



Cisco IOS Release 15.9(3)M3a – Release Notes for Cisco CGR1000 Series Connected Grid Routers

The following release notes support the Cisco IOS 15.9(3)M3a release. These release notes are updated to describe new features, limitations, troubleshooting, recommended configurations, caveats, and provide information on how to obtain support and documentation.

Revised: July 30, 2021

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PSIRT ADVISORY

IMPORTANT INFORMATION – PLEASE READ!

FPGA and BIOS have been signed and updated to new versions.

For the 15.9 Release Train, this image (15.9-3.M) is considered as the baseline. Downgrade is **STRICTLY UNSUPPORTED** and bundle install to previous releases (158-3.M2/157-3.M4/156-3.M6) will cause an error and fail if attempted. Any manual downgrade [non bundle operations] will impair router functionality thereafter.

Note: After upgrading to this release, make sure to delete any old image files that may still be in flash. This will prevent an unintended IOS downgrade.

For additional information on the PSIRT see the following:

<https://tools.cisco.com/security/center/content/CiscoSecurityAdvisory/cisco-sa-20190513-secureboot>

Image Information and Supported Platforms

Note: You must have a Cisco.com account to download the software.

Cisco IOS Release 15.9(3)M3a includes the following Cisco IOS images:

ICGR1K

- System Bundled image: cgr1000-universalk9-bundle.SPA.159-3-M3a
 - IOS Version: cgr1000-universalk9-mz.SPA.159-3-M3a
 - Guest Operating System: cgr1000-ref-gos.img.1.8.2.12.gz
 - Hypervisor: cgr1000-hv.srp.SPA.3.0.59
 - FPGA: 2.E.0
 - BIOS: 18

Software Downloads

CGR1K Series

The latest image file for the CGR 1000 Series Cisco IOS image is:

<https://software.cisco.com/download/navigator.html?mdfid=284165761&flowid=75122>

For details on the CGR1000 installation, please see:

<http://www.cisco.com/c/en/us/td/docs/routers/connectedgrid/cgr1000/ios/release/notes/OL-31148-05.html#pgfld-9>

Warning about Installing the Image

Note: The bundle can be copied via Trivial File Transfer Protocol (TFTP) or SCP to the device, and then installed using the `bundle install flash:<image name>` command. The bin file can NOT be directly booted using the `boot system flash:/image_name`.

Caution: MANUAL [non-bundle] DOWNGRADE IS STRICTLY PROHIBITED.

Known Limitations

This release has the following limitations or deviations from expected behavior:

- Please ensure there is a minimum 30MB additional space in the flash: file system before attempting an upgrade or downgrade between releases. Otherwise, the FPGA/BIOS will not have enough space to store files and perform the upgrade. In these current releases, the bundle installation will not display a warning, but future releases from September 2019 going forward will have a warning.

- **SSH access to GuestOS disabled:**

From 15.9(3)M1, access to GuestOS through SSH is completely disabled to address vulnerabilities in IOS - GuestOS communication.

However, to access GuestOS, reverse telnet to the GuestOS shell with this command:

```
router#telnet <GOS interface IP> 2070
```

Important Notice

- **Note:** Only privilege 15 user will be able to do reverse telnet to GuestOS.

Important Notice

NOTE: This upgrade supports CGOS to IOS migration in all IOS 15.9 release trains.

Related Documentation

The following documentation is available:

- Cisco IOS 15.9M cross-platform release notes:
<https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/15-9m/release/notes/15-9-3-m-rel-notes.html>
- All of the Cisco CGR 1000 Series Connected Grid Routers documentation can be found here:
<http://www.cisco.com/c/en/us/support/routers/1000-series-connected-grid-routers/tsd-products-support-series-home.html>
- IoT Field Network Director
<https://www.cisco.com/c/en/us/support/cloud-systems-management/iot-field-network-director/products-installation-and-configuration-guides-list.html>
- Cisco IOx Documentation is found here:
<https://www.cisco.com/c/en/us/support/cloud-systems-management/iox/tsd-products-support-series-home.html>
- Cisco IOx Developer information is found here:
<https://developer.cisco.com/docs/iox/>

Caveats

Caveats describe unexpected behavior in Cisco IOS releases. Caveats listed as open in a prior release are carried forward to the next release as either open or resolved.

Note: You must have a Cisco.com account to log in and access the Cisco Bug Search Tool. If you do not have one, you can [register for an account](#).

For more information about the Cisco Bug Search Tool, see the [Bug Search Tool Help & FAQ](#).

Cisco IOS Release 15.9(3)M3a

The following sections list caveats for Cisco IOS Release 15.9(3)M3a:

Open Caveats

- **CSCvw84782 - CGR1240**
TAM/ACT2 Write Object Corruption (WPAN and IOS GTK keys mismatch).

Caveats

Symptoms: GTK Keys of CG-Mesh PAN present in IOS not matching with the keys present in WPAN module locally as per the IOS Cli command & show wpan commands. The keys entry is blank (0's) for WPAN command cli output. This issue is rarely observed.

Workaround: Reload the router, planned fix in 159-3.M4.

■ CSCvw81805 - CGR1240

WPAN interface missing after a power outage.

Symptoms: WPAN interface will not be created and not seen in show running config. This is a random issue and observed very rarely.

Workaround: Reload the CGR1240 router, planned fix in 159-3.M4.

■ CSCvw64192 - CGR1K

IOX web server port inaccessible on CGM-SRV due to TCP concurrent connection storm.

Symptoms: When applying TCP maximum concurrent connection storm on IOx https port 8443, the port becomes inaccessible.

Workaround: Reload the CGM-SRV module, planned fix in 159-3.M4.

Resolved Caveats

None.

Communications, Services, and Additional Information

Any Internet Protocol (IP) addresses and phone numbers used in this document are not intended to be actual addresses and phone numbers. Any examples, command display output, network topology diagrams, and other figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses or phone numbers in illustrative content is unintentional and coincidental.

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