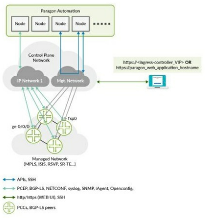
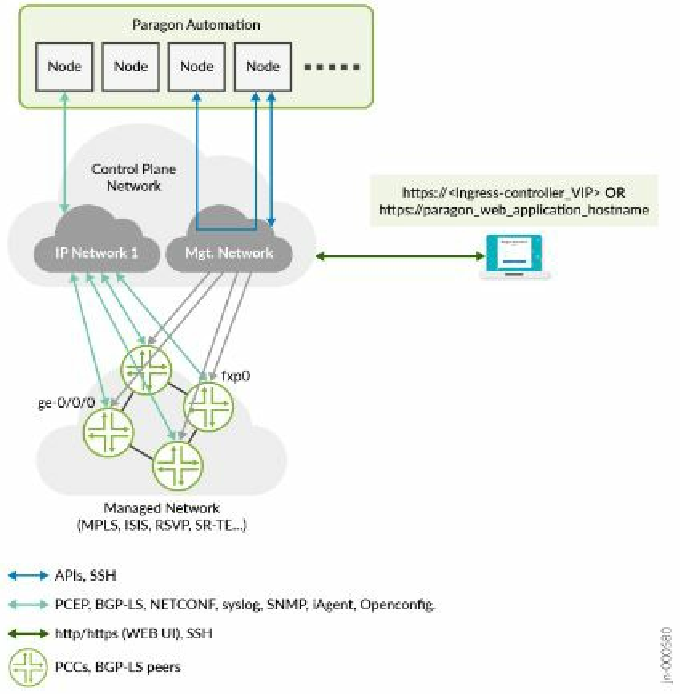

Paragon Automation
Node
Node
Node
Node
Control Plane Network
IP Network 1
Mgt. Network
https://<ingress-controller_VIP> OR https://paragon_web_application_hostname
ge-0/0/0
fxp0
Managed Network (MPLS, ISIS, RSVP, SR-TE...)
APIs, SSH
PCEP, BGP-LS, NETCONF, syslog, SNMP, iAgent, Openconfig.
http/https (WEB UI), SSH
PCCs, BGP-LS peers

Juniper NETWORKS Release 23.2 Paragon Automation Instructions

Contents

Juniper NETWORKS Release 23.2 Paragon Automation



Introduction

Juniper® Paragon Automation is a cloud-ready solution for network planning, configuration, provisioning, traffic engineering, monitoring, and life-cycle management that brings advanced visualization capabilities and analytics to network management and monitoring. You can deploy Paragon Automation as an on-premises (customer-managed) application.

Paragon Automation operates on a microservices-based architecture and employs REST APIs, gRPC APIs, and common messaging bus communications. Paragon Automation provides base platform capabilities such as support for Juniper Networks and third-party (Cisco IOS XR, Nokia) devices, zero-touch provisioning, user management, and role-based access control (RBAC). In addition to providing base platform capabilities, Paragon Automation offers a suite of microservices-based applications— Juniper® Paragon Insights (formerly HealthBot), Juniper® Paragon Planner (formerly NorthStar Planner), and Juniper® Paragon Pathfinder (formerly NorthStar Controller). When you add any of these applications to Paragon Automation, the API suite of the application integrates with Paragon Automation to allow seamless communication between new and existing services.

In these release notes, we outline the new features of the base platform, Paragon Pathfinder, Paragon Planner (Desktop Application), and Paragon Insights modules that are available in this release. For more information about features related to these applications, see Paragon Automation User Guide.

Installation and Upgrade Instructions

For information about installation procedure, upgrade procedure, and requirements (software and hardware), see Paragon Automation Installation Guide.

NOTE: You cannot use the direct upgrade process to upgrade to Paragon Automation Release 23.2. You must install Paragon Automation Release 23.2 afresh. However, in order to migrate your current Release 23.1 configuration to Release 23.2, you can use the back up and restore functionality. For more information on the upgrade, see Upgrade to Paragon Automation Release 23.2.

Licensing

In Paragon Insights, we’ve introduced the following license tiers and their related device licenses:

- Paragon Insights Advanced (PIN-Advanced)
- Paragon Insights Standard (PIN-Standard)

Currently, the tier licenses are hard-enforced. That is, you cannot perform the deploy operation unless you add the licenses.
The device licenses are soft-enforced. That is, you'll receive an out-of-compliance alert in the Paragon Automation GUI if you try to deploy more devices than the number for which you've obtained licenses. However, you can continue to use the existing functionality.
You can view your license compliance status on the Administration > License Management page in the GUI.
In Paragon Pathfinder, we've hard-enforced the following license tiers:

- Pathfinder Standard
- Pathfinder Advanced
- Pathfinder Premium

For information about licensing, see the Licensing Guide.
If you have a license key that was generated for a version of Paragon Automation earlier than Release 22.1 you will need to upgrade the license key format to the new format before you can install it in Paragon Automaton Release 23.2. You can generate a new license key by using the Juniper Agile Licensing portal. For more information about generating a new license key, see View, Add, or Delete Licenses.

New and Changed Features

This section describes the features in each module of Juniper Paragon Automation Release 23.2.
Paragon Pathfinder

- Safe mode notification on the Topology page—In a dual-cluster deployment of Paragon Automation, when the Paragon Pathfinder component in one deployment goes into safe mode, a notification
- indicating that the deployment is in safe mode is displayed at the top of the Topology (Network > Topology) page.
- [See Disaster Recovery Overview.]

Paragon Installation and Upgrade

- Support for air-gap installation on nodes running Ubuntu base OS—You can use the air-gap method to install Paragon Automation on nodes running Ubuntu base OS. In the air-gap method, the cluster nodes don't need Internet access during installation.
- [See Air-Gap Install Paragon Automation on Ubuntu.]
- Support for MD5 authentication—You can configure MD5 authentication to:
- Ensure that the BGP Monitoring Protocol (BMP) service peers with the correct BGP Link State (BGP-LS) router
- Authenticate and secure Path Computation Element Protocol (PCEP) sessions between the router and Paragon Pathfinder
- Configure the VIPs for the Containerized Routing Protocol Daemon (cRPD) and the Path Computation Element (PCE) server during the installation of Paragon Automation. After the device has been onboarded, you must enter the MD5 authentication key on the Edit Device-Name page to authenticate PCEP sessions between the router and Paragon Pathfinder. To access this page, select Configuration > Devices > Edit Device-Name. You can also modify the cRPD configuration after the installation is complete and the cluster is successfully deployed.
- [See Virtual IP Address Considerations, Install Paragon Automation on a Multinode Cluster, and Edit Devices.]
- paragon command CLI utility—We've introduced a set of intuitive commands that you can use to analyze,

query, and debug your Paragon Automation setup. To view the list of paragon commands, log in to any of the primary nodes and execute paragon ?. [See Troubleshoot Using the Paragon CLI Utility.]

Base Platform

- We’ve not added any new features related to the base platform in Paragon Automation Release 23.2.

Paragon Insights

- We’ve not added any new features related to Paragon Insights in Paragon Automation Release 23.2.

Paragon Planner

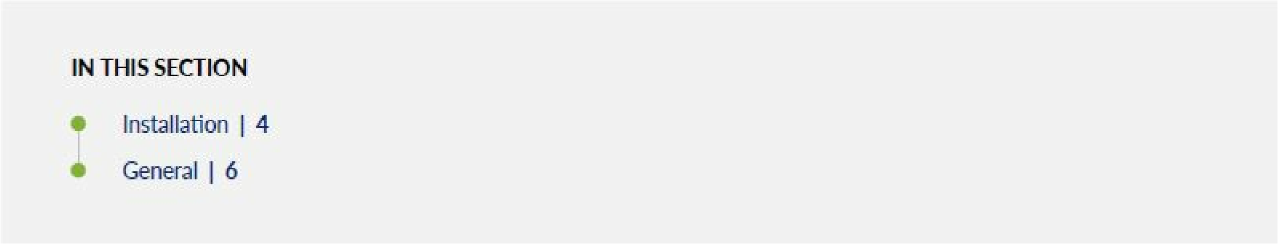
- We’ve not added any new features related to Paragon Planner in Paragon Automation Release 23.2.

NOTE: Paragon Planner Web Application is a beta feature in Paragon Automation Release 23.2.

Anuta ATOM

Starting in Paragon Automation Release 23.2, we do not support testing the integration of Paragon Automation Release 23.2 with Anuta ATOM. We recommend that you validate the integration before upgrading to newer releases of Anuta ATOM.

Known Issues



IN THIS SECTION

- This section lists the known issues in Juniper Paragon Automation Release 23.2

Installation

- When you provision virtual machines (VMs) on VMware ESXi servers, if you add the block storage disk before adding the disk with the base OS, Ceph sometimes incorrectly identifies the drives and creates the cluster using the incorrect drive, resulting in the base OS being destroyed.
- Workaround: Add the first disk as the base OS (larger drive) and then add the smaller block storage disk.
- In the absence of a time series database (TSDB) HA replication, if a Kubernetes worker node running a TSDB pod goes down, even though there is capacity in the pod, the TSDB service is not spun up on a new node. This is because a huge volume of data would need to be transferred to the new node. Workaround: In the event of a failure of the server or storage hosting a TSDB instance, you can rebuild the server or damaged component.
- If the replication factor is set to 1, then the TSDB data for that instance is lost. In that case, you need to remove the failed TSDB node from Paragon Automation. To remove the failed TSDB Node:

1. In the Paragon Automation GUI, select Configuration > Insights Settings.

The Insights Settings page appears.

2. Click the TSDB tab to view the TSDB Settings tabbed page.
3. To delete the failed node, on the TSDB Settings tabbed page, click X next to the name of the failed TSDB node.

   NOTE: We recommend that you delete TSDB nodes during a maintenance window since some services will be restarted and the Paragon Automation GUI will be unresponsive while the TSDB work is performed.
4. Click Save and Deploy.
5. If the changes are not deployed and if you encounter an error while deploying, enable the Force toggle button and commit the changes by clicking Save and Deploy. By doing so, the system ignores the error encountered while adjusting the TSDB settings.

- If you uninstall Paragon Automation completely, you must also ensure that the /var/lib/rook directory is removed on all nodes, and all Ceph block devices are wiped.
- Workaround: See the Troubleshooting Ceph and Rook > Repair a Failed Disk section in the Paragon Automation Installation Guide.
- While installing Paragon Automation using the air-gap method, the following error occurs:

```
task path: /runtime/roles/docker/tasks/prepare-redhat.yml:40
fatal: [ppflabappl02]: FAILED! =>
  msg: |-
 The task includes an option with an undefined variable. The error was: list object has no
element 0
```

- **Workaround:** Edit the following configuration variables in the config-dir/config.yml file and then install Paragon Automation using the air-gap method:

```
docker_version: '20.10.13-3'
containerd_version_redhat: '1.5.10-3'
```

General

- If you run a simulation directly after you perform a Diverse Multicast Tree Design, the report in Tunnel Traffic on Links (Tunnel Layer Simulation Report > Peak Network Statistics) is incorrect. Workaround: Save the network after you perform a Diverse Multicast Tree Design and close it.
- Reopen the network and then run the simulation.
- While simulating failure scenarios (Tools > Options > Failure Simulation), if you run a multiple failure simulation first and then run a single failure simulation after, the report in Tunnel Traffic on Links (Tunnel Layer Simulation Report > Peak Network Statistics) is incorrect. The report displays multiple failure simulation values instead of a single failure.
- Workaround: De-select all options on the Multiple Failure tab before simulating a single failure scenario.
- Symmetric pair LSPs might not be routed symmetrically upon threshold crossing rerouting.

Workaround: None.

- The path analysis report is empty.

Workaround: Run a device collection task before performing path analysis. Note that the path analysis report can be empty if LSPs are already on the optimal path.

- Traffic charts are now supported for devices with dual Routing Engines which are onboarded with re0 or re1 suffixed to their hostnames. However, graphs are only supported if the hostname-suffixes are in lower case and in the -re0 or -re1 format. For example vmx101-re0 or vmx101-re1

Workaround: None

- Link Utilization simulation report might show negative values during the double failure scenario.

Workaround: None.

- Controller Sites are not included in the network archive for Paragon Planner.

Workaround: None.

- When a device hostname is changed, the change is not reflected across all databases.
- Workaround: Perform the following steps so that the new device hostname is reflected across all databases and components.

1. Before the hostname change, remove the device from all the device groups (controller or other playbooks).
2. Ensure that the device references are deleted from all the different Paragon Automation components. Navigate to the Configuration > Devices page.
    - Select the device.
    - Click the trash can icon to delete the device. The Delete Device page appears.
    - Select Force Delete and click Yes.
3. Onboard the device again, using the device onboarding workflow from the Configuration > Devices page. The device should now be onboarded with new hostname. The device properties especially system-id (important for receiving the JTI streams) should also be updated.
4. Add the device with the new hostname back to the device groups.
5. (Optional) Verify all the device stats in Influxdb using Grafana or on the device CLI. The database should be updated with the new hostname.

- On the Network > Topology > Tunnel tab, when you hover over the Filter (funnel) icon and select Add Filter, the Add Criteria page is displayed. If you select Color in the Field list, the field value is displayed as plannedProperties instead of Color. Workaround: None.
- The Network Configuration Protocol (NETCONF) provisioning method for point-to-multipoint (P2MP) LSPs is not supported in Cisco IOS-XR routers.
- LSPs on the optimal path may receive unnecessary PCEP updates during PCS optimization. Workaround:

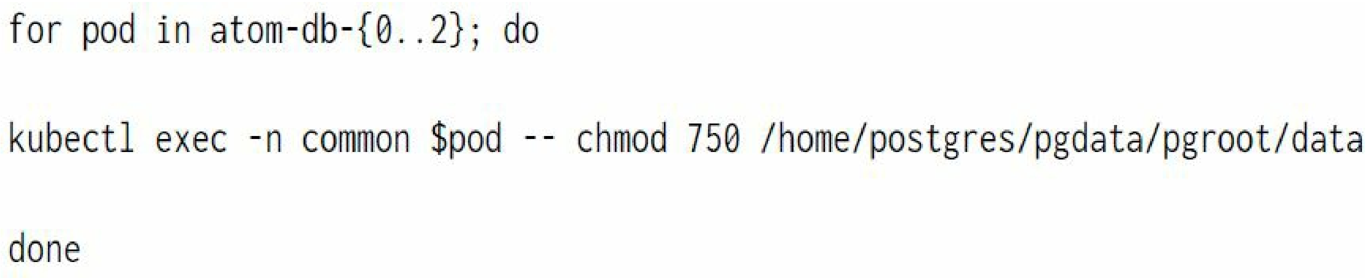
None.

- On Cisco IOS-XR routers, the P2MP sub-LSP status is not supported in the configuration state for CLI-provisioned P2MP LSPs. Workaround: None.
- An error in the diagnostics (Configuration > Data Ingest > Diagnostics > Application) feature causes application tests to fail. Workaround: None.
- Junos OS Release 22.4R1 and later have a limitation with SR-TE LSPs.
- For PCEP sessions to be established, you must disable the multipath feature using the following command: set protocols pcep disable-multipath-capability
- The secondary path is not supported.
- Safe mode status is always false when the ns-web pod starts. Workaround: None.
- Old messages in the queue are being processed after the federation link is recovered. Workaround: None.
- You get an incorrect safe mode status after you the modify source-of-truth flag during safe mode. Workaround: None.
- Sometimes devices with NETCONF disabled appear with NETCONF status Up.
- Workaround: Edit the device profile without any changes to trigger the reloading of a device profile.
- Colour for SR-TE LSPs originating from Cisco IOS-XR devices is visible only if the LSP is initially discovered from device collection. Workaround: None.
- You cannot use the NETCONF and Path Computation Element Protocol (PCEP) methods to provision P2MP LSPs for Cisco IOS-XR routers using the Paragon Automation UI.
- Workaround. Provision the P2MP LSPs using the CLI. After the configuration is parsed, run a Device Collection task to view the LSPs.
- You cannot disable the source-of-truth flag when the deployment is in safe mode.
- Workaround: Restart the top server pod to disable the source-of-truth flag during safe mode.
- When you select multiple delegated label-switched paths (LSPs) belonging to a single ingress router and click Return Delegation to PCC, only one of the LSPs becomes device-controlled. An issue in Junos causes this scenario.
- Workaround: Select one LSP at a time and click Return Delegation to PCC individually for each LSP.
- The operational status of a delegated SR-TE LSP remains down after its destination node is rediscovered.
- Workaround: You must sync the network model after the delegated SR-TE LSP destination node is rediscovered.
- PCE server is unable to reconnect to rabbitmq after rabbitmq is restarted. Workaround: Restart the ns-preserved pod.
- You cannot modify the use-federated-exchange setting from REST API/UI.
- Workaround: Modify the use-federated-exchange setting directly from the cMGD CLI and restart the toposerver for the change to take effect.
- Paragon Insights maps the Name (hostname or IP address) field to the Device ID field. However, the device name is no longer unique for the following reasons:
- In a dual Routing Engine device, “-reX” is appended to the device name.
- Third-party applications like Anuta Atom append the domain name to the device name.
- Also, mapping a device by its universal unique identifier (UUID) and not the hostname could cause issues with the information that the GUI displays. Workaround: Configure an additional IP address for the management Ethernet interface on the device by including the master-only statement at the [edit groups] hierarchy level. You must then use this additional IP address for onboarding the device. For more information, see Management Ethernet Interfaces.

- If you have dedicated a node for TSDB, some services (for example, AtomDB, ZooKeeper, and so on) in the common namespace that has a PersistentVolumeClaim set can be affected if the relevant pods are running on the dedicated node. That is, the status of pods running on the TSDB node is always displayed as Pending.
- Workaround: To avoid this situation, while dedicating a node for TSDB, ensure that the node does not have any pods for dedicated services that use PersistentVolumeClaim.
- When you undelegate a delegated LSP, the planned bandwidth of the LSP is based on the bandwidth reported by the device instead of the user input value. Workaround: None.
- While adding a device, if you specify a source IP address that is already used in a network, you may not be able to add the device to a device group, deploy a playbook, encounter function ingest-related errors, and so on.
- Workaround: Fix the conflicting source IP address. Click the Deployment Status icon and commit the changes.
- If you select a saved query on the Alarms page, the alarms are filtered based on the saved query. But, the graph and the data are not updated. Workaround: None.
- If you add an unmanaged device on the Device page and later edit the hostname of the unmanaged device, the hostname is not reflected in the device group and in the Devices dashlet on the Dashboard.
  Workaround: You can add an unmanaged device using the hostname or the IP address of a device.
- If you have added an unmanaged device using the hostname, then deleting the existing device and adding the device with a new hostname resolves the issue.
- If you have added an unmanaged device using the IP address, then in the device group and the Devices dashlet on the Dashboard, you need to identify the unmanaged devices based on the IP address and not the hostname.
- By default, the topology filter is disabled. You cannot enable the topology filter by using the Paragon Automation GUI.
- Workaround: For the procedure to enable the topology filter, see the Enable the Topology Filter Service topic.
- For Cisco IOS XR devices, you cannot restore a device configuration from the Devices page. You can only back up the device configuration.
- Workaround: To restore the device configuration of your Cisco IOS XR devices:
- On the Configuration > Devices page, select the Cisco XR device and click More > Configuration Version.
- Copy the configuration version that you want to restore.
- Restore the configuration using the CLI.
- If you have enabled outbound SSH at a device group level, you cannot disable outbound SSH for one of the devices in the device group.
- Workaround: You can enable or disable the outbound SSH on the device by using the MGD CLI or Rest APIs. To disable the outbound SSH you must set the disable flag to true. Run the following command on the device to disable the outbound SSH using the MGD CLI: set healthbot
- DeviceName outbound-ssh disable true
- You cannot download all service logs from the Paragon Automation GUI.
- Workaround: You can view all service logs in Elastic Search Database (ESDB) and Grafana. To log in to Grafana or ESDB, you must configure a password in the grafana_admin_password field in the config.yml file before installation.
- If you modify an existing LSP or use a slice ID as one of the routing criteria, then the path preview might not appear correctly.
- Workaround: Once you provision the path, the path respects the slice ID constraints and the path appears

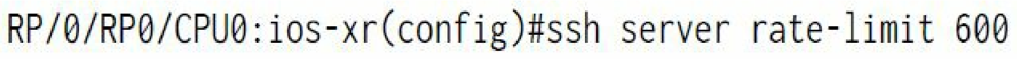
correctly in the path preview.

- If you provision a segment-routed LSP by using PCEP, then the color functionality does not work. This issue occurs if the router is running on Junos OS Release 20.1R1. Workaround: Upgrade the Junos OS to Release 21.4R1.
- Microservices fail to connect to PostgresSQL as PostgresSQL does not accept any connections during the primary role switchover. This is a transient state. Workaround: Ensure that the microservices connect to PostgresSQL after the primary role switchover is complete.
- The Postgres database becomes non-operational in some systems, which leads to connection failure. Workaround: Execute the following command in the primary node:



```
for pod in atom-db-{0..2}; do

kubectl exec -n common $pod -- chmod 750 /home/postgres/pgdata/pgroot/data

done
```

- The device discovery for Cisco IOS XR devices fails.
- Workaround: Increase the SSH server rate-limit for the Cisco IOS XR device. Log in to the device in the configuration mode, and run the following command:



```
RP/0/RP0/CPU0:ios-xr(config)#ssh server rate-limit 600
```

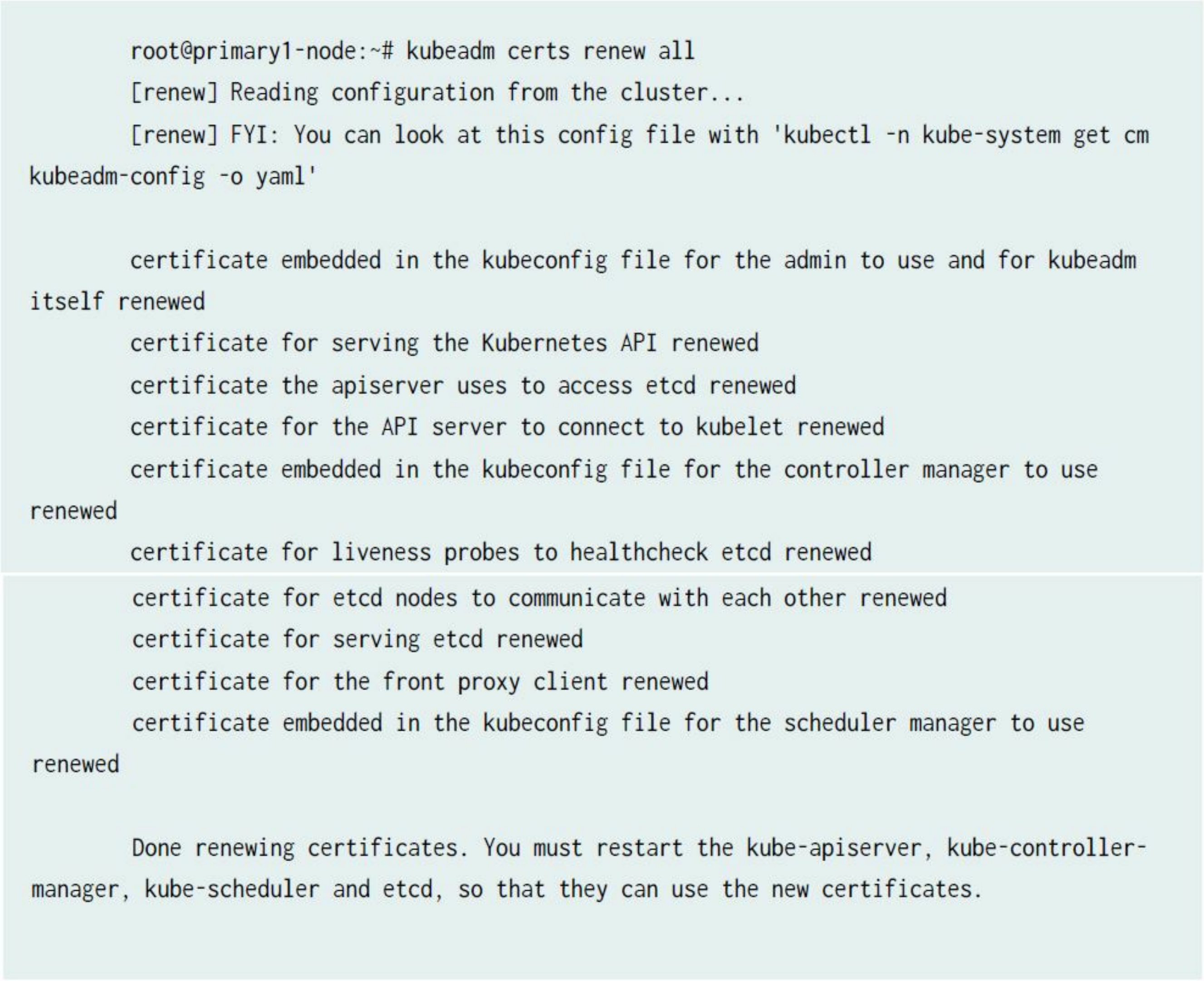
- If you use BGP-LS to obtain information about the link delay and link delay variation, you cannot view the historical link delay data. Workaround: None.
- In rare scenarios (For example, when Redis crashes and is auto-restarted by Kubernetes, or you have to restart the Redis server), some interface information is lost and interfaces are not listed on the Interface tab of the network information table. However, this issue does not affect path computation, statistics, or LSP provisioning.
- Workaround: To restore interfaces in the live network model, rerun the device collection task.
- On the Tasks tab of Add New Workflow and Edit Workflow pages:
- Even though you click the Cancel option, the changes that you have made while editing a task will be saved.
- You cannot reuse the name of a step that you have already deleted.
- An error message will not be displayed even when you add a step with empty entries and click Save and Deploy. Workaround: None.
- Upgrade of some of the lower-end PTX devices with the Dual RE mode (For example, PTX5000 and PTX300) is not supported in Paragon Automation. This is because the lower-end PTX devices with the Dual RE mode do not support the bridging or bridge domain configuration. Workaround: None.
- The POST /traffic-engineering/api/topology/v2/1/rpc/diverseTreeDesign API does not work. Workaround: We recommend that you use the POST /NorthStar/API/v2/tenant/1/topology/1/rpc/ diverseTreeDesign API.
- Paragon Automation doesn’t show alarms for Nokia devices. Workaround: None.
- While configuring an SRv6 LSP with the routing method as routeByDevice, you must specify a value for the segment routing-Explicit Route object (SR-ERO); otherwise, you cannot use the SRv6 LSP to carry traffic.

- Workaround: While adding a tunnel, on the Path tab, add hops to specify the required or preferred routing type.
- If a device-controlled SRv6 LSP is discovered from the network, the path highlighted for this LSP will be incorrect irrespective of whether or not you specify an Explicit Route object (ERO) for the route. Workaround: None.
- Sometimes, you may not be able to delete segment-routing LSPs in bulk.
- Workaround: You can force delete the LSPs that are not deleted during the process of bulk deletion.
- In the Paragon Automation GUI, on the Tasks tab of the Add New Workflow and Edit Workflow pages, the following error message is displayed when you try to edit and save an existing step without making any changes: Name already exists
- Workaround: If you have erroneously clicked the Edit option, ensure that you at least change the name of the step.
- The PCEP session is sometimes displayed as Down if you restart all pods in the Northstar namespace. Workaround: Restart the topology server by using the kubectl delete pods ns-topo server-<POD_ID> -n northstar command.
- On the Administration > License Management page, you cannot view the SKU name of a license when you select the license and then select More > Details. Workaround: None.
- The graph on the Alarms page does not reflect the latest data. That is, the graph is not updated after an alarm is no longer active. Workaround: None.
- When you configure the outbound SSH for agent, the data for the configured rule will not be generated. Workaround: None.
- A zero per cent value of packet loss is displayed between the links if you have configured Two-Way Active Management Protocol (TWAMP). This is incorrect because TWAMP does not support exporting packet loss for IS-IS traffic engineering. Workaround: None.
- If you are using a device with MPC10+ line cards and if the device is running on a Junos OS Release other than Release 21.3R2-S2 or Release 21.4R2-S1, then the statistics for logical interfaces are not collected. However, the statistics for physical interfaces and LSPs are collected.
- Workaround: Upgrade the Junos OS release to Release 21.3R2-S2 or 21.4R2-S1. Also, ensure that you have upgraded Paragon Automation to Release 23.1.
- When you undelegate an LSP, the LSP status is displayed as delegated. When you try to undelegate the LSP again, the router configuration might be modified to add explicit route objects (ERO).
- Workaround: Refresh the Tunnel tab before you undelegate the LSP again.
- Paragon Pathfinder does not bring down a delegated SR LSP when the SR LSP does not meet slice constraints if the SR LSP's status is locally routed.
- If you create a topology group with a slice ID greater or equal to 2**32, the topology group ID will not match the slice ID.
- The Paragon Automation Kubernetes cluster uses self-generated kubeadm-managed certificates.
- These certificates expire in one year after deployment unless the Kubernetes version is upgraded or the certificates are manually renewed. If the certificates expire, pods fail to come up and display bad certificate errors in the log.
- Workaround: Renew the certificates manually. Perform the following steps to renew certificates:

1. Check the current certificates-expiration date by using the kubeadm certs check-expiration command on each primary node of your cluster.

```
    root@primary1-node:~# kubeadm certs check-expiration
    [check-expiration] Reading configuration from the cluster...
    [check-expiration] FYI: You can look at this config file with 'kubectl -n kube-system
get cm kubeadm-config -o yaml'

    CERTIFICATE                EXPIRES                  RESIDUAL TIME   CERTIFICATE
AUTHORITY   EXTERNALLY MANAGED
    admin.conf                 Dec 13, 2023 13:20 UTC
328d                                   no
    apiserver                  Dec 13, 2023 13:20 UTC   328d
ca                      no
    apiserver-etcd-client      Dec 13, 2023 13:20 UTC   328d            etcd-
ca                 no
    apiserver-kubelet-client   Dec 13, 2023 13:20 UTC   328d
ca                      no
    controller-manager.conf    Dec 13, 2023 13:20 UTC
328d                                   no
    etcd-healthcheck-client    Dec 13, 2023 13:20 UTC   328d            etcd-
ca                 no
    etcd-peer                  Dec 13, 2023 13:20 UTC   328d            etcd-
ca                 no
    etcd-server                Dec 13, 2023 13:20 UTC   328d            etcd-
ca                 no
    front-proxy-client         Dec 13, 2023 13:20 UTC   328d            front-proxy-
ca          no
    scheduler.conf             Dec 13, 2023 13:20 UTC
328d                                   no

    CERTIFICATE AUTHORITY   EXPIRES                  RESIDUAL TIME   EXTERNALLY MANAGED
    ca                      Nov 27, 2032 21:31 UTC   9y              no
    etcd-ca                 Nov 27, 2032 21:31 UTC   9y              no
    front-proxy-ca          Nov 27, 2032 21:31 UTC   9y              no
```

2. To renew the certificates, use the kubeadm certs to renew all commands on each primary node of your Kubernetes cluster.



```
        root@primary1-node:~# kubeadm certs renew all
        [renew] Reading configuration from the cluster...
        [renew] FYI: You can look at this config file with 'kubectl -n kube-system get cm
kubeadm-config -o yaml'

        certificate embedded in the kubeconfig file for the admin to use and for kubeadm
itself renewed
        certificate for serving the Kubernetes API renewed
        certificate the apiserver uses to access etcd renewed
        certificate for the API server to connect to kubelet renewed
        certificate embedded in the kubeconfig file for the controller manager to use
renewed
        certificate for liveness probes to healthcheck etcd renewed
        certificate for etcd nodes to communicate with each other renewed
        certificate for serving etcd renewed
        certificate for the front proxy client renewed
        certificate embedded in the kubeconfig file for the scheduler manager to use
renewed

        Done renewing certificates. You must restart the kube-apiserver, kube-controller-
manager, kube-scheduler and etcd, so that they can use the new certificates.
```

3. Recheck the expiration date using the kubeadm certs check-expiration command on each primary node of your cluster.

```
        root@primary1-node:~# kubeadm certs check-expiration
        [check-expiration] Reading configuration from the cluster...
        [check-expiration] FYI: You can look at this config file with 'kubectl -n kube-
system get cm kubeadm-config -o yaml'

        CERTIFICATE                EXPIRES                  RESIDUAL TIME   CERTIFICATE
AUTHORITY   EXTERNALLY MANAGED
        admin.conf                 Jan 18, 2024 21:40 UTC
364d                                    no
        apiserver                  Jan 18, 2024 21:40 UTC   364d
ca                      no
        apiserver-etcd-client      Jan 18, 2024 21:40 UTC   364d            etcd-
ca                 no
        apiserver-kubelet-client   Jan 18, 2024 21:40 UTC   364d
ca                      no
        controller-manager.conf    Jan 18, 2024 21:40 UTC
364d                                    no
        etcd-healthcheck-client    Jan 18, 2024 21:40 UTC   364d            etcd-
ca                 no
        etcd-peer                  Jan 18, 2024 21:40 UTC   364d            etcd-
ca                 no
        etcd-server                Jan 18, 2024 21:40 UTC   364d            etcd-
ca                 no
        front-proxy-client         Jan 18, 2024 21:40 UTC   364d            front-proxy-
ca          no
        scheduler.conf             Jan 18, 2024 21:40 UTC
364d                                    no

        CERTIFICATE AUTHORITY   EXPIRES                  RESIDUAL TIME   EXTERNALLY MANAGED
        ca                      Nov 27, 2032 21:31 UTC   9y              no
        etcd-ca                 Nov 27, 2032 21:31 UTC   9y              no
        front-proxy-ca          Nov 27, 2032 21:31 UTC   9y              no
```

4. Restart the following pods from any one of the primary nodes to use the new certificates.

```
        root@primary1-node:~# kubectl delete pod -n kube-system -l component=kube-apiserver
        root@primary1-node:~# kubectl delete pod -n kube-system -l component=kube-scheduler
        root@primary1-node:~# kubectl delete pod -n kube-system -l component=kube-
controller-manager
        root@primary1-node:~# kubectl delete pod -n kube-system -l component=etcd
```

Resolved Issues

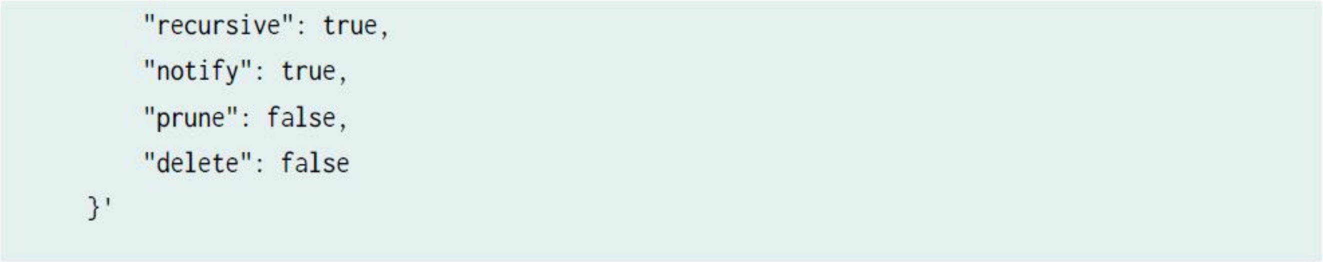
- This section lists the resolved issues in Juniper Paragon Automation Release 23.2.
- MD5 authentication is not supported on a Path Computation Element Protocol (PCEP) server. Workaround: None.
- Toposerver saves the live properties (ero and rro) path for each LSP twice. Workaround: None.
- The maintenance mode simulation feature and the corresponding maintenance reports are not available.
- Workaround: Run failure simulation in Java Planner.
- Config viewer in the Integrity Check tab does not work. You can use the config viewer available in the Topology tab instead. Workaround: None.
- The P2MP logical tree-view can incorrectly show nodes multiple times resulting in cycles in a tree.
- This is due to the issue where top server saves live properties path for each LSP twice. Workaround: None.
- The “Delegation Bit” column in the tunnel table is always empty.
- Workaround: View the delegation bit by selecting the LSP, right-click and select Show Details.
- Admin group of an SR-TE LSP learned from PCEP disappears after topology synchronization if the LSP has configured state.
- Workaround: Modify SR-TE LSP to persist the admin group learned from PCEP.
- Demand is missing from the Network Archive in the Java Client, but the demand traffic is available. Workaround: None.
- The root cause analysis (RCA) feature is disabled, by default.
- Workaround: To enable the RCA feature, perform the following steps:

1. Ensure that you set the kubeconfig environment variable or the ~/.kube/admin.conf file is present.
2. Ensure that the Paragon Insights services are up and running. To verify that the status of the pods is Running, use one of the following commands. root@primary-node:~# kubectl-n health bot get pods or root@primary-node:~# kubectl get po -n health bot
3. Log in to one of the primary nodes.
4. Change the working directory to /var/local/healthbot. root@primary-node:~# cd /var/local/health bot
5. Use a text editor to edit the health bot.sys file and change the value for ENABLE_RCA to “True” in the inference-engine section. Save and close the file.

   ```
   …
   ENABLE_RCA = True
   ```

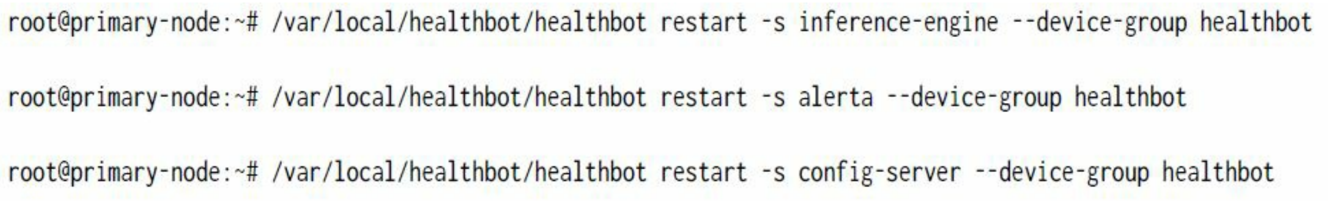
6. Publish the changes to all the other nodes in the cluster using the following command.

   ```
   curl --location --request POST  http://localhost:7005/publish \
       --header 'Content-Type: application/json' \
       --data-raw '{
           "channel": "common",
           "files": [
               "/var/local/healthbot/healthbot.sys"
           ],
   ```



```
        "recursive": true,
        "notify": true,
        "prune": false,
        "delete": false
    }'
```

7. Restart the inference engine, alerta, and config-server services using the following commands.

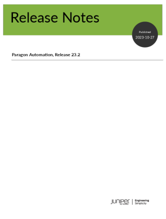


```
root@primary-node:~# /var/local/healthbot/healthbot restart -s inference-engine --device-group healthbot

root@primary-node:~# /var/local/healthbot/healthbot restart -s alerta --device-group healthbot

root@primary-node:~# /var/local/healthbot/healthbot restart -s config-server --device-group healthbot
```

8. Verify that all the services are up and running. root@primary-node:~# kubectl -n health bot get pods

NOTE: This procedure enables the feature at the global level. You can continue to use the Root Cause Analysis option on the Configuration > Device Groups and Configuration > Network pages to enable or disable the RCA feature at the device group level.

Documents / Resources

 Release Notes Published 2023-10-27 Paragon Automation, Release 23.2	Juniper NETWORKS Release 23.2 Paragon Automation [pdf] Instructions Release 23.2, Release 23.2 Paragon Automation, Paragon Automation, Automation

References

- Management Ethernet Interfaces | Junos OS | Juniper Networks
- Juniper Licensing User Guide | Licensing | Juniper Networks
- Paragon Automation Installation Guide | Paragon Automation 23.2 | Juniper Networks
- Upgrade to Paragon Automation Release 23.2 | Paragon Automation 23.2 | Juniper Networks
- Troubleshoot Paragon Automation Installation | Paragon Automation 23.2 | Juniper Networks
- Troubleshoot Paragon Automation Installation | Paragon Automation 23.2 | Juniper Networks
- About the Topology Filter Page | Paragon Automation 23.2 | Juniper Networks
- View, Add, or Delete Licenses | Paragon Automation 23.2 | Juniper Networks

- **User Manual**