Extreme NSight 5.9.3.0 Release Notes

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1. OVERVIEW

Extreme NSight is a software application providing network visibility, service assurance and analytics capabilities for Extreme Wireless WiNG access points. Extreme NSight 5.9.3 is a maintenance release which includes the following enhancements:

NSight as a standalone virtual appliance, separate from WiNG controllers:

In prior releases, NSight was part of WiNG releases. Going forward, NSight is being separated from WiNG VX9000/NX9500/NX9600 controllers and can be hosted as a standalone application on supported VM hypervisors. This provides a more optimal use of hardware resources, a simpler upgrade process and an agile independent delivery of features/ fixes due to the decoupling from the WiNG release train.

Rest API support:

A new Rest API has been added to NSight to allow customer applications to retrieve data from it. This allows such applications to perform analytics in combination with data retrieved from other (non-Extreme) products for additional insights.

Trouble-shooting enhancements for AP 7612/ AP 7632 / AP 7662:

Wireless networks operate in the same 2.4 GHz and 5 GHz unlicensed spectrum as many devices, such as cordless phones, wireless cameras, and microwave ovens. Such devices can cause interference in the WLAN and impact your network performance. Often sources are introduced unknowingly and problems are intermittent, so troubleshooting is difficult and typically must be performed in real time. The Spectrum Analysis feature offers a cost-effective solution to resolve these types of interference issues. The troubleshooting capabilities of NSight have been enhanced in this release with the addition of Spectrum Analysis for 7612/ AP 7632 / AP 7662 access points.

MongoDB upgrade:

NSight uses MongoDB as its internal database for storing and analyzing data. This database has been upgraded in this release to provide bug fixes, vulnerability fixes and other performance improvements.
Extreme NSight 5.9.3 release also includes key bug fixes – additional details can be found in the "Issues Fixed" section.

With Extreme NSight 5.9.3, deployments with integrated WiNG NSight installations on VX9000/NX9500/NX9600 controllers can easily migrate to a VM based Extreme NSight deployment – details can be found in the "EXTREME NSIGHT MIGRATION, DATABASE BACKUP AND RESTORE" section.

Please refer Extreme NSight 5.9.3 User Guide for Key Features, Installation Procedures, Migration and Upgrade Procedure, Troubleshooting and Debugging Extreme NSight Deployments.
https://documentation.extremenetworks.com/WiNG/5.9.3/9035561-01_Extreme_NSight_5_9_3_UG.pdf

Please refer Extreme NSight Datasheet for System Requirements.
https://cloud.kapostcontent.net/pub/70c8352d-433c-4091-8651-a2f5c3d3df50/nsight-platform-data-sheet.pdf

Note: Going forward, all feature enhancements and bug fixes will be made on the standalone Extreme NSight application.

2. PLATFORMS SUPPORTED

Extreme NSight release 5.9.3 is a VM based firmware image for Extreme NSight application.

Virtual Platform	Firmware Image
Extreme NSight	ExtremeNSight-5.9.3.0-007R.img
	ExtremeNSight-INSTALL-5.9.3.0-007R.iso
	UpgradeVX9000ToExtremeNSight.patch

The Supported Hypervisors for Extreme NSight installation are VMware ESXi 5.5 (and above) and Microsoft Hyper-V

3. FEATURES IN EXTREME NSIGHT

Features in Extreme NSight Release 5.9.3.0:

All existing NSight features present under WiNG 5.9.3 is available in Extreme NSight 5.9.3 release.

1. Map View
2. Live Monitor chart
3. Dashboards Widgets
4. Application Visibility
5. Reports
6. Alarms
7. Event Logging
8. AP Test
9. Spectrum Analysis
10. Remote Packet captures and logging
11. REST API

4. EXTREME NSIGHT MIGRATION, DATABASE BACKUP AND RESTORE

Please refer to the Extreme NSight 5.9.3 User Guide for more detailed information.

4.1 Converting WiNG VX9000 NSight server to Extreme NSight 5.9.3.0

Existing WiNG NSight deployments on VX9000 can be converted to Extreme NSight platform by following the below procedure.

Note:

- WiNG controller as an Arbiter is not recommended, use Extreme NSight VM as Arbiter to avoid database synchronization issues.
- The below procedure holds good for converting VX9000 based Standalone/3 Node Replica Set/Split-VX NSight Deployment.

1. Converting WiNG VX9000 NSight server to Extreme NSight 5.9.3:
   a. Install Migration patch 'UpgradeVX9000ToExtremeNSight.patch' on all VX9000 running WiNG 5.9.3 firmware.

   VX9000 #upgrade UpgradeVX9000ToExtremeNSight.patch

   VX9000 #show boot (To confirm patch is installed)

   b. Install ExtremeNSight-5.9.3.0-007R.img using the upgrade command.
   Note: "DO NOT" reboot the devices.
   VX9000 #upgrade <ftp/tftp path>ExtremeNSight-5.9.3.0-007R.img
   c. In Case of Standalone VX9000, Reboot using "VX9000 #reload" command.
   d. In Case of 3 Node Replica Set or Split VX continue with the below steps.
   e. Reboot the Arbiter and wait for the device to come up and join the replica-set.

f. Disable Extreme NSight server on both Primary and Secondary replica-set member:

Primary #self

Enter configuration commands, one per line. End with CNTL/Z.

Primary (config-device-00-0C-AA-BB-CC-DD)# no use nsight-policy

Primary (config-device-00-0C-AA-BB-CC-DD)#commit write mem

Primary (config-device-00-0C-AA-BB-CC-DD)#end

Secondary #self

Enter configuration commands, one per line. End with CNTL/Z.

Secondary (config-device-00-0C-BB-CC-DD-EE)# no use nsight-policy

Secondary (config-device-00-0C-BB-CC-DD-EE)# commit write mem

Secondary (config-device-00-0C-BB-CC-DD-EE)#end

2. Reboot the "Primary" replica-set member and wait for the device to come up and join the replica-set. Make sure that the replica-set is up. Use the below-mentioned command to verify:

Primary#show database status

MEMBER   STATE   ONLINE TIME

10.10.10.1*   PRIMARY   0 hours 3 min 10 sec

10.10.10.2   SECONDARY   12 hours 05 min 40 sec

10.10.10.3   ARBITER   0 hours 15 min 11 sec

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[*] indicates this device.

3. Reboot the "Secondary" replica-set member and wait for the device to come up and join the replica-set. Make sure that the replica-set is up using "show database status " command.
4. Enable Extreme NSight Server on primary and then on secondary replica-set member:

Primary #self

Enter configuration commands, one per line. End with CNTL/Z.

Primary (config-device-00-0C-AA-BB-CC-DD)# use nsight-policy <name>

Primary (config-device-00-0C-AA-BB-CC-DD)#commit write mem

Primary (config-device-00-0C-AA-BB-CC-DD)#end

Secondary #self

Enter configuration commands, one per line. End with CNTL/Z.

Secondary (config-device-00-0C-BB-CC-DD-EE)# use nsight-policy <name>

Secondary (config-device-00-0C-BB-CC-DD-EE)#commit write mem

Secondary (config-device-00-0C-BB-CC-DD-EE)#end

5. Confirm NSIGHT License, Network IP address are configured correctly on Extreme NSight.
6. Make sure that the Extreme NSight services are running on Primary and Secondary servers:
    a. To check NSight process is running fine, check for "is running"

    ExtremeNSight# show nsight status

    Nsight is enabled

    Nsight report and aggregation daemon is running

    Nsight alarm daemon is running

    Nsight server daemon is running

    Database server is local

    Database server is reachable

    b. To check mongod process is running fine use "service show process"

    ExtremeNSight# service show process | grep mongo

     1351   S 8375584   1 3.1 25.4 mongod

    c. To check "nsight_server", "nsightd" process are running fine
       Use "service show process" to confirm.

    Below are some key processes listed for reference:

    The actual number of threads will vary.

    ExtremeNSight# service show process | grep nsight

     2195   S 83244 2072 0.0 0.2 nsight_server-g

     2216   S 78648 2072 0.0 0.2 nsight_server-w

     2221   S 78472 2072 0.0 0.2 nsight_server-n

     2201   S 64996 2072 0.0 0.1 nsight_server-s

     2072   S 53620 2064 0.0 0.1 nsight_server

     2022   S 20564 2006 0.0 0.0 nsightd

     2080   S 20348 2022 0.0 0.0 nsightd-aggr-ap

     2083   S 19704 2022 0.0 0.0 nsightd-aggr-mu

     2121   S 18864 2022 0.0 0.0 nsightd-aggr-tc

     2116   S 18192 2022 0.0 0.0 nsightd-aggr-dn

```
2124  S  17788  2022  0.0  0.0  nsightd-aggr-dh

2127  S  17556  2022  0.0  0.0  nsightd-alive-d

2110  S  17532  2022  0.0  0.0  nsightd-aggr-av

2125  S  17464  2022  0.0  0.0  nsightd-col-exp

2128  S  17448  2022  0.0  0.0  nsightd-kms
```

4.2 Downgrade Extreme NSight to WiNG VX9000:

Extreme NSight **Does Not** support downgrade to WiNG Release once WiNG VX9000 has been converted to Extreme NSight.

4.3 Export Database from NX9500/NX9600/VX9000 to new Extreme NSight 5.9.3.0

Existing WiNG NSight deployments on NX9500/NX9600/VX9000 can be migrated to Extreme NSight platform by following the below procedure.

1. Export NSight Database from the current NX9500/NX9600/VX9000 on WiNG 5.9.2 and above to an external FTP/TFTP server.
    a. Import database using restore command

    NX9600# database-backup database nsight <ftp/tftp path>nsightdb.tar.gz

    b. Use "show database backup-status" to check status.

2. Create Extreme NSight 5.9.3 VM following your hypervisors instructions for installing Virtual Machine using "ExtremeNSight-INSTALL-5.9.3.0-007R.iso" image.
3. Import the NSight Database previously exported on to the newly created Extreme NSight 5.9.3 VM.
    a. Confirm database policy is configured using "show database status".

    b. Confirm that NSight policy is "NOT" configured using "show nsight status".

    c. Import database using restore command.

    ExtremeNSight# database-restore database nsight <ftp/tftp path>nsightdb.tar.gz

    d. Use "show database restore-status" and "show database status" to check status.

4.4 Migrating WiNG + NSight Server VX9000 to a new WiNG controller

In case where WiNG and NSight Server are running on the same VX9000 and customer wants to migrate WiNG adoption to a new WiNG controller and use the existing VX9000 as Extreme NSight.
1. Host a new VX9000-02 (5.9.3.0-018R) and install WiNG Adoption licenses.

2. Migrate configurations from VX9000-01 to VX9000-02, Updating IP address needs to be taken into consideration.

3. Configure auto-provisioning policy on VX9000-01 with redirect elements for adopting devices. Enable "evaluate-always".

4. Start deleting adopted device context from VX9000-01 WiNG controller.

5. Let the adopting devices migrate/adopt to the new WiNG controller VX9000-02.

6. Make sure that the devices get the new controller IP.

7. Confirm that all AP's have migrated and adopted to the new WiNG controller.

8. Follow the steps mentioned in "Converting WiNG VX9000 NSight server to Extreme NSight 5.9.3.0"

   a. Upgrade VX9000-01 with migration script: "UpgradeVX9000ToExtremeNSight.patch".

   b. Upgrade VX9000-01 with Extreme NSight 5.9.3 image.

5. IMPORTANT NOTES

Extreme NSight Release 5.9.3

1. "NSight" in Login Screen, Left Navigation and About section has been changed to "Extreme NSight".
2. WiNG NSight Server feature on WiNG NX9500/NX9600/VX9000 controllers will not be available going forward on WiNG 5.9.4 release, Customers will have to install Extreme NSight 5.9.3 or above as a target platform to provide Extreme NSight server capabilities.
3. WiNG infrastructure should be upgraded to at least 5.9.2 to be compatible with Extreme NSight 5.9.3.
   ➢ With WiNG 5.9.1 and Extreme NSight 5.9.3, there are known issues with NSight Troubleshooting features like Packet Capture and Wireless Debug.
4. In order to have correct Guest Client Count and Statistics on Extreme NSight, "**no nsight client-history**" should be configured on all WiNG WLAN's which are used for Guests across all WiNG controllers in the network.

   ➢ "no nsight client-history" on WLAN's config will ensure the new clients connecting to those guest WLANs are marked as guest clients on Extreme NSight.

   ➢ "no nsight client-history" will ensure customers don't face scalability issues with higher CPU/Disk and Memory utilization on Extreme NSight.

5. To have Extreme NSight with Left Navigation Tree, RF Domains and Devices populated , "**no controller adoption**" should be configured on all the WiNG controller (NOC) which do not adopt to any other WiNG controller.

   ➢ This should NOT be configured on an AP or Site-Controllers which are adopting to any other WiNG Controller.

6. "NSIGHT/NSIGHT-PER" license should be installed on the new Extreme NSight VM.

   ➢ For ease of Migration from WiNG NSight on VX9000 to Extreme NSight, there will be no change in the installation procedure of NSIGHT License.
   ➢ For any new VM based Extreme NSight installation, **License Key** should be procured.

   ExtremeNSight# self

   ExtremeNSight# license (NISGHT/NSIGHT-PER) <license-key>

ExtremeNSight# commit write memory

> Extreme NSight does not support any other WiNG Licensed feature and does not recommend enabling any WiNG features other than the features required for enabling Extreme NSight functionality

7. To Have Extreme NSight open HTTP/HTTPS port, Management policy should have

    HTTP/HTTPs server enabled.

    ExtremeNSight# (config-management-policy-default)# http server

    ExtremeNSight# (config-management-policy-default)# https server

    ExtremeNSight# (config-management-policy-default)# commit write mem

8. Extreme NSight configuration is only available via CLI (which is WiNG based) GUI/SNMP based configuration for Extreme NSight is not available in this release.
    > Configuration for Management Policy, Network Interface GE/VLAN, Allowed Locations, Location and Area Tree for device should be configured using Extreme NSight CLI.
9. To avoid Database sync issues in 3 Node replica Set/Split-VX where WiNG controller is configured as Arbiter in WiNG NSight deployment, It is recommended that new VM Extreme NSight Arbiter is installed instead of using WiNG controller as Arbiter.
10. To avoid database inconsistency in 3 Node Replica set during Downtime, Upgrades, Migration: It is recommended to use "service database server stop/start" instead of " no use database-policy" and "use database-policy".
    > "service database server stop" should be carried out only after "no use nsight-policy" is configured.
    > "service database server start" should be carried out only after confirming "mongod" process has exited gracefully.
    > "no use database-policy" and "use database-policy" should be carried out only on newer deployments .
11. For scenarios where statistics are not reported correctly from different RF-domains or Extreme NSight server is not displaying statistics or device information, it is recommended to carry out "no use nsight-policy" followed by "use nsight-policy" .
    > "use nsight-policy" should be carried out only after confirming all "nsight" related process have gracefully exited.
12. On a newly Installed Extreme NSight "database-policy" is configured by default and database will be up and running in Standalone mode.

    > "nsight-policy" on Extreme NSight should be configured once Database is up and running.

13. Extreme NSight **DOES NOT** support downgrade to WiNG Release.

    > It is recommended to take backup of Tech-support, Database and running-config before Migrating WiNG VX9000 to Extreme NSight.
    > Database backup can be performed using
    "database-backup database nsight <ftp/tftp path>nsightdb.tar.gz"
    "database-backup database nsight-placement-info <ftp/tftp path>nsightdb-placement.tar.gz"
14. All WiNG RF-domains "nsight-policy" should point to the newly configured Extreme NSight's server IP address.

15. Extreme NSight does not have any WiNG MiNT dependency, by default MINT configuration is disabled on Extreme Nsight.
    - ➢ no mint mlcp vlan
    - ➢ no mint mlcp ip
16. NSight REST API functionality covers NSight statistics, Extreme NSight Configuration via REST API is not available.
17. To have REST API support on Extreme NSight, Management policy should have the REST server enabled

    ExtremeNSight# (config-management-policy-default)# rest-server

    ExtremeNSight# (config-management-policy-default)# commit write mem

18. NSight REST API should have count and offset parameter set for retrieving large data sets.
    - ➢ Input parameter 'count' is used with Statistics APIs to restrict the number of latest items returned using the API.

    - ➢ Maximum number of items returned using Statistics APIs is 100 irrespective of the 'count' parameter provided with the API. This is to avoid issues with huge data set.

    - ➢ Parameter 'total_count' in the response of Statistics APIs indicates the total number of data/items present in the database related to the REST API.

    - ➢ Newly added 'offset' input parameter provides a facility to skip the items and retrieve subsequent items using REST API.

    - ➢ Default values in case of Statistics APIs are: 'offset' = 0 & 'count' = 100.

    - ➢ Applicable to 'avc_stats', 'cpu_info', 'ap_stats' and 'mu_wireless_stats'.

19. AP7612/AP7632/AP7662 support for Spectrum Analysis (ASA) has been added in Extreme NSight 5.9.3 release.
    - ➢ Spectrum Analysis (ASA) for AP7612/AP7632/AP7662 works when radio is configured as dedicated Sensor and not in WLAN/Infra mode.
    - ➢ If the radio is configured for ADSP WIPS sensor or is in radio-share mode, NSight ASA functionality will not be supported.

20. AP Test feature on Extreme NSight is not supported on AP-76xx platforms.
21. Refer to the feature matrices in WING 5.9.3 release notes Section 8 for AP Test/ Spectrum analysis features supported by AP model
22. 3rd Party Mongo DB has been upgraded from 3.2.16 to 3.2.21 version to fix Mongod crashes and kernel panics - SPR-3497.
23. 3rd Party Node for Extreme NSight has been patched to fix Node Mongo connection pool issue - NSIG-4.
24. Extreme NSight PCI report format has been modified for OPEN and WEP WLAN's report.
25. NSight Client Details for a given RF-Domain is limited to 100 clients in the tabular display. For complete list of wireless clients, User should generate NSight report for wireless clients.

6. VULNERABILITY AND 3RD PARTY UPGRADES

In case a patch has been applied to address vulnerability even though vulnerability was addressed – some security scans only check the version number of the component as opposed to testing the actual vulnerability – and therefore might still report issue being present.

Extreme NSight 5.9.3

Mongo upgraded to 3.2.21

OpenSSL upgraded to 1.0.2o.

CVE-2018-5390 [VU#962459] [FICORA #1052508] Vulnerability Notification

CVE-2018-10124 Allows DoS attack by local users, via INT_MIN argument

CVE-2018-10087 denial of service by triggering an attempted use of the -INT_MIN value

CVE-2018-8897 The MOV to SS and POP SS instructions inhibit interrupts (including NMIs), data breakpoints, and single step trap exceptions, may result in unexpected behavior

CVE-2018-0739 Constructed ASN.1 types with a recursive definition could result in a DoS attack.

CVE-2017-18255 Linux kernel before 4.11 allows local users to cause a denial of service (integer overflow)

7. ISSUES FIXED

Following issues have been fixed in Extreme NSight 5.9.3 release:

SPR/CR	Description
SPR-3444	DPD2 core seen when processing DPI metadata
SPR-3462	NSight - UI crashes while mapping/un-mapping AP's from one floor map to another.
SPR-3487	NSight v5.9.1.6 system level KMS issue
SPR-3497	Panics observed pertaining to soft lockup on different modules
SPR-3498	Device List not getting updated in User Interface after looking into a specific device
SPR-3502	NSightd crash RangeError: Invalid string length in client.js
SPR-3503	NSightd error alive_dev.py:153:run : Exception (<class 'pymongo.errors.DocumentTooLarge'>, DocumentTooLarge('BSON document too large (17079121 bytes) - the connected server supports BSON document sizes up to 16777216
SPR-3519	NSight : No client details in RF Matrix Line Chart for Clients dashboard widget
SPR-3524	NSight : nsightd crash seen when trying to generate PCI report
SPR-3546	NSight Report box overwrites fields
SPR-3547	NSight Report Object Type Device Offline List by Switch shows all devices (online/offline)

SPR/CR	Description
SPR-3548	NSight: Device inventory list report object device displays AP uptime that is not in user friendly format.
SPR-3557	NSight: Floor names in Map View not alphabetically ordered
NSIG-4	NSight: nsight_server crash ReferenceError: err is not defined at Pool.destroy (/usr/lib/node_modules/mongodb-core/lib/connection/pool.js:867:27)
NSIG-7	NSight Reports: scroll missing for report template, thus can't add all report objects to a report template
NSIG-19	NSight: Spanning tree enabled by default, Allow CLI options to enable/disable.
NSIG-27	NSight: When you place an AP on floor map using the configure option, GUI crashes
NSIG-28	NSight Reports: Unable to view complete list of objects under Report Builder
NSIG-30	NSight: The RF Matrix line chart for Client/AP is Broken. UI crashes with Uncaught TypeError: Cannot read property 'start_time' of undefined
NSIG-31	NSight: Mongo Authentication with special characters broken
NSIG-46	NSight: Clicking on Target AP in Generated Reports fails to load on GUI
NSIG-69	NSight:%DIAG-4-FD_COUNT: FD Usage 26160 is over limit 25500 is seen on NSight Scale setup
NSIG-75	NSight: The Client Summary (Max 100 Clients) limit is set at the domain-level
NSIG-92	NSight Reports: Change in format of PCI report
NSIG-99	NSight Reports: "client distribution by WLAN" does not generate PDF report, throws error
NSIG-105	NSight: Scale Test Rest API: NSight server core crash while fetching the data through rest API
NSIG-109	NSight: management user login with external AAA not working, service radius command works.
NSIG-112	Add Average Object Size in service show database collection statistics CLI command

8. KNOWN ISSUES

Following issues are known issues in Extreme NSight 5.9.3:

Key	Summary
SPR-3516	APs not showing on the NSight Map if user tried to place AP on NSight server before setting the floor name on Controller
NSIG-2	NSight AVC : App group trend displays incorrect count at system level

Key	Summary
NSIG-9	AVC, widgets dont show data, timeouts seen, get_application_details_per_bucket():mu_wireless_error: MongoError: connection 19 to localhost:27017 timed out
NSIG-16	NSight - Dashboard - Themes and Widgets Not Visible during startup when mongoDB is not fully loaded
NSIG-67	NSight: Mongo Authentication fails with special character "&" Ampersand in username/password
NSIG-88	NSight: The PCI Reports for 1 days take more than 12 hours to generate with the Scale Replica setup (25K Aps and 250K Clients)
NSIG-89	NSight Scale 3node Replica: Client Widgets at System Level fails to get data intermittently
NSIG-90	NSight Reports: While selecting a scope for a report dropdown window closes for each selection
NSIG-91	NSight: Not able to pull in the theme for dashboard widgets using Firefox
NSIG-93	NSight Report: Scrollbar is needed in object filters when selecting the option system
NSIG-95	NSight: On the Scale Replica setup, on a monitor page If a select a week window, the query is timing out after 2 mins
NSIG-98	NSight Report: Multiple recipient addresses cannot be added for Emailing Reports
NSIG-103	NSight: Split-VX Wireless debug logs doesn't work, Error during websocket handshake. Unexpected response code 400

9. GLOBAL SUPPORT:

By Phone: +1 800-998-2408 (toll-free in U.S. and Canada)

For the toll-free support number in your country:
www.extremenetworks.com/support/

By Email: support@extremenetworks.com

By Web: www.extremenetworks.com/support/

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For information regarding the latest software available, recent release note revisions, or if you require additional assistance, please visit the Extreme Networks Support website.