SD-WAN Orchestrator MEA - Release Notes

Version 6.4.1.r5

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Change Log

Date	Change Description
2020-12-22	Initial release of 6.4.1.r5.
2020-12-22	Updated Known Issues on page 14.
2021-01-08	Updated Limitations of SD-WAN Orchestrator MEA on page 16.
2021-03-05	Added support for FortiManager 6.4.5 and FortiOS 6.4.5 to Supported FortiManager and FortiOS versions on page 12.
2021-08-10	Added Address group change and upgrade on page 7 to Special Notices on page 7.
2021-08-25	Updated Address group change and upgrade on page 7.

SD-WAN Orchestrator MEA 6.4.1.r5 Release

This document provides information about SD-WAN Orchestrator MEA version 6.4.1.r5 build 0334. SD-WAN Orchestrator MEA management extension application (MEA) is available with some FortiManager models.

This section includes the following topics:

- Supported FortiManager host models on page 5
- Licensing on page 5
- What's new on page 5

Supported FortiManager host models

For a list of FortiManager models that can host SD-WAN Orchestrator MEA 6.4.1.r5 management extension application and minimum system requirements, see the FortiManager 6.4.4 Release Notes.

Licensing

SD-WAN Orchestrator MEA requires the following license:

- 360 FortiGate Protection or SD-WAN Orchestrator Entitlement License

SD-WAN Orchestrator MEA does not include a free license.

What's new

This section identifies new features and enhancements available with SD-WAN Orchestrator MEA 6.4.1.r5.

For information about what's new in FortiManager 6.4, see the FortiManager 6.4 New Features Guide.

Non-standard HTTPS port support

SD-WAN Orchestrator supports FortiGates with non-standard HTTPS ports.

Version standardization

SD-WAN Orchestrator versions have been standardized to include a revision number. Previously the version included the build number, for example, `6.4.1-build0330-201113`. Now the version includes a revision number and the build number, for example `6.4.1.r5-build0334-201222`.

To view the SD-WAN Orchestrator version in the Root ADOM, go to *SD-WAN Orchestrator > Maintenance > Upgrade*.

Blackhole routes

You can add a blackhole static route to FortiGates for all intranet IP Pools. The blackhole static route entries will be deployed to FortiGate automatically by SD-WAN Orchestrator after an IP pool is created. This prevents intranet prefixes from being added to the route when the routes are resolved via underlay WAN ports in BGP.

To upgrade the configuration from 6.4.1.r4 to 6.4.1.r5:

When the LAN port is configured with a custom subnet instead of auto assigned, create a new IP pool or modify the existing IP pool to include the LAN custom subnet. See also Address group change and upgrade on page 7.

Dual hub load mode

When creating a business rule, the option *Dual Hub Load Mode* is added to control the behavior of the business rule in dual hub scenarios.

ACTIVE_PASSIVE: The business rule is split and deployed to FortiGate as two rules:

- **Primary hub**: This includes all overlay links to the primary hub as priority members.
- **Secondary hub**: This includes all overlay links to the secondary hub as priority members. This is the default option from 6.4.1.r5 builds.

ACTIVE_ACTIVE: The business rule will be deployed to FortiGate as one rule.

The priority members will include all overlay links between the edge and the hubs. This behavior is the same as 6.4.1.r4 and previous builds.

This option is only available when the *Group Type* is *Overlay* or *All*.

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Special Notices

This section highlights some of the operational changes that administrators should be aware of in SD-WAN Orchestrator MEA 6.4.1.r5.

- Address group change and upgrade on page 7
- FortiSwitch profiles on page 7

Address group change and upgrade

Starting with SD-WAN Orchestrator MEA 6.4.1.r5, custom IP addresses created by the user must be in an intranet IP pool address. Every custom address must be *part* (not whole) of a subnet of an intranet IP pool address. The subnets of intranet IP pool addresses will be added to blackhole static routes.

Before you upgrade SD-WAN Orchestrator MEA from version 6.4.1.r4 or earlier to 6.4.1.r5 or later, create one or more intranet IP pool addresses in SD-WAN Orchestrator MEA that contains one or more subnets to cover all custom IP addresses created by the user.

For example, you are using SD-WAN Orchestrator MEA version 6.4.1.r4, and it contains the following custom IP addresses:

- 192.168.0.0/24
- 192.168.1.0/24
- 192.168.100.0/24

Before you upgrade SD-WAN Orchestrator MEA from 6.4.1.r4 to 6.4.1.r5 or later, create an intranet IP pool address in SD-WAN Orchestrator MEA that contains the following subnets:

- 192.168.0.0/23 (includes 192.168.0.0/24 and 192.168.1.0/24)
- 192.168.100.0/23 (includes 192.168.100.0/24)

Alternately you create an intranet IP pool address that contains one subnet (192.168.0.0/16), which includes all three custom IP addresses.

You must NOT create an intranet IP pool address that contains subnet 192.168.100.0/24, which is equal to one of the custom IP addresses, because the subnet will be added to the blackhole static route, making the routes of other types invalid.

FortiSwitch profiles

If SD-WAN Orchestrator MEA prompts an exception when changing the profile of a device as reported in issue 064530, check if the two profiles meet the following conditions:

1. Compare VLANs in interface FortiLink with these two profiles, and check if there are VLANs that own same VLAN ID.

2. Compare VLANs in same interface (except interface FortiLink) with these two profiles, and check if there are VLANs that own same name, but have different VLAN IDs.

3. Compare VLANs in different interfaces (except interface FortiLink) with these two profiles, and check if there are VLANs that own same name.

Workaround:

1. Make sure the device is synchronized, and then enable the *override device LAN* setting.

2. Release resources (for example, IP pool, DHCP server, and so on) used by VLANs (except default, video, voice, rspan, onboarding, quarantine) in interface FortiLink.

3. Release resources used by VLANs that meet condition 2 above, and then delete these VLANs.

4. Release resources used by VLANs that meet condition 3 above, and then delete these VLANs.

5. Disable Switch/AP configuration in *Device LAN setting* page.

6. Wait 5-10 minutes until device's configuration state becomes *Modified*, and then trigger a manual deployment.

7. When device is synchronized, change profile.

8. After changing the profile, disable *override device LAN* setting.

Upgrade Information

Upgrade of SD-WAN Orchestrator MEA 6.4.1.r4 to 6.4.1.r5 is supported.

> You must be in a 6.4 ADOM to access SD-WAN Orchestrator MEA.

When you upgrade FortiManager from 6.4.3 to 6.4.4, SD-WAN Orchestrator MEA upgrades automatically to 6.4.1.r5. Alternately you can leave FortiManager running 6.4.3 and manually upgrade SD-WAN Orchestrator MEA to 6.4.1.r5.

This section covers the following upgrade scenarios:

Upgrading SD-WAN Orchestrator MEA automatically

In this scenario, you are starting the upgrade with the following items:

- FortiManager 6.4.3
- SD-WAN Orchestrator MEA 6.4.1.r4
- FortiGates running FortiOS 6.4.3

To upgrade SD-WAN Orchestrator MEA:

1. Upgrade FortiManager to 6.4.4.
   After FortiManager reboots, SD-WAN Orchestrator MEA is automatically upgraded to 6.4.1.r5.
2. In FortiManager, upgrade FortiOS from 6.4.3 to 6.4.4.
   a. Go to *Device Manager > Firmware*.
      The *Upgrade Available* column displays 6.4.4.
   b. Select the FortiGates, and click *Upgrade*.
      When the firmware upgrade completes, click *Close*.

   FortiManager, SD-WAN Orchestrator MEA, and all FortiGate are upgraded.

Upgrading SD-WAN Orchestrator MEA manually

If you have not yet upgraded FortiManager to 6.4.4, you can upgrade SD-WAN Orchestrator MEA by using the GUI.

In this scenario, you are starting the upgrade with the following items:

- FortiManager 6.4.3
- SD-WAN Orchestrator MEA 6.4.1.r4

Although you can run SD-WAN Orchestrator MEA 6.4.1.r5 with FortiManager 6.4.3 and FortiOS 6.4.3, it is recommended to use FortiManager 6.4.4 and FortiOS 6.4.4 with SD-WAN Orchestrator MEA 6.4.1.r5.

To upgrade SD-WAN Orchestrator MEA by using the GUI:

1. If ADOMs are enabled in FortiManager, ensure you are in the root ADOM to access the *Maintenance* tab in SD-WAN Orchestrator MEA.
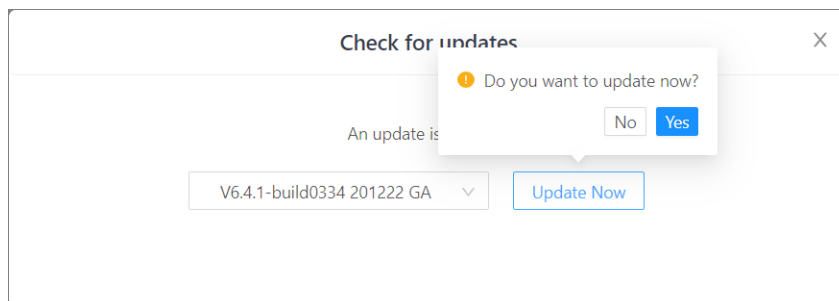2. In SD-WAN Orchestrator MEA, go to *Maintenance > Upgrade*, and click *Check for updates*.
    When an update is available, the following message is displayed:
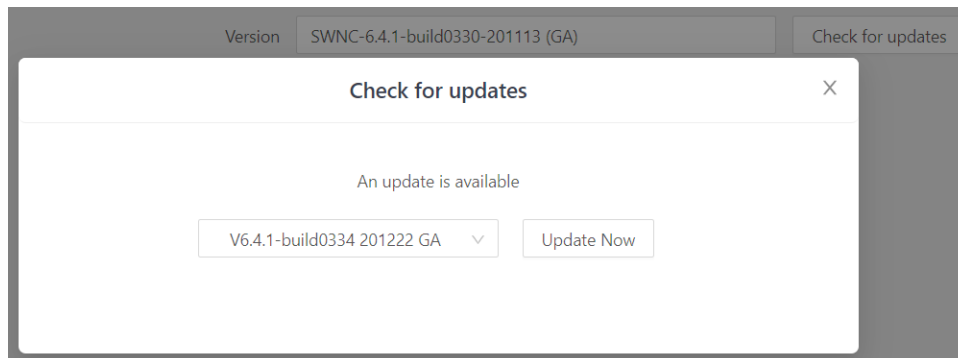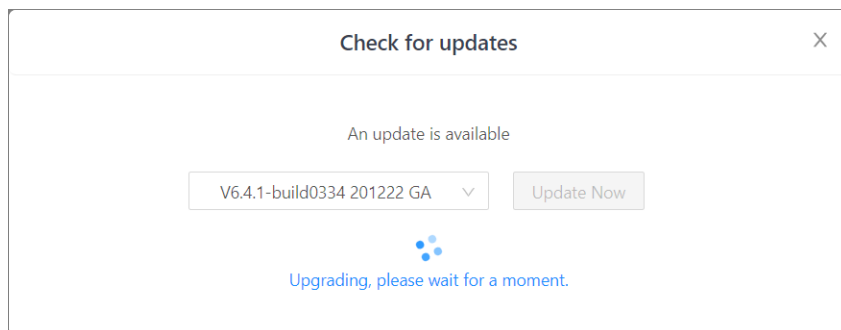

    When SD-WAN Orchestrator MEA is up to date, the following message is displayed, and no upgrade is available:
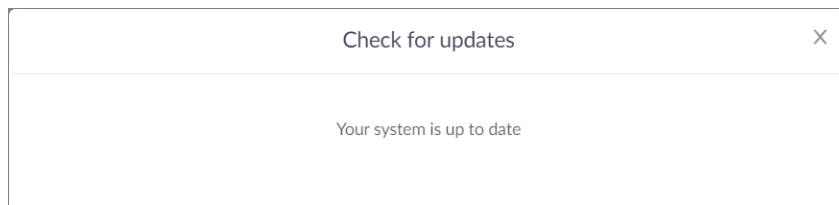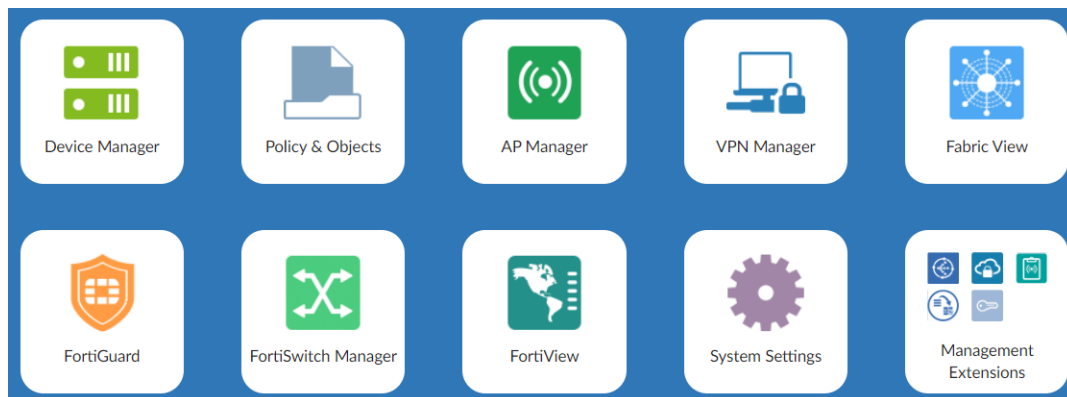

3. Click *Update Now*.
    A confirmation dialog box is displayed.

4. Click *Yes*.
    SD-WAN Orchestrator MEA proceeds with the upgrade to 6.4.1.r5.

When the upgrade is complete, the FortiManager GUI is displayed.

5. Click *Management Extensions > SD-WAN Orchestrator*.

Product Integration and Support

This section lists SD-WAN Orchestrator MEA 6.4.1.r5 support of other Fortinet products. It contains the following topics:

- Supported FortiManager and FortiOS versions on page 12
- Supported FortiGate models on page 12

Supported FortiManager and FortiOS versions

This section identifies SD-WAN Orchestrator MEA 6.4.1.r5 product integration and support information:

FortiManager	• 6.4.1 - 6.4.5
FortiOS	• 6.4.1 - 6.4.5

Supported FortiGate models

SD-WAN Orchestrator MEA supports the following FortiGate models:

Model	Firmware Version
FortiGate: FortiGate-40F, FortiGate-40F-3G4G, FortiGate-60F, FortiGate-61F, FortiGate-100F, FortiGate-101F, FortiGate-60E, FortiGate-61E, FortiGate-60E-POE, FortiGate 60E-DSL, FortiGate 60E-DSLJ, FortiGate-80E, FortiGate-81E, FortiGate-80E-POE, FortiGate-81E-POE, FortiGate-100E, FortiGate-100EF, FortiGate-101E, FortiGate-140E, FortiGate-140E-POE, FortiGate-200E, FortiGate-201E, FortiGate-300E, FortiGate-301E, FortiGate-400E, FortiGate-401E, FortiGate-500E, FortiGate-501E, FortiGate-600E, FortiGate-601E, FortiGate-1100E, FortiGate-1101E, FortiGate-2000E, FortiGate-2500E, FortiGate-3400E, FortiGate-3401E, FortiGate-3600E, FortiGate-3601E, FortiGate-3960E, FortiGate-3980E, FortiGate-300D, FortiGate-400D, FortiGate-500D, FortiGate-600D, FortiGate-800D, FortiGate-900D, FortiGate-1000D, FortiGate-1200D, FortiGate-1500D, FortiGate-1500DT, FortiGate-2200E, FortiGate-2201E, FortiGate-3000D, FortiGate-3100D, FortiGate-3200D, FortiGate-3300E, FortiGate-3301E, FortiGate-3800D, FortiGate-3980E; **FortiGate-VM:** Same support as FortiManager 6.4.4. See the FortiManager 6.4.4 Release Notes on the Document Library. **FortiWiFi:** FortiWiFi 60E, FortiWiFi 61E	6.4

For a list of FortiManager models that support SD-WAN Orchestrator MEA, see Supported FortiManager host models on page 5.

Resolved Issues

The following issues have been fixed in 6.4.1.r5. For inquires about a particular bug, please contact Customer Service & Support.

Bug ID	Description
678140	RETRIEVE_CONFIG doesn't properly import some of existing configurations.
681956	User can choose the secondary hub or link from the *Dual Hub Load Mode* option, only when the primary hub is down.
682621	Importing SDWAN O R3 configuration into the SDWAN O R4 version changes the Hub role profile to the Edge role profile.
681612	ADVPN shortcuts never expire.
633828	The `set preserve-session-route` is always set to *Enable* on IPsec tunnels.
677972	The SD-WAN Orchestrator API connection is denied if the FortiGate has a non-standard HTTPS port.
677129	Log shows the controller version always goes from 256 to the latest build number while upgrading.
681618	Unfiltered prefix advertisement between Hubs causes internal prefixes to be resolved via Internet underlays.
670929	Orchestrator configures `set preserve-session-route enable` on interfaces by default.
670835	Default static route updates in *Health Checks* brings down all tunnels.
677654	Revised SD-WAN release numbers.
685583	Sync all will cause a conflict with Blackhole when executing the backup and restoring the configuration.
685584	Switching ADOM may cause the *Maintenance* menu to disappear.
678142	Default route via all overlays (due to static `set sdwan enable`) breaks SD-WAN switchover in some failure scenarios.
685747	If an IP pool conflicts with a WAN IP address, a message should be reported, and do not allow *sync all* to be clicked.
668211	If FortiManager tasks fail, the retrieve action will change the HA mode to Standalone mode.

Known Issues

The following issues have been identified in 6.4.1.r5. For inquires about a particular bug or to report a bug, please contact Customer Service & Support.

SD-WAN Orchestrator MEA

Bug ID	Description
641221	FortiGate-500E does not show up in *Available Devices* list.
649447	Address Object and Group names in FortiManager don't match names in SD-WAN Orchestrator.
654540	Memory usage slowly increases. **Workaround**: In the FortiManager CLI, set `sdwancontroller` to `disable` and then `enable`.
656872	When *Load Policy* is *MANUAL* and Manual Path is an MPLS link, business rules fail to be deployed to FortiGates.
663933	Port statuses are incorrect in *SD-WAN Underlay Performance Status* chart.
664675	Exchange the IP address used to connect to peer hub, and a conflict occurs. **Workaround**: Configure a different IP address, and then switch back.
664959	While enabling or disabling short guard-interval setting, it won't sync to FortiManager's AP profile settings.
671382	The CPU usage of JAVA process is very high from time to time when managing 200 FortiGate devices.
673991	When the old configuration contains HA referencing the aggregate interface, the new configuration cannot be overwritten.
674777	Shortcut monitor is empty if FortiGates are in a NAT traversal scenario.
674812	Installation causes conflict after switching from QA to Dev, and then switching back to QA branch.
675112	Shortcut cannot be generated when two edge devices are behind the same NAT gateway.
676632	Changing ISP link from *public* to *private* and *private* to *public* results in a conflict. **Workaround**: Reset the FortiGate to default, join SD-WAN Orchestrator, and install the configuration again.
677174	Modifying the servers in a Health Check will cause it to fail. **Workaround**: Clear the SLA servers and re-configure the Health Check.

FortiManager and FortiOS

Bug ID	Description
572485/ 632946	Once the name of address object has changed, the address referred in business rule and firewall policy does not change.
598603/ 598895	Sometimes FortiGate-30E warns conflict as *execute script:Response has no task attribute!*.
628750	When Service Access is enabled on FortiManager interface, ONOS failed to start up.
628750/ 630007	When Service Access is enabled on FortiManager interface, SDWAN Orchestrator fails to start up.
640431	Conflict reported as *system sdwan commit check error* after changing ISP link of all device's port1 from Internet to MPLS.
640431/ 641740	When changing ISP link of WAN port from MPLS to Internet or Internet to MPLS, conflict might occur.
643825	SLA in IPsec tunnels sometimes fails due to not sending out SLA probe packets. **Workaround**: Reboot FortiGate.
662106	Conflict occurs when installing business rules that include internet service group.
669976	The *Device* column is empty on hubs when the traffic is from the subnet behind its edge.
673361	Controller task cannot stop in 57h. This issue is found in 500-FGT test bed.
677397	SD-WAN Orchestrator should be supported when Workspace/Workflow in per-ADOM mode is disabled.

FortiSwitch and FortiAP

Bug ID	Description
578622/ 586763	Installation fails when creating FortiLink interfaces.
618165/ 587742	Changing subnet of hard switch interface will cause FortiManager and FortiGate conflict.
645309	Change the FortiSwitch profile to operate smoothly. For a workaround, see FortiSwitch profiles on page 7.
645946	Conflict reported as *delete 'fortivoice.fortilink* when FortiSwitch first comes online. **Workaround**: Use SD-WAN Orchestrator to install configuration to FortiGate again. If it still fails, authorize FortiSwitch on FortiManager or FortiGate, and try to install configuration again.

Limitations of SD-WAN Orchestrator MEA

SD-WAN Orchestrator MEA currently does not support FortiGate with VDOMs.

SD-WAN Orchestrator MEA is not supported when FortiManager workspace/workflow mode is enabled.

SD-WAN Orchestrator MEA is not supported when FortiManager is operating in a closed network or an air-gapped environment.

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