Release Notes for NSO SMI AFP, 2026.02.0

Contents

NSO SMI Automation Function Pack, 2026.02.0

The NSO SMI Automation Function Pack is a collection of multiple packages including the cisco-smi-deployer (previously referred to as the SMI Core Function Pack).

The key highlights of this release include:

- **System local time-zone support**: This enhancement enables cluster-level time-zone configuration to ensure unified event timestamping. It improves operational consistency, simplifying log analysis and troubleshooting across the entire environment.
- **Unified IPA configuration management**: This update integrates Identity Management (IPA) directly into the deployment section for both cluster and node levels. It eliminates fragmented configuration requirements, enabling a streamlined and efficient service-driven management workflow.
- **Advanced network configuration for MSUP and EPCGW**: Provides granular control over SR-IOV, CNI, and MTU settings to optimize network performance and streamline MSUP/EPCGW deployment workflows.
- **Automated data masking and encryption**: Automates the protection of sensitive information within device templates, ensuring passwords and other critical data are never stored or displayed in plaintext.
- **Integrated Longhorn storage management**: Streamlines the deployment of Longhorn storage by integrating it into the standard SMI AFP repository and configuration framework.
- **Native path-based Ingress support**: Provides a more flexible way to manage external access to Cloud-native functions, improving routing efficiency and simplifying network configuration.

For more information on SMI AFP, see the Related resources section.

Release lifecycle milestones

The following table provides EoL milestones for NSO SMI AFP software:

Table 1. EoL milestone information for NSO SMI AFP, 2026.02.0

Milestone	Date
First Customer Ship (FCS)	23-Apr-2026
End of Life (EoL)	23-Apr-2026
End of Software Maintenance (EoSM)	22-Oct-2027
End of Vulnerability and Security Support (EoVSS)	22-Oct-2027
Last Date of Support (LDoS)	31-Oct-2028

These milestones and the intervals between them are defined in the Cisco Ultra Cloud Core (UCC) Software Release Lifecycle Product Bulletin available on cisco.com.

New software features

This section provides a brief description of the new software features introduced in this release.

Table 2. New software features for SMI AFP, 2026.02.0

Product impact	Feature	Description
Software Reliability	System local time-zone support	This enhancement allows the configuration of the system's local time-zone at the cluster level through the AFP. This ensures that system logs and events are time-stamped according to the specified local time, improving operational consistency across the CNDP environment. Command introduced: **smi deployment** <deployment-name> **clusters** cluster <cluster-name> **timezone name** <timezone-name>
Software Reliability	Unified IPA configuration management	The Identity Management (IPA) configuration container is now integrated into the cisco-smi-deployment configuration section, allowing for management at both the cluster and node levels. Commands introduced: • **Cluster level:** smi deployment <deployment_name> clusters cluster <cluster_name> ipa [parameter] • **Node level:** smi deployment <deployment_name> clusters cluster <cluster_name> node <node_name> ipa [parameter]
Software Reliability	Enhanced cluster parameter support for MSUP and EPCGW	AFP supports advanced cluster-level parameters tailored for MSUP and EPCGW deployments. These enhancements allow for direct configuration of SR-IOV, Cilium CNI, and MTU settings within the AFP deployment model, eliminating the need for manual workarounds while optimizing data plane throughput and network efficiency.
Software Reliability	Encryption of sensitive data in device templates	Support includes an encrypted-value field within device templates to secure sensitive information. When users provide plaintext data in this field, the AFP automatically encrypts it, ensuring that only the encrypted version is stored or displayed. This feature is available for templates at the cluster, node, function, and card levels, providing a secure and streamlined workflow for managing sensitive parameters.
Software Reliability	Longhorn addon integration	AFP supports Longhorn as an integrated "addon," enabling automated deployment and lifecycle management of persistent storage. This update introduces a new "addon" repository type and allows for granular cluster-level configuration of Longhorn settings, such as data paths and UI access, ensuring a consistent management experience across all system components.
Upgrade	Validation for ConfD 8.x and CDL 2.0	SMI AFP has been fully validated to support the upgrade to ConfD 8.x and the migration from CDL 1.12 to 2.0.

Product impact	Feature	Description
Software Reliability	Native path-based Ingress configuration in AFP	AFP supports the native configuration of a path-based-ingress parameter on function objects. This feature, applicable to Cloud-native functions running on Kubernetes clusters, allows for more granular control over ingress traffic routing. The parameter is a Boolean value, set to false by default, and is configured directly within the AFP function object. Command introduced: smi functions function <function_type> <function_name> path-based-ingress {true | false} **Default Setting**: Disabled – Configuration required.

Changes in behavior

This section provides a brief description of the behavior changes introduced in this release.

Table 3. Behavior changes for SMI AFP, 2026.02.0

Description	Behavior changes
Decoupling of bind IP address from management IP configurations [CSCws84287]	**Previous Behavior**: When the bind-ip-address was configured at the cluster level, the system automatically used this address to configure the netconf-ip and ssh-ip for the associated network function. **New Behavior**: The assignment of management IP addresses now follows a specific hierarchy based on the configurations within the function object: 1. netconf-ip Assignment: • If mgmt-ip is configured in the function object, netconf-ip is set to that mgmt-ip. • If mgmt-ip is not configured AND mgmt-ipv6 is not configured, netconf-ip is set to the bind-ip-address of the cluster. • In all other conditions, netconf-ip is not set. 2. netconf-ipv6 Assignment: • If mgmt-ipv6 is configured on the function object, netconf-ipv6 is set to that mgmt-ipv6. • If mgmt-ipv6 is not configured AND mgmt-ip is not configured, netconf-ipv6 is set to the bind-ipv6-address of the cluster. • In all other conditions, netconf-ipv6 is not set. 3. ssh-ip Assignment: • If ssh-ip is configured in the function object, the configured value is used. • If ssh-ip is not configured, ssh-ip inherits the value of netconf-ip. If netconf-ip is not set, ssh-ip remains unset. 4. ssh-ipv6 Assignment: • If ssh-ipv6 is configured in the function object, the configured value is used. • If ssh-ipv6 is not configured, ssh-ipv6 inherits the value of netconf-ipv6. If netconf-ipv6 is not set, ssh-ipv6 remains unset. **Customer Impact**: For both existing and new deployments, the reliance on automatic population from the bind-ip-address has been reduced. To ensure consistent connectivity and management access, users should configure the appropriate parameters in the function so that netconf and ssh IP parameters are set to the desired values.

Resolved issues

This table lists the resolved issues in this specific software release.

Note: This software release may contain bug fixes first introduced in other releases. To see additional information, click the bug ID to access the Cisco Bug Search Tool. To search for a documented Cisco product issue, type in the browser: <bug_number> site:cisco.com.

Table 4. Resolved issues for SMI AFP, Release 2026.02.0

Bug ID	Description
CSCws76472	NED prompts for unnecessary string value for node-defaults OS IPA enabled.
CSCws76512	NED shows IPA password in clear text under devices template (node-defaults OS IPA password).

Bug ID	Description
CSCwt56909	AFP onboarding timeout and callback failure.
CSCws84287	SMI function auto-adds default IPv4 netconf-ip/ssh-ip under ops-centers even when only IPv6 management is configured, with no user control to disable this.

Open issues

This table lists the open issues in this specific software release.

Note: This software release may contain open bugs first identified in other releases. To see additional information, click the bug ID to access the Cisco Bug Search Tool. To search for a documented Cisco product issue, type in the browser: <bug_number> site:cisco.com.

Table 5. Open issues for SMI AFP, Release 2026.02.0

Bug ID	Description
CSCwt67281	SMI AFP does not support the "ssh-ip" parameter under "nodes" on SMI Cluster Manager.
CSCwt67780	SMI AFP needs to provide replay timestamp when subscribing for system-status notifications.
CSCwt67791	SMI AFP should probably not receive smi-alert-notification for non-RCM NFs.
CSCwq34560	SMI AFP does not allow configuring functions without static NETCONF and SSH ports.

Compatibility

This section lists compatibility information of the Cisco UCC software products that are verified to work with this version of the NSO SMI AFP software.

Table 6. Compatibility information for SMI AFP, 2026.02.0

Product	Supported release
CEE	2026.02.0
PCF	2026.02.0
RCM	2026.02.0
SMF+cnSGWc	2026.02.0
UPF	21.28.mhx.100306

The NSO SMI AFP software is compatible with the following operating systems:

Table 7. Compatible operating systems for NSO SMI AFP software

OS	Minimum server configuration	Version
Ubuntu	CPU: 8 Cores RAM: 64 GB Disk: 250 GB	18.04 LTS
Red Hat	CPU: 8 Cores RAM: 64 GB Disk: 250 GB	7.3 (Maipo)
CentOS	CPU: 8 Cores RAM: 64 GB Disk: 250 GB	7.4 (Core)
MacOS	CPU: 8 Cores RAM: 64 GB Disk: 250 GB	10.12.6

Note the following product, platform, and runtime requirements for this release:

- NSO: 6.4.8.2
- SMI: 2026.02.1.i07
- Python: 3.12.x

Supported software packages

This section provides information about the release packages associated with NSO SMI AFP.

Table 8. Software packages for SMI AFP, 2026.02.0

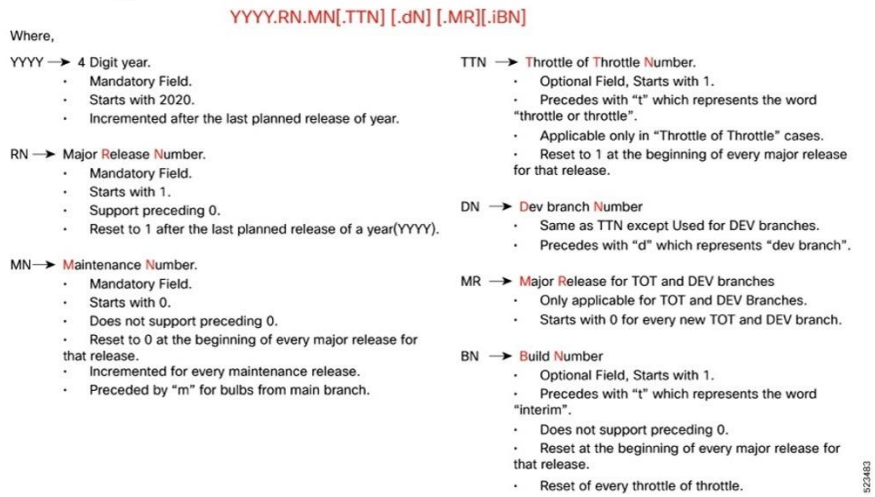
Software package	Release
ncs-6.4.8.2-nso-smi-afp-2026.02.0.tar.SPA.tgz	SMI AFP version: 2026.02.0
cisco-etsi-nfvo	4.7.8
cisco-smi-deployer	2026.02.0
cisco-smi-dvpc	2026.02.0
cisco-smi-nc-1.1	1.1.2026.02.1.i07
cisco-staros-cli-5.57	5.57.5
esc	5.3.0.94

Software package	Release
etsi-sol003-gen-1.13	1.13.19
mobility-common	2026.02.0
mobility-rcm-subscriber	2026.02.0
mop-automation	2026.02.0
mop-common	2026.02.0
openstack-cos-gen-4.2	4.2.34
resource-manager	4.2.10

Cloud native product version numbering system

The show helm list command displays detailed information about the version of the cloud native product currently deployed.

Figure 1. Cloud native product versioning format and description



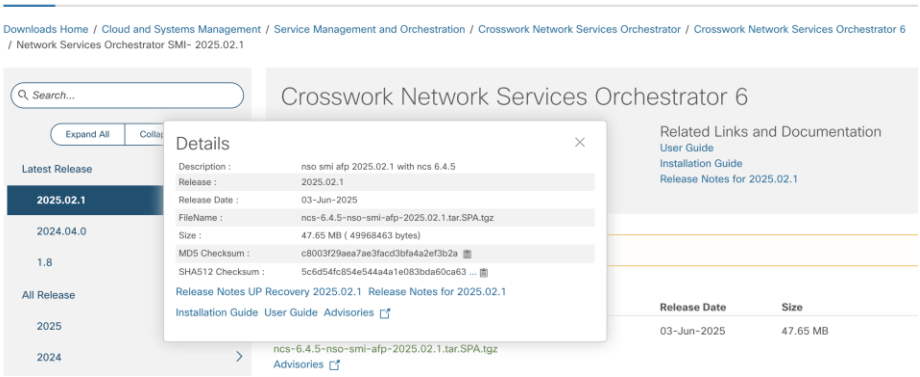
The appropriate version number field increments after a version has been released. The new version numbering format is a contiguous sequential number that represents incremental changes between releases. This format facilitates identifying the changes between releases when using Bug Search Tool to research software releases.

Software integrity version

To verify the integrity of the software image you have from Cisco, you can validate the SHA512 checksum information against the checksum identified by Cisco for the software.

Image checksum information is available through **Cisco.com Software Download Details**. To find the checksum, hover the mouse pointer over the software image you have downloaded.

Figure 2. Sample of NSO SMI AFP software image



At the bottom you find the SHA512 checksum, if you do not see the whole checksum you can expand it by pressing the "..." at the end.

To validate the information, calculate a SHA512 checksum using the information in the following table and verify that it matches the one provided on the software download page.

To calculate a SHA512 checksum on your local desktop, see this table.

Table 9. Checksum calculations per operating system

Operating System	SHA512 checksum calculation command examples
Microsoft Windows	Open a command line window and type the following command: `> certutil.exe -hashfile <filename.extension> SHA512`
Apple MAC	Open a terminal window and type the following command: `$ shasum -a 512 <filename.extension>`

Linux	Open a terminal window and type the following command:
	`$ sha512sum <filename.extension>`
	OR
	`$ shasum -a 512 <filename.extension>`

Note: <filename> is the name of the file. <extension> is the file type extension (for example, .zip or .tgz).	

If the SHA512 checksum matches, you can be sure that no one has tampered with the software image or the image has not been corrupted during download.

If the SHA512 checksum does not match, we advise you not to attempt upgrading any systems with the corrupted software image. Download the software again and verify the SHA512 checksum again. If there is a constant mismatch, please open a case with the Cisco Technical Assistance Center.

Certificate validation

NSO SMI AFP software images are signed via x509 certificates. Please view the .README file packaged with the software for information and instructions on how to validate the certificates.

Related resources

This table provides key resources and links to the support information and essential documentation for SMI AFP.

Table 10. Related resources and additional information

Resource	Link
NSO SMI AFP documentation	NSO SMI AFP
Service request and additional information	Cisco Support

Legal information