualified domain name of the FortiManager unit • an email address that identifies the FortiManager unit • An IP address or domain name is preferable to an email address.
`[<optional_information>]`	Enter `optional_information` as required to further identify the unit. See "Optional information variables" for the list of 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.

Optional information variables

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 e-mail 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.

chassis

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

Syntax

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

Variable	Description
`<pw>`	Replace the chassis password.

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

console

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: 115200
```

Set the baudrate to 9600:

```
execute console baudrate 9600
```

date

Get or set the FortiManager system 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 `2100`

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

Dates entered will be validated - `mm` and `dd` require 2 digits, and `yyyy` requires 4 digits. Entering fewer digits will result in an error.

Example

This example sets the date to 17 September 2010:

```
execute date 09/17/2010
```

device

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

Syntax

```
execute device replace pw <name> <pw>
execute device replace sn <devname> <serialnum>
```

Variable	Description
`<name>`	The name of the device.
`<pw>`	The device password.

`<devname>`	The name of the device.
`<serialnum>`	The new serial number.

Example

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

devicelog

devicelog clear

Use this command to clear a device log.

Syntax

```
execute devicelog clear <device>
```

Variable	**Description**
`<device>`	The serial number of the device.

dmserver

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 <devicename>
```

Variable	Description
`<devicename>`	The name of the device.

dmserver showconfig

Use this command to show a specific configuration type and revision.

You cannot use this command with read-only permission.

Syntax

```
execute dmserver showconfig <devicename>
```

Variable	Description
`<devicename>`	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.

You cannot use this command with read-only permission.

Syntax

```
execute dmserver showrev <devicename> <revision>
```

Variable	Description
`<devicename>`	The name of the device.
`<revision>`	The configuration revision you want to display.

factory-license

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

Syntax

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

The following table lists command variables, description, and default values where applicable.

Variables	Description
`<key>`	Enter the factory license key.

fgfm

fgfm reclaim-dev-tunnel

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

Syntax

```
execute fgfm reclaim-dev-tunnel <devicename>
```

Variable	Description
`<devicename>`	Enter the device name.

fmpolicy

fmpolicy copy-global-object

Use this command to set the policy to copy a global object.

Syntax

```
execute fmpolicy copy-global-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> <devid> <revname>
```

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

fmpolicy print-device-database

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

Syntax

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

fmpolicy print-device-object

Use this command to display the device objects.

Syntax

```
execute fmpolicy print-device-object <devname> <vdom> <category>
     {<object name>|all|list} <output>
```

Variable	Description
`<devname>`	Enter the name of the device.
`<vdom>`	Enter the name of the VDOM.
`<category>`	Enter the category of the ADOM.
`<object name>`	Show object by name.
`all`	Show all objects.
`list`	Get all objects.
`<output>`	Output file name.

fmpolicy print-global-database

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

Syntax

```
execute fmpolicy print-global-database <adom_name> <ouput_filename>
```

fmpolicy print-global-object

Use this command to display the global object for an ADOM.

Syntax

```
execute fmpolicy print-global-object <adom> <category> <object name>
     <output>
```

Variable	Description
`<adom>`	Enter the name of the ADOM.
`<category>`	Enter the category of the ADOM.
`<object name>`	Show object by name. Enter `all` to show all objects, or enter `list` to get all objects.
`<output>`	Output file name.

fmprofile

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> <devname>
```

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

Variable	Description
`<adom>`	Enter the name of the ADOM.
`<devname>`	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>
```

Variable	Description
`<adom>`	Enter the name of the ADOM.

fmscript

fmscript clean-sched

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

Syntax

```
execute fmscript clean-sched
```

fmscript delete

Delete a script from FortiManager.

Syntax

```
execute fmscript delete <scriptid>
```

Variable	Description
`<scriptid>`	The name of the script to delete.

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> <devicename> <buildno>
     <hostname> <serialno>
```

Variable	Description
`<ftpserver_ipv4>`	The IP 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 or TCL.
`<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.
`<devicename>`	The device name to run this script on. Options include any, or the specific device name as it is displayed on the FortiManager system

Variable	Description
`<buildno>`	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.
`<serialno>`	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
```

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
```

Related topics

- fmscript import
- fmscript run

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 <scriptid_int> <run_on> <devname> <adomname>
```

Variable	Description
`<scriptid_int>`	The ID number of the script to run.
`<run_on>`	Select where to run the script: • `device:` on the device • `group`: on a group • `devicedb:` on the device’s object database • `globaldb`: on the global database
`<devname>`	Enter the device name to run the script on. This is required if `device` or `devicedb` were chosen for where to run the script.
`<adomname>`	Name of the administrative domain.

Related topics

- fmscript import
- fmscript list

fmscript showlog

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

Syntax

```
execute fmscript showlog <devicename>
```

Variable	Description
`<devicename>`	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

fmupdate {ftp | scp | tftp} import

You can import packages using the FTP, SCP, or TFTP servers.

Syntax

```
execute fmupdate {ftp | scp | tftp} import <type> <remote_file> <ip>
    <port> <remote_path> <user> <password>
```

Variable	Description
`{ftp | scp | tftp}`	Select ftp, scp, or tftp as the file transfer protocol to use.
`<type>`	Select the type of file to export or import. Options include: av-ips, fct-av, url, spam, license-fgt, license-fct, and custom-url, domp.
`<remote_file>`	Update manager packet file name on the server or host.
`<ip>`	Enter the FQDN or the IP Address of the server.
`<port>`	Enter the port to connect to on the remote SCP host.
`<remote_path>`	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.
`<user>`	Enter the user name to log into the FTP server or SCP host
`<password>`	Enter the password to log into the FTP server or SCP host

fmupdate {ftp | scp | tftp} export

You can export packages using the FTP, SCP, or TFTP servers.

Syntax

```
execute fmupdate {ftp | scp | tftp} export <type> <remote_file> <ip>
     <port> <remote_path> <user> <password>
```

Variable	Description
{ftp | scp | tftp}	Select ftp, scp, or tftp as the file transfer protocol to use.
<type>	Select the type of file to export or import. Options include: url, spam, license-package, license-info-in-xml, custom-url, and domp.
<remote_file>	Update manager packet file name on the server or host.
<ip>	Enter the FQDN or the IP address of the server.
<port>	Enter the port to connect to on the remote SCP host.
<remote_path>	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.
<user>	Enter the user name to log into the FTP server or SCP host
<password>	Enter the password to log into the FTP server or SCP host

format

format disk

Format the hard disk on the FortiManager system.

Syntax

```
execute format <disk | disk-ext4> <Raid level>
```

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. FortiManager's IP address, and routing information will be preserved.

Variable	Description
<disk | disk-ext4>	Select to format the hard disk or format the hard disk with ext4 file system.
<disk_partition_2>	Format hard disk partition 2 (static)
<disk_partition_2-ext4>	Format hard disk partition 2 (static) with ext4 file system.

`<disk_partition_3>`	Format hard disk partition 3 (dynamic)
`<disk_partition_3-ext4>`	Format hard disk partition 3 (dynamic) with ext4 file system.
`<disk_partition_4>`	Format hard disk partition 4 (misc)
`<disk_partition_4-ext4>`	Format hard disk partition 4 (misc) with ext4 file system.
`<Raid level>`	Enter the RAID level to be set on the device. This option is only available on FortiManager models that support RAID. Press the Enter key to show available RAID levels.

Related topics

- restore

log

Manage device logs.

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 MB.

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 `All` for all devices.
`<permission>`	Select one of the following: • `all: All permissions` • `logs: Log permission` • `content: Content permission` • `quar: Quarantine permission` • `ips: IPS permission`

{enable | disable}>	Enable or disable the option.

log dlp-files clear

Delete log DLP files.

Syntax

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

Variable	Description
<string>	Enter the device name.
<string>	Enter the device archive type. Select one of: all, email, 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> <user-name> <password> <file-name>
     <device-id>
```

Variable	Description
<service>	Enter the transfer protocol. Select one of: ftp, sftp, scp, tftp.
<ip>	Enter the server IP address.
<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. For example, FG100A2104400006.

log ips-pkt clear

Delete IPS packet files.

Syntax

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

Variable	Description
<string>	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-integrity

Query the log file’s MD5 checksum and timestamp.

Syntax

```
execute log-integrity <device name> <string>
```

Variable	Description
`<device name>`	Enter the name of the log device. Example: FWF40C3911000061
`<string>`	The log file name

lvm

With Logical Volume Manager (LVM), a FortiManager VM device can have up to eight 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.

Syntax

```
execute lvm extend [arg...]
execute lvm info
execute lvm start
```

The following table lists command variables, description, and default values where applicable.

Variables	Description
`extend`	Extend the LVM logical volume.
`[arg...]`	Argument list (0 to 7).

info	Get system LVM information.
start	Start using LVM.

Example

View LVM information:

```
execute lvm info
  disk01  In use          80.0(GB)
  disk02  Not present
  disk03  Not present
  disk04  Not present
  disk05  Not present
  disk06  Not present
  disk07  Not present
  disk08  Not present
```

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>	IP address of network device to contact.
<hostname>	DNS resolvable hostname of network device to contact.

Example

This example shows how to ping a host with the IP address 192.168.1.23:

```
execute ping 192.168.1.23
```

Related topics

- traceroute

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>`	IPv6 address of network device to contact.
`<hostname>`	DNS resolvable hostname of network device to contact.

Example

This example shows how to ping a host with the IP address 8001:0DB8:AC10:FE01:0:0:0:0:

```
execute ping6 8001:0DB8:AC10:FE01:0:0:0:0:
```

Related topics

- traceroute

raid

Use these commands to add or delete a hard disk to RAID.

Syntax

```
execute raid add-disk <disk index>
execute raid delete-disk <disk index>
```

This command is only available on FortiManager models that support RAID.

reboot

Restart the FortiManager system.

This command will disconnect all sessions on the FortiManager system.

Syntax

```
execute reboot
```

Example

```
execute reboot
The system will be rebooted.
Do you want to continue? (y/n)
```

Related topics

- reset
- restore
- shutdown

remove

Use this command to remove all reports from the FortiManager system.

Syntax

```
execute remove <reports>
```

Variable	Description
`<reports>`	Remove all reports.

Example

```
execute remove reports
```

reset

Use this command to reset the FortiManager unit to factory defaults.

This command will disconnect all sessions and restart the FortiManager unit.

Syntax

```
execute reset all-settings
```

Example

```
execute reset all-settings
This operation will reset all settings to factory defaults
Do you want to continue? (y/n)
```

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
- change the FortiManager unit image

This command will disconnect all sessions and restart the FortiManager unit

Syntax

```
execute restore all-settings {ftp | scp | sftp} <ip> <string>
     <username> <password> <ssh-cert> <crptpasswd>
     [option1+option2+...]
execute restore image {ftp | tftp} <filepath> <ip> <username>
     <password>
execute restore logs <device name(s)> {ftp | scp | sftp} <ip>
     <username> <password> <directory>
execute restore logs-only <device name(s)> {ftp | scp | sftp} <ip>
     <username> <password> <directory>
execute restore reports <report schedule name(s)> {ftp | scp | sftp}
     <ip> <username> <password> <directory>
execute restore reports-config <adom name(s)> {ftp | scp | sftp} <ip>
     <username> <password> <directory>
```

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 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 | tftp}`	Enter the type of server to retrieve the image from.
`{ftp | scp | sftp}`	Enter the type of server.
`<device name(s)>`	Enter the device name(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.
`<filepath>`	The file to get from the server. You can enter a path with the filename, if required.

Variable	Description
`<ip>`	IP address of the server to get the file from.
`<string>`	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>`	Optional password to protect backup content. Use `any` for no password.
`<directory>`	Enter the directory.
`[option1+option2+...]`	Select whether to keep IP, routing, and HA info on the original unit.

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`. 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 mypasword
```

shutdown

Shut down the FortiManager system.

This command will disconnect all sessions.

Syntax

```
execute shutdown
```

Example

```
execute shutdown
The system will be halted.
Do you want to continue? (y/n)
```

sql-local

Use this command to remove the SQL database and logs from the FortiManager system and to rebuild the database and devices.

sql-local rebuild-db

Syntax

```
execute sql-local <rebuild-db>
```

Variable	Description
`<rebuild-db>`	Rebuild the entire local SQL database.

sql-local rebuild-device

Syntax

```
execute sql-local <rebuild-device> <Device ID>
```

Variable	Description
`<rebuild-device>`	Rebuild all log entries of the designated device.
`<Device ID>`	Enter the device ID. Example: FG300A3907552101

sql-local remove-db

Syntax

```
execute sql-local <remove-db>
```

Variable	Description
`<remove-db>`	Remove entire local SQL database.

sql-local remove-device

Syntax

```
execute sql-local<remove-device> <Device ID>
```

Variable	Description
`<remove-device>`	Remove all log entries of the designated device.
`<Device ID>`	Enter the device ID. Example: FG300A3907552101

Example

This example removes all logs of device FG5A253E07600124 from the local SQL database:

```
execute sql-local remove-device FG5A253E07600124
```

sql-local remove-logs

Syntax

```
execute sql-local <remove-logs> <Device ID>
```

Variable	Description
`<remove-logs>`	Remove SQL logs within a time period.
`<Device ID>`	Enter the device ID. Example: FG300A3907552101

sql-local remove-logtype

Syntax

```
execute sql-local <remove-logtype> <log type>
```

Variable	Description
`<remove-logtype>`	Remove all log entries of the designated log type.
`<log type>`	Enter the log type from available log types. Example: app-ctrl

Example

```
execute sql-local remove-logtype app-ctrl
All SQL logs with log type 'app-ctrl' will be erased!
Do you want to continue? (y/n)
```

sql-query-dataset

Use this command to execute a SQL dataset against the FortiManager system.

Syntax

```
execute sql-query-dataset <dataset-name> <device/group name>
     <faz/dev> <start-time> <end-time>
```

Variable	Description
`<dataset-name>`	Enter the dataset name.
`<device/group name>`	Enter the name of the device or device group.
`<faz/dev>`	Enter the name of the FortiAnalyzer.
`<start-time>`	Enter the log start time.
`<end-time>`	Enter the log end time.

Example

```
execute sql-query-dataset Top-App-By-Bandwidth
```

sql-query-generic

Use this command to execute a SQL statement against the FortiManager system.

Syntax

```
execute sql-query-generic <string>
```

Variable	Description
`<string>`	Enter the SQL statement to run.

sql-report

sql-report run

Use this command to run a SQL report once against the FortiManager system.

Syntax

```
execute sql-report run <adom> <schedule-name> <num-threads>
```

Variable	Description
`<adom>`	The ADOM name to run the report.
`<schedule-name>`	Select one of the available report schedule names.
`<num-threads>`	Select the number of threads.

ssh

Use this command to establish an SSH session with another system.

Syntax

```
execute ssh <destination> <username>
```

Variable	Description
`<destination>`	Enter the IP or FQ 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 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
`<host/ip>`	Enter the hostname or IP address of the SSH host to remove.

time

Get or set the system time.

Syntax

```
execute time [<time_str>]
```

`time_str` has the form `hh:mm:ss`, where

- `hh` is the hour and can be `00` to `23`
- `mm` is the minutes and can be `00` to `59`
- `ss` is the seconds and can be `00` to `59`

All parts of the time are required. Single digits are allowed for each of `hh`, `mm`, and `ss`.

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

```
execute time <enter>
current time is: 12:54:22
```

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
```

execute top help menu

Command	Description
`Z,B`	Global: 'Z' change color mappings; 'B' disable/enable bold
`l,t,m`	Toggle Summaries: 'l' load average; 't' task/cpu statistics; 'm' memory information
`1,I`	Toggle SMP view: '1' single/separate states; 'I' Irix/Solaris mode

f,o	Fields/Columns: 'f' add or remove; 'o' change display order
F or O	Select sort field
<,>	Move sort field: '<' next column left; '>' next column right
R,H	Toggle: 'R' normal/reverse sort; 'H' show threads
c,i,S	Toggle: 'c' command name/line; 'i' idle tasks; 'S' cumulative time
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	Show specific user only
n or #	Set maximum tasks displayed
k,r	Manipulate tasks: 'k' kill; 'r' renice
d or s	Set update interval
W	Write configuration file
q	Quit

Example

The `execute top` command displays the following information:

```
top_bin - 12:50:25 up  1:48,  0 users,  load average: 0.00, 0.02, 0.05
Tasks: 168 total,   1 running, 167 sleeping,   0 stopped,   0 zombie
Cpu(s):  0.0%us,  0.0%sy,  0.0%ni,100.0%id,  0.0%wa,  0.0%hi,  0.0%si,
     0.0%st
Mem:   6108960k total,   923440k used,  5185520k free,    24716k buffers
Swap:  2076536k total,        0k used,  2076536k free,   306136k cached
H
PID USER     PR  NI  VIRT  RES  SHR S %CPU %MEM   TIME+  COMMAND
5566 root     20   0  187m 159m 4432 S    0  2.7   0:04.63 dmserver
13492 root     20   0  2072  956  708 R    0  0.0   0:00.01 top_bin
   1 root      20   0  186m 159m 5016 S    0  2.7   0:11.77
       initXXXXXXXXXXX
   2 root     20   0     0    0    0 S    0  0.0   0:00.00 kthreadd
   3 root     20   0     0    0    0 S    0  0.0   0:00.00 ksoftirqd/0
   4 root     20   0     0    0    0 S    0  0.0   0:00.00 kworker/0:0
   5 root     20   0     0    0    0 S    0  0.0   0:00.00 kworker/u:0
   6 root     RT   0     0    0    0 S    0  0.0   0:00.00 migration/0
   7 root     RT   0     0    0    0 S    0  0.0   0:00.00 migration/1
   8 root     20   0     0    0    0 S    0  0.0   0:00.00 kworker/1:0
   9 root     20   0     0    0    0 S    0  0.0   0:00.00 ksoftirqd/1
   10 root     20   0     0    0    0 S    0  0.0   0:00.18 kworker/0:1
   11 root     RT   0     0    0    0 S    0  0.0   0:00.00 migration/2
   12 root     20   0     0    0    0 S    0  0.0   0:00.00 kworker/2:0
   13 root     20   0     0    0    0 S    0  0.0   0:00.00 ksoftirqd/2
```

```
14 root      RT   0     0    0    0 S    0  0.0   0:00.00 migration/3
```

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>`	IP address or hostname of network device.

Example

This example shows how trace the route to a host with the IP address `172.18.4.95`:

```
execute traceroute 172.18.4.95
traceroute to 172.18.4.95 (172.18.4.95), 32 hops max, 72 byte packets
1  172.18.4.95  0 ms  0 ms  0 ms
2  172.18.4.95  0 ms  0 ms  0 ms
```

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>`	IPv6 address or hostname of network device.

Example

This example shows how trace the route to a host with the IPv6 address 8001:0DB8:AC10:FE01:0:0:0:0:

```
execute traceroute6 8001:0DB8:AC10:FE01:0:0:0:0
```

diagnose

The diagnose commands display diagnostic information that help you to troubleshoot problems.

FortiManager CLI commands and variables are case sensitive.

This chapter contains following sections:

cdb

cdb check

Use this command to check the object configuration database integrity, the global policy assignment table, and repair configuration database.

Syntax

```
diagnose cdb check objcfg-integrity
diagnose cdb check policy-assignment
```

Variable	Description
objcfg-integrity	Check object configuration database integrity.
policy-assignment	Check the global policy assignment table.

Example

```
# diagnose cdb check policy-assignment
Checking global policy assignment ... correct
```

debug

Use the following commands to debug the FortiManager.

debug application

Use this command to set the debug levels for the FortiManager applications.

Syntax

```
diagnose debug application alertmail <integer>
diagnose debug application ddmd <integer> [deviceName]
diagnose debug application depmanager <integer>
diagnose debug application dmapi <integer>
diagnose debug application fazcfgd <integer>
diagnose debug application fazsvcd <integer>
diagnose debug application fgdsvr <integer>
diagnose debug application fgdupd <integer>
diagnose debug application fgfmsd <integer> [deviceName]
diagnose debug application fnbam <integer>
diagnose debug application fortilogd <integer>
diagnose debug application FortiManagerws <integer>
diagnose debug application gui <integer>
diagnose debug application ha <integer>
diagnose debug application ike <integer>
diagnose debug application localmod <integer>
diagnose debug application logd <integer>
diagnose debug application logfiled <integer>
diagnose debug application lrm <integer>
diagnose debug application ntpd <integer>
diagnose debug application oftpd <integer>
     [IP/deviceSerial/deviceName]
diagnose debug application ptmgr <integer>
diagnose debug application ptsessionmgr <integer>
diagnose debug application securityconsole <integer>
diagnose debug application snmpd <integer>
diagnose debug application sql_dashboard_rpt <integer>
diagnose debug application sql-integration <integer>
diagnose debug application sqlplugind <integer>
diagnose debug application sqlrptcached <integer>
diagnose debug application srchd <integer>
diagnose debug application ssh <integer>
diagnose debug application storaged <integer>
diagnose debug application uploadd <integer>
```

Variable	Description
alertmail <integer>	Set the debug level of the alert email daemon.

Variable	Description
ddmd <integer> [deviceName]	Set the debug level of the dynamic data monitor. Enter a device name to only show messages related to that device.
depmanager <integer>	Set the debug level of the deployment manager.
dmapi <integer>	Set the debug level of the dmapi.
fazcfgd <integer>	Set the debug level of the fazcfgd daemon.
fazsvcd <integer>	Set the debug level of the fazsvcd daemon.
fgdsvr <integer>	Set the debug level of the FortiGuard query daemon.
fgdupd <integer>	Set the debug level of the FortiGuard update daemon.
fgfmsd <integer> [deviceName]	Set the debug level of FGFM daemon. Enter a device name to only show messages related to that device.
fnbam <integer>	Set the debug level of the Fortinet authentication module.
fortilogd <integer>	Set the debug level of the fortilogd daemon.
FortiManagerws <integer>	Set the debug level of the FortiManager Web Service.
gui <integer>	Set the debug level of the Web-based Manager.
ha <integer>	Set the debug level of high availability daemon.
ike <integer>	Set the debug level of the IKE daemon.
localmod <integer>	Set the debug level of the localmod daemon.
logd <integer>	Set the debug level of the log daemon.
logfiled <integer>	Set the debug level of the logfilled daemon.
lrm <integer>	Set the debug level of the Log and Report Manager.
ntpd <integer>	Set the debug level of the Network Time Protocol (NTP) daemon.
oftpd <integer> [IP/deviceSerial/deviceName]	Set the debug level of the oftpd daemon. Enter an IP address, device serial number, or device name to only show messages related to that device or IP address.
ptmgr <integer>	Set the debug level of the Portal Manager.
ptsessionmgr <integer>	Set the debug level of the Portal Session Manager.
securityconsole <integer>	Set the debug level of the security console daemon.
snmpd <integer>	Set the debug level of the SNMP daemon from 0-8.
sql_dashboard_rpt <integer>	Set the debug level of the SQL dashboard report daemon.
sql-integration <integer>	Set the debug level of SQL applications.
sqlplugind <integer>	Set the debug level of the SQL plugin daemon.

Variable	Description
`sqlrptcached <integer>`	Set the debug level of the SQL report caching daemon.
`srchd <integer>`	Set the debug level of the SRCHD.
`ssh <integer>`	Set the debug level of SSH protocol transactions.
`storaged <integer>`	Set the debug level of communication with java clients.
`uploadd <integer>`	Set the debug level of the upload daemon.

Example

This example shows how to set the debug level to 7 for the upload daemon:

```
diagnose debug application uploadd 7
```

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 from 0-8. Default: 3

Example

This example shows how to set the CLI debug level to 5:

```
diagnose debug cli 5
```

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 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 a DPM to FortiGate communication trace.
`conf-trace {enable | disable | status}`	Enable a DPM to FortiGate configuration trace.
`probe-device <ip>`	Check device status.

Example

This example shows how to enable a communication trace between the DPM and a FortiGate:

```
diagnose debug dpm comm-trace enable
```

debug enable

Use this command to enable debug.

Syntax

```
diagnose debug enable
```

debug info

Use this command to show active debug level settings.

Syntax

```
diagnose debug info
```

Example

Here is an example of the output from `diagnose debug info`:

```
terminal session debug output:  disable
console debug output:           enable
debug timestamps:               disable
cli debug level:                3
fgfmsd debug filter:            disable
```

debug service

Use this command to debug services.

Syntax

```
diagnose debug service cdb <integer>
diagnose debug service cmdb <integer>
diagnose debug service dvmcmd <integer>
diagnose debug service dvmdb <integer>
diagnose debug service fazconf <integer>
diagnose debug service main <integer>
diagnose debug service sys <integer>
diagnose debug service task <integer>
```

Variable	Description
`cdb <integer>`	Debug the CDB daemon service. Enter the debug level.
`cmdb <integer>`	Debug the CMDB daemon service. Enter the debug level.
`dvmcmd <integer>`	Debug the DVMCMD daemon service. Enter the debug level.
`dvmdb <integer>`	Debug the DVMDB daemon service. Enter the debug level.
`fazconf <integer>`	Debug the NCMDB daemon service. Enter the debug level.
`main <integer>`	Debug the Main daemon service. Enter the debug level.
`sys <integer>`	Debug the SYS daemon service. Enter the debug level.
`task <integer>`	Debug the Task daemon service. Enter the debug level.

debug sysinfo

Use this command to show system information.

Syntax

```
diagnose debug sysinfo
```

Example

Here is an example of the output from `diagnose debug sysinfo`:

```
diagnose debug sysinfo
collecting information with interval=3 seconds...

=== file system information ===
Filesystem           1K-blocks      Used Available Use% Mounted on
none                     65536         0     65536   0% /dev/shm
none                     65536        24     65512   1% /tmp
/dev/sda1                47595     35147      9991  78% /data
/dev/mdvg/mdlv        82565808   2529432  75842280   4% /var
/dev/mdvg/mdlv        82565808   2529432  75842280   4% /drive0
/dev/mdvg/mdlv        82565808   2529432  75842280   4% /Storage
/dev/loop0                9911      1121      8278  12% /var/dm/tcl-root

=== /tmp system information ===
drwxrwxrwx    2 root     root           40 Dec 24 12:44 FortiManagerWS
srwxrwxrwx    1 root     root            0 Dec 24 12:44 alertd.req
-rw-rw-rw-    1 root     root            4 Dec 24 12:44 cmdb_lock
srwxrwxrwx    1 root     root            0 Dec 24 12:44 cmdbsocket
-rw-r--r--    1 root     root          175 Dec 24 12:50 crontab
-rw-r--r--    1 root     root            0 Dec 24 12:46 crontab.lock
srw-rw-rw-    1 root     root            0 Dec 24 12:44 ddmclt.sock
-rw-rw-rw-    1 root     root            5 Dec 24 12:44 django.pid
srw-rw-rw-    1 root     root            0 Dec 24 12:44 dmserver.sock
-rw-rw-rw-    1 root     root            0 Dec 24 12:44 dvm_sync_init
-rw-rw-rw-    1 root     root            4 Dec 24 15:43 dvm_timestamp
drwx------    2 root     root           40 Dec 24 12:44 dynamic
srwxrwxrwx    1 root     root            0 Dec 24 12:44 faz_svc
srwxrwxrwx    1 root     root            0 Dec 24 12:44 fcgi.sock
srwxrwxrwx    1 root     root            0 Dec 24 12:44 fmgd.domain
-rw-rw-rw-    1 root     root          149 Dec 24 12:44
     fortilogd_status.txt
srwxrwxrwx    1 root     root            0 Dec 24 12:44 httpcli.msg
srw-rw-rw-    1 root     root            0 Dec 24 12:44 hwmond.req
srwxrwxrwx    1 root     root            0 Dec 24 12:44
     reliable_logging_path
srwxrwxrwx    1 root     root            0 Dec 24 12:44 sql_plugin
srwxrwxrwx    1 root     root            0 Dec 24 12:44 sql_report
srw-rw-rw-    1 root     root            0 Dec 24 12:44 srchd.sock
srwxrwxrwx    1 root     root            0 Dec 24 12:54
     upm_forticlient.sock

=== resource use information ===
Program uses most memory: [storaged], pid 3674, size 182m
Program uses most cpu: [dmserver], pid 3645, percent 0%
```

```
=== db locks information ===
```

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 <ip> <string> <username> <password>
```

Variable	Description
`<ip>`	Enter the FTP server IP address.
`<string>`	Enter the path or filename to save to the FTP server.
`<username>`	Enter the user name for the FTP server.
`<password>`	Enter the password for the FTP server.

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: The default value of n is 10

debug timestamp

Use this command to enable or disable debug timestamp.

Syntax

```
diagnose debug timestamp {enable | disable}
```

debug vminfo

Use this command to show VM license information.

Syntax

```
diagnose debug vminfo
```

This command is only available on FortiManager VM models.

Example

Here is an example of the output from `diagnose debug vminfo`:

```
ValidLicense Type: 5000UG
Table size:
    Maximum dev: 6120
```

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 statistics {show | flush}
diagnose dlp-archives status
```

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
`statistics {show | flush}`	Display or flush the quarantined and DLP archived file statistics.
`status`	Running status.

dvm

Use the following commands for DVM related settings.

dvm adom

Use this command to list ADOMs.

Syntax

```
diagnose dvm adom list
```

Variable	Description
`list`	List ADOMs, state, mode, OS version, MR and name.

Example

Here is an example of the output from `diagnose dvm adom list`:

```
There are currently 8 ADOMs:
OID       STATE    MODE OSVER MR   NAME
108       enabled  GMS  5.0   0    FortiCache
104       enabled  GMS  5.0   0    FortiCarrier
111       enabled  GMS  5.0   0    FortiClient
106       enabled  GMS  5.0   0    FortiMail
109       enabled  GMS  5.0   0    FortiWeb
110       enabled  GMS  5.0   0    SysLog
102       enabled  GMS  5.0   0    others
3         enabled  GMS  5.0   0    root
---End ADOM list---
```

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.

Syntax

```
diagnose dvm chassis list
```

Variable	Description
list	List chassis.

dvm check-integrity

Use this command to check the DVM database integrity.

Syntax

```
diagnose dvm check-integrity
```

Example

Here is an example of the output from `diagnose dvm check-integrity`:

```
[1/11] Checking object memberships        ... correct
[2/11] Checking device nodes              ... correct
[3/11] Checking device vdoms              ... correct
[4/11] Checking device ADOM memberships   ... correct
[5/11] Checking devices being deleted     ... correct
[6/11] Checking devices not supported     ... correct
[7/11] Checking devices state             ... correct
[8/11] Checking groups                    ... correct
[9/11] Checking group membership          ... correct
[10/11] Checking device locks              ... correct
[11/11] Checking task database             ... correct
```

dvm debug

Use this command to enable or disable debug channels.

Syntax

```
diagnose dvm debug {enable | disable} <channel> <channel> ...
     <channel>
```

dvm device

Use this command to list devices or objects referencing a device.

Syntax

```
diagnose dvm device dynobj <device> <cli>
diagnose dvm device list <device> <vdom>
```

Variable	Description
`dynobj <device> <cli>`	List dynamic objects on this device.
`list <device> <vdom>`	List devices. Optionally, enter a device or VDOM name.

Example

Here is an example of the output from `diagnose dvm device dynobj <device>`:

```
=== VDOM root ===
         Dynamic interface
         Dynamic firewall address
                 name: SSLVPN_TUNNEL_ADDR1
                 name: all
         Dynamic firewall address6
         Dynamic firewall vip
         Dynamic firewall vip6
         Dynamic firewall vip46
         Dynamic firewall vip64
         Dynamic firewall ippool
         Dynamic firewall ippool6
         Dynamic certificate local
         Dynamic vpn tunnel
```

dvm device-tree-update

Use this command to enable or disable device tree automatic updates.

Syntax

```
diagnose dvm device-tree-update {enable | disable}
```

dvm group

Use this command to list groups.

Syntax

```
diagnose dvm group list
```

dvm lock

Use this command to print the DVM lock states.

Syntax

```
diagnose dvm lock
```

Example

Here is an example of the output from `diagnose dvm lock`:

```
DVM lock state = unlocked
Global database pending read: unlocked
Global database pending write: unlocked
Global database reserved read: unlocked
Global database reserved write: unlocked
Global database shared read: unlocked
Global database shared write: unlocked
```

dvm proc

Use this command to list DVM processes.

Syntax

```
diagnose dvm proc list
```

Example

This example shows the output from `diagnose dvm proc list`:

```
dvmcmd group id=3632
dvmcmd process 3632 is running control
        Process is healthy.
dvmcore is running normally.
```

dvm supported-platforms

Use this command to list supported platforms and firmware versions.

Syntax

```
diagnose dvm supported-platforms list detail
```

Variable	Description
`list`	List support platforms.
`detail`	Show detail with syntax support.

dvm task

Use this command to repair or reset the task database.

Syntax

```
diagnose dvm task list <adom> <type>
diagnose dvm task repair
diagnose dvm task reset
```

Variable	Description
`list <adom> <type>`	List task database information.
`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.

Example

This example shows the output for `diagnose dvm task root all`:

```
ADOM: root
ID Source Description User Status Start Time
-------------------------------------------
112 device_manager adddevtitle admin done Wed Jan 23 15:39:24 2013
113 device_manager deldevtitle admin done Wed Jan 23 15:51:10 2013
114 device_manager adddevtitle admin done Wed Jan 23 15:52:19 2013
115 import_dev_objs Import Device Objs/Policy admin done Wed Jan 23
     15:52:55 2013
116 import_dev_objs Import Device Objs/Policy admin done Wed Jan 23
     15:53:04 2013
117 import_dev_objs Import Device Objs/Policy admin done Wed Jan 23
     15:53:08 2013
118 import_dev_objs Import Device Objs/Policy admin done Wed Jan 23
     15:53:13 2013
132 device_manager adddeldevtitle admin done Thu Jan 24 17:55:17 2013
133 device_manager adddeldevtitle admin done Thu Jan 31 18:34:25 2013
134 device_manager adddeldevtitle admin done Mon Mar 25 16:26:35 2013
135 device_manager upddevtitle admin done Tue Mar 26 09:15:20 2013
136 device_manager deldevtitle admin done Tue Mar 26 09:16:48 2013
137 device_manager adddeldevtitle admin done Tue Mar 26 09:18:32 2013
138 device_manager deldevtitle admin done Tue Mar 26 09:22:49 2013
139 device_manager adddeldevtitle admin done Tue Mar 26 09:23:48 2013
140 device_manager deldevtitle admin done Tue Mar 26 09:30:20 2013
141 device_manager adddeldevtitle admin done Tue Mar 26 09:33:34 2013
142 device_manager deldevtitle admin done Tue Mar 26 09:35:06 2013
143 device_manager adddeldevtitle admin done Tue Mar 26 09:38:41 2013
144 device_manager adddeldevtitle admin done Tue Mar 26 09:59:18 2013
145 device_manager deldevtitle admin done Tue Mar 26 10:08:16 2013
146 device_manager deldevtitle admin done Tue Mar 26 10:08:26 2013
147 device_manager adddevtitle admin done Tue Mar 26 14:40:54 2013
```

```
148 import_dev_objs Import Device Objs/Policy admin done Tue Mar 26
    14:42:05 2013
```

dvm transaction-flag

Use this command to edit or display DVM transaction flags.

Syntax

```
diagnose dvm transaction-flag {abort | debug | none}
```

fgfm

Use this command to get installation session, object, and session lists.

Syntax

```
diagnose fgfm install-session
diagnose fgfm object-list
diagnose fgfm session-list <device ID>
```

Variable	Description
`install-session`	Get installations session lists.
`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.

Example

This example shows the output for `diagnose fmnetwork apr list`:

```
index=2 ifname=port1 10.2.115.20 00:09:0f:ed:bc:f3 state=00000002
     use=2954 confirm=2954 update=2508 ref=3
index=1 ifname=lo 0.0.0.0 00:00:00:00:00:00 state=00000040
     use=172515 confirm=835387 update=2096758 ref=2
index=2 ifname=port1 10.2.115.36 00:0c:29:ce:81:98 state=00000004
     use=2978 confirm=2978 update=23 ref=2
index=2 ifname=port1 10.2.115.37 00:0c:29:8f:a2:8e state=00000002
     use=2658 confirm=2658 update=2508 ref=3
index=2 ifname=port1 10.2.117.138 00:09:0f:77:05:28 state=00000002
     use=2996 confirm=2996 update=2510 ref=3
index=2 ifname=port1 10.2.0.250 00:09:0f:48:91:b7 state=00000002
     use=706 confirm=0 update=553 ref=19
index=2 ifname=port1 10.2.66.95 00:09:0f:09:00:00 state=00000002
     use=2828 confirm=2828 update=2483 ref=3
index=2 ifname=port1 10.2.118.24 state=00000020 use=2701
     confirm=2094709 update=2401 ref=2
```

fmnetwork interface

Use this command to view interface information.

Syntax

```
diagnose fmnetwork interface detail <portX>
diagnose fmnetwork interface list <portX>
```

Variable	**Description**
`detail <portX>`	View a specific interface’s details.
`list <portX>`	List all interface details.

Example

Here is an example of the output from `diagnose fmnetwork interface list port1`:

```
port1     Link encap:Ethernet  HWaddr D4:AE:52:86:F4:52
          inet addr:10.2.60.101  Bcast:10.2.255.255  Mask:255.255.0.0
          inet6 addr: fe80::d6ae:52ff:fe86:f452/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:26988508 errors:0 dropped:0 overruns:0 frame:0
          TX packets:38322005 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:4165017288 (3.8 GiB)  TX bytes:54518196952 (50.7 GiB)
          Interrupt:28 Memory:d6000000-d6012800
```

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.

Example

Here is an example of the output from `diagnose fmnetwork netstat tcp -r`:

```
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
tcp        0      0 FMG-VM:9090             *:*                     LISTEN
tcp        0      0 *:6020                  *:*                     LISTEN
tcp        0      0 *:8900                  *:*                     LISTEN
tcp        0      0 *:8901                  *:*                     LISTEN
tcp        0      0 *:8080                  *:*                     LISTEN
tcp        0      0 *:22                    *:*                     LISTEN
tcp        0      0 *:telnet                *:*                     LISTEN
tcp        0      0 *:8890                  *:*                     LISTEN
tcp        0      0 *:8891                  *:*                     LISTEN
tcp        0      0 *:541                   *:*                     LISTEN
```

fmupdate

Use this command to diagnose update services.

Syntax

```
diagnose fmupdate add-device <serial> <ip> <firmware> <build>
diagnose fmupdate deldevice {fct | fds | fgd | fgc} <serialnum> <uid>
diagnose fmupdate dellog
diagnose fmupdate fct-configure
diagnose fmupdate fct-dbcontract
diagnose fmupdate fct-delserverlist
diagnose fmupdate fct-getobject
diagnose fmupdate fct-serverlist
diagnose fmupdate fct-update-status
diagnose fmupdate fct-updatenow
diagnose fmupdate fds-configure
diagnose fmupdate fds-dbcontract
diagnose fmupdate fds-delserverlist
diagnose fmupdate fds-dump-breg
diagnose fmupdate fds-dump-srul
diagnose fmupdate fds-get-downstream-device <serialnum>
diagnose fmupdate fds-getobject
diagnose fmupdate fds-serverlist
diagnose fmupdate fds-service-info
diagnose fmupdate fds-update-status
diagnose fmupdate fds-updatenow
diagnose fmupdate fgc-configure
diagnose fmupdate fgc-delserverlist
diagnose fmupdate fgc-serverlist
diagnose fmupdate fgc-update-status
diagnose fmupdate fgd-bandwidth {1h | 6h | 12h | 24h | 7d | 30d}
diagnose fmupdate fgd-configure
diagnose fmupdate fgd-dbcontract
diagnose fmupdate fgd-dbver {wf | as | av-query}
diagnose fmupdate fgd-delserverlist
diagnose fmupdate fgd-get-downstream-device
diagnose fmupdate fgd-serverlist
diagnose fmupdate fgd-service-info
diagnose fmupdate fgd-test-client <ip> <serialnum> <string>
diagnose fmupdate fgd-update-status
diagnose fmupdate fgd-updatenow
diagnose fmupdate fgd-url-rating <serialnum> <version> <url>
diagnose fmupdate fgd-wfas-clear-log
diagnose fmupdate fgd-wfas-log {name | ip} <string>
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} <serialnum>
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
diagnose fmupdate fmg-statistic-info
diagnose fmupdate fortitoken {seriallist | add | del} {add | del |
     required}
diagnose fmupdate getdevice {fct | fds | fgd | fgc} <serialnum>
diagnose fmupdate service-restart {fds | fct | fgd | fgc}
diagnose fmupdate show-bandwidth {fct | fgt | fml | faz} <serialnum>
diagnose fmupdate show-dev-obj <serialnum>
diagnose fmupdate view-linkd-log {fct | fds | fgd | fgc}
diagnose fmupdate vm-license
```

Variable	Description
`add-device <serial> <ip> <firmware> <build>`	Add an unregistered device. The build number is optional.

Variable	Description
`deldevice {fct | fds | fgd | fgc} <serialnum> <uid>`	Delete a device. The UID applies only to FortiClient devices.
`dellog`	Delete log for FDS and FortiGuard update events.
`fct-configure`	Dump the FortiClient running configuration.
`fct-dbcontract`	Dump the FortiClient subscriber contract.
`fct-delserverlist`	Dump the FortiClient server list file fdni.dat.
`fct-getobject`	Get the version of all FortiClient objects.
`fct-serverlist`	Dump the FortiClient server list.
`fct-update-status`	Display the FortiClient update status.
`fct-updatenow`	Update the FortiClient antivirus/IPS immediately.
`fds-configure`	Dump the FDS running configuration.
`fds-dbcontract`	Dump the FDS subscriber contract
`fds-delserverlist`	Delete the FDS server list file fdni.dat.
`fds-dump-breg`	Dump the FDS beta serial numbers.
`fds-dump-srul`	Dump the FDS select filtering rules.
`fds-get-downstream-device <serialnum>`	Get information of all downstream FortiGate antivirus-IPS devices. Optionally, enter the device serial number.
`fds-getobject`	Get the version of all FortiGate objects.
`fds-serverlist`	Dump the FDS server list.
`fds-service-info`	Display FDS service information.
`fds-update-status`	Display the FDS update status.
`fds-updatenow`	Update the FortiGate antivirus/IPS immediately.
`fgc-configure`	Dump the FGC running configuration.
`fgc-delserverlist`	Delete the FGC server list file fdni.dat.
`fgc-serverlist`	Dump the FGC server list.
`fgc-update-status`	Display the FGC update status.
`fgd-bandwidth {1h | 6h | 12h | 24h | 7d | 30d}`	Display the download bandwidth.
`fgd-configure`	Dump the FortiGuard running configuration.
`fgd-dbcontract`	Dump the FortiGuard subscriber contract.

Variable	Description
`fgd-dbver {wf | as | av-query}`	Get the version of the database. Optionally, enter the database type.
`fgd-delserverlist`	Delete the FortiGuard server list file fdni.dat.
`fgd-get-downstream-device`	Get information on all downstream FortiGate web filter and spam devices.
`fgd-serverlist`	Dump the FortiGuard server list.
`fgd-service-info`	Display FortiGuard service information.
`fgd-test-client <ip> <serialnum> <string>`	Execute FortiGuard test client. Optionally, enter the hostname or IP address of the FGD server, the serial number of the device, and the query number per second or URL.
`fgd-update-status`	Display the Fortiguard update status.
`fgd-updatenow`	Update the FortiGate web filter / antispam immediately.
`fgd-url-rating <serialnum> <version> <url>`	Rate URLs within the FortiManager database using the FortiGate serial number. Optionally, enter the category version and URL.
`fgd-wfas-clear-log`	Clear the FortiGuard service log file.
`fgd-wfas-log {name | ip} <string>`	View the FortiGuard service log file. Optionally, enter the device filter type, and device name or IP address.
`fgd-wfas-rate {wf | av | as_ip | as_url | as_hash}`	Get the web filter / antispam rating speed. Optionally, enter the server type.
`fgd-wfdevice-stat {10m | 30m | 1h | 6h | 12h | 24h | 7d} <serialnum>`	Display web filter device statistics. Optionally, enter a specific device’s serial number.
`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 apn to cover.
`fgt-del-statistics`	Remove all statistics (antivirus / IPS and web filter / antispam). This command requires a reboot.
`fgt-del-um-db`	Remove `UM` and `UM-GUI` databases. This command requires a reboot. Note: um.db is a sqlite3 database that update manager uses internally. It will store AV/IPS package information of downloaded packages. This command removed 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.
`fmg-statistic-info`	Display statistic information for FortiManager and Java Client.
`fortitoken {seriallist | add | del} {add | del | required}`	FortiToken related operations.

Variable	Description
`getdevice {fct | fds | fgd | fgc} <serialnum>`	Get device information. Optionally, enter a serial number.
`service-restart {fds | fct | fgd | fgc}`	Restart `linkd` service.
`show-bandwidth {fct | fgt | fml | faz} <serialnum>`	Display download bandwidth. Optionally, enter a serial number.
`show-dev-obj <serialnum>`	Display an objects version of a device. Optionally, enter a serial number.
`view-linkd-log {fct | fds | fgd | fgc}`	View the `linkd` log file.
`vm-license`	Dump the FortiGate VM license.

Example

To view antispam server statistics for the past seven days, enter the following:

```
diagnose fmupdate fgd-asserver_stat 7d
```

The command returns information like this:

```
Server Statistics
Total Spam Look-ups: 47
Total # Spam: 21(45%)
Total # Non-spam:26(55%)
Estimated bandwidth usage:17MB
```

fortilogd

Use this command to view FortiLog daemon information.

Syntax

```
diagnose fortilogd msgrate
diagnose fortilogd msgrate-device
diagnose fortilogd msgrate-total
diagnose fortilogd msgrate-type
diagnose fortilogd msgstat <flush>
diagnose fortilogd status
```

Variable	Description
`msgrate`	Display log message rate.
`msgrate-device`	Display log message rate devices.
`msgrate-total`	Display log message rate totals.
`msgrate-type`	Display log message rate types.

Variable	Description
msgstat	Display log message status.
<flush>	Reset the log message status.
status	Running status.

Example

This example shows the output for `diagnose fortilogd status`:

```
fortilogd is starting
config socket OK
cmdb socket OK
cmdb register log.device OK
cmdb register log.settings OK
log socket OK
reliable log socket OK
```

fwmanager

Use this command to manage firmware.

Syntax

```
diagnose fwmanager cancel-devsched <string> <firmware_version>
     <release_type> <build_num> <date_time>
diagnose fwmanager cancel-grpsched <string> <firmware_version>
     <release_type> <build_num> <date_time>
diagnose fwmanager delete-all
diagnose fwmanager delete-imported-images
diagnose fwmanager delete-offical-images
diagnose fwmanager delete-serverlist
diagnose fwmanager fwm-log
diagnose fwmanager getall-schedule
diagnose fwmanager getdev-schedule <string>
diagnose fwmanager getgrp-schedule <string>
diagnose fwmanager imported-imagelist
diagnose fwmanager official-imagelist
diagnose fwmanager reset-schedule-database
diagnose fwmanager set-devsched <string> <firmware_version>
     <release_type> <build_num> <date_time>
```

```
diagnose fwmanager set-grpsched <string> <firmware_version>
    <release_type> <build_num> <date_time>
```

Variable	Description
`cancel-devsched <string> <firmware_version> <release_type> <build_num> <date_time>`	Cancel an upgrade schedule for a device. For special branches, the release type is the branch point. The build number for official releases is always `-1`, for special releases it is the build number. The date and time format is: `YYYY/MM/DD_hh:mm:ss`
`cancel-grpsched <string> <firmware_version> <release_type> <build_num> <date_time>`	Cancel an upgrade schedule for a group. For special branches, the release type is the branch point. The build number for official releases is always `-1`, for special releases it is the build number. The date and time format is: `YYYY/MM/DD_hh:mm:ss`
`delete-all`	Remove everything in the firmware manager folder. This command requires a reboot.
`delete-imported-images`	Remove all imported images. This command requires a reboot.
`delete-offical-images`	Remove all official images. This command requires a reboot.
`delete-serverlist`	Remove the server list file (fdni.dat). This command requires a reboot.
`fwm-log`	View the firmware manager log file.
`getall-schedule`	Display all upgrade schedules recorded.
`getdev-schedule <string>`	Get scheduled upgrades for the device.
`getgrp-schedule <string>`	Get scheduled upgrades for this group.
`imported-imagelist`	Get the imported firmware image list
`official-imagelist`	Get the official firmware image list.
`reset-schedule-database`	Cleanup and initialize the schedule database and restart the server.
`set-devsched <string> <firmware_version> <release_type> <build_num> <date_time>`	Create an upgrade schedule for a device.
`set-grpsched <string> <firmware_version> <release_type> <build_num> <date_time>`	Create an upgrade schedule for a group.

ha

Use this command to manage high availability.

Syntax

```
diagnose ha debug-sync {on | off}
diagnose ha dump-datalog
diagnose ha force-resync
diagnose ha stats
```

Variable	Description
`debug-sync {on	off}`	Turn on synchronized data debug.
`dump-datalog`	Dump the HA data log.
`force-resync`	Force re-synchronization.
`stats`	Get HA statistics.

Example

To turn on debug synchronization, enter the following:

```
diagnose ha debug-sync on
```

hardware

Use this command to view hardware information.

Syntax

```
diagnose hardware info
```

Example

This example shows the output for `diagnose hardware info`:

```
### CPU info
processor: 0
vendor_id: GenuineIntel
cpu family: 6
model: 30
model name: Intel(R) Xeon(R) CPU           X3440  @ 2.53GHz
stepping: 5
cpu MHz: 2526.984
cache size: 8192 kB
fpu: yes
fpu_exception: yes
cpuid level: 11
wp: yes
flags: fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov
     pat pse36 clflush dts mmx fxsr sse sse2 ss syscall nx rdtscp lm
     constant_tsc up arch_perfmon pebs bts rep_good xtopology
     tsc_reliable nonstop_tsc aperfmperf pni ssse3 cx16 sse4_1 sse4_2
     x2apic popcnt hypervisor lahf_lm ida dts
bogomips: 5053.96
clflush size: 64
cache_alignment: 64
address sizes: 40 bits physical, 48 bits virtual
power management:
### Memory info
MemTotal:        1027160 kB
MemFree:           11820 kB
Buffers:            1632 kB
Cached:           521396 kB
SwapCached:        17088 kB
Active:           417396 kB
Inactive:         425604 kB
Active(anon):     223600 kB
Inactive(anon):   227304 kB
Active(file):     193796 kB
Inactive(file):   198300 kB
Unevictable:      107924 kB
Mlocked:            9752 kB
SwapTotal:       2076536 kB
SwapFree:        1698756 kB
Dirty:             49936 kB
Writeback:             0 kB
AnonPages:        411868 kB
Mapped:            22356 kB
Shmem:             32776 kB
Slab:              37976 kB
SReclaimable:      21276 kB
SUnreclaim:        16700 kB
KernelStack:        1584 kB
PageTables:        13464 kB
NFS_Unstable:          0 kB
Bounce:                0 kB
WritebackTmp:          0 kB
CommitLimit:     2590116 kB
Committed_AS:    5905028 kB
VmallocTotal:   34359738367 kB
VmallocUsed:        2972 kB
VmallocChunk:   34359726264 kB
DirectMap4k:        4096 kB
DirectMap2M:     1044480 kB
### Disk info
```

```
major minor  #blocks  name
  7        0      10240 loop0
  8        0      49153 sda
  8        1      49152 sda1
  8        2          0 sda2
  8       16   83886080 sdb
  253        0   83881984 dm-0
### RAID info
N/A
### System time
local time: Mon Apr  1 17:36:37 2013
UTC time: Tue Apr  2 00:36:37 2013
```

log

log device

Use this command to manage device logging.

Syntax

```
diagnose log device
```

Example

This example shows the output for `diagnose log device`:

```
Device Name          Device ID        Used
     Space(logs/database/quar/content/IPS) Allocated Space  % Used
FK3K8A3407600133   FK3K8A3407600133     0MB(0   / 0   / 0   / 0   / 0   )
     1000MB   0.00%
FOC-32bit         FGVM01EW12000001      0MB(0   / 0   / 0   / 0   / 0   )
     1000MB   0.00%
b147-37           FGVM02EW12000001      0MB(0   / 0   / 0   / 0   / 0   )
     1000MB   0.00%
FWF-60CM-Gen4      FW60CM3G11004076      0MB(0   / 0   / 0   / 0   / 0   )
     1000MB   0.00%
FG200B3911601438   FG200B3911601438     0MB(0   / 0   / 0   / 0   / 0   )
     1000MB   0.00%
FortiGate-VM64     FGVM04QX10091530     0MB(0   / 0   / 0   / 0   / 0   )
     1000MB   0.00%
FW60CM3G10003021   FW60CM3G10003021     0MB(0   / 0   / 0   / 0   / 0   )
     1000MB   0.00%
m-fwf60cm         FW60CM1738042MDL      0MB(0   / 0   / 0   / 0   / 0   )
     1000MB   0.00%
FW60CM3G11000082   FW60CM3G11000082     0MB(0   / 0   / 0   / 0   / 0   )
     1000MB   0.00%
fgtha-m-95          FGHA002041334518_CID       0MB(0    / 0    / 0    / 0    /
     0    )            1000MB   0.00%
```

pm2

Use this command to print from and check the integrity of the policy manager database.

Syntax

```
diagnose pm2 check-integrity {all  adom  device  global  ips}
diagnose pm2 print <log-type>
```

Variable	Description
`check-integrity {all  adom  device global  ips}`	Check policy manager database integrity. Multiple database categories can be checked at once.
`print <log-type>`	Print policy manager database log messages.

report

Use these commands to check the SQL database.

Syntax

```
diagnose report clean
diagnose report maintain
diagnose report status {pending | running}
```

Variable	Description
`clean`	Cleanup the SQL report queue.
`maintain`	Maintain the SQL report queue.
`status {pending | running}`	Check status information on pending and running reports list.

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_name> <filter_str> <verbose>
     <count>
```

Variable	Description
`<interface_name>`	Type 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_str>`	Type 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.
	The filter uses the following syntax:
	`'[[src|dst] host {<host1_fqdn> | <host1_ipv4>}] [and|or] [[src|dst] host {<host2_fqdn> | <host2_ipv4>}] [and|or] [[arp|ip|gre|esp|udp|tcp] port <port1_int>] [and|or] [[arp|ip|gre|esp|udp|tcp] port <port2_int>]'`
	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.
	For example, to display UDP port 1812 traffic between 1.example.com and either 2.example.com or 3.example.com, you would enter:
	`'udp and port 1812 and src host 1.example.com and dst \( 2.example.com or 2.example.com \)'`

`<verbose>`	Type one of the following numbers indicating the depth of packet headers and payloads to capture: • `1`: header only • `2`: IP header and payload • `3`: Ethernet header and payload For troubleshooting purposes, Fortinet Technical Support may request the most verbose level (`3`). Default: 1
`<count>`	Type the number of packets to capture before stopping. If you do not specify a number, the command will continue to capture packets until you press CTRL + C.

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.

```
FortiManager# 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 IP 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 CTRL + 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.

```
FortiManager# 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 IP 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 CTRL + 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.

```
FortiManager # 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 in 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. Type the packet capture command, such as:

   ```
   diag 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 `CTRL + 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 like this:

    ```
    =~=~=~=~=~=~=~=~= PuTTY log 2014.07.25 11:34:40 =~=~=~=~=~=~=~=~=
    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 (formerly called Ethereal) 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:

Methods to open a command prompt vary by operating system.
On Windows XP, go to *Start* > *Run* and enter `cmd`.
On Windows 7, click the Start (Windows logo) menu to open it, then enter `cmd`.

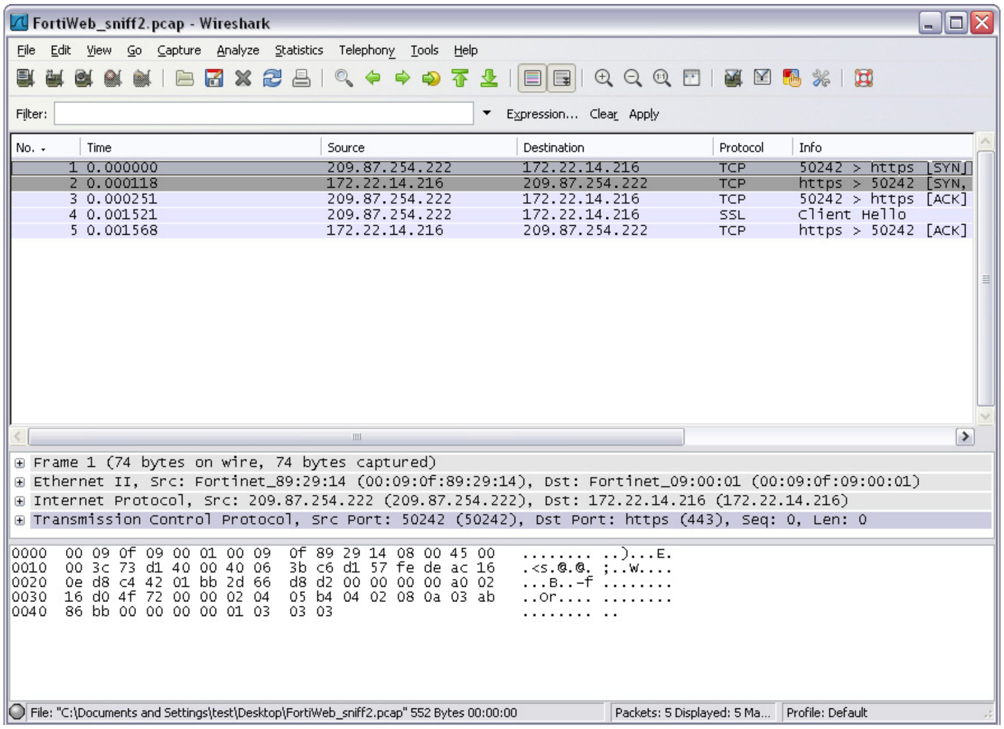
```
fgt2eth.pl -in packet_capture.txt -out packet_capture.pcap
```

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.

Figure 2: Viewing sniffer output in Wireshark


FortiWeb_sniff2.pcap - Wireshark
File Edit View Go Capture Analyze Statistics Telephony Tools Help
Filter:
Expression... Clear Apply

```
No.   Time        Source           Destination      Protocol  Info
    1 0.000000    209.87.254.222   172.22.14.216    TCP       50242 > https [SYN]
    2 0.000118    172.22.14.216    209.87.254.222   TCP       https > 50242 [SYN,
    3 0.000251    209.87.254.222   172.22.14.216    TCP       50242 > https [ACK]
    4 0.001521    209.87.254.222   172.22.14.216    SSL       Client Hello
    5 0.001568    172.22.14.216    209.87.254.222   TCP       https > 50242 [ACK]
```

```
⊞ Frame 1 (74 bytes on wire, 74 bytes captured)
⊞ Ethernet II, Src: Fortinet_89:29:14 (00:09:0f:89:29:14), Dst: Fortinet_09:00:01 (00:09:0f:09:00:01)
⊞ Internet Protocol, Src: 209.87.254.222 (209.87.254.222), Dst: 172.22.14.216 (172.22.14.216)
⊞ Transmission Control Protocol, Src Port: 50242 (50242), Dst Port: https (443), Seq: 0, Len: 0
```

```
0000   00 09 0f 09 00 01 00 09  0f 89 29 14 08 00 45 00   ........ ..)...E.
0010   00 3c 73 d1 40 00 40 06  3b c6 d1 57 fe de ac 16   .<s.@.@. ;..W....
0020   0e d8 c4 42 01 bb 2d 66  d8 d2 00 00 00 00 a0 02   ...B..-f ........
0030   16 d0 4f 72 00 00 02 04  05 b4 04 02 08 0a 03 ab   ..Or.... ........
0040   86 bb 00 00 00 00 01 03  03 03                     ........ ..
```

File: "C:\Documents and Settings\test\Desktop\FortiWeb_sniff2.pcap" 552 Bytes 00:00:00 | Packets: 5 Displayed: 5 Ma... | Profile: Default

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.

Syntax

```
diagnose sql config debug-filter [{set | test} <string>]
diagnose sql config deferred-index-timespan [set <value>]
diagnose sql gui-rpt-shm {list-all | clear} <num>
diagnose sql process list [full]
diagnose sql process kill <pid>
diagnose sql remove hcache <device-id>
diagnose sql remove tmp-table
diagnose sql show <db-size | hcache-size | log-stfile}
diagnose sql show log-filters
diagnose sql status {run_sql_rpt | sqlplugind | sqlreportd}
diagnose sql upload <host> <directory> <username> <password>
```

Variable	Description
`config debug-filter [{set	test} <string>]`	Show the `sqlplugin` debug filter, set it’s value, or test it.
`config deferred-index-timespan [set <value>]`	Show the timespan for the deferred index or set its value.

Variable	Description
`gui-rpt-shm {list-all | clear} <num>`	List or clear all asynchronous GUI report shared memory slot information.
`process list [full]`	List running query processes.
`process kill <pid>`	Kill a running query.
`remove hcache <device-id>`	Remove `hcache`.
`remove tmp-table`	Remove temporary tables.
`show <db-size | hcache-size | log-stfile}`	Show the database or `hcache` size and `logstatus` file.
`show log-filters`	Show log view searching filters.
`status {run_sql_rpt | sqlplugind | sqlreportd}`	Show `run_sql_rpt`, `sqlplugind`, or `sqlreportd` status.
`upload <host> <directory> <username> <password>`	Upload `sqlplugind` messages or `pgsvr` logs via FTP.

system

Use the following commands for system related settings.

system admin-session

Use this command to view login session information.

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.
`list`	List login sessions.
`status`	Show the current session.

Example

Here is an example of the output from `diagnose system admin-session status`:

```
session_id: 31521 (seq: 4)
username: admin
admin template: admin
from: jsconsole(10.2.0.250)
profile: Super_User (type 3)
```

```
adom: root
session length: 198 (seconds)
```

system export

Use this command to export logs.

Syntax

```
diagnose system export crashlog <ftp server> <user> <password>
     [remote path] [filename]
diagnose system export dminstallog <devid> <server> <user> <password>
     [remote path] [filename]
diagnose system export fmwslog <sftp | ftp> <type> <ftp server>
     <username> <password> <directory> <filename>
diagnose system export umlog {ftp | sftp} <type> <server> <user>
     <password> [remote path] [filename]
diagnose system export upgradelog <ftp server>
```

Variable	Description
`crashlog <ftp server> <user> <password> [remote path] [filename]`	Export the crash log.
`dminstallog <devid> <server> <user> <password> [remote path] [filename]`	Export deployment manager install log.
`fmwslog <sftp | ftp> <type> <ftp server> <username> <password> <directory> <filename>`	Export web service log files.
`umlog {ftp | sftp} <type> <server> <user> <password> [remote path] [filename]`	Export the update manager and firmware manager log files. The `type` options are: `fdslinkd`, `fctlinkd`, `fgdlinkd`, `usvr`, `update`, `service`, `misc`, `umad`, and `fwmlinkd`
`upgradelog <ftp server>`	Export the upgrade error log.

system flash

Use this command to diagnose the flash memory.

Syntax

```
diagnose system flash list
```

Example

Here is an example of the output from `diagnose system flash list`:

```
ImageName    Version                          TotalSize(KB)  Used(KB)  Use%
      BootImage  RunningImage
primary     FM-3KC-4.01-FW-build8308-200212   63461          29699     47%
      No         No
secondary   FM-3KC-5.00-FW-build0254-131025   63461          41812     66%
      Yes        Yes
```

system fsck

Use this command to check and repair the filesystem.

Syntax

```
diagnose system fsck harddisk
```

Variable	Description
harddisk	Check and repair the file system, then reboot the system.

system geoip

Use these commands to obtain geoip information. FortiManager uses a MaxMind GeoLite database of mappings between geographic regions and all public IP addresses that are known to originate from them.

Syntax

```
diagnose system geoip dump
diagnose system geoip info
diagnose system geoip ip
```

Example

This example shows the output for `diagnose system geoip info`:

```
Version: 1.019
Date: Fri Oct  4 16:56:02 2013
Copyright: Copyright (c) 2011 MaxMind Inc.  All Rights Reserved.
```

This example shows the output for `diagnose system geoip ip 223.255.254.0`:

```
223.255.254.0 : SG - Singapore
```

system ntp

Use this command to list NTP server information.

Syntax

```
diagnose system ntp status
```

Example

This example shows the output for `diagnose system ntp status`:

```
server ntp1.fortinet.net (208.91.112.50) -- Clock is synchronized
server-version=4, stratum=11
reference time is d5049d6a.4c80f64e -- UTC Mon Apr  1 23:57:30 2013
clock offset is 0.052517 msec, root delay is 0 msec
root dispersion is 752 msec, peer dispersion is 4 msec
```

system print

Use this command to print server information.

Syntax

```
diagnose system print certificate
diagnose system print cpuinfo
diagnose system print df
diagnose system print hosts
diagnose system print interface <interface>
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
certificate	Print the IPsec certificate.
cpuinfo	Print the CPU information.
df	Print the file system disk space usage.
hosts	Print the static table lookup for host names.
interface <interface>	Print the information of the interface
loadavg	Print the average load of the system.
netstat	Print the network statistics.
partitions	Print the partition information of the system.
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.

Example

Here is an example of the output from `diagnose system print df`:

```
Filesystem           1K-blocks      Used Available Use% Mounted on
none                     65536         0     65536   0% /dev/shm
none                     65536        20     65516   1% /tmp
/dev/sda1                47595     28965     16173  65% /data
/dev/sdb3              9803784    723128   8582652   8% /var
```

```
/dev/sdb2              61927420    224212  58557480   1% /var/static
/dev/sdb4               9803784    132164   9173616   2% /var/misc
/dev/sdb4               9803784    132164   9173616   2% /drive0
/dev/sdb4               9803784    132164   9173616   2% /Storage
/dev/loop0                 9911      1043      8356  12% /var/dm/tcl-root
```

system process

Use this command to view and kill processes.

Syntax

```
diagnose system process kill <signal> <pid>
diagnose system process killall <module>
diagnose system process list
```

Variable	Description
`kill <signal> <pid>`	Kill a process.
`killall <module>`	Kill all the related processes.
`list`	List all processes.

system route

Use this command to diagnose routes.

Syntax

```
diagnose system route list
```

Example

Here is an example of the output from `diagnose system route list`:

```
Destination     Gateway         Genmask         Flags Metric Ref    Use Iface
10.2.0.0        0.0.0.0         255.255.0.0     U     0      0        0 port1
169.254.0.0     0.0.0.0         255.255.0.0     U     0      0        0 svr_fgfm
169.254.0.0     0.0.0.0         255.255.0.0     U     0      0        0 svr_fgfm
0.0.0.0         10.2.115.20     0.0.0.0         UG    1      0        0 port1
```

system route6

Use this command to diagnose IPv6 routes.

Syntax

```
diagnose system route6 list
```

Example

Here is an example of the output from `diagnose system route list`:

```
Destination      Gateway Intf    Metric  Priority
fe80::/64        ::      port1   131080  256
fe80::/64        ::      port2   131080  256
```

```
fe80::/64       ::      port3   131080  256
fe80::/64       ::      port4   131080  256
```

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.

Syntax

```
diagnose test application fazcfgd <var0> <var1> ... <var20>
diagnose test application fazsvcg <var0> <var1> ... <var20>
diagnose test application fortilogd <var0> <var1> ... <var20>
diagnose test application logfiled <var0> <var1> ... <var20>
diagnose test application oftpd <var0> <var1> ... <var20>
diagnose test application snmpd <var0> <var1> ... <var20>
diagnose test application sqllogd <var0> <var1> ... <var20>
diagnose test application sqlrptcached <var0> <var1> ... <var20>
```

Variable	Description
`fazcfgd <var0> <var1> ... <var20>`	Test the FortiAnalyzer config daemon.
`fazsvcg <var0> <var1> ... <var20>`	Test the FortiAnalyzer service daemon.
`fortilogd <var0> <var1> ... <var20>`	Test the FortiAnalyzer `fortilogd` daemon.
`logfiled <var0> <var1> ... <var20>`	Test the FortiAnalyzer log file daemon.
`oftpd <var0> <var1> ... <var20>`	Test the FortiAnalyzer `oftpd` daemon.
`snmpd <var0> <var1> ... <var20>`	Test the SNMP daemon.
`sqllogd <var0> <var1> ... <var20>`	Test the FortiAnalyzer `sqllog` daemon.
`sqlrptcached <var0> <var1> ... <var20>`	Test the FortiAnalyzer `sqlrptcache` daemon.

test connection

Use this command to test connections.

Syntax

```
diagnose test connection mailserver <server-name> <account>
diagnose test connection syslogserver <server-name>
```

Variable	Description
`mailserver <server-name> <account>`	Test the connection to the mail server.
`syslogserver <server-name>`	Test the connection to the syslog server.

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 test applications.

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).

Syntax

```
diagnose test sftp auth <sftp server> <username> <password>
     <directory>
```

Variable	Description
`auth <sftp server> <username> <password> <directory>`	Test the scheduled backup. The directory variable represents the directory on the SFTP server where you want to put the file. The default directory is "/".

upload

upload clear

Use this command to clear the upload request.

Syntax

```
diagnose upload clear all
diagnose upload clear failed
```

Variable	Description
`all`	Clear all upload requests.
`failed`	Clear the failed upload requests.

upload force-retry

Use this command to retry the last failed upload request.

Syntax

```
diagnose upload force-entry
```

Example

Here is an example of the output from `diagnose upload force-retry`:

```
Force retry command has been issued.
```

upload status

Use this command to get the running status.

Syntax

```
diagnose upload status
```

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.

FortiManager CLI commands and variables are case sensitive.

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
```

This chapter describes the following `get` commands:

- fmupdate analyzer
- fmupdate av-ips
- fmupdate custom-url-list
- fmupdate device-version
- fmupdate disk-quota
- fmupdate fct-services
- fmupdate fds-setting
- fmupdate multilayer
- fmupdate publicnetwork
- fmupdate server-access-priorities
- fmupdate server-override-status
- fmupdate service
- fmupdate support-pre-fgt43
- fmupdate web-spam
- system admin
- system alert-console
- system alert-event
- system alertemail
- system auto-delete
- system backup status
- system certificate
- system dm
- system dns
- system fips
- system global
- system ha
- system interface
- system locallog
- system log
- system mail
- system metadata
- system ntp
- system password-policy
- system performance
- system report
- system route
- system route6
- system snmp
- system sql
- system status
- system syslog

fmupdate analyzer

Use this command to view analyzer settings.

fmupdate analyzer virusreport

Use this command to view forward virus report to FDS setting.

Syntax

```
get fmupdate analyzer virusreport
```

fmupdate av-ips

Use these commands to view AV/IPS update settings.

fmupdate av-ips advanced-log

Use this command to view AV/IPS advanced log configuration.

Syntax

```
get fmupdate av-ips advanced-log
```

fmupdate av-ips fct server-override

Use this command to view AV/IPS FortiClient server override configuration.

Syntax

```
get fmupdate av-ips fct server-override
```

fmupdate av-ips fgt server-override

Use this command to view AV/IPS FortiGate server override configuration.

Syntax

```
get fmupdate av-ips fgt server-override
```

fmupdate av-ips push-override

Use this command to view AV/IPS push override configuration.

Syntax

```
get fmupdate av-ips push-override
```

fmupdate av-ips push-override-to-client

Use this command to view AV/IPS push override to client configuration.

Syntax

```
get fmupdate av-ips push-override-to-client
```

fmupdate av-ips update-schedule

Use this command to view AV/IPS update schedule configuration.

Syntax

```
get fmupdate av-ips update-schedule
```

fmupdate av-ips web-proxy

Use this command to view AV/IPS web proxy configuration.

Syntax

```
get fmupdate av-ips web-proxy
```

fmupdate custom-url-list

Use this command to view the FortiGuard URL database.

Syntax

```
get fmupdate custom-url-list
```

fmupdate device-version

Use this command to view device version objects.

Syntax

```
get fmupdate device-version
```

Example

This example shows the output for `get fmupdate device-version`:

```
faz                  : 4.0 5.0
fct                  : 4.0 5.0
fgt                  : 3.0 4.0 5.0
fml                  : 3.0 4.0
fsw                  : 5.0
```

fmupdate disk-quota

Use this command to view the disk quota for the update manager.

Syntax

```
get fmupdate disk-quota
```

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`:

```
fds-pull-interval    : 10
max-av-ips-version   : 20
```

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`:

```
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               : disable
query-antispam      : disable
query-antivirus     : disable
query-filequery     : disable
query-webfilter     : disable
use-cert            : BIOS
```

fmupdate support-pre-fgt43

Use this command to view support for pre-fgt43 configuration.

Syntax

```
get fmupdate support-pre-fgt43
```

fmupdate web-spam

Use these commands to view web spam configuration.

fmupdate web-spam fct server-override

Use this command to view Web Spam FortiClient server override configuration.

Syntax

```
get fmupdate web-spam fct server-override
```

fmupdate web-spam fgd-log

Use this command to view Web Spam FortiGuard log (obsolete).

Syntax

```
get fmupdate web-spam fgd-log
```

fmupdate web-spam fgd-setting

Use this command to view Web Spam FortiGuard run parameter.

Syntax

```
get fmupdate web-spam fgd-setting
```

fmupdate web-spam fgt server-override

Use this command to view Web Spam FortiGate server override configuration.

Syntax

```
get fmupdate web-spam fgt server-override
```

fmupdate web-spam poll-frequency

Use this command to view Web Spam polling frequency configuration.

Syntax

```
get fmupdate web-spam poll-frequency
```

fmupdate web-spam web-proxy

Use this command to view Web Spam web proxy configuration.

Syntax

```
get fmupdate web-spam web-proxy
```

system admin

Use these commands to view admin configuration.

Syntax

```
get system admin group
get system admin ldap
get system admin profile
get system admin radius
get system admin setting
get system admin tacacs
get system admin user
```

Example

This example shows the output for `get system admin setting`:

```
access-banner       : disable
admin_server_cert   : server.crt
allow_register      : disable
auto-update         : enable
banner-message      : (null)
chassis-mgmt        : disable
chassis-update-interval: 15
demo-mode           : disable
device_sync_status  : enable
http_port           : 80
https_port          : 443
idle_timeout        : 480
install-ifpolicy-only: disable
mgmt-addr           : (null)
mgmt-fqdn           : (null)
offline_mode        : disable
register_passwd     : *
show-add-multiple   : enable
show-adom-central-nat-policies: disable
show-adom-devman    : enable
show-adom-dos-policies: disable
show-adom-dynamic-objects: enable
show-adom-icap-policies: enable
show-adom-implicit-policy: enable
show-adom-ipv6-settings: enable
show-adom-policy-consistency-button: disable
show-adom-rtmlog    : disable
show-adom-sniffer-policies: disable
show-adom-taskmon-button: enable
show-adom-terminal-button: disable
show-adom-voip-policies: enable
show-adom-vpnman    : enable
show-adom-web-portal: disable
```

```
show-device-import-export: enable
show-foc-settings    : enable
show-fortimail-settings: disable
show-fsw-settings    : enable
show-global-object-settings: enable
show-global-policy-settings: enable
show_automatic_script: disable
show_grouping_script: disable
show_tcl_script      : 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
```

system alert-event

Use this command to view alert event information.

Syntax

```
get system alert-event <alert name>
```

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, archived and quarantined files.

Syntax

```
get system auto-delete
```

system backup status

Use this command to view the backup status on your FortiManager unit.

Syntax

```
get system backup status
```

system certificate

Use these commands to view certificate configuration.

Syntax

```
get system certificate ca
get system certificate local
get system certificate ssh
```

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`:

```
concurrent-install-limit: 60
concurrent-install-script-limit: 60
discover-timeout    : 6
dpm-logsize         : 10000
fgfm-sock-timeout   : 360
fgfm_keepalive_itvl : 120
force-remote-diff   : disable
max-revs            : 100
nr-retry            : 1
retry               : enable
retry-intvl         : 15
rollback-allow-reboot: disable
```

```
script-logsize      : 100
verify-install      : enable
```

system dns

Use this command to view DNS configuration.

Syntax

```
get system dns
```

system fips

Use this command to view FIPS configuration.

Syntax

```
get system fips
```

system global

Use this command to view global configuration.

Syntax

```
get system global
```

Example

This example shows the output for `get system global`:

```
admin-https-pki-required: disable
admin-lockout-duration: 60
admin-lockout-threshold: 3
admin-maintainer    : enable
admintimeout        : 5
adom-mode           : normal
adom-rev-auto-delete: disable
adom-status         : enable
auto-register-device: enable
clt-cert-req        : disable
console-output      : standard
daylightsavetime    : enable
default-disk-quota  : 1000
enc-algorithm       : low
hostname            : FMG3000C
language            : english
ldapconntimeout     : 60000
max-concurrent-users: 20
max-running-reports : 1
pre-login-banner    : disable
```

```
remoteauthtimeout   : 10
ssl-low-encryption  : enable
swapmem             : enable
timezone            : (GMT-8:00) Pacific Time (US & Canada).
vdom-mirror         : disable
webservice-support-sslv3: disable
workspace           : disable
```

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
hb-interval         : 5
hb-lost-threshold   : 3
mode                : standalone
password            : *
peer:
```

system interface

Use this command to view interface configuration.

Syntax

```
get system interface
```

Example

This example shows the output for `get system interface`:

```
== [ port1 ]
name: port1   status: up   ip: 10.2.115.82 255.255.0.0   speed: auto
== [ port2 ]
name: port2    status: up    ip: 0.0.0.0 0.0.0.0   speed: auto
== [ port3 ]
name: port3    status: up    ip: 0.0.0.0 0.0.0.0   speed: auto
== [ port4 ]
name: port4   status: up   ip: 1.1.1.1 255.255.255.255   speed: auto
```

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 filter
get system locallog fortianalyzer setting
get system locallog memory filter
get system locallog memory setting
get system locallog syslogd filter (also syslogd2 and syslogd3)
get system locallog syslogd setting (also syslogd2 and syslogd3)
```

Example

This example shows the output for `get system locallog disk setting`:

```
status                : enable
severity              : debug
upload                : disable
server-type           : FTP
max-log-file-size     : 100
roll-schedule         : none
diskfull              : overwrite
log-disk-full-percentage: 80
```

system log

Use these commands to view log configuration.

Syntax

```
get system log alert
get system log fortianalyzer
get system log settings
```

Example

This example shows the output for `get system log settings`:

```
FCH-custom-field1    : (null)
FCH-custom-field2    : (null)
FCH-custom-field3    : (null)
FCH-custom-field4    : (null)
FCH-custom-field5    : (null)
FCT-custom-field1    : (null)
FCT-custom-field2    : (null)
FCT-custom-field3    : (null)
FCT-custom-field4    : (null)
FCT-custom-field5    : (null)
```

```
FGT-custom-field1    : (null)
FGT-custom-field2    : (null)
FGT-custom-field3    : (null)
FGT-custom-field4    : (null)
FGT-custom-field5    : (null)
FML-custom-field1    : (null)
FML-custom-field2    : (null)
FML-custom-field3    : (null)
FML-custom-field4    : (null)
FML-custom-field5    : (null)
FWB-custom-field1    : (null)
FWB-custom-field2    : (null)
FWB-custom-field3    : (null)
FWB-custom-field4    : (null)
FWB-custom-field5    : (null)
analyzer             : disable
analyzer-interface   : port1
analyzer-quota       : 1000
analyzer-quota-full  : overwrite
analyzer-settings    : device
local                : enable
local-level          : information
local-quota          : 1000
local-quota-full     : overwrite
local-settings       : device
rolling-regular:
syslog               : disable
syslog-csv           : disable
syslog-filter        :
syslog-ip            : 0.0.0.0
syslog-level         : emergency
syslog-port          : 514
```

system mail

Use this command to view alert email configuration.

Syntax

```
get system mail <server name>
```

system metadata

Use this command to view metadata configuration.

Syntax

```
get system metadata <admin name>
```

system ntp

Use this command to view NTP configuration.

Syntax

```
get system ntp
```

system password-policy

Use this command to view the password policy setting on your FortiAnalyzer.

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
```

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:7.6%
  Used(Excluded NICE):7.6%
  CPU_num: 1.
  CPU[0] usage: 19%
Memory:
  Total:3,103,696 kB
  Used:785,720 kB25.3%
Hard Disk:
  Total:82,565,808 kB
  Used:45,063,300 kB54.6%
Flash Disk:
  Total:47,595 kB
  Used:35,374 kB74.3%
```

system report

Use this command to view report configuration.

Syntax

```
get system report
```

Example

This example shows the output for `get system report`:

```
est-browse-time     : enable
est-browse-time-usr-max: 20000
```

system route

Use this command to view IPv4 routing table configuration.

Syntax

```
get system route <entry number>
```

Example

This example shows the output for `get system route 1`:

```
seq_num             : 1
device              : port1
dst                 : 0.0.0.0 0.0.0.0
gateway             : 10.2.0.250
```

system route6

Use this command to view IPv6 routing table configuration.

Syntax

```
get system route6 <entry number>
```

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 sysinfo`:

```
contact_info        : (null)
description         : (null)
engine-id           : (null)
location            : (null)
status              : disable
trap-high-cpu-threshold: 80
trap-low-memory-threshold: 80
```

system sql

Use this command to view SQL configuration.

Syntax

```
get system sql
```

Example

This example shows the output for `get system sql`:

```
prompt-sql-upgrade  : enable
status              : local
auto-table-upgrade  : disable
database-type       : postgres
logtype             : app-ctrl attack content dlp emailfilter event
     generic history traffic virus voip webfilter netscan
start-time          : 17:57 2013/01/10
table-partition-mode: auto
table-partition-time-range: 1000
table-partition-time-range-max: 604800
```

```
table-partition-time-range-min: 10
```

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                        : FMG3000C
Version                              : v5.0-build0200 130710 (GA Patch 3)
Serial Number                        : FM-3KC3R12600027
BIOS version                         : 00010018
System Part-Number                   : P06450-04
Hostname                             : FMG3000C
Max Number of Admin Domains          : 5000
Max Number of Device Groups          : 5000
Admin Domain Configuration           : Enabled
FIPS Mode                            : Disabled
HA Mode                              : Stand Alone
Branch Point                         : 200
Release Version Information          :  (GA Patch 3)
Current Time                         : Thu Jul 18 16:28:09 PDT 2013
Daylight Time Saving                 : Yes
Time Zone                            : (GMT-8:00) Pacific Time (US &
     Canada).
```

system syslog

Use this command to view syslog information.

Syntax

```
get system syslog <syslog server name>
```

show

The show commands display a part of your Fortinet unit's configuration in the form of 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.

FortiManager CLI commands and variables are case sensitive.

Unlike the `get` command, `show` does not display settings that are assumed to remain in their default state.

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