FortiClient EMS - Release Notes

Version 6.4.2

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Introduction

FortiClient Endpoint Management Server (EMS) is a system intended to be used to manage installations of FortiClient. It uses the Endpoint Control protocol and supports all FortiClient platforms: Microsoft Windows, macOS, Linux, Android OS, Apple iOS, and Chrome OS. FortiClient EMS runs on a Microsoft Windows server.

This document provides the following information for FortiClient EMS 6.4.2 build 1570:

For information about FortiClient EMS, see the *FortiClient EMS 6.4.2 Administration Guide*.

Endpoint requirements

The following FortiClient platforms are supported:

- FortiClient for Microsoft Windows
- FortiClient for macOS
- FortiClient for Linux
- FortiClient for Android OS
- FortiClient for iOS
- FortiClient for Chromebooks

See Product integration and support on page 10 for FortiClient version support information.

FortiClient is supported on multiple Microsoft Windows, macOS, and Linux platforms. EMS supports all such platforms as endpoints.

Supported web browsers

The latest version of the following web browsers can be used to connect remotely to the FortiClient EMS 6.4.2 GUI:

- Mozilla Firefox
- Google Chrome
- Microsoft Edge

Internet Explorer is not recommended. Remote access may need to be enabled from the FortiClient EMS GUI.

Licensing and installation

For information on licensing and installing FortiClient EMS, see the *FortiClient EMS Administration Guide*.

> Ensuring that all installed software, including EMS and SQL Server, is up-to-date, is considered best practice.

Special notices

FortiClient EMS Microsoft Visual C++ installation

The EMS installation includes installation of Microsoft Visual C++ (VC) 2015. If the server already has a newer version of VC installed, the installation fails. See VC++ 2015 Redistributable installation returns error 1638 when newer version already installed.

If you have a version of VC installed on your server that is newer than 2015, uninstall VC before installing EMS.

SQL Server Enterprise with 5000 or more endpoints

When managing more than 5000 endpoints, install SQL Server Enterprise instead of SQL Server Express, which the EMS installation also installs by default. Otherwise, you may experience database deadlocks. The minimum SQL Server version that FortiClient EMS supports is 2017. See the FortiClient EMS Administration Guide.

Split tunnel

A split tunnel configuration that functioned in FortiClient (Windows) 6.4.1 no longer works after upgrading to 6.4.2, unless you have configured a per-tunnel configuration in EMS.

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What's new

For information about what's new in FortiClient EMS 6.4.2, see the *FortiClient & FortiClient EMS 6.4 New Features*.

Upgrading

Upgrading from previous EMS versions

FortiClient EMS supports direct upgrade from EMS 6.2. To upgrade older EMS versions, follow the upgrade procedure outlined in *FortiClient and FortiClient EMS Upgrade Paths*.

Downgrading to previous versions

FortiClient EMS does not support downgrading to previous EMS versions.

Product integration and support

The following table lists version 6.4.2 product integration and support information:

Server operating systems	• Windows Server 2019. On Windows Server 2019, preinstalling Microsoft ODBC Driver 17 for SQL Server (x64) is necessary. • Windows Server 2016 • Windows Server 2012 R2
Minimum system requirements	• 2.0 GHz 64-bit processor, four virtual CPUs (4 vCPU) • 4 GB RAM (8 GB RAM or more is recommended) • 40 GB free hard disk • Gigabit (10/100/1000baseT) Ethernet adapter • Internet access is recommended, but optional, during installation. SQL Server may require some dependencies to be downloaded over the Internet. EMS also tries to download information about FortiClient signature updates from FortiGuard. You should only install FortiClient EMS and the default services for the operating system on the server. You should not install additional services on the same server as FortiClient EMS.
FortiAnalyzer	• 6.4.0 and later
FortiClient (Linux)	• 6.4.0 and later • 6.2.0 and later
FortiClient (macOS)	• 6.4.0 and later • 6.2.0 and later
FortiClient (Windows)	• 6.4.0 and later • 6.2.0 and later
FortiOS	• 6.4.0 and later • 6.2.0 and later
FortiSandbox	• 3.2.0 and later (for detailed reports on files that FortiSandbox has detected) • 3.1.0 and later (for detailed reports on files that FortiSandbox has detected) • 3.0.0 and later • 2.5.0 and later

Installing and running EMS on a domain controller is not supported.

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Resolved issues

The following issues have been fixed in version 6.4.2. For inquiries about a particular bug or to report a bug, contact Customer Service & Support.

EMS Settings

Bug ID	Description
651897	GUI should show certificate obtained from license.
652843	EMS should prefer user-uploaded certificate over certificate obtained from FortiCare.
666319	EMS that accepts requests from all hosts ('*') strips off the subdomain from URL when the URL is not in ALLOWED_HOSTS.

License management

Bug ID	Description
641447	EMS displays license expired message when it is licensed but one license has expired.
646082	License expired warning displays under logs even though user has activated new license.
661194	EMS should allow user to configure Chromebook settings when only Fabric Agent license is available.
672206	EMS fails to release license seat for unregistered FortiClient.
681443	*Delete Account* button does not work after applying trial license.

Endpoint control

Bug ID	Description
657208	EMS fails to push assigned on-fabric detection rules to endpoints.

Endpoints management

Bug ID	Description
624338	LDAP synchronization fails with *The LDAP server is unavailable. at System.DirectoryServices.Protocols.LdapConnection.Connect()* error.
636563	Computer moved between organization units synchronizes, then disappears.
639654	FortiClient monitor widget and FortiView widget cannot show FortiClient avatar when SSL VPN is connected.
639661	Endpoint Zero Trust tag does not show on FortiGate.
645056	Some Zero Trust tagging rules do not work.
646253	EMS fails to synchronize with LDAP server for new changes after upgrade.
649003	NullReferenceException occurs in FcmAdDaemon.User.FromSearchResultEntry when syncing domain.
649902	Email alert about new FortiClient version available for deployment is inaccurate.
651958	Sandbox Events tab is not visible when Cloud Sandbox is enabled.
655339	Restoring a quarantined file with FortiSandbox takes too long.
663266	Active Directory (AD) sync is stuck at 0%.
663793	Missing fortigate_connection_details.
667750	Host Tag Monitor does not show all tagged endpoints.
668687	Domain sync does not work.
670370	Filtering the list of endpoints displayed on the Endpoints content pane does not work for classification tags.
672052	*Allowed inactive days* does not work as expected.
672135	Attempting to save policy on a large domain hangs almost indefinitely.
673078	EMS fails to delete endpoint.
673149	SSO setting error displays while trying to sign in with SSO.
673159	Newly created group does not appear on *Move* menu.

Endpoint policy and profile

Bug ID	Description
632180	Remove DPD option when selecting IKEv2.

Bug ID	Description
645518	Cloud-based malware protection *Exclude Files from Trusted Sources* does not work properly.
650947	FortiClient EMS should only show parts of imported profile used in FortiClient profile.
657292	EMS should hide remote gateway for FortiSASE connection.
663450	EMS fails to retrieve FortiSASE tunnel when synchronization time is reached.
666801	User cannot save endpoint policy priority change.
667090	EMS does not update endpoint policy when endpoint moves in AD server.
667506	FortiClient EMS provides no error message when saving SAML SSO setting with missing identity provider certificate.
670537	FortiManager Web Filter sync does not work.
673443	Default action to block for Removable Media Access issues.
674744	*Auto Connect Only When Off-Net* enables itself when profile disables IPsec VPN.
677439	XML validation error occurs while adding VPN tunnel using XML.

Installation and upgrade

Bug ID	Description
656854	Upgraded EMS dev tool reports *Duplicate keys detected: 'group.id'* error when clicking the deployment profile after upgrade.
661413	EMS server does not work after failed upgrade.
663554	Upgrade with remote database fails.
664289	LDAP sync does not work after EMS upgrade to 6.4.1.
677511	EMS-created deployment package allows user to select feature when installing with MSI file.

Database backup and restore

Bug ID	Description
643836	DBTools log leaks sensitive error information.

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Chromebook management

Bug ID	Description
652441	EMS is missing Chromebook default policy.
660023	EMS fails to report correct error message for duplicated Chromebook policy.
663224	Google Domain synchronization fails with SQL error.

GUI

Bug ID	Description
630657	EMS fails to delete workgroup containing endpoints because of uncaught (.
661427	GUI is inaccessible from console application.
675416	GUI hangs on Vulnerability Scan page.
681128	Clicking the endpoint summary tab shows console error.
681206	*TypeError at /api/v1/devices/delete* delete device error.

Performance

Bug ID	Description
603614	FcmUpdateDaemon process stays high CPU forever.
659051	Deadlocks and optimization.
669882	Extra client vulnerabilities in database cause performance issues.
670697	Concurrency issue causes duplicate ID error inserting into some database tables.
682703	Multiple FCMDaemon crashes.
683106	spUpdateIPList deadlock.

FortiClient Cloud

Bug ID	Description
588597	FortiClient Cloud reports it failed to delete an invitation being used when deleting a

Bug ID	Description
	deployment package.
631539	FortiClient connection QR code provides wrong connection information.
647776	Error arises after deleting invitation code while deleting a deployment package.
668400	FortiClient Cloud fails to add user role for newly added account.
673259	EMS does not display invitation code for deployment package created in FortiClient Cloud.
673475	FortiClient Cloud is missing expiry date on edits software.
674498	FortiClient Cloud does not show license expiration labels in License Information widget.

User management

Bug ID	Description
657207	When standard admin tries to test a new endpoint domain, user gets permission denied.
669051	EMS read-only admin can still configure some features.
674442	EMS administrator cannot reactivate inactive users in the GUI.

Deployment

Bug ID	Description
615247	EMS does not remove installer from its directory when the administrator deletes it from EMS.
658004	Deployment status does not update during deployment.
672588	EMS fails to remove uploaded installer from GUI.
680821	EMS deployment fails to change install status to complete.

API

Bug ID	Description
681998	FortiOS APIs report incorrect data due to SQL table race condition.

Logs

Bug ID	Description
667817	Files do not clear out automatically from fctuploads.

Other

Bug ID	Description
646417	Console system time is incorrect.
664960	fcmdaemon crash.
677593	Multiple FcmDaemon crashes observed within short period.

Known issues

The following issues have been identified in version 6.4.2. For inquiries about a particular bug or to report a bug, contact Customer Service & Support.

Multitenancy

Bug ID	Description
647465	Some Chromebook settings should be per-site and not global.
647892	Creating sites through API breaks EMS.
673587	Running out of licenses alerts should not apply to global EMS with multitenancy enabled.

Dashboard

Bug ID	Description
671175	Dashboard widgets results are inaccurate.

Endpoint management

Bug ID	Description
576108	Distinguished name parsing problems.
608500	Active Directory (AD) synchronization to EMS issue - groups do not populate in EMS.
631620	Administrator fails to manually move endpoint to a new workgroup.
639974	Domain endpoint registered to EMS before importing domain shows no IP address and loses events upon restarting.
647407	Computers deleted from AD domains appear in EMS.
649002	Sync fails when adding device with more than 256 characters in DN.
649275	Selected device VCM detail only lists 50 and cannot scroll to the rest.
664087	Duplicate key in dbo.group_container object.

Bug ID	Description
668149	EMS endpoint details page is missing antiransomware and cloud-based malware detection features.
668190	Endpoint does not show in domain OU.
674145	With FortiClient registered to EMS, an IPsec VPN tunnel may fail to come up because the IPsec VPN IKE mode changes from aggressive to main. Workaround: On the FortiGate, change the IPsec VPN tunnel mode to main.
680940	In private cloud, FortiClient Cloud does not accurately record the IP address of EMS administrators that log in.
682739	Endpoint summary displays scheduled time with value *invalid date* when user modifies installation schedule.
683512	Big Sur format macOS in EMS.

Endpoint policy and profile

Bug ID	Description
624666	Policy progress bar does not show the correct status.
631502	Web Filter fails to switch to Anycast rating server when using FortiOS imported profile.
639274	Edit policy column does not work.
650334	Feature list for logs settings are inconsistent between EMS and FortiClient.
678922	Endpoint policy takes several minutes to save.
683390	User cannot enable Sandbox Cloud because of *FortiCloud Region and Time Offset need to be set* error.

Installation and upgrade

Bug ID	Description
682708	Login banner is disabled after EMS upgrade.

Logs

Bug ID	Description
661633	No email for *EMS license is expired or about to expire*.

Deployment

Bug ID	Description
657683	Deleted tags show on FortiClient GUI.
666289	EMS should report correct deployment package state.

User management

Bug ID	Description
639658	EMS fails to edit default admin in global site.
673178	Setting administrator has SAML SSO setting available but no permissions.

GUI

Bug ID	Description
646052	EMS does not show error icon for profiles in invalid state.
646186	GUI issue when deleting a Zero Trust tag rule and tag.
677612	EMS does not show username/email that user set in FortiClient GUI.

Performance

Bug ID	Description
676799	Deadlocked errors transactions on fcmdaemon log.
681212	spGetActiveUsers encounters deadlocks when registering many endpoints.

Bug ID	Description
681634	Post-upgrade race condition can cause crashes and other instabilities.
682617	Possible memory leak in FcmDaemon.
682884	Deadlock found in fcmaddaemon log.
683162	Deadlocks for spInsertClientEvents.

Database backup and restore

Bug ID	Description
653864	Restoring database from other EMS should not import the other EMS license.

Chromebook management

Bug ID	Description
661794	FcmChromebookDaemon.exe runs when Chromebook management is disabled.

API

Bug ID	Description
644295	On-fabric detection rule is still created when no rule set is provided and API returns 500.
674035	Devices_ip_mac_list is empty.

License management

Bug ID	Description
666925	Freshly installed EMS reports all licenses were consumed in global site.
675005	EMS reassigns all license seats to default site after EMS user manually syncs license.

Other

Bug ID	Description
634581	Session cookie does not expire after logging out of EMS server.
641520	EMS allows remote login when Remote HTTPS access option is disabled.

Change log

Date	Change Description
2020-12-17	Initial release.
2020-12-22	Added 674145 to Known issues on page 17.
2021-03-18	Added Split tunnel on page 7.
2021-03-29	Removed 673328 from Installation and upgrade on page 18.

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