SD-WAN Orchestrator MEA - Release Notes

Version 6.4.1.r7

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SD-WAN Orchestrator MEA 6.4.1.r7 Release Notes
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TABLE OF CONTENTS

Change Log

Date	Change Description
2021-06-25	Initial release of 6.4.1.r7.
2021-08-10	Added Address group change and upgrade on page 8 to Special Notices on page 8.
2021-08-25	Updated Address group change and upgrade on page 8.

SD-WAN Orchestrator MEA 6.4.1.r7 Release

This document provides information about SD-WAN Orchestrator MEA version 6.4.1.r7 build 0345. SD-WAN Orchestrator management extension application (MEA) is available with some FortiManager models.

This section includes the following topics:

Supported FortiManager host models

For a list of FortiManager models that can host SD-WAN Orchestrator MEA 6.4.1.r7 management extension application and minimum system requirements, see the FortiManager 6.4.5 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.r7.

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

Support for full-mesh tunnel links

Support for establishing full-mesh overlay links on WAN ports between hub devices and edge devices in the same region.

When creating a profile for hub or edge devices, select the *DIAL_UP_FULL_MESH* option from the *VPN Mode with Edge* list.

Support to send configuration scripts

A new *Sync to FortiManager* option lets you send configuration scripts from SD-WAN Orchestrator MEA to FortiManager for additional configuration before installation on FortiGate devices. After the configuration scripts are synchronized to FortiManager, the status of the device in SD-WAN Orchestrator MEA changes to *Synchronized_to_FortiManager*.

After FortiManager receives the scripts, the admin can use FortiManager to add additional configuration information, and then install the configuration changes to FortiGate devices. SD-WAN Orchestrator MEA periodically polls FortiGate devices for configuration information.

After changes from FortiManager are successfully installed on FortiGate devices, the status of the devices in SD-WAN Orchestrator MEA changes to *Synchronized*.

This new feature is also useful for a zero-touch provisioning (ZTP) workflow. You can use both SD-WAN Orchestrator MEA and FortiManager to provide configuration information, and the configuration is installed to FortiGate devices when they are online.

Better management of FortiGate objects and attributes

SD-WAN Orchestrator MEA can create and manage some, but not all FortiGate objects and attributes. If SD-WAN Orchestrator MEA manages an attribute and the admin changes the attribute by using FortiManager or FortiGate, the attribute is recovered to the default value assigned by SD-WAN Orchestrator MEA. However if an attribute is not managed by SD-WAN Orchestrator MEA, an admin can change it by using FortiManager or FortiGate as needed for special cases.

For more information about the objects and attributes managed by SD-WAN Orchestrator MEA, see the *SD-WAN Orchestrator MEA 6.4.1.r7 Administration Guide*.

Support for hardware switches

A hardware switch is a virtual switch interface that groups different ports together so that the FortiGate can use the group as a single interface. Supported FortiGate models have a default hardware switch called either *internal* or *lan*. The hardware switch is supported by the chipset at the hardware level.

SD-WAN Orchestrator MEA supports the following FortiGate platforms that support hardware switches:

- FortiGate 60E/61E series
- FortiGate 80E/81E series
- FortiGate 90E/91E series
- FortiGate 100E(F)/101E series
- FortiGate 140E series
- FortiGate 40F series
- FortiGate 60F/61F series
- FortiGate 80F/81F series
- FortiGate 100F/101F series

When you create a profile or set device settings for supported FortiGate hardware models, you can configure a hardware switch. In the *Network* > *Interface* > *LAN* section, create new and select *HARD_SWITCH* from the *Port Type* list. The *Name*, *Port Type*, *IP Pool*, *Subnet mask length*, and *Interface members* options are required.

Support for software switches

A software switch is a virtual switch that is implemented at the software or firmware level and not at the hardware level.

When you create a profile or set device settings for FGT-VM or FortiGate hardware models, you can configure a software switch. In the *Network* > *Interface* > *LAN* section, create new and select *SOFT_SWITCH* from the *Port Type* list. The *Name*, *Port Type*, *IP Pool*, *Subnet mask length*, and *Interface members* options are required.

Support for virtual wire pairs

A virtual wire pair consists of two interfaces that do not have IP addressing and are treated like a transparent-mode VDOM.

When you create a profile or set device settings for FGT-VM or FortiGate hardware models, you can configure virtual wire pairs. In the *Network* > *Virtual Wire Pair* section, create new and set the options. The *Name* and *Interface Members* options are required.

A virtual wire pair must have exactly 2 interface members.

For a newly created virtual wire pair, remember to configure a virtual wire pair policy in FortiManager.

Other improvements

- IPsec tunnel names
  The IPsec tunnel name for edge devices has been changed for easier debugging.
- WAN port options
  Interface Status has been added to the WAN port options. When a physical WAN port is set to *Disabled* and *Interface Status* is *UP* and *Mode* is *Static*, the underlay and overlay links will not be initiated on the WAN port. However, underlay and overlay links can be established on the VLAN ports based on this physical WAN port.

Special Notices

This section highlights some of the operational changes that administrators should be aware of in SD-WAN Orchestrator MEA 6.4.1.r7.

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. Disable Switch/AP configuration in *Device LAN setting* page.
3. Wait 5-10 minutes until device's configuration state becomes *Modified*, and then trigger a manual deployment.
4. When device is synchronized, change profile.
5. After changing the profile, disable *override device LAN* setting.

Upgrade Information

Upgrade of SD-WAN Orchestrator MEA 6.4.1.r6 to 6.4.1.r7 is supported.

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

When you upgrade FortiManager from 6.4.5 to 6.4.6, SD-WAN Orchestrator MEA upgrades automatically to 6.4.1.r7. Alternately you can leave FortiManager running 6.4.6 and manually upgrade SD-WAN Orchestrator MEA to 6.4.1.r7.

This section covers the following upgrade scenarios:

- Upgrading SD-WAN Orchestrator MEA automatically on page 10
- Upgrading SD-WAN Orchestrator MEA manually on page 10

Upgrading SD-WAN Orchestrator MEA automatically

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

- FortiManager 6.4.5
- SD-WAN Orchestrator MEA 6.4.1.r6
- FortiGates running FortiOS 6.4.5

To upgrade SD-WAN Orchestrator MEA:

1. Upgrade FortiManager to 6.4.6.
   After FortiManager reboots, SD-WAN Orchestrator MEA is automatically upgraded to 6.4.1.r7.
2. In FortiManager, upgrade FortiOS from 6.4.5 to 6.4.6.
   a. Go to *Device Manager* > *Firmware*.
      The *Upgrade Available* column displays 6.4.6.
   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 6.4.6, or you upgraded to FortiManager 6.4.6 before SD-WAN Orchestrator MEA 6.4.1.r7 was released, you can upgrade SD-WAN Orchestrator MEA by using the GUI.

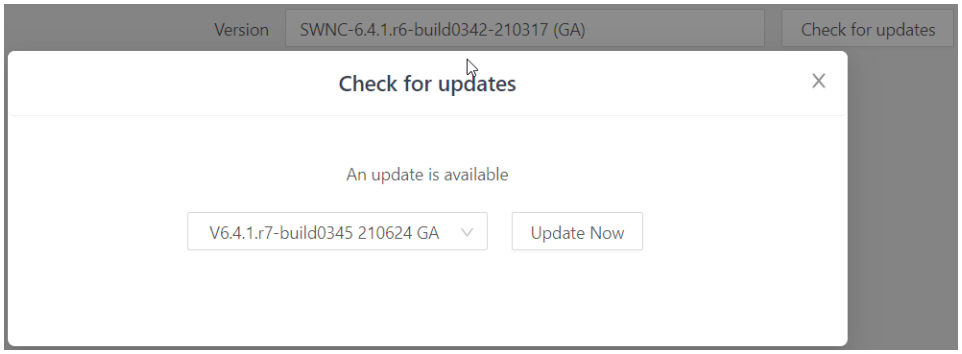
In this scenario, you are starting the upgrade with the following items:

- FortiManager 6.4.5 or 6.4.6
- SD-WAN Orchestrator MEA 6.4.1.r6

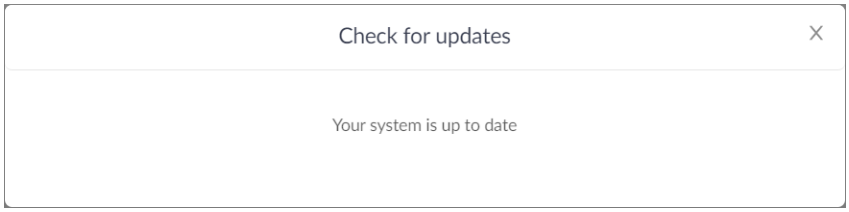
Although you can run SD-WAN Orchestrator MEA 6.4.1.r7 with FortiManager 6.4.5 and FortiOS 6.4.5, it is recommended to use FortiManager 6.4.6 and FortiOS 6.4.6 with SD-WAN Orchestrator MEA 6.4.1.r7.

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

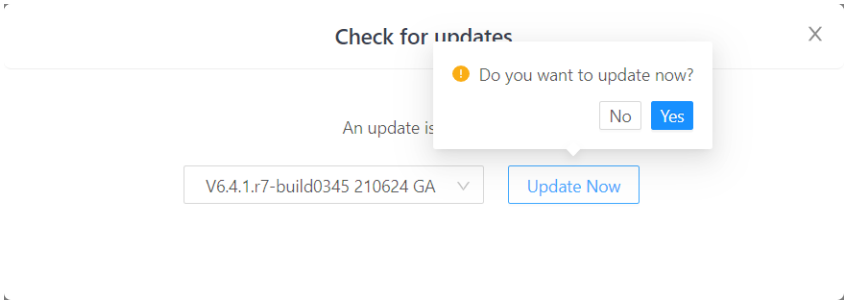
1. If ADOMs are enabled in FortiManager, ensure you are in the root ADOM to access the *Maintenance* tab in SD-WAN Orchestrator MEA.
2. In SD-WAN Orchestrator MEA, go to *Maintenance* > *Upgrade*, and click *Check for updates*.
   When an update is available, a message is displayed.



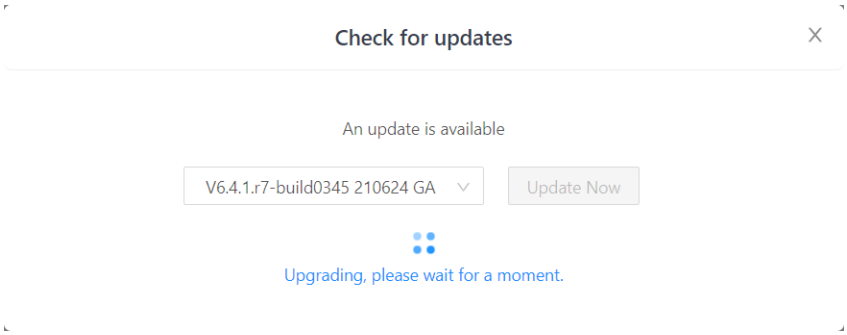
   When SD-WAN Orchestrator MEA is up to date, the following message is displayed, and no upgrade is available:



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.r7.



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.r7 support of other Fortinet products. It contains the following topics:

Supported FortiManager and FortiOS versions

This section identifies SD-WAN Orchestrator MEA 6.4.1.r7 product integration and support information:

FortiManager	• 6.4.1 - 6.4.6
FortiOS	• 6.4.1 - 6.4.6

Supported FortiGate models

SD-WAN Orchestrator MEA supports the following FortiGate models:

Model	Firmware Version
FortiGate: FortiGate-40F, FortiGate-40F-3G4G, FortiGate-60E, FortiGate-60E-POE, FortiGate 60E-DSL, FortiGate 60E-DSLJ, FortiGate-60F, FortiGate-61F, FortiGate-61E, FortiGate-80E, FortiGate-80E-POE, FortiGate-80F, FortiGate-80F-Bypass, FortiGate-81E, FortiGate-81E-POE, FortiGate-81F, FortiGate-100F, FortiGate-100E, FortiGate-100EF, FortiGate-101E, FortiGate-101F, FortiGate-140E, FortiGate-140E-POE, FortiGate-200E, FortiGate-201E, FortiGate-300D, FortiGate-300E, FortiGate-301E, FortiGate-400D, FortiGate-400E, FortiGate-401E, FortiGate-500D, FortiGate-500E, FortiGate-501E, FortiGate-600D, FortiGate-600E, FortiGate-601E, FortiGate-800D,FortiGate-900D, FortiGate-1000D, FortiGate-1100E, FortiGate-1101E, FortiGate-1200D, FortiGate-1500D, FortiGate-1500DT, FortiGate-2000E, FortiGate-2200E, FortiGate-2201E, FortiGate-2500E, FortiGate-3000D, FortiGate-3100D, FortiGate-3200D, FortiGate-3300E, FortiGate-3301E, FortiGate-3400E, FortiGate-3401E, FortiGate-3600E, FortiGate-3601E, FortiGate-3700D, FortiGate-3800D, FortiGate-3960E, FortiGate-3980E, FortiGate-3980E **FortiGate-VM:** Same support as FortiManager 6.4.6. See the FortiManager 6.4.6 Release Notes on the Document Library. **FortiWiFi:** FortiWiFi-40F, FortiWiFi-40F-3G4G, FortiWiFi 60E, FortiWiFi-60E-DSL, FortiWiFi-60E-DSLJ, FortiWiFi-60F, FortiWiFi 61E, FortiWiFi-61F	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.r7. For inquires about a particular bug, please contact Customer Service & Support.

Bug ID	Description
700456	Adding business rule responds too slowly.
694042	Shortcut monitor cannot display correct port information.
693726	Shortcut monitor displayed incorrect information, if there are two edges behind NAT device in ADVPN mode.
645309	[Enhancement] Let the workaround of change profile more smoothly.

Known Issues

The following issues have been identified in 6.4.1.r7. For inquires about a particular bug or to report a bug, please contact Customer Service & Support.

SD-WAN Orchestrator MEA

Bug ID	Description
649447	Address object and group names in FortiManager don't match names in SD-WAN Orchestrator MEA.
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.
670820	Sometimes conflict occurs when config between FortiGate and FortiManager is different due to sync failures. At the same time, the FortiGate admin happens to click *Dont' show again* in the login page. **Workaround**: Execute retrieve config on FortiManager, and install config again on SD-WAN Orchestrator MEA.
675112	Shortcut cannot be generated when two edge devices are behind the same NAT gateway.
691408	Repeat auto-inject enable and disable in BGP neighbor and Global routing table doesn't take effect. **Note**: IBGP is not supported in SD-WAN networks. AS configured on adjacent routers should be different with that auto-generated by SD-WAN Orchestrator MEA and deployed to FortiGates.
696898	FortiWiFi-40F-3G4G platform after *sync all* reports conflict with switch-interface member. **Workaround**: Install the configuration again.
700703	The global theme change in FortiManager GUI is not supported in SD-WAN Orchestrator MEA.
702503	Create FortiManager *addressgroup* object with *address/addrgrp* objects created by adding IP Pool in SD-WAN Orchestrator MEA, and then delete IP Pool. A conflict occurs. **Workaround**: Do not use address /addrgrp objects that are automatically generated by SD-WAN Orchestrator MEA in FortiManager.

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.
628750/ 630007	When Service Access is enabled on FortiManager interface, SD-WAN Orchestrator MEA fails to start up.
643825	SLA in IPsec tunnels sometimes fails due to not sending out SLA probe packets. **Workaround**: Reboot FortiGate.
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. **Workaround**: Reboot FortiManager.
677174	Exchange the server of health-check will cause failure. **Workaround**: Clear the SLA servers and configure again.
677397	SD-WAN Orchestrator MEA should be supported when Workspace/Workflow in per-ADOM mode is disabled.

FortiSwitch and FortiAP

Bug ID	Description
618165/ 587742	Changing subnet of hard switch interface will cause FortiManager and FortiGate conflict.

Limitations of SD-WAN Orchestrator MEA

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.