Manuals+ — User Manuals Simplified.

CISCO NX-OS Lifecycle Software User Guide

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CISCO NX-OS Lifecycle Software

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- **Release variants:** major+, major releases or trains, feature releases, and maintenance releases

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What you will learn
A comprehensive Cisco NX-OS Software release methodology has been developed both to preserve the integrity and stability of mission-critical networks and to have the flexibility to respond to market needs for timely delivery of advanced networking features with multilayer intelligence. This document is a guide to understanding the Cisco NX-OS Software release lifecycle. It describes the types of releases, their functions, and their timelines. It also describes the Cisco NX-OS Software release and image-naming conventions.
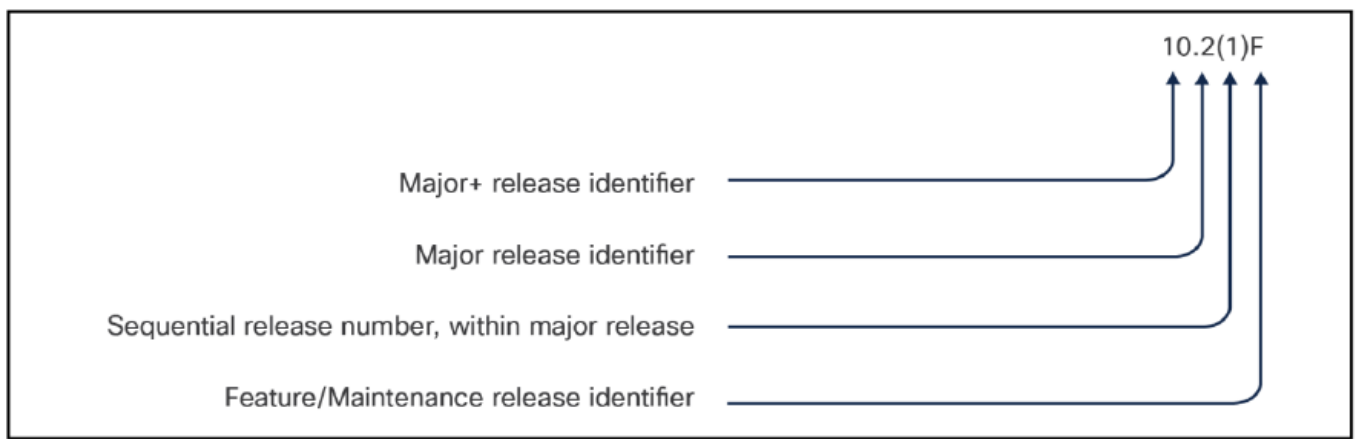
Types of Cisco NX-OS Software releases

Table 1 lists the Cisco NX-OS Software release variants: major+, major releases or trains, feature releases, and maintenance releases.

The Cisco NX-OS Software releases are categorized into the following types:

Cisco NX-OS Software Description	Release Type
Major+ release	A major+ release is considered a superset train, which carries all the attributes of a major release but can also have additional key changes (for example, 64-bit kernel) or other significant changes that require increasing the release numbering. A major+ release consists of multiple major releases. Example: Release 10.x(x)
Major release	A major release or software train introduces significant new features, functions, and/or hardware platforms. Each major release consists of multiple feature releases and maintenance releases and is its own train. Examples: Release 10.2(x), 10.3(x)
Feature release	Each major include will receive new features, functions, and hardware platforms in the first few releases (typically 3 releases) of the major train. These are designated as feature releases. Examples: Release 10.2(1)F, 10.2(2)F, 10.2(3)F
Maintenance release	Once a major train has reached maturity through the first few feature releases, it will then transition to the maintenance phase, where it will receive bug fixes and security enhancements only. No new features will be developed on a maintenance release, to ensure the integrity and stability of the overall major release train. Examples: Releases 10.2(4)M, 10.2(5)M, 10.2(6)M

Each Cisco NX-OS Software release is uniquely numbered as A.B(C)x, where A is the major+ release or train, B is a major train that enhances a major+ release, C is the numerical identifier of the sequence within the major train and x represents if this release is a Feature release or a Maintenance release.
Figure 1 is a graphical representation of the Cisco NX-OS Software releases, based on the example of the Cisco Nexus 9000 Series Switches.
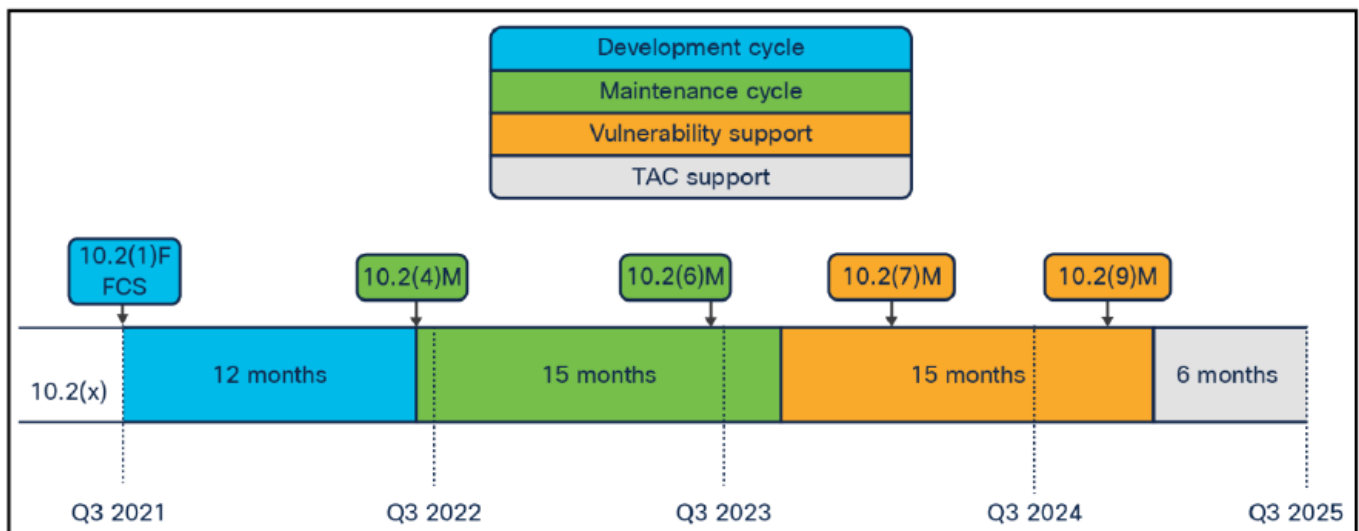
Cisco NX-OS Software

Cisco NX-OS Software release numbering
Each Cisco NX-OS Software release is uniquely numbered as A.B(C)x, where A is the major+ release or train, B is a major train that enhances a major+ release, C is the numerical identifier of the sequence within the major train, and x represents if this release is a Feature release or a Maintenance release.

Lifecycle of a Cisco NX-OS Software release

Previously, Cisco NX-OS releases were designated as either a long-lived or a short-lived release. From 10.2(1)F onwards, all major releases will be treated equally, and all major release trains will be designated as the recommended release at various points within their lifecycle. Figure 2 represents the lifecycle of the Cisco NX-OS 10.2(x) release.

Lifecycle of a Cisco NX-OS software release
The lifecycle of a Cisco NX-OS release goes through four phases. These phases also align with various stages in the End-of-Life (EOL) process.

1. The lifecycle of a major release starts with a feature development phase. This phase starts with First Customer Shipment (FCS) or the first release, on the major train. It represents the date of the first shipment of a software release to customers. There are two additional releases over the subsequent 12 months on this major train, where new features and enhancements are introduced.

2. At 12 months post FCS, the major release then enters the maintenance phase. This maintenance phase extends over 15 months, with regular software releases, where any potential defects or security vulnerabilities

(PSIRTs) are addressed. No new features or enhancements are introduced during this phase, to ensure software stability.

3. At 27 months post FCS, it enters the extended support phase, under which it receives only PSIRT fixes. This date aligns with the End of Software Maintenance (EoSWM) milestone in the EOL process.

4. At 42 months post FCS, it enters the TAC support phase, where customers can continue to get software support from Cisco TAC, and an upgrade to a subsequent major release will be required for defect fixes. This date aligns with the End of Software Vulnerability/Security Support (EoVSS) milestone in the EOL process. At 48 months post FCS, no support will be provided for this major release.

5. For Nexus products running NX-OS software, customers will receive vulnerability (PSIRT) support through the hardware Last Day of Support (LDoS) milestone, on the final supported NX-OS release, Please see the hardware End of Life (EoL) announcement for specific milestones.

Upgrade and migration

Cisco NX-OS will continue to innovate across major releases while providing reliable and stable versions of NX-OS to our customers. A new major release will be launched in Q3 of each calendar year, enabling customers to take advantage of new features and hardware in this new major release while allowing other customers to remain on the previous major and recommended release, for those who want the reassurance of regular releases focused solely on defect fixes.
The major release timelines and milestones are outlined below in Figure 3.
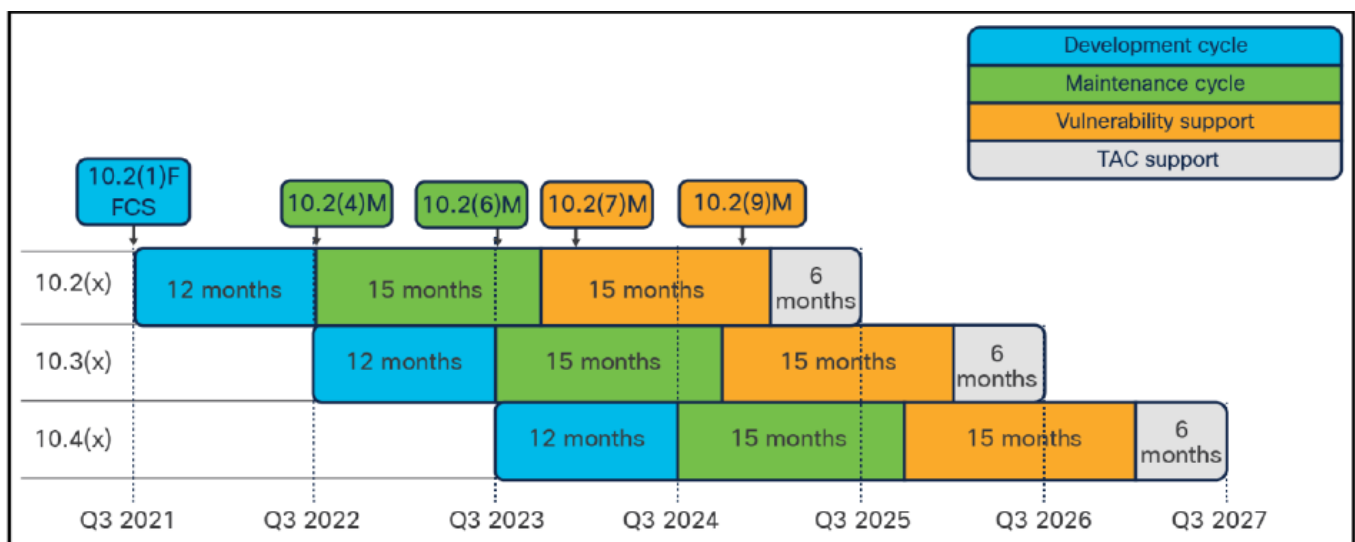
NX-OS timelines across multiple releases.
NX-OS EoL Milestones

NX-OS Major Release	EoSWM Date	EoVSS Date	LDoS
10.2(x)	Nov 30 2023	Feb 28 2025	Aug 31 2025
10.3(x)	Nov 30 2024	Feb 28 2026	Aug 31 2026
10.4(x)	Nov 30 2025	Feb 28 2027	Aug 31 2027

Conclusion
The Cisco NX-OS cadence-based software release methodology preserves the integrity, stability, and quality of customers' mission-critical networks. It has the flexibility to respond to market needs for timely delivery of innovative features.

The primary attributes of this release methodology include the following:

- Major releases introduce significant new features, functions, and platforms.
- Feature releases enhance NX-OS features and functions.
- Maintenance releases address product defects.

For more information

- Cisco Nexus 9000 Series Switches release notes:
  https://www.cisco.com/c/en/us/support/switches/nexus-9000-series-switches/products-release-notes-list.html.
- Cisco Nexus 9000 Series Switches minimum recommended Cisco NX-OS releases:
  https:**//www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus9000/sw/recommended_release/b_Minimum_and_Recommended_Cisco_NXOS_Releases_for_Cisco_Nexus_9000_Series_Switches.html**.
- Cisco Nexus 9000 Series Switches End-of-Life (EOL), End-of-Sale (EOS) notices:
  https://www.cisco.com/c/en/us/products/switches/nexus-9000-series-switches/eos-eol-notice-listing.html.

FAQ

1. **Q: What are the different types of Cisco NX-OS Software releases?**
   A: The different types of Cisco NX-OS Software releases include major+, major releases or trains, feature releases, and maintenance releases.
2. **Q: What is a major+ release?**
   A: A major+ release is considered a superset train, which carries all the attributes of a major release but can also have additional key changes or other significant changes that require increasing the release numbering.
3. **Q: What is a feature release?**
   A: A feature release is a release within a major train that introduces new features, functions, and hardware platforms in the first few releases of the train.
4. **Q: What is a maintenance release?**
   A: A maintenance release is a release within a major train that focuses on bug fixes and security enhancements, without introducing new features.

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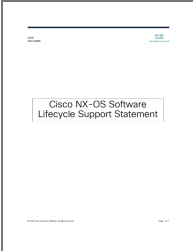- Cisco Systems International BV Amsterdam, The Netherlands

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Documents / Resources

Cisco NX-OS Software Lifecycle Support Statement	**CISCO NX-OS Lifecycle Software** [pdf] User Guide NX-OS Lifecycle Software, Lifecycle Software, Software

References

- **User Manual**

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