Installing vRealize Network Insight

VMware vRealize Network Insight 3.4

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About vRealize Network Insight Installation Guide

The *vRealize Network Insight Installation Guide* is intended for administrators or specialists responsible for installing vRealize Network Insight.

Intended Audience

This information is intended for administrators or specialists responsible for installing vRealize Network Insight. The information is written for experienced virtual machine administrators who are familiar with enterprise management applications and datacenter operations.

VMware Technical Publications Glossary

VMware Technical Publications provides a glossary of terms that might be unfamiliar to you. For definitions of terms as they are used in VMware technical documentation, go to http://www.vmware.com/support/pubs.

Preparing for Installation 1

Before you install vRealize Network Insight, prepare the deployment environment to meet the system requirements.

This chapter includes the following topics:

System Requirements

Ensure that the system meets the minimum hardware configurations to install vRealize Network Insight.

Minimum resource requirements

- vRealize Network Insight Platform OVA
  - 800 GB - HDD, Thin provisioned
  - Medium Brick Requirement
    - 8 cores - Reservation 4096 Mhz
    - 32 GB RAM - Reservation - 16GB
  - Large Brick Requirement
    - 12 cores - Reservation 6144 Mhz
    - 48 GB RAM - Reservation - 24GB
- vRealize Network Insight Proxy OVA
  - 150 GB - HDD, Thin provisioned
  - Medium Brick Requirement
    - 4 cores - Reservation 2048 Mhz
    - 10 GB RAM - Reservation - 5GB
  - Large Brick Requirement
    - 6 cores - Reservation 3072 Mhz
    - 12 GB RAM - Reservation - 6GB

Software Requirements

- Google Chrome or Mozilla Firefox Web browser

Privileges required for Data Sources

- Privileges required to configure and use IPFIX
  - vCenter Server Credentials with privileges:
    - Distributed Switch: Modify
    - dvPort group: Modify
  - The predefined roles in the vCenter server must have the following privileges:
    - System.Anonymous
    - System.Read
    - System.View
    - global.settings
- Privileges required for NSX Manager Data Provider
  - NSX Manager Data Provider requires the **Enterprise** role.
  - If Central CLI is enabled, then the `system admin` credentials are required for NSX Manager Data Provider.
- User privileges required on Cisco switches for metrics collection
  - vRealize Network Insight is capable of collecting metric data via SNMP as well as configuration via SSH from Cisco Switches. Cisco Switches UCS platform requires the use of both SSH and API for collection.

Table 1-1.

Type of data	User Privileges
Configuration Data	Read-Only
Metric Data	SNMP read-only
	SNMPv2 read-only SNMP community
	SNMPv3 read-only

Note

Supported Products and Versions

vRealize Network Insight support several products and versions.

Environment	Version/Model	Description
VMware vSphere	■ vSphere 5.5 (up to U3) ■ vSphere 6.0 (up to U2) ■ vSphere 6.5 For IPFIX, VMware ESXi version needed: ■ 5.5 Update 2 (Build 2068190) and above ■ 6.0 Update 1b (Build 3380124) and above ■ VMware VDS 5.5 and above **Note** vmtools should be installed on all the Virtual Machines in the data center to identify the VM to VM path.	Data provider connects to VMware vCenter over HTTPS to fetch virtual environment information.
VMware NSX	■ 6.3 (up to 6.3.1) ■ 6.2 (up to 6.2.6) ■ 6.1 (up to 6.1.7) ■ 6.0	The data provider connects: ■ VMware NSX Manager over HTTPS ■ VMware NSX Controller over SSH ■ VMware NSX Edge over SSH or Central CLI depending on customer preference
Cisco Nexus	5000, 7000, 9000, VSM N1000	The data provider connects Cisco Nexus switches over SSH v2 and SNMP.
Cisco UCS (Unified Computing System)	Series B blade servers, Series C rack servers, Chassis, Fabric interconnect	The data provider connects to UCS Manager over HTTPS and UCS Fabric Interconnect over SSH to fetch information. It also connects to the SNMP service on UCS.
Cisco Catalyst switches	3000, 3750, 4500, 6000, 6500	The data provider Cisco Catalyst switches connects to device over SSH and SNMP.
Dell switches	FORCE10 MXL 10, FORCE10 S6000, S4048, Z9100, S4810, PowerConnect 8024	The data provider connects to Dell switches over SSH v2 and SNMP.
Arista switches	7050TX, 7250QX	The data provider connects to Arista switches over SSH v2 and SNMP.
Brocade Switches	VDX 6740, VDX 6940	The data provider connects to Brocade switches over SSH v2 and SNMP.
Juniper Switches	EX3300	The data provider connects to Juniper switches over SSH v2 and SNMP.
Palo Alto Networks	Panorama 7.0.x, Panorama 7.1	The data provider connects to Palo Alto Panorama appliance HTTPS.
HP	HP Virtual Connect Manager 4.41	The data provider connects to HP Virtual Connect Manager over SSH v2.

Prerequisites

Certain prerequisites for installing vRealize Network Insight are as follows:

- If the vRealize Network Insight platform is behind an Internet proxy, ensure that you whitelist the following domain names and ports:

Table 1-2.

Service	URL	Port
Upgrade Service/Metric Service	`svc.ni.vmware.com`	443
Support Tunnel Service	`support2.ni.vmware.com`	443
Registration Service	`reg.ni.vmware.com`	443
Log Service	`log.ni.vmware.com`	443

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You can deploy vRealize Network Insight using vSphere Web client or vSphere Windows native client.

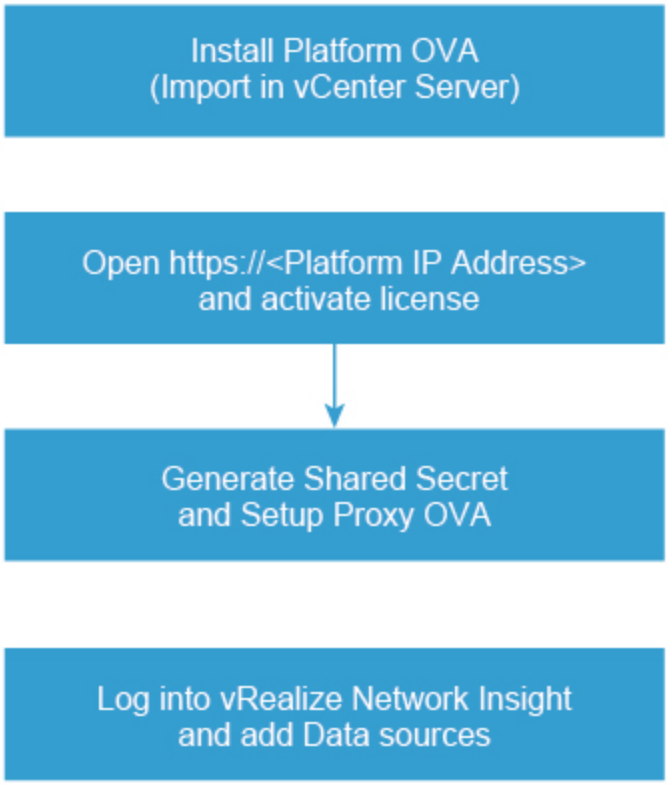
Note After you successfully deploy vRealize Network Insight Platform OVA, verify whether the given static IP is set on vCenter Server.

This chapter includes the following topics:

Installation Workflow

To install vRealize Network Insight, you install the platform OVA, activate the license, generate shared secret, and setup proxy OVA.

Note The terms **Proxy** and **Collector** are used interchangeably in the documentation.



Deploying vRealize Network Insight Platform OVA

You can import the vRealize Network Insight Platform OVA to your vCenter Server.

Deployment using vSphere Web Client

You can deploy vRealize Network Insight using vSphere Web Client.

Procedure

1. Right-click on the **Datacenter** where you want to install the appliance and select **Deploy OVF Template**.
2. Browse to select the source location of the appliance OVA.
3. Verify the OVF template details.
4. Read the End User License Agreement and click **Accept**.
5. Select the destination folder in which you want to create the VM and give a desired name to the VM.
6. Select the **Deployment Configuration**.
7. Select a **Host/Cluster** where you want to run the deployed template.
8. Select the **Resource Pool** in which you want to deploy this template.
9. Select the **Datastore** where you want to store the files.
10. Select **Thin Provision** as the Virtual Disk format.

11 Select the **Network** that the deployed VM will use.

Selected network should allow the appliance to reach out to the Internet for support and upgrade.

12 Customize the template as mentioned below:

a **IPv4 Address**: First reserved static IP address

b **Netmask**: Subnet mask for the above static IP

c **Gateway**: Default gateway of your network

d **DNS Server List**: DNS servers of your environment

e (Optional) **DNS Server List**: DNS servers of your environment

f Domain Search List: Determines which domain to be appended for dns lookups.

g (Optional) **NTP Server List**: Enter the list of NTP servers and ensure that NTP Server can be reached from the VM. The services will fail to start if NTP time is out of sync.

h (Optional) **Web Proxy IP/FQDN and Web Proxy Port**: For accessing the Internet using a proxy

i (Optional) **Syslog server IP** : Syslog server IP [Optional]: IP address of the syslog server where you want to send the syslog messages

j Uncheck the **Log Push Enable** checkbox if you do not want to send diagnostic and troubleshooting data to VMware.

13 Review the details and select the **Power on after deployment checkbox**, then click **Finish**.

Deployment using vSphere Windows Native Client

You can deploy vRealize Network Insight using vSphere Windows native client.

Procedure

1 Click **File > Deploy OVF Template**.

2 Browse to select the source location of the OVA.

3 Click **Next** and Verify OVF template details.

4 Ensure that the desired folder is selected and give a name to the VM.

5 Select the **Deployment Configuration**.

6 Select a **Host/Cluster** where you want to run the deployed template.

7 Select the **Resource Pool** in which you want to deploy this template.

8 Select the **Datastore** where you want to store the files.

9 Select **Thin Provision** as the Virtual Disk format.

10 Map the **Network** from OVA to your inventory

11 Customize the template as mentioned below:

a **IPv4 Address**: First reserved static IP address

b **Netmask**: Subnet mask for the above static IP

c **Gateway**: Default gateway of your network

d **DNS Server List**: DNS servers of your environment

e (Optional) **DNS Server List**: DNS servers of your environment

f **Domain Search List:** Determines which domain to be appended for dns lookups.

g (Optional) **NTP Server List**: Enter the list of NTP servers and ensure that the NTP Server can be reached from the VM. The services will fail to start if NTP time is out of sync.

h (Optional) **HTTP Proxy IP/FQDN** and **HTTP Proxy Port**: For accessing the Internet using a proxy

i (Optional) **Syslog server IP** : IP address of the syslog server where you want to send the syslog messages

j Uncheck the **Log Push Enable** checkbox if you do not want to send diagnostic and troubleshooting data to VMware.

k Select the **Health Telemetry Enable** checkbox to improve the product by sending anonymous data about product performance.

12 Review the details and select the **Power on after deployment checkbox**, then click **Finish**.

Generating the Support Tunnel Certificate

Perform this step only if you are offline or have restricted access to Internet.

To generate the support tunnel certificate:

1 Log on to the console user CLI and run the `offline-registration` command.

2 The CLI generates a token. After you supply this token to VMware Support, an entry is created in the registration server and a certificate is given to you.

3 Install this certificate by using the `offline-registration` command.

Activating the License

Before the deployment, activate and install the vRealize Network Insight virtual appliance.

After installing the vRealize Network Insight Platform OVA, open *https://<vRealize Network Insight Platform IP address>* in the Chrome Web browser.

Procedure

1 Enter the license key received in the welcome email.

2 For UI admin (`admin@local`) user name, set the password. If you are a support user or a CLI user, refer "Default Login Credentials," on page 17for the password.

3 Click **Activate**.

4 Add the vRealize Network Insight Collector after activating the license.

Generating Shared Secret

You can generate and import the vRealize Network Insight proxy virtual appliance.

Generate a shared secret and import the vRealize Network Insight proxy virtual appliance:

Procedure

1 Generate a shared secret after activating the license on the **Setup Proxy Virtual Appliance** page.

2 Copy the shared secret.

You will require this during the deployment of vRealize Network Insight Proxy OVA.

Setting up vRealize Network Insight Proxy Virtual Appliance (OVA)

You can set up vRealize Network Insight proxy virtual appliance by importing OVA to your vCenter server.

Follow the steps below to import the vRealize Network InsightProxy OVA to your vCenter Server

Deployment using vSphere Web Client

You can import the vRealize Network Insight Proxy OVA using vSphere Web Client.

Procedure

1 Right-click on the **Datacenter** where you want to install the appliance and select Deploy OVF Template.

2 Browse to select the source location of the appliance OVA.

3 Verify the OVF template details.

4 Read the End User License Agreement and click **Accept**.

5 Select the destination folder in which you want to create the VM and give a desired name to the VM.

6 Select the **Deployment Configuration**.

7 Select a **Host/Cluster** where you want to run the deployed template.

8 Select the **Resource Pool** in which you want to deploy this template.

9 Select the Datastore where you want to store the files.

10 Select **Thin Provision** as the Virtual Disk format.

11 Select the **Network** that the deployed VM will use.

12 Customize the template as mentioned below:

   a **Shared Secret for vRealize Network Insight Proxy**: The shared secret generated on the onboarding page

   b **IPv4 Address**: Second reserved static IP address

   c **Netmask**: Subnet mask for the above static IP

   d **Gateway**: Default gateway of your network

   e **DNS Server List**: DNS servers of your environment

   f (Optional) **Domain Search List** : Determines which domain to be appended for dns lookups

   g **NTP Server List**: Enter the list of NTP servers and ensure that the NTP Server can be reached from the VM. The services will fail to start if NTP time is out of sync.

   h (Optional) **Web Proxy IP/FQDN**and **Web Proxy Port**: For accessing the Internet using a proxy

   i (Optional) **Syslog server IP** : IP address of the syslog server where you want to send the syslog messages

   j Uncheck the **Log Push Enable** checkbox if you do not want to send diagnostic and troubleshooting data to VMware.

   k Select the **Health Telemetry Enable** checkbox, to improve the product by sending anonymous data about product performance.

13 Review the details and select the **Power on after deployment** checkbox then click Finish.

Deployment using vSphere Windows Native Client

You can import the vRealize Network Insight Proxy OVA using vSphere Windows native client.

Procedure

1 Click **File > Deploy OVF Template**.

2 Browse to select the source location of OVA.

3 Verify the OVF template details.

4 Read the End-User License Agreement and click **Accept**.

5 Ensure the desired folder is selected and give a name to the VM.

6 Select the **Deployment Configuration**.

7 Select a **Host/Cluster** where you want to run the deployed template.

8 Select the **Resource Pool** in which you want to deploy this template.

9 Select the **Datastore** where you want to store the files.

10 Select **Thin Provision** as the Virtual Disk format.

11 Select the **Network** that the deployed VM will use.

12 Map the network from OVA to your inventory.

13 Customize the template as mentioned below:

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   g **NTP Server List**: Enter the list of NTP servers and ensure that the NTP Server can be reached from the VM. The services will fail to start if NTP time is out of sync.

   h (Optional) **HTTP Proxy IP/FQDN** and **HTTP Proxy Port**: For accessing the Internet using a proxy

   i (Optional) **Syslog server IP** : IP address of the syslog server where you want to send the syslog messages

   j Uncheck the **Log Push Enable** checkbox if you do not want to send diagnostic and troubleshooting data to VMware.

   k Select the **Health Telemetry Enable** checkbox, to improve the product by sending anonymous data about product performance.

14 Review the details and select the **Power on after deployment** checkbox then click **Finish**.

Note After the vRealize Network Insight Proxy OVA is deployed and running, you must verify whether the given static IP is set on vCenter Server.

15 Click **Finish**, once **Proxy Detected!** message is displayed on the onboarding page. It will redirect to the Login Page.

Deploy Additional Proxy to an Existing Setup

You can add additional vRealize Network Insight proxy to an existing setup.

Procedure

1 Log into the vRealize Network Insight UI. Navigate to **Settings > Install and Support**.

2 Click **Add Proxy VM**.

3 Copy the shared secret from the dialog that is displayed.

4 Follow the steps in section "Setting up vRealize Network Insight Proxy Virtual Appliance (OVA)," on page 14 in step 3.

Default Login Credentials

vRealize Network Insight has three types of users. The login credentials for these users are as follows:

Note Use Google Chrome to log in to vRealize Network Insight.

Table 2-1.

Types of Users	Username	Password
Admin UI	`admin@local`	Set this password in Activate License screen during installation
SSH User	`support`	`ark1nc0113ct0r`
CLI User	`consoleuser`	`ark1nc0ns0l3`

Procedure

1 Open *https://<vRealize Network Insight Platform IP address>*.

2 Log in to the product UI with the corresponding username and password.

NSX Assessment Mode for Evaluation License

vRealize Network Insight starts in the NSX assessment mode when you use the evaluation license.

You can add a data source to vRealize Network Insight, analyze traffic flow, and generate reports.

Note To switch to the Full Product mode, click **Switch to Full Product Evaluation** located in the bottom right corner.

Add vCenter Server

You can add vCenter Servers as data source to vRealize Network Insight.

Multiple vCenter Servers can be added to vRealize Network Insight to start monitoring data.

Procedure

1 Click **Add vCenter**.

2 Click **Add new source** and customize the options.

Option	Action
Source Type	Select the vCenter Server system from the drop-down menu.
IP Address/FQDN	Enter the IP address or fully qualified domain name of the vCenter Server.
Username	Enter the user name, with the following privileges: ■ **Distributed Switch**: Modify ■ **dvPort group**: Modify
Password	Enter the password for vRealize Network Insight software to access the vCenter Server system.

3 Click **Validate**.

4 Add advanced data collection sources to your vCenter Server system.

5 (Optional) Click **Submit** to add the vCenter Server system. The vCenter Server systems appear on the homepage.

Analyze Traffic Flows

You can use vRealize Network Insight to analyze flows in your datacenter.

Prerequisites

At least two hours of data collection must occur before starting the flow analysis.

Procedure

1 Specify the scope of the analysis. For example, if you are interested in flows of all virtual machines in a **Cluster**, select Cluster from the dropdown menu. You can alternately select all virtual machines connected to a VLAN or VXLAN.

2 Select the entity name for which you want to analyze the flows.

3 Select the duration and click **Analyze**.

Generate a Report

You can generate a report of the flow assessment.

Prerequisites

Analyze traffic flows in the datacenter. For comprehensive reports, collect 24 hours of data before the analysis.

Procedure

1 In the **EVAL NSX Assessment Mode**, click **Generate Report** in the Analyze Flows page.

2 In the **Non EVAL Mode**, on the **Microsegmentation** page, click **Traffic Distribution > More Options > Assesment Report**.

Adding Data Sources

After you log in, add the various data sources to vRealize Network Insight for the software to monitor your data center.

The product will start showing the data from your environment after two hours of data collection.

Procedure

1 Select **Profile > Settings**.

2 Click the **Add new source** button.

3 Select the **Source Type**.

4 Enter the required details and click **Submit** to add the Data source.

5 Repeat the above steps to add all the required data sources from your environment.

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