Collecting System Information in an Admin-Tech File

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Feature history: Admin-tech file

Table 1: Feature history

Feature Name	Release Information	Description
Admin-Tech Enhancements	Cisco IOS XE Catalyst SD-WAN Release 17.2.1r	This feature enhances the admin-tech file to include commands like **show tech-support memory**, **show policy-firewall stats platform**, **show sdwan confd-log netconf-trace** and so on in the admin-tech logs. The admin-tech tar file includes memory, platform, and operation details.
Generate System Status Information for a Cisco SD-WAN Manager Cluster Using Admin Tech	Cisco IOS XE Catalyst SD-WAN Release 17.6.1a Cisco vManage Release 20.6.1	This feature adds support for generating an admin-tech file for a Cisco SD-WAN Manager cluster. The admin-tech file is a collection of system status information intended for use by Cisco Catalyst SD-WAN Technical Support for troubleshooting. Before this feature was introduced, Cisco Catalyst SD-WAN was only able to generate an admin-tech file for a single device.

Feature Name	Release Information	Description
View Generated Admin-Tech Files at Any Time	Cisco IOS XE Catalyst SD-WAN Release 17.6.1a Cisco vManage Release 20.6.1	This feature provides support for viewing the generated admin-tech files whenever the admin-tech files are available on a device. You can view the list of generated admin-tech files and then decide which files to copy from your device to Cisco SD-WAN Manager. You can then download the selected admin-tech files to your local device, or delete the downloaded admin-tech files from Cisco SD-WAN Manager, the device, or both.
Additional Diagnostics Information Added to Admin-Tech File	Cisco IOS XE Catalyst SD-WAN Release 17.7.1a Cisco vManage Release 20.7.1	This feature enhances the output of the admin-tech file with additional diagnostics information collected from the application server, the configuration database, the statistics database, and other internal services.
Upload an Admin-Tech File to a TAC Case	Cisco IOS XE Catalyst SD-WAN Release 17.7.1a Cisco vManage Release 20.7.1	This feature enables you to upload an admin-tech file directly from Cisco SD-WAN Manager when opening a TAC case. When you create a TAC case, you can upload the generated admin-tech files to TAC service requests from Cisco SD-WAN Manager. This streamlines the steps required for working with TAC to troubleshoot a problem.
Generate an Admin-Tech File with the Feature Filter	Cisco IOS XE Catalyst SD-WAN Release 17.13.1a Cisco Catalyst SD-WAN Manager Release 20.13.1	This feature adds new options for information to include in the admin-tech file. For Cisco IOS XE Catalyst SD-WAN devices, you can include information about IPsec and security policy. For Cisco Catalyst SD-WAN Control Components, you can include information about the forwarding information base and routing information base.
Include Custom CLI Command Output in an Admin-Tech File	Cisco IOS XE Catalyst SD-WAN Release 17.15.1a Cisco Catalyst SD-WAN Manager Release 20.15.1	You can include the output of specific **show** commands in an admin-tech file. This is helpful for troubleshooting.
Cellular Modem Auto-Collect Crash Data	Cisco IOS XE Catalyst SD-WAN Release 17.18.1a Cisco Catalyst SD-WAN Manager Release 20.18.1	You can use the **lte modem crash-action auto-collect** command to configure a router to collect essential information about cellular modem operation, ensuring that the admin-tech file contains necessary details for troubleshooting in the event of an LTE modem crash.

Feature Name	Release Information	Description
Include Log Settings Output in an Admin-Tech File	Cisco IOS XE Catalyst SD-WAN Release 26.2.1 Cisco Catalyst SD-WAN Manager Release 26.2.1	This feature enhances the admin-tech file by including verbose logs from the application server and its internal components, such as the configuration database, statistics database, and other services. You can select the log categories required for debugging, including Authentication, Cloud, and Configuration Database logs. The selected option increases the logging verbosity for the corresponding component of the application server.

Collecting system information using an admin-tech file

An admin-tech file is a collection of system status information used for troubleshooting a given issue. Send your Cisco SD-WAN Manager admin-tech files to Cisco Catalyst SD-WAN Technical Support to resolve your issue.

You can generate an admin-tech file for a single device or for all the nodes in a SD-WAN Manager cluster.

Note Starting from Cisco vManage Release 20.7.1, the admin-tech file includes additional diagnostics information collected from the application server, the configuration database, the statistics database, and other internal services.

Note The admin-tech generation fails if any malformed characters are present in the disk.

Note From Cisco Catalyst SD-WAN Manager Release 20.18.1, the generation of admin tech in Cisco SD-WAN Manager fails when disk space usage exceeds the designated limits. When the total utilized space surpasses the limit, you may attempt to delete the existing admin tech data from Cisco SD-WAN Manager.

If this action is ineffective, or if there are no admin tech files available for deletion, please contact your network administrator for further assistance in freeing up disk space. The administrator can ensure that the total utilized space at /opt/data/ remains below 80% and can attempt to delete admin tech across tenants in a multi-tenant setup.

Note From Cisco Catalyst SD-WAN Manager Release 26.2.1, the admin-tech generation uses a refactored internal debug-collection workflow. The log settings page is integrated with admin tech, grouping log keys into various categories. When you enable a log category, related log details are automatically collected for 30 minutes. After admin tech completes, the enabled log settings are cleared automatically.

Log Categories:

- Authentication
- Cloud
- Configuration DB
- Data Collection
- Device Config
- Device Events
- Messaging
- Monitor
- NWPI
- OLAP
- REST API
- SDAVC
- Statistics
- Utility

Each category contains specific log keys for detailed logging. This refactor improves usability by providing a centralized, categorized logging configuration accessible through SD-WAN Manager, CLI, and API, with automatic log collection and cleanup to prevent system issues caused by debug settings.

Prior to Cisco Catalyst SD-WAN Manager Release 26.2.1, when you request a admin-tech for multiple nodes, if one node is down the API throws an exception and skips generating admin-tech for the remaining nodes. However, starting from Cisco Catalyst SD-WAN Manager Release 26.2.1, for multipple Cisco SD-WAN Manager admin tech generation requests, if certain nodes are down, it shows the failure in the UI for the affected node, but continues with admin-tech generation for other available nodes.

Prior to Cisco Catalyst SD-WAN Manager Release 26.2.1, the generated admin files were removed from the disk after 24 hours. Now, the files are not deleted after 24 hours, they will stay on disk till the user manually deletes it. In case, if you have less disk space, you can manually delete admin tech files.

Starting from Cisco Catalyst SD-WAN Manager Release 26.2.1, if an internal configuration translation service stops responding, the device automatically generates admin-tech and reloads to recover. Previously, the device could remain in that degraded state until a later configuration operation failed. This change helps restore normal operation automatically and preserves logs for troubleshooting.

Benefits collecting system information using an admin-tech file

- Provides a consolidated file with system status information to submit to Cisco Catalyst SD-WAN Technical Support for diagnostics and troubleshooting.
- Provides support for directly uploading admin-tech files to Cisco Catalyst SD-WAN Technical Support

Prerequisites for collecting system information using an admin-tech file

All of the nodes in the Cisco SD-WAN Manager cluster must be in a healthy state to generate an admin-tech file for all of the nodes in the cluster.

Restrictions for collecting system information in an admin-tech file

- All in-progress admin-tech requests are purged every three hours.
- You can have only one outstanding admin-tech request for an SD-WAN Manager cluster at a time. A second admin-tech request fails if there is an existing admin-tech request.
- Creating an admin-tech file for an SD-WAN Manager cluster is successful only if an admin-tech request is not running for individual devices.

Generate admin-tech files

1. From the Cisco SD-WAN Manager menu, choose **Tools** > **Operational Commands**.
2. Do one of the following:
   - To generate an admin-tech file for all the nodes in a SD-WAN Manager cluster, click **Generate Admin Tech for Manager**.
   - To generate an admin-tech file for a single device, click ... adjacent to the device and choose **Generate Admin Tech for Manager**.
3. In the **Generate admin-tech File** pane, choose the content to include in the admin-tech tar file, as follows:

Field	Description
Logs	Include log files. **Note** The log files are stored in the `/harddisk/tracelogs` directory on the local device.

Field	Description
Add+	(Optional) Minimum supported releases: Cisco IOS XE Catalyst SD-WAN Release 26.2.1 and Cisco Catalyst SD-WAN Manager Release 26.2.1 This field is available only when the **Logs** field is enabled. **a.** Click **Add+** to include logs. The **Log Settings** page appears. **b.** Choose the log type from the list and click **Enable debug**.
Core	Include core files. **Note** The core files are stored in the `/harddisk/core` directory on the local device.
Tech Features	**Note** From Cisco Catalyst SD-WAN Manager Release 20.15.1, this field is no longer available. This option is available in SD-WAN Manager Releases 20.13.x and 20.14.x. Choose additional information to include in the admin-tech file. The options depend on whether you are generating an admin-tech file for a single Cisco IOS XE SD-WAN device or for all devices and SD-WAN Control Components. For Cisco IOS XE Catalyst SD-WAN devices: • **IPsec**: Include IPsec information. • **Security Policy**: Include security policy information. The technical information for the features is stored in a separate tech files in the folder /var/tech/ directory. By default, the admin file collects the technical information for IPsec and security features. The feature specific technical files are named as /var/tech/ipsec and /var/tech/security. For Cisco SD-WAN Control Components: • **All**: Include forward information base and route information base details. **Include fib detail**: Include forwarding information base details. **Include rib detail**: Include routing information base details.

Field	Description
Use Custom Commands	(Optional) Minimum supported releases: Cisco IOS XE Catalyst SD-WAN Release 17.15.1a and Cisco Catalyst SD-WAN Manager Release 20.15.1 Enter **show** commands, separated by commas, to include **show** command output in the admin-tech file. The command output is available in the `/var/tech/custom` file path in the admin-tech zip file. From Cisco IOS XE Catalyst SD-WAN Release 17.16.1a and Cisco Catalyst SD-WAN Manager Release 20.16.1, some OMP and TTM commands are not supported. If you enter an unsupported command, the admin-tech file displays an error.

4. Click **Generate**.

   SD-WAN Manager creates the admin-tech file.

   The file name has the format *date-time*-admin-tech.tar.gz.

By default, the admin-tech file collects the technical information for IPsec and security features. The feature-specific technical files are named as `/var/tech/ipsec` and `/var/tech/security`.

View admin-tech files

You can perform any of the following operations after the admin-tech file is generated:

- View the list of the generated admin-tech files.
- Copy the selected admin-tech files from your device to Cisco SD-WAN Manager.
- Download the selected admin-tech files to your local device.
- Delete the selected admin-tech files from Cisco SD-WAN Manager, the device, or both.

1. From the Cisco SD-WAN Manager menu, choose **Tools** > **Operational Commands**.
2. For the desired device, click **. . .** and choose **View Admin Tech List**.

   A tar file appears that contains the admin-tech contents of the device that you selected earlier. This file has a name similar to *ip-address-hostname*-20210602-032523-admin-tech.tar.gz, where the numeric fields are the date and the time.

   You can view the list of the generated admin-tech files and decide which files that you want to copy to SD-WAN Manager.
3. Click the **Copy** icon to copy the admin-tech file from the device to SD-WAN Manager.

   A hint appears letting you know that the file is being copied from the device to SD-WAN Manager.
4. After the file is copied from the device to SD-WAN Manager, you can click the **Download** icon to download the file to your local device.

You can view the admin-tech file size after the file is copied to SD-WAN Manager.

5. After the admin-tech file is successfully copied to SD-WAN Manager, you can click the **Delete** icon and choose which files to delete from SD-WAN Manager, the device, or both.

Upload an admin-tech file to a TAC case

From Cisco vManage Release 20.7.1, Cisco IOS XE Catalyst SD-WAN Release 17.7.1a, and Cisco SD-WAN Release 20.7.1, you can upload an admin-tech file directly from Cisco SD-WAN Manager when opening a TAC case.

Before you begin

Ensure that you have generated admin-tech files from Cisco SD-WAN Manager.

Upload an admin-tech file to a TAC case

1. From the Cisco SD-WAN Manager menu, choose **Tools** > **Operational Commands**.
2. After you generate **Admin-Tech** files, click **Show Admin Tech List**.

   The **List of Admin-techs** window is displayed.
3. From the list of Admin-tech files, select the admin-tech file and click **Upload**.
4. In the **SR Number** and **Token** fields, enter the details.
5. Choose the **VPN** from the VPN options. The options are VPN 0 and VPN 512.
6. Click **Upload**.

   The selected admin-tech file is uploaded to the relevant service request.