

Citrix SD-WAN OrchestratorTM

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Citrix SD-WAN Orchestrator™

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Citrix SD-WAN Orchestrator™ service

Citrix SD-WAN™ Orchestrator service is a cloud-hosted, multitenant management service available to **Do It Yourself** enterprises and Citrix® Partners. Citrix partners can use Citrix SD-WAN Orchestrator service to manage multiple customers with a single pane of glass, and suitable role based access controls.

Citrix SD-WAN Orchestrator service provides a single-pane of glass management platform for Citrix partners to manage multiple customers centrally, with suitable role based access controls.

The following are some of the key capabilities:

- **Multi-tenancy & RBAC:** The service enables Citrix partners to on-board and manage multiple SD-WAN customers, with a single pane of glass and suitable role based access controls.
- **Centralized configuration:** Centralized configuration of SD-WAN networks, with guided workflows, visual aids, and profiles.
- **Zero touch provisioning:** Seamless bring up of the network and connections.
- **Application-centric policies:** Application based traffic steering, Quality of Service (QoS), and Firewall policies, configurable globally or per site.
- **Hierarchical summarization of health:** Ability to centrally monitor the health, usage, quality, and performance of a network as a whole, with the ability to drill down into individual sites and associated connections.
- **Troubleshooting:** Device and Audit Logs, Diagnostic utilities such as Ping, Traceroute, Packet Capture to troubleshoot network connectivity issues.

Prerequisites for Citrix SD-WAN Orchestrator service usage

- **Appliances:** A minimum of two appliances (Standard Edition - Physical or Virtual) is required. For information on provisioning a new SDWAN VPX instance, see [Citrix SD-WAN VPX](#).

Each SD-WAN appliance or virtual instance must have an IP address configured statically or via DHCP and must include DNS entry to resolve the Fully Qualified Domain Name (FQDN) to Citrix Cloud™ Services.

- **Internet Connectivity:** Each of the branch and DC sites must have Internet connectivity to access Citrix SD-WAN Orchestrator service.
- Appliances need access to the following mentioned domain names. Citrix recommends whitelisting *.citrixnetworkapi.net:443. Here is a list of individual cloud service URLs that have to be whitelisted on the appliance firewall for zero-touch deployment:
 - Global endpoints:
 - sdwan-home.citrixnetworkapi.net:443
 - sdwanzt.citrixnetworkapi.net:443
 - sdwan-applmgr.citrixnetworkapi.net:443
 - download.citrixnetworkapi.net:443
 - Region specific endpoints
 - download-*region*.citrixnetworkapi.net:443
 - sdwan-applmgr-*region*.citrixnetworkapi.net:443
 - sdwan-logging-*region*.citrixnetworkapi.net:443
 - sdwan-statistics-collector-*region*.citrixnetworkapi.net:443
 - sdwan-saasgw-*region*.citrixnetworkapi.net:443
 - sdwan-policy-*region*.citrixnetworkapi.net:443
- Citrix SD-WAN software version 10.1.1 is the minimum appliance software supported on Citrix SD-WAN Orchestrator service.

For the complete documentation of Citrix SD-WAN Orchestrator, see [Citrix SD-WAN Orchestrator](#).

What's new

September 29, 2022

Fixes

- **SDW-23725:** {{page.productname}} failed to process the virtual path route records that did not have a static virtual path to the site.
- **SDWANHELP-2769:** The Rollback banner on the **Change Management Settings** page was not cleared after the SD-WAN appliance was up and auto corrected to the correct version.

September 15, 2022

Configuration

HTTP server configuration

{{page.productname}} now supports Certificate-based authentication for HTTPS push notifications to the server URL. Ensure to upload the client certificate in PEM format and the secret key in PKCS8 format.

Fixes

- **SDW-24143:** On the site level **Configuration > Appliance Settings > SNMP** page, users were unable to update multiple destination IP addresses as a semi-colon separated list.

August 23, 2022

Miscellaneous

Citrix SD-WAN 11.5 release

Citrix SD-WAN 11.5 release is supported in {{page.productname}}. SD-WAN 11.5.0 release is available only via {{page.productname}} and only on selected geographical POPs. Ensure to get the required approvals and guidance from Citrix Product Management / Citrix Support before deploying 11.5.0 on any production network.

June 30, 2022

Miscellaneous

[WAN link template enhancements](#)

When you modify a WAN link template, you now have an option copy the modified WAN link template configuration settings to the site WAN link configuration that is created using the WAN link template.

The following fields are introduced in the **WAN Link Info** section of the WAN link template page:

- Adaptive Bandwidth Detection
- Minimum acceptable bandwidth (%)

The following fields are introduced in the **Metering** section of the WAN link template page:

- Data Cap(MB)
- Disable Link If Data Cap Reached
- Approximate Data Already Used (MB)

The Eligibility field has been introduced in the **MPLS Queues** section of the **Configuration > Site Configuration > WAN Links** page.

On the **Site configuration > WAN links** page, the **Template Name** field is introduced. This field is displayed when a new WAN link is created using a template.

[Ethernet interface settings](#)

{{page.productname}} introduces the Ethernet interface settings section on the **Site Configuration > Appliance Settings** page of the UI. This section provides information such as connectivity status of the ethernet ports, Interface type, MAC address, auto negotiate, and the duplex setting status.

Fixes

- **SDWANHELP-2706** - {{page.productname}} fails to auto-correct the firmware mismatch when the SD-WAN appliance is factory reset more than once.

June 02, 2022

Fixes

- **SDW-23687:** LTE firmware upload and validation of the uploaded firmware fails intermittently on {{page.productname}}.
- **SDW-23768:** The {{page.productname}} UI allows more than one WAN link to be set as primary WAN link for Intranet services.
- **SDW-23827:** The audit error EC 100 is displayed for sites that do not have the serial number registered and site names that contain more than 25 characters.

May 05, 2022

Dynamic source NAT

The {{page.productname}} UI now displays the auto-created IPv4 outbound Internet dynamic source NAT rules when the following conditions are fulfilled:

- Internet service is enabled on the site.
- IPv4 outbound Internet dynamic source NAT rule is not configured at the site.
- At least 1 WAN link is on an untrusted interface or Internet is enabled on all routing domains.

Minimum and Maximum value in Kbps for WAN link settings: {{page.productname}} allows you to set minimum and maximum upload bandwidth values in Kbps for LAN to WAN as well as WAN to LAN while configuring a WAN link. The minimum/maximum kbps fields are added under the **Configuration > Site Configuration > WAN Links tab > Services** section at the site level. You must provide the value (mandatory to add the minimum value) while adding any new services or editing any existing services.

You can also set the minimum/maximum upload and download bandwidth value for Internet and Intranet services. The same fields are also added under **Configuration > Advanced Settings > Delivery Services > Internet/Intranet Services** at the site level.

Provider-No-Access Role: With the No access role feature, initially a provider administrator can avoid giving the full access role to a newly added user. When the user with a no-access role clicked the {{page.productname}}, the UI gets stuck on loading. The administrator can later decide whether to restrict giving access to the newly added user or add them to a specific tenant.

Deployment enhancements

The **Deployment** home page is enhanced with a new look and feel for a better user experience.

The following changes are effective on the new **Deployment** page:

- **Deployment summary:** This section provides a summary of the most recent deployment with such as the date and time (in UTC time zone), and the status of the deployment.
- **Switch to Old Deployment View:** An option to go back to the old Deployment page is available.
- **Deployment history:** The new **Deployment history** table provides details of the past deployment. If Partial Site Upgrade is enabled, the deployment history table categorizes the details based on the software version that the appliances are configured to run. If the last activation fails, you can even view details of the failure.
- **Site View:** This table includes details about the current deployment status, Orchestrator connectivity, the software version of each appliance, and a timestamp of the running configuration. It also includes options to retry the deployment on individual sites in case of failures.
- **Default network software:** The option to select the software version to be applied to the sites across the network is now available under **Deploy Now > Software & Sites**.
- **Partial site upgrade:** The partial site upgrade option is now available under **Deploy Now > Software & Sites**.
- **Ignore Incomplete:** This check box is now available under **Deploy Now > Settings**.
- **Rollback Settings:** The **Rollback on error** option is renamed as **Rollback Settings**. It is now available under **Deploy Now > Settings**.
- The 4 main stages of the deployment process are captured in the following screens:
 - Software & Sites
 - Configuration
 - Settings
 - Summary

Site template

{{page.productname}} introduces the option of using a Site template to configure a site. The Site template can be created from **Configuration > Profiles & Templates > Templates** and a new site can be created using this Site template from **Configuration > Network Home**.

You can also clone a branch site in addition to site template. However, if some additional features require any modifications, verify the configuration details after cloning the site or the site template and make the changes as required.

Mobile broadband settings - Manage firmware

{{page.productname}} provides an option to upload a firmware and apply it as part of the mobile broadband configuration. Currently, the firmware can be applied only on SD-WAN SE 210 LTE appliances.

Fixes

- **SDWANHELP-2657** - Unable to invite a user as there is an interim issue with Citrix Cloud™ server.
- **SDW-23322** - The service state of an SD-WAN appliance running a software version of 11.4.2 is displayed as **BAD** on the {{page.productname}} for On-premises UI. The error message displayed is **No Response from Orchestrator URL**. This issue occurs when a custom domain is configured in {{page.productname}}.

March 31, 2022

Record device mismatch

{{page.productname}} notifies users when a mismatch is identified between the platform model reported by the appliance and platform model that the users provide while configuring a site. The mismatch details of the platform model and submodel are displayed on the UI in a tabular format.

Platform and systems

Management IP / In-band IP enhancements

The **Management IP** and the **Device Access** columns on the following UI screens are enhanced to display either the in-band IP address or the management IP address based on the type of IP address that the device is using to communicate with {{page.productname}}:

- **Provider > Reporting > Inventory > Details**
- **Customer > Configuration > Network Home > Actions > View Details**
- **Customer > Security > Hosted Firewall > VM administration**
- **Customer > Reporting > Inventory > Deployed**

- **Site > Dashboard > Devices**

Mobile broadband settings and Mobile broadband status

You can now connect the Citrix SD-WAN™ appliance from your site to a network using a broadband Internet connection. This mobile broadband status and configuration support is available for Internal modems. You can also view the status of the broadband configuration of your device and the active SIM.

Fixes

- **SDWANHELP-2619:** In the case of multi-MCN MSP, the audit log for deleting a tenant is missing. With the fix, when user deletes a tenant from the MSP an audit log entry is created.
- **SDWANHELP-2570:** {{page.productname}} UI reflects the actual value of MTU - 1350 in Wan links.
- **SDW-23477:** {{page.productname}} sends TCP synchronization packets to the AWS endpoint.

March 03, 2022

Citrix SD-WAN 11.4.3 release is supported in {{page.productname}}.

IP access list

{{page.productname}} allows administrators to configure user IP addresses at a network level. This feature is useful when administrators want to allow the tenant access to users based on the IP address, thereby enhancing IP security. This feature is supported for users that have specific roles assigned as part of a tenant.

The **IP Access List** page is introduced in {{page.productname}} to enable administrators to configure user IP addresses.

Site summary table

A new **Device Status** column has been added at the network home sites summary table.

Fixes

- **SDWANHELP-2609:** Earlier, the user was not able to change the alternate port values after initially configuring it.

- **SDWANHELP-2482:** HA failover was triggered when activation on active and standby appliances did not happen within the predefined freeze time. To avoid unnecessary failovers, the freeze time for failover during Change Management on Citrix SD-WAN 110 appliances has been increased by 10 seconds.
- **SDW-23322:** The service state of an SD-WAN appliance running a software version of 11.4.2 is displayed as *BAD* on the {{page.productname}} UI. The error message displayed is *No Response from Orchestrator URL*. This issue occurs when a custom domain is configured in {{page.productname}}.
- **SDW-23399:** A missing value of 1500 bandwidth for VPX and VPXL has been added.
- **SDW-23310:** To set Access Interface and gateway IPs at WAN links, you have to change the Virtual Interface from the drop-down list > select another Virtual Interface > then back to the original.

January 27, 2022

Restore previous version

{{page.productname}} introduces the Restore previous version functionality. When the **Restore previous version** option is selected, {{page.productname}} initiates a network-wide activation of the previous configuration and restores the previously activated configuration(and/or software) on your network.

QoS Policies

The QoS policies page is revamped to enhance the user experience. The options such as Custom Application Rules, Application Rules, HDX™ Rules, Application Group Rules, IP Rules, and Default IP-Protocol Rules are enhanced with a new look and feel.

IP Rules

The Override Service option is added under **IP Rules > Virtual Path Traffic Policy** section. When the **Traffic Policy** is selected as **Override Service**, you can select the service type as Intranet, Internet, pass-through, or Discard to which the virtual path service overrides.

Configuration Difference

A **Config Diff** feature is newly added at the Network level under **Configuration**. The **Config Diff** capability helps you to review the difference between any two versions of configuration

checkpoints. You can also have the ability to view the configurations both at the global and site levels.

Appliance settings

{{page.productname}} introduces an option to configure the management network priority. You can select **In-Band** or Out-of-Band as the management interface for your network. This option is available only if the SD-WAN appliance is running a software version of 11.4.2 or later.

CSV Export Report

With the **Export as CSV** capability, you can download the path graph points (virtual/member path) for any time series (hourly, weekly, and so on) as an excel Comma-separated Value (CSV) file and can plot all distinct points of data for a particular site report.

Certificate authentication

{{page.productname}} supports appliance authentication for static and dynamic virtual paths using Public Key Infrastructure (PKI) as an additional security feature. Enabling the feature extends the existing virtual path authentication mechanism by distributing PKI certificates over the data path, by the appliance initiating the exchange. The PKI enhancement also supports Certificate Revocation List (CRL) management for centralized revocation of compromised certificates.

View Configuration (Preview)

{{page.productname}} introduces the **View Configuration** page at the site level. This page provides a detailed summary of a site's configuration across multiple subsystems.

Real-time statistics

The **Firewall Connection** is now renamed to **Firewall Statistics**. NAT and Filter Policies are newly added under the statistics type drop-down list. Also, the Real-time statistic options are restructured and divided into the following categories:

- Network statistics
- Application statistics
- Route statistics

Fixes

- **SDW-22977**: When a serial number is added to an existing site configuration that is deployed without a serial number, the appliance gets activated with the previously staged configuration.

- **SDWANHELP-2536:** User was not able to update cc/bcc emails at **Network level > Alerts > Notification settings > Notification** profile tab.
- **SDW-10178:** On adding more than 9 subinterfaces, the diagram for the LAN segment is not clear.
- **NSSDW-37813:** In Citrix SD-WAN 11.4.2 release, uploading a signed CSR certificate from {{page.productname}} fails for files with .der extension.

Known issues

Sep 29, 2022

{{page.productname}} has the following known issues:

Platform and systems

In the Citrix SD-WAN™ 210 appliance, if you remove the Standard Edition (SE) add-on license, the services get disabled.

Workaround: Before removing the SE add-on license (or) moving from AE to SE license, remove the firewall policies that have the security profile, configure the appliance as out-of-band management (If In-band management is configured) and then proceed with the stage and activation process to convert the appliance to standard edition.

License

When the pooled license's low bandwidth quota is over, the device does not consume any licenses and remains in grace license mode.

Workaround: Add more licenses into pooled licenses and then change the bandwidth in the site configuration to trigger allocation of the pooled licenses. Or, you can change the bandwidth to a higher bandwidth in the site configuration if it is available in pooled licenses.

Currently, there is no indication to the user that the device remains in grace license mode when there are no more licenses to be allocated from pooled licenses while saving the device serial number.

Workaround: Add more licenses into the pooled license and then change the bandwidth in the site configuration to trigger allocation of the pooled licenses.

Customer with a Secure Internet Access (SIA) entitlement while onboarding to {{page.productname}}, is being onboarded to a different PoP. Whereas the other way, with the customer having SD-WAN entitlement and onboarding to SIA works fine.

Appliance configuration activation fails when the appliance device model is set to Advanced Edition (AE).

Platform and systems

The GUI of one of the Citrix SD-WAN appliances is not accessible because the network statistics provider is reusing a session and this caused the HTTPD process to behave improperly (in rare cases).

Configuration and Management

On the **Realtime VRRP Site reports** page of the {{page.productname}} UI, the **Enable** and **Disable** operations are not working.

The Applications and Application categories graphs are empty on the **Reports > Usage > Applications** page of the {{page.productname}} UI.

A mismatch is observed between the agent and appliance scripts while fetching IGMP statistics.

The **Restore previous version** operation fails with the **Activation Failed(ER101)** error message for the sites in PSU when the partial site upgrade list is modified and a change management (stage and activate) is performed on a network.

- **Workaround:** Perform another round of change management before applying the restore previous version action.

Customer is not able to send push notification to their own HTTP Server.

If a site is added to the configuration before performing staging and activation, enabling HA on the site post activation with a new serial number for the secondary appliance triggers auto-deployment of the newly added appliance. The staging fails with the error **Staging Failed (Failed to download script files)**.

Workaround: After enabling HA, do a full network stage and activate to deploy the HA appliance.

The **WAN-OP Settings > SSL Profiles > Add** section of the UI fails to display the list of newly created WAN optimization rules in the **Service classes** drop-down list.

Workaround: Create an SSL profile without specifying service classes, and then edit the same profile. The list of WAN optimization rules is displayed.

A change in the SSL inspection root Certificate Authority (CA) and the key will not be propagated to the SD-WAN appliance, unless another edge security-related setting is also changed. This results in the SSL inspection being performed with the previous root CA.

Workaround: Change another setting related to edge security, then stage and activate it. This triggers the download and application of the root CA and key.

The static virtual paths that are formed between a transit node and the branch sites are not getting deleted when the transit node configuration is removed.

Workaround: Delete the static virtual paths manually when the transit node configuration is removed.

Scheduling Information of the appliance in **Change Management Settings** might display outdated data, when the appliance reconnects to the {{page.productname}} after a factory reset.

Workaround: In the **Change Management** settings, select the desired scheduled window and apply it. The appliance is updated and the data between the appliance and the {{page.productname}} is synchronized.

Creating the transit nodes for the branches does not form virtual paths.

Workaround: Create the static virtual paths manually between the transit site and the branch nodes.

fix

This is the content for the sample heading topic. It is hidden from the main table of contents but remains accessible via links.