



Cisco WAN Automation Engine Release Notes, Release 6.4.2

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This document describes the features, limitations, and bugs for Cisco WAN Automation Engine (Cisco WAE) Release 6.4.2.

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Introduction

Cisco WAE is a model-driven path visibility and path computation engine that simulates, automates, and optimizes multi-vendor, multi-layer networks by leveraging time-series traffic and flow data. For more information on Cisco WAE, visit <http://www.cisco.com/go/wae>.

Open Source

A list of open source software used in Cisco WAE can be found in [Open Source Software Used in Cisco WAN Automation Engine](#).



Bugs

The following are descriptions of the open and resolved bugs in Cisco WAE Release 6.4.2. The bug ID links you to the Cisco Bug Search Tool.

Open Bugs

Table 1 *Open Bugs*

Bug ID	Description
CSCuz68723	Cannot filter with complex regular expressions when using user-defined properties.
CSCva59980	Demand deduction does not work when using an external demand table.
CSCvb29527	The WAE 6.4.x installation fails if the Ansible package 2.1.1 already exists.
CSCvb30069	After upgrading from WAE 6.1.x to WAE 6.2.x/6.3.x/6.4.x, old RPMs that have been renamed or are no longer applicable remain on the system. You must manually remove any unnecessary RPMs.
CSCvb54634	The Start and Stop buttons on the WAE Collector Schedule page do not refresh automatically. When you go to Collection > Schedule and click Start, the button is not disabled while the collection is scheduled. If you click Start again, the following error message occurs: Unable to schedule collection: Periodic collection is still running. The same problem occurs with the Stop and Run Once buttons.
CSCvb57926	The parse_configs tool does not find SRLG assignments to interfaces in Junos configurations.
CSCvb59642	After an mld install, the ml.log file contains the following error: Error -302 No GRANT option or illegal option on multi-table view.
CSCvb59902	The WAE Live Map does not load unless you restart the web server. The map.log contains the following error: INFO UiCache.getPeersTable() - ##### getPeersTable() now retrieves new PeersTable
CSCvb69623	The WAE Statistics - Events web page exhibits the following problems: <ol style="list-style-type: none"> 1. The page display is limited to 1 or 2 pages, no matter which option is selected (Last 4 hours, Last 12 hours, or Last 7 days). The output is limited to just a few logs. 2. When you click the drop-down list on the top-right and choose INFO, DEBUG, WARN, ERROR, or FATAL, the time filter always resets to 15 minutes.

Resolved Bugs

Table 2 *Resolved Bugs*

Bug ID	Description
CSCuz89339	In the context of a manual installation, the wae-svcs-client-6.3.3 and wae-svcs-server-6.3.3 RPMs should be independent from wae-platsvcs-6.3.3, but they are not independent.
CSCva41756	Some P2MP LSPs appear twice in the P2MPLSPs table.
CSCva50465	Affinities are not collected correctly for parse_configs, rsvp.

Table 2 **Resolved Bugs (continued)**

Bug ID	Description
CSCva76171	The Events and Diagnostics Serviceability pages return the following error when opened: Warning No default index pattern. You must select or create one to continue.
CSCva95269	When upgrading the WAE Live database from 6.0.6 to 6.4.0, the following errors occur during the mld-update: 2016:08:17 16:13:11 Buildddb complete 2016:08:17 16:13:11 Bringing datastore online 2016:08:17 16:13:11 Taking datastore offline 2016:08:17 16:13:12 Error: Unable to take datastore offline, datastore upgrade aborted 2016:08:17 16:13:12 Error: Failed to upgrade the SQL
CSCvb02149	LDAP integration fails with an error in WAE 6.3.0. WAE returns an “unsuccessful login” error when you try to log in as an LDAP user.
CSCvb15002	On the WAE Collector home page and the WAE Live home page, after 1 to 2 minutes of staying on the page, the following error message occurs: “timeout: timeout of the call!”
CSCvb16616	In WAE Design, if you choose a P2MP LSP name that was previously used but no longer exists, you cannot rename the P2MP LSP. For example, if the name <i>test2</i> was used previously (but no longer exists), you cannot rename any P2MP LSPs as <i>test2</i> .
CSCvb18622	The LSP Setup BW Optimization tool causes WAE Design to crash.
CSCvb32777	If you try to use the P2MPLSPs table with TableSelection in addon.txt, WAE Design rejects the table as invalid.
CSCvb35077	After installing WAE Planning Release 6.4.1, the service wae-mld status command is not available.
CSCvb40904	The compare_plans CLI tool creates a report with duplicate ReportTableInteraction entries.
CSCvb44933	When you try to update the WAE Live Data Collection page, the following error message occurs: “Failed in Update!”
CSCvb46031	Running parse_config fails with Java-like error messages on a Junos configuration.
CSCvb54163	When you use the “newConnection” method to create a new circuit via the WAE Design API, the method accidentally removes all user-defined properties on all existing circuits.
CSCvb61811	There is a delay when loading the WAE Live Map on Internet Explorer 11.

Using the Cisco Bug Search Tool

You can use the Cisco Bug Search Tool to search for a specific bug or to search for all bugs in a release.

- Step 1** Go to the [Cisco Bug Search Tool](#).
- Step 2** Enter your registered Cisco.com username and password, and then click **Log In**. The Bug Search page opens.



Note If you do not have a Cisco.com user name and password, you can [register for them](#).

- Step 3** Use any of these options to search for bugs, and then press Enter (Return) to initiate the search:
- To search for a specific bug, enter the bug ID in the Search For field.

- To search for bugs based on specific criteria, enter search criteria in the Search For field, such as a problem description, a feature, or a product name.
- To search for bugs based on products, enter or select the product from the Product list. For example, if you enter “WAE,” you have several options from which to choose.
- To search for bugs based on releases, in the Releases list select whether to search for bugs affecting a specific release, bugs that were fixed in a specific release, or both. Then enter one or more release numbers.

Step 4 When the search results are displayed, use the filter tools to narrow the results. You can filter the bugs by status, severity, modified date, and so on.

To export the results to a spreadsheet, click **Export Results to Excel**.

Known Limitations

This section describes the limitations and restrictions for Cisco WAE.

WAE Design

- macOS Sierra 10.12 implements an additional security measure for applications that are not distributed through the App Store, which includes WAE Design.

By default, WAE Design is in a quarantine state as shown by the following command on a terminal:

```
xattr Mate.app
```

The command returns the following for a quarantined application:

```
com.apple.quarantine
```

As a workaround, remove WAE Design from quarantine by entering:

```
xattr -r -d com.apple.quarantine Mate.app
```

Then, you can run WAE Design 6.4.x on macOS Sierra 10.12.

- In some Linux installations with Xfce desktop installed, the documentation does not open from the WAE Design GUI Help menu. The workaround is to do one of the following:
 - Open the help files from a terminal in the `$CARIDEN_HOME/docs` directory.
 - Install a default browser.
 - Install the following packages:

```
yum install evince
yum groupinstall "X Window System"
yum groupinstall "Desktop"
yum groupinstall "General Purpose Desktop"
```

WAE Collector and WAE Network Interface (NI)

- Due to vendor MIB limitations, Collector cannot represent QoS traffic on interfaces that have more than one VLAN configured. If a network contains such interfaces, their queue traffic statistics are omitted from the collection. The total traffic on these interfaces is still measured. As a result, per class-of-service demands estimated through Demand Deduction are less accurate. Estimates of traffic totals over all classes of services, however, are not affected.
- Due to lack of MIB support, SR tunnel type is not collected for Cisco IOS XR routers through SNMP.
- Collection of interface egress shaping rate for Alcatel-Lucent devices does not support LAG interfaces.

WAE NI

- The interval for continuous LSP discovery in WAE NI cannot be less than 60 seconds.
- LSP's ActualPathHop cannot be resolved when using continuous collection. As a workaround, use interval-based collection.

Collector

- Juniper MIBs do not support P2MP LSPs.
- If upgrading the Collector server from 5.6x to 6.1x or 6.2, the `$(CARIDEN_ROOT)/etc/collector/server/db-persistence/DiscoveryEngineImplementation.db` file must be removed prior to starting the web server. Since installation automatically starts the web server, the recommendation is to remove this prior to installation.
- OSPFv3 and IPv6 IS-IS databases cannot be collected. The workaround is to use a manual snapshot.
- SNMPv3 is not an available option when configuring default credentials.
- `snmp_find_interfaces`
 - Does not support association of a GRE tunnel with the physical interface it uses to reach the tunnel destination since the IP-Tunnel MIB lacks this information.
 - Does not update LAG port status if LAGs are discovered running both `parse_configs` and `snmp_find_interfaces`. The workaround is to run only `snmp_find_interfaces`.
- Juniper routers: Signaled standby LSP path option is not available from the standard MPLS-TE MIB for Juniper routers. Only the active path option name is collected.
- Cisco IOS XR routers
 - IGP topology collected through `parse_igp` and `login_find_igp_db`
 - IS-IS link-state database with TE extensions contains incorrect interface “admin-weights” (TE metric) on Intel-based routers.
 - IPv6 IS-IS link-state database does not contain IPv6 interface addresses or parallel interfaces. This information is only available when Cisco IOS XR supports IS-IS IPv6 TE extensions. The `snmp_find_interfaces` tool collects this information.
 - MAC Accounting is not supported.
 - `snmp_find_rsvp` does not set the Standby value in the <LSPPaths> table for signaled backup paths or collect named affinities configured with affinity-maps.

- BGP peers
 - `find_bgp` does not build BGP pseudo-nodes among internal ASNs.
 - `find_bgp` does not collect BGP peers under PE-CE VRFs.
- `parse_configs`
 - Does not accurately detect the bandwidth of some Juniper ‘ge’ interfaces that have a capacity of 10 Gbps.
 - Collects POS bundles, but has limitations due to unavailability of the port OperStatus property.
- TE Extended Admin Groups (EAGs), also known as extended affinities, are only supported from Juniper and `parse_configs`.
- There is no support for building port circuits for LAG members that are not within the same IGP (inter-AS circuits)
- It is not possible to distinguish between physically connected and unconnected LAG ports that are down for LAG port matching.
- `snmp_find_ospf_db` cannot be used when routers have a large number of links that cannot fit into a single PDU.
- `find_bgppls` does not support multi-area OSPF or multi-level IS-IS, non-TE-enabled interfaces, and pseudo-nodes. The workaround is to use SNMP- or login-based discovery.
- `get_inventory` does not collect Juniper multi-chassis router hardware inventory.
- Segment routing
 - SR protected adjacency SIDs are not supported.
 - Concurrent RSVP-TE and SR-TE paths are not supported on the same LSP.

Deployer

Cisco Open SDN Controller (OSC)

During detailed PCEP tunnel creation or when modifying PCEP tunnels, affinity values are misinterpreted if multiple affinities are specified. This limits you to specifying one affinity for `IncludeAffinity`, `IncludeAnyAffinity`, and `ExcludeAffinity`, and each of these values must be a number within [0,31].

NSO Controller

- LSP affinities are deployed, while interfaces affinities require separate provisioning.
- LSPs that exist in the network by another controller cannot be updated.
- Deployment of each RSVP-TE named-path or SR-TE segment-list is limited to a single LSP.
- Cisco IOS XR: WAE client specifies the XR LSP signaled-name, while NSO service and device use tunnel-id. The workaround is to deploy all Cisco IOS XR LSPs using the tunnel-id and to make sure that existing LSPs are not redeployed.
- NEDs (NSO console)
 - For Cisco IOS XR, there is no option to give the IP address of the LSP directly; you can only specify a loopback address. There is no option to give tunnel affinity values directly; you can only specify an affinity-map name.

- For Junos, there is no inter-domain keyword, which is used only when an inter-area LSP is created.

WAE System

Installation and Startup

- The WAE NI server and the WAE Core server cannot reside on the same device or on the same VM. Note that the *Cisco WAE Server Installation Guide* assumes that they are on the same device. If needed, contact your support representative for further installation details.
- If the OS is using an old CA certificate to verify the integrity of the EPEL repository, you might see this error from the OS vendor:

Error: Cannot retrieve metalink for repository: epel. Please verify its path and try again.

- One workaround is to perform an offline installation. For instructions, refer to the “Offline Installation” chapter in the *Cisco WAE Server Installation Guide*.
- Another workaround is to change https to http.



Note

This is not a secure solution. For information on how to resolve OS security issues, contact your OS vendor.

1. In the `/etc/yum.repos.d/epel.repo` file, change the first instance of https to http.

```
sudo vim /etc/yum.repos.d/epel.repo
```

Change https to http in the following line:

```
mirrorlist=[https://mirrors.fedoraproject.org/metalink-repo=epel-6&arch=$basearch]
```

2. Execute yum to clean up makecache.

```
sudo yum clean all && yum makecache
```

3. Rerun the installer. For installation instructions, see the *Cisco WAE Server Installation Guide*.

```
sudo bash wae-k9-<version>.bin
```

- The `$CARIDEN_HOME` directory is not automatically added to `$PATH` (only `$CARIDEN_HOME/bin` is). If not in `$CARIDEN_HOME/bin`, to start the WAE Design GUI from the command line, you must specify its full path.

```
/opt/cariden/software/mate/current/mate
```

Web Server

The `embedded_web_server` tool is deprecated. The recommendation is to use the `wae-web-server` service, which is constantly monitored to be brought up automatically.

By default, this web service starts upon installation completion. Therefore, if you stop the web server using the `embedded_web_server` tool (`embedded_web_server -action stop`), the web server does not stop. The workaround is the following:

```
service wae-svcs-mon stop
embedded_web_server -action stop
```

WAE Statistics UI

The WAE Statistics page does not open in all browsers. The workaround is the following:

1. Click the WAE Statistics link. The URL format is `https://<server_IP>:8443`. Example:
`https://192.0.2.14:8443`
2. Copy the URL of this page to another browser window.
3. In the new browser, change the URL port from 8443 to 8843. Example:
`https://192.0.2.14::8843 Ex`
4. Follow the browser messages to accept the connection and add it as an exception.

Web User Management

Both the System UI and the WAE Design Archive UI have local user management capabilities. If both are used to configure users, WAE uses the most recently updated information. The recommendation is to use only the System UI to manage local users.

License Check Failures on Newer Linux Distributions

Some newer Linux distributions have started using a new way (via `biosdevname`) of naming hardware devices, including the network interfaces. This causes some software that depends on the traditional naming (for example, `eth0`, `eth1`) to fail on license checks, including MATE.

The workaround is to append `biosdevname=0` to the kernel line of the grub configuration file and reboot. (Syntax varies among distributions.)

After reboot, you should be able to use `ifconfig` to verify that the NICs are named `eth0` (or `eth1`, ...) instead of the `biosdevname` names (such as `p34p1`).

Java Memory

Certain tools (such as `parse_configs`) may require more memory to start than what is available. The symptom is an error message similar to the following:

```
Error occurred during initialization of VM.
Could not reserve enough space for object heap.
Error: Could not create the Java Virtual Machine.
Error: A fatal exception has occurred. Program will exit.
```

The workaround is to set the maximum memory to a low enough value in the `CARIDEN_JAVA_OPTIONS` variable before calling the tool. An example setting is as follows:

```
set CARIDEN_JAVA_OPTIONS=-Xmx1000m
```

Accessibility Features

For a list of accessibility features in Cisco WAE, visit Cisco's [Voluntary Product Accessibility Template \(VPAT\)](#) website, or contact accessibility@cisco.com.

All product documents are accessible except for images, graphics and some charts. If you would like to receive the product documentation in audio format, braille, or large print, contact accessibility@cisco.com.

Related Documentation

For related documentation, see the [Cisco WAE 6.4 Documentation Roadmap](#).

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