Purpose

This document provides information about the currently supported network applications for the Nexus® 3550-T Programmable Network Platform. The product plan is to create and release new 3550 Series platform applications. The new network application releases will be communicated in the quarterly Cisco New Product Introduction (NPI) as they are released.

The new Cisco NX-OS Software Release and Image-naming Convention information is available here — [Cisco NX-OS Software Strategy and Lifecycle Guide](https://www.cisco.com/c/en/us/products/collateral/ios-nx-os-software/nx-os-software/guide_c07-658595.html).

**Note**: The documentation set for this product strives to use bias-free language. For the purposes of this documentation set, bias-free is defined as language that does not imply discrimination based on age, disability, gender, racial identity, ethnic identity, sexual orientation, socioeconomic status, and intersectionality. Exceptions may be present in the documentation due to language that is hardcoded in the user interfaces of the product software, language used based on RFP documentation, or language that is used by a referenced third-party product.

The following table lists the changes to this document.

1. Changes to this Document

| Date | Description |
| --- | --- |
| December 16, 2021 | Cisco NX-OS 3550-T Release 10.1(2t) became available. |

Patch Files

This release includes the patches listed in this section.

The patch files for the platforms can be downloaded from the Software Download Center for the respective platforms with a valid CCO account. Here is a direct link:

<https://software.cisco.com/download/home/286326689/type/286278856/release/10.1(2t)>

1. Patch Files

| **Patch File** | **Requires Reload** | **Release** |
| --- | --- | --- |
| [**SMU Patch to address SMU defect**](https://software.cisco.com/download/home/286326689/type/286278856/release/10.1(2t)) | Requires reload | NXOS 10.1(2t)SMU(7) |

To download this patch follow the instructions in the [Cisco Nexus 3550-T Release Notes, Patch Release 10.1(2t)](https://www.cisco.com/c/en/us/td/docs/dcn/nexus3550/3550-t/sw/101x/release-notes/cisco-nexus-3550-t-patch-release-notes-1012t.html).

New and Enhanced Features

| New Features | | |
| --- | --- | --- |
| Feature | Description | Release |
| ULL Layer 3 Routing | Ultra-Low Latency Layer 3 switching capability.   * Static Routing * BGP * PIM * OSPF * Exchange facing handoff * Top-of-Rack Colocation Switch   For more information, see the [Cisco Nexus 3550-T NX-OS Software Upgrade and Installation Guide](https://www.cisco.com/c/en/us/td/docs/dcn/nexus3550/3550-t/sw/101x/installing-and-upgrading/cisco-nexus-3550-t-software-installation-and-upgrade-guide.html). | NXOS 10.1(2t) |
| ULL Layer 2 Switching | Ultra-Low Latency Layer 2 switching capability.   * Mac learning * VLAN Tagging/Trunking * LLDP * IGMP * STP * ULL Layer 2 Fabric * N:N Layer 2 switching   For more information, see the [Cisco Nexus 3550-T Configuration Guide](https://www.cisco.com/c/en/us/td/docs/dcn/nexus3550/3550-t/sw/101x/configuration/cisco-nexus-3550t-configuration-guide.html). | NXOS 10.1(2t) |
| Security | Enhanced packet filtering and Network Address Translation.   * Per Port RACL Filtering * Unicast NAT/PAT * Low Latency Firewall * Exchange Distribution to trading floor   For more information, see the [Cisco Nexus 3550-T Configuration Guide](https://www.cisco.com/c/en/us/td/docs/dcn/nexus3550/3550-t/sw/101x/configuration/cisco-nexus-3550t-configuration-guide.html). | NXOS 10.1(2t) |
| High Availability | Provides redundancy in the network.   * Link Aggregation (LAG) * VRRP * Exchange facing handoff redundancy * Top-of-Rack Colocation Switch | NXOS 10.1(2t)  Available in a future release:   * MC LAG |
| Wan Extension | Wan Link Policing.   * Wan Link Policing * 1G Support * Low latency link aggregation for long-uhaul link sharing * VLAN tagging and trunking | Available in a future release |
| FastMux | Packet aggregation capability.   * Low Latency L2 Packet Aggregation * 1G, 10G, 25G Support * Layer 2 Packet aggregation in colocation * N:1 Packet Aggregation | Available in a future release |
| Exchange Gateway App | Ultra-Low Latency Exchange Fairness and HPT.   * Precise Timestamping (RX and TX) * <250 ps resolution * 8G Deep buffer * Timestamping at Exchange gateway * Fairness in Exchange | Available in a future release |
| Data Broker App | Packet Flow Optimization.   * Packet De-Duplication * SSL/TLS Encryption * Used with Nexus Data Broker to detect and drop duplicated packets | Available in a future release |
| Grand Master App | Provides Grand Master Clock.   * Time Sync (Inc GPS, PPS) * PTP (GM/Boundary) * Grand Master Clock | Available in a future release |
| Tap Agg | Provides Network Visibility.   * Precise Timestamping (RX and TX) * Time Sync (Inc GPS, PPS) * PTP (GM/Boundary) * <250 ps resolution * 8G Deep buffer * Network Visibility * Market Data capture and aggregation | Available in a future release |
| Custom User Applications (FDK) | Adding custom intelligence in the network.   * FDK (Firmware Development Kit) * Deep packet inspection * Custom application specific logic | NXOS 10.1(2t) |

New Hardware Features

The following new hardware are introduced in Cisco NX-OS 3550-T Release 10.1(2t):

* 1RU 48 port SFP28 (Small Form-factor Pluggable 28) configuration (backwards compatible with SFP+

and SFP).

* Dual redundant, hot-swap PSUs and dual hot-swap fans.
* Build using a Xilinx Virtex Ultrascale Plus VU35P Field Programmable Gate Array (FPGA) with a “-3”

speed grade. The chip has 8GB of High Bandwidth Memory (HBM) on board.

* x86-based management processor with 100MB/s/1GB/s (RJ45) and 1GB (SFP+) based management

ports.

* Hardware (electronics) supporting 25G speeds to the FPGA.

Cisco Nexus 3550-T Programmable Network Platform features a console port, a Micro USB port, and a 1G RJ45 port, which can be used as management interfaces. The Cisco Nexus 3550-T Platform uses a Command Line Interface (CLI) designed to address the needs of low-latency FPGA configurations.

The Cisco Nexus 3550-T Programmable Network Platform includes standard enterprise manageability and deployment capability features such as automatic configuration (via DHCP), SNMP, TACACS+ authentication, on-board Python programmability, BASH shell access, and time-series logging.

See the [Cisco Nexus 3550-T Configuration Guide](https://www.cisco.com/c/en/us/td/docs/dcn/nexus3550/3550-t/sw/101x/configuration/cisco-nexus-3550t-configuration-guide.html) to learn more.

Release Image

Cisco Nexus 3550-T switches require 64-bit NX-OS image depending on the Cisco Nexus 3550-T platforms.

Open Issues

| Bug ID | Description |
| --- | --- |
| [CSCvy82000](https://bst.cloudapps.cisco.com/bugsearch/bug/CSCvy82000) | Headline: One side of the link state is connected and other side it’s “Link not connected”  Symptoms: One side of the link remains in 'Link not connected' state.  Conditions: Switch reload. The issue is not seen consistently.  Workarounds: Flap the port which is in the Link not connected state .(shut/no shut).  In some cases, the peer port needs to be flapped as well. |
| [CSCvy92285](https://bst.cloudapps.cisco.com/bugsearch/bug/CSCvy92285) | Headline: IntraQuad L3 Unicast getting dropped  Symptoms: L3 Unicast traffic may get dropped in a corner-case scenario.  Conditions: Traffic Ingresses and is expected to Egress out of the same L2 trunk Port-Channel interface after getting routed between SVIs.  Workarounds: None. |
| [CSCvz10166](https://bst.cloudapps.cisco.com/bugsearch/bug/CSCvz10166) | Headline: SFP 1gig mgmt interface didnt come up  Symptoms: Link does not come up when connected to the 1GbE SFP management port. Management connectivity is not established.  Conditions: Any supported transceiver connected to the 1GbE SFP management port.  Workarounds: None. Use RJ45 port for management connectivity on N3550-T. |
| [CSCwa32108](https://tools.cisco.com/bugsearch/bug/CSCwa32108) | Headline: RACL ACE modify or new ACE entry addition needs explicit port flap on the applied interface  Symptoms: Ingress traffic matching a newly added/modified RACL ACE entry is not denied/permitted as per the new ACE entry.  Conditions:  Condition # 1:  RACL with one or more ACEs is configured on a port. Traffic that does not match any of the configured ACEs ingresses on the port. It is denied as expected.  Now, a permit ACE entry matching the previous traffic stream is added to the RACL configured on the port.  The traffic continues to get dropped instead of getting forwarded.  Condition # 2:  RACL with a permit ACE entry is configured on a port. Traffic that matches the ACE ingresses on the port. It is permitted and forwarded as expected.  Now, the ACE is modified to make it a deny entry instead of permit.  The traffic continues to get forwarded instead of being dropped.  Workarounds: Flap (shut/ no shut) the ports on which the modified RACL is configured. |
| [CSCvz73310](https://tools.cisco.com/bugsearch/bug/CSCvz73310) | Headline: Dynamic Nat Entries replicated when shutting L3backup Links in same quad leading to table exhaustion  Symptoms: Primary link flap(shut/no shut) with NAT or ACL can cause NAT/ACL HW table exhaustion.  Conditions:   1. Multiple backup l3 links configured with ACL or NAT and the rules are in the order of hundreds. 2. L3 Back up Links are configured on the same quad.   Workarounds: Flap the L3 interfaces on which the ACL/NAT is configured.  (or)  Unconfigure and configure ACL/NAT back on the L3 interface. |
| [CSCwa70130](https://bst.cloudapps.cisco.com/bugsearch/bug/CSCwa70130) | Headline: L3 Routing across the ULL network in the Colo is unstable due to Mac out-of-sync issue  Symptoms: Host to GW ping not working intermittently.  Workarounds: A patch is now available to fix this issue. Please refer to the [*Cisco Nexus 3550-T Release Notes, Patch Release 10.1(2t)*](https://www.cisco.com/c/en/us/td/docs/dcn/nexus3550/3550-t/sw/101x/release-notes/cisco-nexus-3550-t-patch-release-notes-1012t.html)to download this patch*.* |

Device Hardware

The following table list the Cisco Nexus 3550-T hardware that Cisco NX-OS Release 10.1(1) supports. For additional information about the supported hardware, see the Hardware Installation Guide for Cisco Nexus 3550-T device.

[Table 1. Cisco Nexus 3550-T Switches 7](#_Toc90564249)

[Table 2. Cisco Nexus 3550-T Fan Trays and Power Supplies 7](#_Toc90564250)

[Table 3. Cisco Nexus 3550-T Power Cords 7](#_Toc90564251)

Table 1. Cisco Nexus 3550-T, Release 10.1(2t) Switches

| Product ID | Description |
| --- | --- |
| N35-T-48X | Cisco Nexus 3550-T switch features a console port, a Micro USB port, and a 1G RJ45 port, which can be used as management interfaces. |

Table 2. Cisco Nexus 3550-T, Release 10.1(2t) Fan Trays and Power Supplies

| Product ID | Description |
| --- | --- |
| N35-T-FAN-PE | Fan module with port-side exhaust airflow |
| N35-T-FAN-PI | Fan module with port-side intake airflow |
| N35-T-PAC-PE | Cisco Nexus 2000 or 3000 400W AC power supply, forward airflow (port side exhaust) |
| N35-T-PAC-PI | Cisco Nexus 2000 or 3000 350W AC power supply, reverse airflow (port side intake) |

Table 3. Cisco Nexus 3550-T, Release 10.1(2t) Power Cords

| Power Cable PID | Description | Country |
| --- | --- | --- |
| CP-PWR-CORD-AU N35-T-48X | Standard Power Cord | Australia |
| CAB-AC-10A-BRZ | Power Cord 10A NBR 14136 plug 3 pins | Brazil |
| CAB-9K12A-NA | Power Cord, 125VAC 13A NEMA 5-15 Plug, 8.2-Ft | North America |
| CAB-ACC | AC Power Cord, C13, NEMA 5-15P, 2.1m |
| CAB-C13-C14-2M | Standard Power Cable, 240 Volts, 0.02 Pounds, Length: 6.6 ft., Connectors: 1 x power IEC 320 EN 60320 C13 |
| CAB-N35-AC-EU | AC Power Supply Cord | Europe |
| CP-PWR-CORD-UK | Cisco CP-PWR-CORD-UK Transformer Power Cord, Cisco VOIP phones | United Kingdom |
| CAB-IND-10A | Standard Power Cord, Second End Connector Type: IEC 320 EN 60320 C13, Current Rating: 10 A | India |
| CAB-C13-C14-3M-IN | This is a 10ft C13 to C14 18AWG 100-250V power cable that can be used to extend the lengths of 3-pin devices that utilize a shrouded power connector. |
| CAB-3P-JPN | Standard AC Power Supply Cord Nema 5-15P to C13. Length: 6 Feet/19.6 Meters | Japan |
| CAB-C13-C14-2M-JP | Power cable - IEC 60320 C13 to IEC 60320 C14 - 6.6 ft |
| CP-PWR-CORD-SA | AC Power Supply Cord | South Africa |
| CP-PWR-CORD-TW | AC Power Supply Cord | Taiwan |

Optics

To determine which transceivers and cables are supported by a switch, see the [Transceiver Module (TMG) Compatibility Matrix](https://tmgmatrix.cisco.com/). To see the transceiver specifications and installation information, see the [Install and Upgrade Guides](https://www.cisco.com/c/en/us/support/interfaces-modules/transceiver-modules/products-installation-guides-list.html).

Cisco Network Insights for Data Center

Cisco NX-OS Release 10.1(2t) supports the Cisco Network Insights Advisor (NIA) and Cisco Network Insights for Resources (NIR) on Cisco Nexus 3550-T platform switches. For more information, see the [Cisco Network Insights documentation.](https://www.cisco.com/c/en/us/support/data-center-analytics/network-insights-data-center/tsd-products-support-series-home.html)

Upgrade and Downgrade

To perform a software upgrade or installation, follow the instructions in the *[Cisco Nexus 3550-T Software Upgrade and Installation Guide, Release 10.1(2t)](https://www.cisco.com/c/en/us/td/docs/dcn/nexus3550/3550-t/sw/101x/installing-and-upgrading/cisco-nexus-3550-t-software-installation-and-upgrade-guide.html)*. For information about an In Service Software Upgrade (ISSU), see the [Cisco NX-OS ISSU Support Matrix](https://www.cisco.com/c/dam/en/us/td/docs/Website/datacenter/ISSUmatrix/index.html).

Related Content

Cisco Nexus 3550-T, Release 10.1(2t) documentation.

Cisco Nexus 9000 and 3000 Series NX-OS Switch License Navigator: [Cisco Nexus 9000 and 3000 Series NX-OS Switch License Navigator](https://www.cisco.com/c/dam/en/us/td/docs/Website/datacenter/license/index.html)

Cisco Nexus 3550-T, Release 10.1(2t) Software Upgrade and Installation Guide.

Licensing Information: [Cisco NX-OS Licensing Guide](https://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/nx-os/licensing/guide/b_Cisco_NX-OS_Licensing_Guide.html)

When you downgrade from Cisco NX-OS Release 10.1(1) to an earlier release, the features that use the ACI+NX-OS Essentials, Advantage, and add-on licenses or the Hardware Streaming Telemetry license continue to work in honor mode in the downgraded version. In addition, the output of the **show license usage** command continues to include entries for these unsupported licenses.

For more information, see the [Cisco NX-OS Licensing Guide](https://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/nx-os/licensing/guide/b_Cisco_NX-OS_Licensing_Guide.html).

Documentation Feedback

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