

Junos Space Connectivity Services Director Release Notes 5.2R1 Release Notes

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Revision 3

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Introduction

These release notes accompany Release 5.2R1 of the Juniper Networks Junos Space Connectivity Services Director. They contain information about new and changed features, limitations, and known and resolved issues in the software.

Release Notes for Connectivity Services Director 5.2R1

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Junos Space Connectivity Services Director, built to run on Junos Space Network Management Platform, is a robust and holistic application that facilitates automated design and provisioning of E-Line services, virtual private LAN services (E-LAN), IP services, and RSVP-signaled label-switched path (LSP) services, configuration of quality-of-service (QoS) profiles, validation and monitoring of service performance, and management of timing or clock synchronization using Precision Time Protocol (PTP). Connectivity Services Director enables unified management of the ACX Series routers, M Series routers, MX Series routers, PTX Series routers, and TCA Series Timing Appliances in your network. It enables full network life-cycle management by simplifying the discovery, configuration, visualization, monitoring, and administration of large networks containing physical and virtual devices.

Connectivity Services Director enables you to provision point-to-point and multipoint services across networks. You can also configure class of service (CoS (also called QoS)) profiles to group a set of CoS

parameters and apply the profiles to one or more interfaces of the devices that are managed by Connectivity Services Director. The Connectivity Services Director software application also contains the applications that were available in the Services Activation Director suite. Network Activate, Transport Activate, OAM Insight, and Sync Design are installed and presented with the same look-and-feel as Services Activation Director, after you install Connectivity Services Director.

The software images for Connectivity Services Director, Junos Space Network Management Platform, additional scripts, Connectivity Services Director API Reference documentation, and the release notes for Connectivity Services Director Release 5.2R1 are available at [Junos Space and Junos Space Connectivity Services Director Download](#).

Supported Platforms

[Table 1 on page 3](#) lists Juniper Networks line cards supported by Connectivity Services Director Release 5.2R1.

Table 1: Supported Line Cards (Chassis View)

Device	Line Cards
MX240	MPC10E-10C-X
MX480	SCBE3-MX-S
	SCBE3-MX-BB
	SCBE3-MX-R
	MPC10E-15C-X
	MPC10E-10C-X

Table 1: Supported Line Cards (Chassis View) (continued)

Device	Line Cards
MX960	SCBE3-MX-S
	SCBE3-MX-R
	SCBE3-MX-BB
	MPC10E-15C-X
	MPC10E-10C-X
	5K-AC-PSM
	HV-PSM

[Table 2 on page 4](#) lists the supported platforms for Connectivity Services Director Release 5.2R1 and the corresponding qualified Junos OS releases.

Table 2: Supported Platforms and the Software Versions for Connectivity Services Director Release 5.2R1

Supported Platforms	Device Platform	Qualified Junos OS Release
ACX Series Universal Metro Routers:	<ul style="list-style-type: none"> ACX500 	Release 12.3X54-D20 through Release 20.1R1
	<ul style="list-style-type: none"> ACX710 	Release 20.1R1
	<ul style="list-style-type: none"> ACX1000 ACX1100 ACX2000 ACX2100 ACX2200 ACX4000 	Release 12.3R1 through Release 20.1R1
	<ul style="list-style-type: none"> ACX5048 ACX5096 	Release 15.1X54-D20 through Release 20.1R1
	<ul style="list-style-type: none"> ACX5000 router (ACX5048 and ACX5096) ACX5548 ACX5448-D ACX5448-M 	Release 17.2R1 Release 17.4R1 Release 18.2R1 through Release 20.1R1

Table 2: Supported Platforms and the Software Versions for Connectivity Services Director Release 5.2R1 (continued)

Supported Platforms	Device Platform	Qualified Junos OS Release
EX Series Devices	<ul style="list-style-type: none"> • EX4550 • EX4600 	Release 19.3R1 through Release 20.1R1
	<ul style="list-style-type: none"> • EX9200 	Release 19.3R1 through Release 20.1R1
MX Series 5G Universal Routing Platforms	<ul style="list-style-type: none"> • MX80 • MX104 • MX240 • MX480 • MX960 	Release 12.2R1 through Release 20.1R1
	<ul style="list-style-type: none"> • MX2010 	Release 13.3R1 through Release 20.1R1
	<ul style="list-style-type: none"> • MX2020 	Release 13.3R1 through Release 20.1R1
	<ul style="list-style-type: none"> • MX150 • MX204 • MX2008 • MX10003 	Release 18.1R1 through Release 20.1R1
	<ul style="list-style-type: none"> • MX10008 • MX10016 	Release 19.2R1 through Release 20.1R1
M Series Multiservice Edge Routers	<ul style="list-style-type: none"> • M320 	Release 10.0 through Release 12.2R1.8
	<ul style="list-style-type: none"> • M7i • M10i 	Release 10.0 through Release 14.2R1.12
	<ul style="list-style-type: none"> • M10 	Release 15.1R6.7
PTX Series Packet Transport Routers	<ul style="list-style-type: none"> • PTX3000 	Release 13.2R2.2 through Release 19.2R1
	<ul style="list-style-type: none"> • PTX5000 	Release 13.2R1.7 through Release 19.2R1

Table 2: Supported Platforms and the Software Versions for Connectivity Services Director Release 5.2R1 (continued)

Supported Platforms	Device Platform	Qualified Junos OS Release
QFX Series Devices	<ul style="list-style-type: none"> • QFX5100 • QFX5110 	Release 19.3R1 through Release 20.1R1
	<ul style="list-style-type: none"> • QFX5120 	Release 19.4R1 and Release 20.1R1
	<ul style="list-style-type: none"> • QFX5200 • QFX5210 	Release 20.1R1
	<ul style="list-style-type: none"> • QFX10002 • QFX10008 	Release 20.1R1
SRX Series Devices	<ul style="list-style-type: none"> • SRX4100 • SRX4200 • SRX4600 • SRX300 • SRX320 • SRX340 • SRX345 	Release 20.1R1
Virtual MX Routers (vMX)	Virtual MX Routers (vMX)	Release 14.1R5 through Release 17.4R1.16
		Release 18.2R1 through Release 20.1R1

Table 2 on page 4 lists prerequisites and limitations for certain supported EX Series, QFX Series, and SRX Series devices in Connectivity Services Director Release 5.2R1.

The following are the prerequisites for SRX Series devices:

- When an SRX Series device is enabled for flow-based processing or drop mode, to configure the SRX Series devices as a border router, you must change the flow mode to packet mode processing for MPLS.

To change flow mode to packet mode, use the **set security forwarding-options family mpls mode packet-based** command in configuration mode.

NOTE: Before changing from flow mode to packet mode, you must remove all security policies remaining under flow mode. To prevent management connection loss, you must bind the management interface to zones and enable host-inbound traffic.

- When MPLS is enabled, all flow-based security features such as security policies, zones, Network Address Translation (NAT), Application Layer Gateways (ALGs), chassis clustering, screens, firewall authentication, IP packets, and IPsec VPNs are deactivated.

The following are the limitations for EX Series, QFX Series, and SRX Series devices:

- SRX300 and SRX4000 lines of devices support flexible physical VLAN tagging only for IP services.
- SRX300 and SRX4000 lines of devices support VLAN tagging and stacked VLAN tagging physical interfaces for E-LAN, E-Line, and IP services.
- SRX Series devices do not support dual VLAN tagging when VLAN map is enabled.

[Table 3 on page 7](#) lists the dual VLAN tagging scenarios that are not supported:

Table 3: Unsupported Dual VLAN Tagging Scenarios

Ethernet Option	Normalization
port/dot1q/qinq	Normalize to Q-in-Q tags
qinq	Normalize to 802.1Q tags
	Normalize to Q-in-Q tags
	Normalize to none

- EX Series, QFX Series, and SRX Series devices do not support stacked VLAN tagging in the **All Traffic** transport type.

[Table 4 on page 7](#) lists the stacked VLAN tagging scenarios that are not supported:

Table 4: Unsupported Stacked VLAN Tagging Scenarios

Ethernet Option	Transport Type	Tagging
(E-LAN/E-Line) qinq	All Traffic	Stacked VLAN
(IP) dot1q/qinq all trafficking	All Traffic	Stacked VLAN

- SRX300 and SRX4000 lines of devices do not support the Ethernet option qinq (Q-in-Q tagging) for E-LAN services.
- SRX300 and SRX4000 lines of devices do not support EVPN/virtual switch E-LAN and EVPN-VPWS E-Line services.
- The SRX300 line of devices do not support the transport VLAN list for the Ethernet option **dot1q**.
- EX9200 devices do not support virtual switch E-LAN services.
- QFX Series devices support only the IP and E-Line LDP services.

Junos Space Network Management Platform Requirements for Connectivity Services Director 5.2R1

Connectivity Services Director Release 5.2R1 is supported on Junos Space Network Management Platform Release 20.1R1.

You can install Connectivity Services Director in a Junos Space Virtual Appliance or the JA2500 Junos Space Appliance. The Junos Space Virtual Appliance can be deployed on a VMware ESXi server. The Junos Space Virtual Appliance requires a VMware ESXi server 5.5, 6.0, or 6.5 that can support a virtual machine with the following configuration:

- 64-bit quad processor with at least 2.66-GHz speed
- 32-GB RAM
- One RJ-45 10/100/1000 Network Interface Connector
- 250-GB hard disk

For detailed information about the configuration requirements and deployment of Junos Space Virtual Appliance, see [Junos Space Virtual Appliance Installation and Configuration Guide](#).

For detailed information about installing and upgrading Connectivity Services Director, see [Connectivity Services Director Quick Start Guide](#).

Operational Notes

The following are the operational notes for Connectivity Services Director:

- The minimum supported screen resolution is 1280 x 1024. If your screen resolution is less than the supported resolution, the Connectivity Services Director UI might not be displayed properly. For example, icons might not be displayed on the Connectivity Services Director banner, pages might appear truncated, or scroll bars might not work correctly.
- The supported Web browsers are Google Chrome 17 and later, Mozilla Firefox 14.0 and later, and Microsoft Internet Explorer 9.0, 10.0, and 11.0.
- If you have been logged in to Connectivity Services Director for a long period of time, the connection to the server might time out. Monitoring pages might go blank or you might not be able to access tasks. To resolve this, log out of Connectivity Services Director and then log in again.
- If you receive a Java exception error message when you perform an operation, retry the operation. The error condition is usually temporary and harmless.
- Only user accounts with administrator (admin) privileges can use the Connectivity Services Director API.

- For Connectivity Services Director to be able to discover and manage devices, the following protocol ports must be open between the Junos Space Network Management Platform server and the devices:
 - Port 22 for SSH connections. If you have changed the SSH port to a port other than port 22 on your Junos Space Network Management Platform, you must change the SSH ports on your managed devices to the port that the Junos Space Network Management Platform is using.
 - Port 10162 for device-level SNMP traps. Connectivity Services Director receives traps from managed devices on this port. (After you install Connectivity Services Director, use Connectivity Services Director to configure SNMP on your devices to send traps to Connectivity Services Director on this port.)
 - Port 162 for service-level SNMP traps. Junos Space Network Management Platform uses the port for snap trap collection and correlation.
 - Port 21 (TCP) and port 69 (UDP). Junos Space Network Management Platform uses these port for uploading the software image and configuration file to the FTP server.
- For a prestaged device, if a mismatch is detected for the UNI status in the Connectivity Services Director database and on the device (caused by the application being down or network accessibility problems), the synchronization of the UNI interface might not occur. In this case, the status update happens on next configuration commit operation on the device. To manually resolve this discrepancy, you can trigger a synchronization by unassigning and reassigning the UNI role of the interface.
- In a scaled environment, it is recommended that you disable monitoring functionality as it might cause the Connectivity Services Director application to poll the specified devices and retrieve details to be displayed in the widgets in Monitor mode of Service view. You might require the monitoring functionality to be disabled to prevent the slowness in loading the GUI pages. You can disable the monitoring mechanism the following ways:
 - In the Connectivity Services Director UI, go to **System > Preferences > Monitoring** and disable monitoring.
 - Run a script on the Junos Space Appliance. You must stage the script on the device with administrative and execute permissions for the script file before executing the script.

To enable or disable monitoring, enter the following command at the shell prompt (To run shell commands, from the Junos Space Appliance Settings menu, enter **7** at the prompt):

```
EnableDisableCollector.sh <db_user_name> <db_password> <collectorName>
<enable/disable>
```

where:

- **db_user_name** is the username of the user for the Connectivity Services Director database.
- **db_password** is the password of the user for the database.
- **collectorName** is the name of the collector for which you want to enable or disable retrieval of statistics. You can enter one of the following collector names:

- **ProvisioningMonitorInterfaceStatusCollector**—Defines the polling interval for monitoring the interface status
- **ProvisioningMonitorInterfaceStatsCollector**—Defines the polling interval for monitoring the interface statistics
- **ProvisioningMonitorServiceStatusCollector**—Defines the polling interval for monitoring the service status
- **ProvisioningMonitorLDPStatsCollector**—Defines the polling interval for monitoring the LDP statistics
- **ProvisioningMonitorY1731PMCollector**—Defines the polling interval for monitoring the performance management or Y.1731 statistics
- **ProvisioningMonitorLSPStatsCollector**—Defines the polling interval for monitoring the LSP statistics
- **EquipmentMonitorDeviceStatusCollector**—Defines the polling interval for monitoring the status of a device

The **collectorName** parameter is optional. If you do not specify a collector name, monitoring is enabled or disabled for all the collectors. If you enter an incorrect collector name, the list of collector names is displayed and you are prompted to select from the list.

- **enable** is the keyword to enable the monitoring functionality and collection of statistics.
- **disable** is the keyword to disable the monitoring functionality and collection of statistics.

We recommend that you use the script to disable the monitoring functionality only with the assistance of a Juniper Technical Assistance Center (JTAC) representative.

- For IP services, data plane validation is not performed when you run functional audit for a service that does not contain the **vrf-table-label** attribute, which maps the inner label of a packet to a specific virtual routing and forwarding (VRF) instance. The Functional Audit Results window displays a message about the **vrf-table-label** configuration attribute not enabled in the service in such a scenario.
- Sometimes, the validation of an E-Line service order fails with an error message stating that a duplicate virtual circuit ID exists, even when you have selected the option to automatically assign a VC ID from the VC ID pool in the service order. This condition occurs because of a resource pool allocation failure—that is, when the same device is managed by more than one Junos Space Network Management Platform application. Consider a device that is added and discovered by two Junos Space Network Management Platform servers. Assume that on one server running Junos Space Network Management Platform, Connectivity Services Director is also installed. The resource pool management functionality on that server reserves resources for devices that are managed only by using that server. If a resource, such as an IP address pool, VLAN ID, or a route target is reserved by both the Junos Space Network Management Platform servers, the reservation on one server is not reflected in the other server. If the same resource is marked for use in a service by multiple Junos Space Network Management Platform instances or servers that manage the same device, you must perform a service recovery operation. This operation recovers services that are present on devices that Junos Space Network Management Platform

is not managing. Auto-discovery of services is not supported; therefore, resources used by other Junos Space Network Management Platform servers or modified on a managed device using the CLI are not reserved and displayed in the resource pool. The device configuration must be validated to check for duplicate resources before deploying or validating a service.

When a device is configured from the CLI, apart from the application, service recovery must be performed on Connectivity Services Director. This is required so that Connectivity Services Director can learn all the consumed resources in the network and auto-allocation allocates free resources and also restricts manual configuration of consumed resources.

New and Changed Features

This section lists the new and changed features in Connectivity Services Director Release 5.2R1.

- Connectivity Services Director enables you to download the data displayed on the Service View panes selected in the Monitor mode for E-Line, E-LAN, and IP services.
- You can start and stop the performance management (PM) statistics collection functionality on multiple pairs of devices at a time. However, you cannot start the PM statistics collection functionality on pairs in the reverse order simultaneously.
- We've introduced the IFD Description field to enable you to add the description of the physical interface when you create E-Line, E-LAN, and IP services.
- We recommend that you use CentOS 7 version for CSD-Topology bundle 5.1 installation. JunosVM for CSD-Topology bundle 5.1 is validated for Junos OS Release 18.4R3.
- Connectivity Services Director Release 5.2R1 supports the following platforms:
 - ACX710
 - QFX5200
 - QFX5210
 - QFX10002
 - QFX10008
 - SRX4100
 - SRX4200
 - SRX4600
 - SRX300
 - SRX320

- SRX340
- SRX345

Known Behavior

This section lists the known or expected behavior in Connectivity Services Director Release 5.2R1.

- By default, parameters that cannot be edited in the service template are hidden in the service order. To view them, mark them as **Ready-Only** while creating service templates.
- On the Service Monitoring Summary page that is displayed when you select a service from the Network Services > Connectivity > E-Line Services tree, Network Services > Connectivity > IP Services tree, or Network Services > Connectivity > E-LAN Services tree in the Tasks pane, and select the Service Traffic tab in Monitor mode of Service view, the Traffic Trend (bps) column displays only the rate of egress traffic in the form of a line graph. The rate at which ingress packets are received is not displayed.
- Several **delete** statements are observed in the service settings on the Service Configuration tab of the Configuration dialog box. The **delete** statements indicate deleted policy attributes from a corresponding service on a device. When a service is created or modified, its policy options are deleted from the device to prevent the previously existing policies from interfering with the service. The presence of the **delete** statements is an expected behavior and does not indicate any incorrect service configuration.
- On the Service Summary page for E-LAN services, the Connections matrix does not show the exact VPLS connection present on the device for all endpoints. This problem occurs because the remote procedure calls and CLI commands do not return the remote device IP address when the connection is down.
- When you select the Service Traffic tab in Monitor mode for a specific E-Line LDP resiliency service, the connection status between the source device and other devices is denoted as NA (not available) in the Service Traffic monitor if any of the following conditions occur:
 - The device does not have Layer 2 circuit data.
 - Remote procedure call (RPC) commands are failing.
 - The NETCONF connection fails to be established.

On the pseudowire graph in the Service Traffic monitor, a gray line is displayed for the NA state. After the next polling cycle, the monitoring mechanism of Connectivity Services Director marks the connections status as NA for all connections from the endpoints on which the Layer 2 circuit configuration is deleted.

The connection status value in the Service Traffic monitor is refreshed depending on the polling interval configured on the Monitoring tab of the Preferences page (which you can launch by clicking the down arrow beside the System button on the Connectivity Services Director banner and selecting Preferences).

- When a configuration audit is performed, the XPath attributes in the service configuration are used. Only the addition, modification, and deletion of the XPath attributes are detected, but the creation of a new attribute (child XPath) on a device is ignored. This behavior is expected because Junos Space Network Management Platform audits only the settings in a user template. If the template has a container, Junos Space Network Management Platform audits only to determine whether the device is configured with this container. If you want to audit any container child, you need to add it into the template. This scenario is similar to an out-of-band configuration change on the device, which Junos Space Platform can determine only whether System of Record mode is set for Junos Space Network Management Platform.
- The Decommissioned Service Orders option is available on the Tasks pane only when you select the Connectivity node or the Tunnel node from the Network Services tree on the View pane. This option is not available if you select the Network Services node on the View pane. Also, this option is not available if you expand the Connectivity tree and select E-Line Services, E-LAN Services, or IPServices, or if you expand the Tunnel tree and select RSVP LSPs.
- Navigation to service specific monitoring view is not supported from **Service Monitoring Summary** page. Select the specific service from **Service View Tree**.
- Ensure that the DMI schema of CSD matches with the JUNOS software running on the device. If there is a schema mismatch, you will see inconsistent behavior with the software.
- For some fields, such as Interface and LSP Status, that are displayed in the different widgets on the Service Traffic, Service Transport, and Service Summary pages in Monitor mode of the Service view, the values or statuses that are shown are updated based on the polling interval for retrieving data from the devices. As a result, the values or statuses for such fields are reflected in the widgets of the monitoring pages with a delay of a few minutes.
- When you edit an E-LAN service order, you cannot modify the device roles. For example, you cannot modify a VPLS spoke to be a point-to-point spoke.
Workaround: To modify the device roles, delete the device and add it back again. For the above example, delete the device as a VPLS spoke and add it as point-to-point spoke.
- The outer and inner tag protocol IDs that you want to configure in a service definition must be preconfigured on the device associated with the service definition for a successful validation and provisioning of the service order.

Known Limitations

This section lists the known limitations in Connectivity Services Director Release 5.2R1.

- When you try to create a service order after provisioning it, the Configuration page is not displayed for a selected template.
- For RFC 2544 test feature to function correctly, install the schema compatible for a device and set it as the default schema, prior to the Connectivity Services Director upgrade, and restart the jboss service.
- Job details displayed on the Config Deployment Jobs Status page do not contain complete information about failed jobs. To get complete information about failed jobs, including the reason for job failure, you need to verify the server logs stored on the server.
- Connectivity Services Director supports role-based access control (RBAC) only at the task category level. There is no support for object-level or task-level access control.
- When you edit a service order, the auto-pick option that you enabled during the creation of the service order that is associated with a service definition is not preserved. Also, the parameters for which you enabled automatic selection by the system, such as Unit ID and Route Target, require you to enter values, and the Autopick check boxes do not remain selected.
- When you edit an existing service order for a pending service, by clicking the Edit button on the Manage Network Services or Manage Service Deployment pages in Deploy mode of the Service view on the Connectivity Services Director GUI, a fresh service order is created with the name you specified. Only the changed node details are stored in the new service order and the previous details are lost.
- When you modify an existing service, if the service order fails, that service order cannot be modified. You need to delete the failed or invalid service order and modify the service again.
- When you launch the Chassis view of a device, device labels are missing from the Google Chrome browser. The interface numbers are not displayed beneath the ports and the device name is not shown in the front view of the chassis image. Also, when you click the Perspective button to view the three-dimensional, advanced view of the chassis, the quality of the chassis image displayed is reduced slightly. This behavior with image quality is expected in the Google Chrome browser.
- When you attempt to validate or provision a service order, the "Service Order Deployed OK" pop-up message is displayed, regardless of the result of the action. This is an incorrect behavior. The same message is displayed even if the validation and provisioning attempts fail. A job ID with a link must be displayed that you can click to navigate to the Job Management page for the results.
- You cannot view details of a device prestaging job on the Job Management page. You need to view the Prestage Devices page in Build mode to view the device prestaging details.
- When you modify an IP service order for which multicast VPN has been enabled during the creation of the service order, the MVPN check box is disabled on the Service Parameters page of the IP service modification wizard. You cannot modify MVPN settings during the editing of a service order if MVPN is already enabled in the service order.
- On the Manage Network Services page, you can search for services using only the service name. For the other fields displayed on this page, the search utility is not supported. You can filter the table by clicking the arrow to display the column drop-down menu in the table and selecting the Filters option.

- The search function is supported only for the elements of the tree that are displayed on the page; the global search facility that analyzes all configured elements in the database is not supported.
- While prestaging a device, you cannot modify a loopback address or add multiple loopback addresses.
- At times, when you attempt to validate an E-LAN service, an error message is displayed stating that the route target is not in the prescribed format of x:y. This error occurs when an autonomous system (AS) number is defined in the device or when the routing options table does not have the AS number of the device stored in it (that is, the AS number is not synchronized properly).
- In a scaled environment, thousands of services, each assigned to a different virtual circuit ID (VC ID), the Resource Allocation Details page from the Prestage Devices workspace in Build mode of the Service view contains too many details. It is difficult to determine whether a VC ID has been assigned to a device or not. This is because VC IDs are sorted on the basis of strings and not numbers.
- Sometimes, when you attempt to discovery devices from the Connectivity Services Director GUI after the installation of a new image, the "Service is not available due to resource loading, please retry later." message is displayed. This condition occurs because it takes more time than expected for the resources and schema to be loaded from Junos Space Network Management Platform. As a result, adequate resources are not available to initiate the discovery of devices.
- Tags, which enable you to categorize and organize managed devices, are not supported in Connectivity Services Director.
- You must clear the browser cache when you need to view and work with the E-LAN service order pages. Otherwise, the webpage is not loaded properly.
- To view only MX Series routers on the Assign Quick Templates page, you select **MX** from the Device Family list. However, you do not have an option to view only ACX Series routers on the Assign Quick Templates page. You select **Common** from the Device Family list to display all device families, which also includes ACX Series routers.
- For the discovery of LSPs, Connectivity Services Director creates router profiles on CSD-Topology. Connectivity Services Director uses the same username that it uses to discover devices to discover LSPs. If the user account has privileges for shell access, LSP discovery fails on CSD-Topology. This failure occurs because the CSD-Topology requires the user account to have only CLI-access privilege and not shell-access privilege. Also, if Connectivity Services Director has discovered devices using the root account (with native access), LSP discovery fails on CSD-Topology.

Workaround: Perform the following steps for CSD-Topology to successfully discover LSPs:

1. Initiate an SSH or Telnet session to the CSD-Topology VM external IP address.
2. Modify the following CLI command files to be executed to add the **cli** command before any other command is executed so that access to the CLI shell is obtained. This modification does not impact non-root (non-superuser accounts) because the output of the additional command is ignored. For root users, the CLI shell is invoked first and all other commands (such **show configuration** and **show mpls lsp**) are executed correctly:

```
[root@hostname~]# /opt/pcs/db/command/juniper.config
[root@hostname~]# /opt/pcs/db/command/juniper.interface
[root@hostname~]# /opt/pcs/db/command/juniper.tunnel_path
[root@hostname~]# /opt/pcs/db/command/juniper.transit_tunnel
```

The contents of the preceding files have the CLI command to be executed on the routers. For example, the original contents of **juniper.config** file are as follows:

```
!Silent
set cli screen-width 0
show config|display inheritance|no-more
```

You must modify this file as follows to include the **cli** command:

```
@P
cli
!P
!Silent
set cli screen-width 0
show config|display inheritance|no-more
```

- The monitoring framework polls data from devices based on the serial number of the chassis, rather than the hostname or IP address of the device, which is unique in a network deployment. With the existing monitoring mechanism, when a chassis contains a new serial number (after RMA), the device chassis is considered a different entity and all historical data (collected for the same host or IP address of the chassis) saved is lost.
- In certain scenarios, such as after an upgrade from Services Activation Director Release 14.3R1 to Connectivity Services Director Release 1.0, you might observe that alarms related to services are not properly cleared on the Connectivity Services Director GUI. This problem occurs because of the manner in which alarms are transmitted from OpenNMS to Junos Space Network Management Platform.

Workaround: Manually clear the appropriate alarm from the Alarm Details page in Fault mode of Service view after examining the alarm and associated events, and taking any action needed to resolve the condition that triggered the event on the corresponding device.

- The ILA adapter fails to upgrade if you install the Connectivity Services Director application in a setup where an ILA adapter already exists.

Workaround: Before you install the Connectivity Services Director application you must delete the existing ILA adapter. You can delete the existing ILA adapter at Network Management Platform > Devices > Device Adapter.

- If you migrate from Services Activation Director to Connectivity Services Director Release 2.0R3 or earlier, **Enable Tunnel services** and **Enable Local Switching** parameters cause functional issues.

In order to overcome these issues and maintain consistency across products, in Connectivity Services Director Release 2.0R4, **Enable Tunnel services** and **Enable Local Switching** parameters are renamed **Disable Tunnel services** and **Disable Local Switching** respectively.

As a result of this renaming, you might encounter issues when you are migrating from Connectivity Services Director Release 2.0R2 to Connectivity Services Director Release 2.0R4.

Workaround: Use the Modify Service workflow to modify the service according to the new naming convention. For example, if you prefer to enable tunnel services while modifying the existing service, clear the **Disable Tunnel services** check box.

Known Issues

This section lists the known issues in Connectivity Services Director Release 5.2R1. For the most complete and latest information about known Junos Space Connectivity Services Director defects, use the Juniper Networks online [Problem Report Search application](#).

- Segment routing LSPs are not highlighted in the Connectivity Services Director topology view. [PR1452627]
- Q-in-Q resource pool displays only inner VLAN details. [PR1435665]
- Service provisioning for LDP FEC 128 with pseudowire resiliency fails when VLAN map is enabled. [PR1459376]
- For an E-Line service, when normalization of VLAN tags is enabled, the normalization is always performed even when VLAN tags are same.
- Fault Status is not getting updated for EVPN services in Connectivity Services Director. [PR1407911]
- Port tagging is not supported when:
 - Tagging is Dot1q, vLAN normalization only normalizes to the Dot1q tag.
 - Tagging is QinQ or asymmetric tag depth, vLAN normalization only normalizes to the QinQ tags.
- In a scaled environment, the Connectivity Services Director application might allow multiple users to modify a large service at the same time from different browsers or machines. As a result, you might see more than one instances of a single validated service order.

- When you edit a service order, you cannot modify the parameters of the MAC Settings and Advanced Settings sections of the service order wizard.
- If you delete the peer node of a device while editing the node settings of an E-LAN service order and later revert the changes, then the peer node is not displayed on the Edit E-LAN Service page. [PR1366732]
- When an Ethernet VPN (EVPN) service, with Ethernet Segment Identifier (ESI) and multihoming set to **single-active** or **all-active**, is recovered, the Service Details page does not list peer interfaces.
Also, when the service is modified, the Node Settings and Site Settings pages of the Service do not show the mapping between interfaces of the peer nodes. [PR1362288]
- Maximum transmission unit (MTU) validation does not work. [PR1401528]
- An existing EP-LINE service cannot be modified for a VRF service. [PR1402417]
- Invalid test profiles must be deleted. [PR1405060]
- On selecting a particular LSP, the LSP path is not highlighted in Connectivity Services Director Topology View with the CSD-Topology bundle (5.1). [PR 1498476]

Resolved Issues

This section lists the resolved issues in Connectivity Services Director Release 5.2R1.

- Service creation job fails in Connectivity Services Director when you trigger the REST API for the service deployment job and FA or CA without completion or success of another job. [PR1473033]
- Commissioning Layer 3 VPN or IP services in more than one site or endpoint fails when you configure BGP between provider edge (PE) and customer edge (CE) routers. [PR1476726].
- The existing VPLS order is deleted from the database. [PR1480606]
- In Connectivity Services Director Topology View, the device view using custom group is not working. [PR1480786]
- Connectivity Services Director fails to save a service definition order when a second site with more than one service template is added. The following error message is displayed:
An error occurred submitting the service order. Service endpoint ID is mandatory [PR1485366]
- You cannot modify a service definition when adding or removing the service definition with a service template. [PR1480788]
- Peer node information is missing in the multihoming settings on the Service > Modify Service > Site Settings page. [PR1489477]

Hot Patch Releases

This section describes the installation procedure and supported platforms in Connectivity Services Director Release 5.2R1 hot patches.

During hot patch installation, the script performs the following operations:

- Blocks the device communication.
- Stops JBoss, JBoss-dc, and watchdog services.
- Backs up existing configuration files and Enterprise Application Archive (EAR) files.
- Updates the Red Hat Package Manager (RPM) files.
- Restarts the watchdog process, which restarts JBoss and JBoss-dc services.
- Unblocks device communication after the watchdog process is restarted for device load balancing.

NOTE: You must install the hot patch on Connectivity Services Director Release 5.2R1.2 or on any previously installed hot patch. The hot patch installer backs up all the files that are modified or replaced during hot patch installation.

Installation Instructions

Perform the following steps in the CLI of the JBoss-VIP node only:

1. Download the Connectivity Services Director Release 5.2R1 Patch vX from the [Downloads](#).
X is the hot patch version. For example, v1, v2, and so on.
2. Copy the **CSD-5.2R1-hotpatch-vX.tgz** file to the **/home/admin** folder of the VIP node.
3. Verify the checksum of the hot patch:
md5sum CSD-5.2R1-hotpatch-vX.tgz.
4. Extract the **CSD-5.2R1-hotpatch-vX.tgz** file:
tar -zxvf CSD-5.2R1-hotpatch-vX.tgz
5. Change the directory to **CSD-5.2R1-hotpatch-vX**:
cd CSD-5.2R1-hotpatch-vX
6. Execute the **patchme.sh** script from the **CSD-5.2R1-hotpatch-vX** folder:

sh patchme.sh

The script detects whether the deployment is standalone deployment or a cluster deployment and installs the patch accordingly.

A marker file `/etc/.CSD-5.2R1-hotpatch-vX` is created with the list of RPMs that are fixed in the hot patch.

NOTE: We recommend that you install the latest available hot patch version, which is the cumulative patch.

Supported Platforms

Table 5 on page 20 lists the supported platforms in Connectivity Services Director Release 5.2R1 hot patches.

Table 5: Supported Platforms

Supported Platforms	Qualified Junos OS Release Version	Hot Patch Version
ACX710	Junos OS Release 20.1R1	v1

Resolved Issues

NOTE: Security vulnerabilities are addressed in the Connectivity Service Director Release 5.2R1-hotpatch-v2.

Table 6 on page 20 lists the resolved issues in the Connectivity Services Director Release 5.2R1 hot patch.

Table 6: Resolved Issues

PR	Description	Hot Patch version
1580997	There is an issue while viewing service definitions and modifying or deactivating E-LAN service.	v2
1577010	Service recovery does not work as expected for E-LINE service.	v2

Table 6: Resolved Issues (*continued*)

PR	Description	Hot Patch version
1605868	When you decommission the nodes of an E-LAN service, the process fails with XSLT transformer configuration failed error message.	v2
1607225	The Discard Changes option does not discard pending changes in a configuration.	v2

Finding More Information

For the latest, most complete information about known and resolved issues with Junos Space Network Management Platform and Junos Space Management Applications, see the Juniper Networks Problem Report Search application at <http://prsearch.juniper.net>.

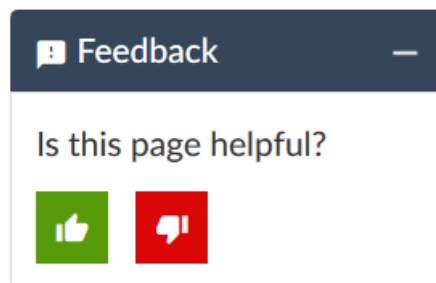
Juniper Networks Feature Explorer is a Web-based application that helps you to explore and compare Junos Space Network Management Platform and Junos Space Management Applications feature information to find the correct software release and hardware platform for your network. Find Feature Explorer at <http://pathfinder.juniper.net/feature-explorer/>.

Juniper Networks Content Explorer is a Web-based application that helps you explore Juniper Networks technical documentation by product, task, and software release, and download documentation in PDF format. Find Content Explorer at <http://www.juniper.net/techpubs/content-applications/content-explorer/>.

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- Online feedback system—Click TechLibrary Feedback, on the lower right of any page on the [Juniper Networks TechLibrary](#) site, and do one of the following:



- Click the thumbs-up icon if the information on the page was helpful to you.
- Click the thumbs-down icon if the information on the page was not helpful to you or if you have suggestions for improvement, and use the pop-up form to provide feedback.
- E-mail—Send your comments to techpubs-comments@juniper.net. Include the document or topic name, URL or page number, and software version (if applicable).

Requesting Technical Support

Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active J-Care or Partner Support Service support contract, or are covered under warranty, and need post-sales technical support, you can access our tools and resources online or open a case with JTAC.

- JTAC policies—For a complete understanding of our JTAC procedures and policies, review the *JTAC User Guide* located at <https://www.juniper.net/us/en/local/pdf/resource-guides/7100059-en.pdf>.
- Product warranties—For product warranty information, visit <http://www.juniper.net/support/warranty/>.
- JTAC hours of operation—The JTAC centers have resources available 24 hours a day, 7 days a week, 365 days a year.

Self-Help Online Tools and Resources

For quick and easy problem resolution, Juniper Networks has designed an online self-service portal called the Customer Support Center (CSC) that provides you with the following features:

- Find CSC offerings: <https://www.juniper.net/customers/support/>
- Search for known bugs: <https://prsearch.juniper.net/>
- Find product documentation: <https://www.juniper.net/documentation/>

- Find solutions and answer questions using our Knowledge Base: <https://kb.juniper.net/>
- Download the latest versions of software and review release notes: <https://www.juniper.net/customers/csc/software/>
- Search technical bulletins for relevant hardware and software notifications: <https://kb.juniper.net/InfoCenter/>
- Join and participate in the Juniper Networks Community Forum: <https://www.juniper.net/company/communities/>
- Create a service request online: <https://myjuniper.juniper.net>

To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) Tool: <https://entitlementsearch.juniper.net/entitlementsearch/>

Creating a Service Request with JTAC

You can create a service request with JTAC on the Web or by telephone.

- Visit <https://myjuniper.juniper.net>.
- Call 1-888-314-JTAC (1-888-314-5822 toll-free in the USA, Canada, and Mexico).

For international or direct-dial options in countries without toll-free numbers, see <https://support.juniper.net/support/requesting-support/>.

Revision History

21 January, 2022—Revision 3—Junos Space Connectivity Services Director 5.2R1.

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