

NetBackup IT Analytics Licensing Guide

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VERITAS™

NetBackup IT Analytics Licensing Guide

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Veritas Services and Operations Readiness Tools (SORT)

Veritas Services and Operations Readiness Tools (SORT) is a website that provides information and tools to automate and simplify certain time-consuming administrative tasks. Depending on the product, SORT helps you prepare for installations and upgrades, identify risks in your datacenters, and improve operational efficiency. To see what services and tools SORT provides for your product, see the data sheet:

https://sort.veritas.com/data/support/SORT_Data_Sheet.pdf

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License installation and guidelines

This chapter includes the following topics:

- [License overview](#)
- [Understanding licensing restrictions](#)
- [Get the NetBackup IT Analytics license key file](#)
- [Install a license](#)
- [Verify the current license configuration](#)
- [Consumption criteria of license suites](#)
- [Storage suite](#)
- [Protection suite](#)
- [Complete suite](#)
- [Overview](#)
- [Managing licenses](#)
- [View the current license](#)
- [Delete clients](#)
- [Expand your license configuration](#)
- [Exclude objects from future data collections](#)
- [Configure the Data Collector policy to exclude the object](#)

- [Removing objects from the license count](#)
- [Deleting objects using the Inventory List view](#)

License overview

A valid license is required to run the NetBackup IT Analytics application.

If you have not received your license file, see [Get the NetBackup IT Analytics license key file](#)

The available NetBackup IT Analytics license suites and their respective inclusions are as follows.

Table 1-1 NetBackup IT Analytics License suites

License suites	Inclusions
Storage suite	<ul style="list-style-type: none"> ■ Capacity Manager ■ Fabric Manager ■ Virtualization Manager
Protection suite	<ul style="list-style-type: none"> ■ Backup Manager ■ Virtualization Manager
Complete suite Note: Complete suite contains the license of File Analytics in addition to those included in both Storage and Protection suites.	<ul style="list-style-type: none"> ■ Capacity Manager ■ Fabric Manager ■ Virtualization Manager ■ Backup Manager ■ File Analytics
Foundation	<p>Only following three policies under Backup Manager:</p> <ul style="list-style-type: none"> ■ Veritas NetBackup ■ Veritas Backup Exec ■ Veritas NetBackup Appliance

If you find that you have exceeded your license configuration, refer to:

- [Understanding licensing restrictions](#)
- [Verify the current license configuration](#)

License Editions

The editions of each license type are defined below:

- **Standard:** Allows licensing for NetBackup IT Analytics Portal only if Oracle Standard edition is used and only a single Instance of the Portal is used in the enterprise.
- **Shared Services:** Allows licensing in Oracle shared services environment. You need to provide your own Oracle license (BYOO - Bring Your Own Oracle).
- **Partitioning:** Allows the underlying database to split large tables into partitions, thus improving the database performance and scalability. NetBackup IT Analytics leverages the Oracle enterprise Edition Database with the Oracle Partitioning option.

The supported License edition based on the License type of each license suite is as follows:

Table 1-2 Supported editions for each license suite

License Suite	License Type	Supported Edition
Storage Suite	Perpetual	Standard Standard DR Shared Services Shared Services DR Partitioning Partitioning DR
	Subscription	Standard Standard DR Shared Services Shared Services DR Partitioning Partitioning DR

Table 1-2 Supported editions for each license suite (*continued*)

License Suite	License Type	Supported Edition
Protection Suite	Perpetual	Standard Standard DR Shared Services Shared Services DR Partitioning Partitioning DR
	Subscription	Standard Standard DR Shared Services Shared Services DR Partitioning Partitioning DR
Complete suite	Evaluation	Standard
	Perpetual	Standard Standard DR Shared Services Shared Services DR Partitioning Partitioning DR
	Subscription	Standard Standard DR Shared Services Shared Services DR Partitioning Partitioning DR
Foundation	Subscription	Shared Services

Note: A Disaster Recovery (DR) License is required if you deploy two or more copies of any product from the suite of softwares on a second or subsequent Portal server for the purpose of disaster recovery, availability, or fail-over from production. A DR License is required for each individual product that you license.

License feature matrix

The following table presents a view of features available under each license suite.

Table 1-3 Feature matrix



















Feature	Foundation	Protection suite	Storage suite	Complete suite
Collection Policy				
Host Discovery and Collection				
Veritas NetBackup, Veritas NetBackup Appliance, and Veritas Backup Exec				
Data Protection Policies, Storage Targets (DD)				
Storage and Replication Policies (except Storage targets)				
Network and Fabrics Policies				
Virtualization Policies				
Cloud Policies				

Table 1-3 Feature matrix (*continued*)

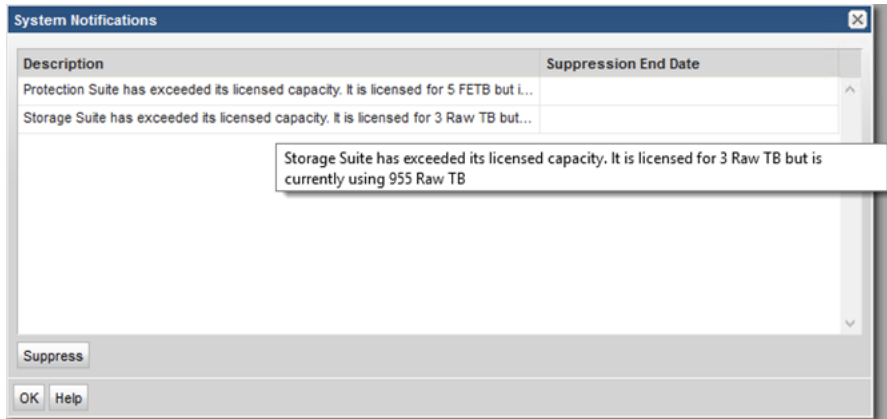
Feature	Foundation	Protection suite	Storage suite	Complete suite
File Analytics				
Inventory				
Backup Servers				
Hosts				
Arrays				
Azure Objects				
AWS Objects (EC2/S3)				
VM Objects and Datastores				
Switches				
File Shares and Volumes				
Chargeback				
Backup				
Capacity				
SAN Fabric				
Solutions				
Storage Optimization				
Risk Mitigation				

Table 1-3 Feature matrix (*continued*)

Feature	Foundation	Protection suite	Storage suite	Complete suite
Alert Categories				
System Administration				
Data Collection				
Data Protection, except ServiceNow				
Data Protection including ServiceNow				
Performance				
Storage and Storage Forecast				
Virtualization and Virtualization Forecast				

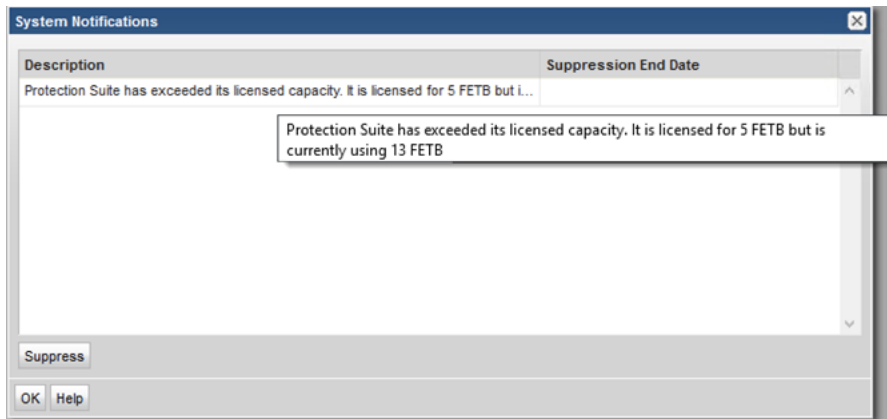
Understanding licensing restrictions

At login, the Portal may prompt with a message window similar to the following examples:



The above message is related to storage array capacity licensing. For specific definitions of these types of licenses refer to the following section.

See [“Consumption criteria of license suites”](#) on page 19.



This message indicates that the total number of Backup Units in your database has exceeded the number for which you are licensed. A Backup Unit is defined as any client, server, media server, primary server--that is, any host in your backup infrastructure for which reporting data is collected.

A number of factors are considered when determining client licensing compliance, as described in the following section.

See [“Consumption criteria of license suites”](#) on page 19.

When you reach the object license limit, any additional objects will not be added to the reporting database. They, however, will be noted in an exception table. Refer to the following section for tools to identify excluded objects.

See “[Managing licenses](#)” on page 25.

Get the NetBackup IT Analytics license key file

A valid license file is required to run the Portal application. If you already have a license file, proceed to the Installation section.

To generate a license key:

- 1 Open the Veritas support portal.
(https://www.veritas.com/content/support/en_US/)
- 2 Click **Licensing** and login to the Veritas Entitlement Management System using your Administrator credentials.
- 3 Open the **Entitlements** tab and use the filters at the top to filter and locate the entitlements granted to your account.
- 4 Click the key icon located against the entitlement ID for which you wish to generate a license key. The **Generate License Key** page is displayed. Verify your account details for which you plan to generate the license key.
- 5 Select the product version for which you want to generate the key. By default, the latest product version is selected.
- 6 Specify the license quantity that you wish to deploy using the key. By default, the entire available quantity is displayed in the field. You can utilize a partial subset of your entitled licenses with this key and generate a separate key for the remainder.

Note: If you create a key for less than the entitled quantity and if you wish to increase the quantity of the systems later using the entitlement associated with the key, you must create a new key for the additional systems. On the contrary, to reduce the number of systems associated with a key, you need to assign a new key to the reduced systems and edit the older key.

- 7 Provide the host lock string of the system where NetBackup IT Analytics will be installed using this key.

To get the correct host lock string, run one of these commands on the portal server:

- Linux: `/opt/aptare/utils/VxLicGetHostLock.sh`

On Linux, `VxLicGetHostLock.sh` uses `hostname --fqdn` commands to get the hostname of the system and uses it to create the host string. Hence, ensure `hostname --fqdn` returns a fully qualified host name, instead of a short name. For example, the command output must have at least one dot (.) character.

- Windows:C:\opt\aptare\utils\VxLicGetHostLock.ps1

If you have not installed the NetBackup IT Analytics Portal, you can download the `VxLicGetHostLock.sh` or `VxLicGetHostLock.ps1` from the Veritas download center and run the appropriate script depending on the OS of the Portal server.

- 8 After running `VxLicGetHostLock.sh` or `VxLicGetHostLock.ps1` file, you get the following output:

```
Veritas Get Host Lock utility v1.0.0.0  
Copyright (c) 2022 Veritas Technologies LLC. All rights reserved.
```

```
FQDN: xyz.abc.com  
Host Lock String: [sha512]4aba838e350d3c9471aa5334db5de8ad4a0ff  
45e34a6cfaea064f4ca77812acd4c8abc7be6b2d756574b7d6e06ceb9581357  
b824f4f70f84b39d938e85ee62b5
```

While generating the license key on VEMS, use the same host lock string including `[sha512]`.

For example:

```
[sha512]4aba838e350d3c9471aa5334db5de8ad4a0ff  
45e34a6cfaea064f4ca77812acd4c8abc7be6b2d756574b7d6e06ceb9581357  
b824f4f70f84b39d938e85ee62b5
```

- 9 Add comments about to the license key if required for the future reference.
- 10 Click **Generate**. The Generated Key page is displayed with the new key in the **License Key** column. You can click the key link and save it locally.

Install a license

Use the procedures listed in this section to install the Portal license. Your login credentials must be assigned the Super User role.

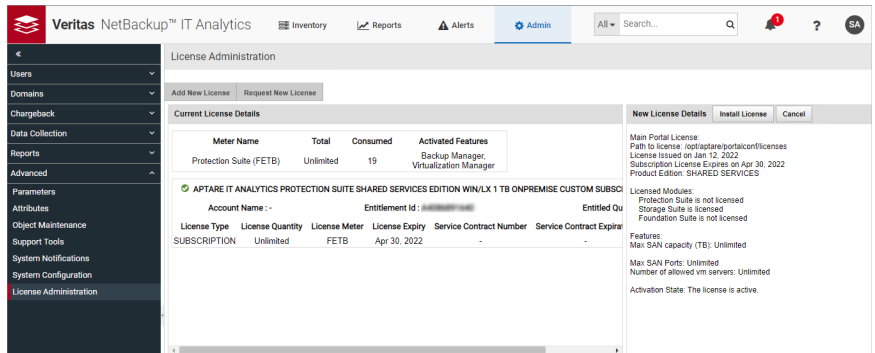
As a best practice, install your license directly through the Portal. Instructions for the command-line installation practices are also available.

See [“Install a license on Linux Portal platform”](#) on page 38.

See [“Install a license on Microsoft Windows Portal platform”](#) on page 37.

To install a license:

- 1 Receive the new license file and save the new license file on your Portal server and complete the subsequent steps.
- 2 Upload the New License
 - Navigate to **Admin > Advanced > License Administration**. The Portal displays your current license details.
 - Click **Add New License**.
 - Browse to locate the license file on your Portal server and click **OK**.



- 3 Verify the License Installation.

See [“Verify the current license configuration”](#) on page 39.

If you have issues with license installation, try uploading the license file again to overwrite the previous one.

Note: After you apply a new license or when you remove an existing license, restart the Portal to display the changes.

Verify the current license configuration

As a Super User, there are a number of ways that you can validate your current license configuration:

- Run the License Summary report in the Portal.
 See [“Run the License Summary report”](#) on page 17.

- Click Help About in the Portal.
See [“Help About”](#) on page 17.
- View the License Details.
See [“View License Details”](#) on page 18.

Run the License Summary report

- 1 Log into the Portal as a Super User.
- 2 Search for License Summary.
- 3 Generate the **License Summary** report.

License Summary

Scope: Feb 1, 2022 5:46:26 PM [Edit Scope](#)

Licensed Module	Licensed Unit	Licensed	Used	Used %	Remain	Rejected	Portal Version	Oracle Version	License Expiration
Storage Suite	Raw TB	Unlimited	0.00	0.00%	Unlimited	0	11.0.0.0.20220201053745	Oracle Database 19c Standard Edition 2 Release 19.0.0.0.0 - Production/Version 19.3.0.0.0	N/A
Protection Suite	FETB	Unlimited	0.00	0.00%	Unlimited	0	11.0.0.0.20220201053745	Oracle Database 19c Standard Edition 2 Release 19.0.0.0.0 - Production/Version 19.3.0.0.0	N/A

Note: 1 FETB(Front End Terabyte) = 2.5 clients conversion factor used to convert number of clients to FETB
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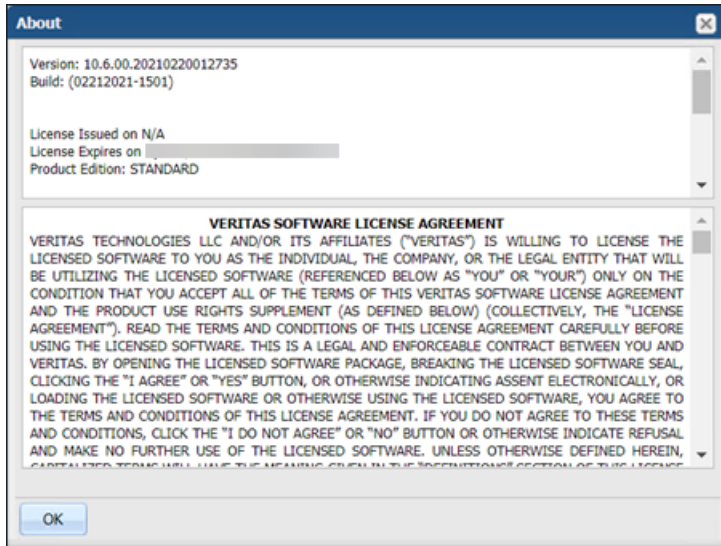
Using this report, you can drill down to additional details about counted objects.

Help About

Log in to the Portal as a Super User and in the Portal toolbar, select:

Help > About

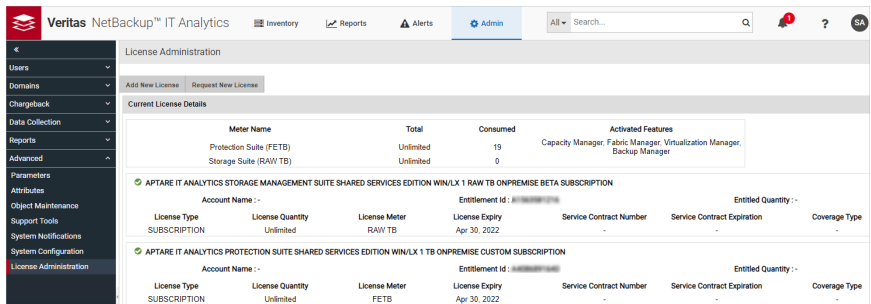
The license details are displayed.



Note: Users without Super User privileges cannot view the license configuration details. Only the end user license agreement is displayed.

View License Details

View license details—that is, the specific capabilities that are associated with the license that was purchased for your environment by navigating to **Admin>Advanced>License Administration**. Your current license details are displayed.



Consumption criteria of license suites

The license consumption for each suite is explained in their respective section. The component description explains how each client is counted.

License suites:

- [Storage suite](#)
- [Protection suite](#)
- [Complete suite](#)
- [Overview](#)

Storage suite

Storage suite comprises of licenses specific to the following components:

- Capacity Manager
- Fabric Manager
- Virtualization Manager. This component is common across all the three license suites and its license consumption criteria is explained under the protection suite.

The Storage suite uses RAW Terabyte as the meter to consume a license. The license consumption criteria for products specific to each component is explained in the sections below.

Capacity Manager

When licensing Capacity Manager, the license is based on the raw amount of SAN storage in your environment. NetBackup IT Analytics only includes arrays that have been polled within the last 30 days.

Storage Array Capacity license criteria

Note: The following description applies to most storage arrays, with the exceptions listed in the following section.

See [“Vendor-specific capacity license criteria”](#) on page 20.

Licensing is based on the raw capacity of storage arrays, for arrays that have been polled within the last 30 days. This capacity is the total capacity of all the physical disks in the storage array. If arrays are provisioning storage to other arrays and we

are capturing data from the source arrays, to avoid double-counting of capacity, only the capacity of the source arrays (not the recipient arrays) is counted toward licensing.

Vendor-specific capacity license criteria

The following vendor-specific descriptions list how raw capacity is calculated for certain specific vendors.

EMC Symmetrix Arrays

Sum of the capacity of all physical disks from all array groups--no spares. **Note:** When viewing raw capacity in EMC Control Center, disk group 0 (hot spares) is not included in the total capacity calculation--accounting for the difference between the EMC and Capacity Manager reported capacity values.

EMC CLARiiON Arrays

Sum of the capacity of all physical disks from all array groups--including spares (drives that are not allocated to an array group).

HDS Arrays

Sum of capacity of all PDEVs from all array groups. Capacity Manager assumes that all PDEVs are part of an array group, so PDEVs that are marked as--Not included in an array group--are included in the capacity calculation. That is, no disks are treated as spares.

NetApp Arrays

Sum of the capacity of all physical disks in the filer/array. For NetApp vFilers and V-Series, this represents only internal raw capacity and does not include vFiler capacity or gateway external capacity.

Fabric Manager

Counts licensed switch ports. For example, licensing checks if the switch has been licensed from the vendor, such as Brocade.

Protection suite

This license suite comprises of:

- Backup Manager

- Virtualization Manager
- File Analytics (required when adding as a NBU Policy)

The Protection Suite uses Front End Terabyte (FETB) as the meter for license consumption and the below conversion factor is used to convert number of clients to FETB:

1 FETB = 2.5 clients

The consumption criteria for each product of these components is explained in the sections below.

You can also configure Storage backup target policies along with policies under Data protection. Reports related to such Storage backup target are also available for Protection Suite license.

Backup Manager

A Backup Manager Unit License is required for each physical or virtual host that contains supported third-party backup software agent/server software. This includes, but is not limited to, primary servers, media servers, and clients. A Backup Manager Unit License is required for each of the logical instances, not just one license for the physical machine. In this discussion, client is synonymous with backup unit.

Cohesity DataProtect

- Counts unique objects such as datastores, resource pools, virtual machines, etc. that have had a backup job in the last 7 days.
- Counts unique clients for objects such as NAS, Directory and files that have had a backup job in the last 7 days.

Commvault Simpana

Client is counted if any of the following bullets apply:

- The client has one or more iDataAgents configured.
- The client was backed up (or had a backup attempt) within the last 7 days. This includes decommissioned clients.
- The client is a media server or a primary server.
- The client is a VM guest that has been backed up within the last 7 days. This includes decommissioned clients.

Dell EMC NetWorker Backup & Replication

- Counts unique objects such as datastores, resource pools, virtual machines, etc. that have had a backup job in the last 7 days.
- Counts unique clients for objects such as NAS, Directory and files that have had a backup job in the last 7 days.

Note: EMC NetWorker is documented based on vendor version number. Legacy versions of EMC NetWorker (pre version 9.2.1.x) are referred to as EMC NetWorker. For EMC NetWorker versions post 9.2.1.x, they are referred to as Dell EMC NetWorker Backup & Recovery. This is also reflected in the data collector policy names.

EMC Avamar

Client is counted if any of the following bullets apply:

- Avamar provided client data in the last 7 days. This includes decommissioned clients.
- It is an Avamar server
- The client is not in the Avamar MC_RETIRE domain

EMC NetWorker

Client is counted if any of the following bullets apply:

- The client resource is active
- The client was backed up (or had a backup attempt) within the last 7 days. This includes decommissioned clients.
- The client is a media server or a primary server.
- The client is a VM guest that has been backed up within the last 7 days. This includes decommissioned clients.

Generic backups

Client is counted if any of the following bullets apply:

- The client was backed up (or had a backup attempt) within the last 7 days. This includes decommissioned clients.
- For generic backups, only the jobs are captured.

HP Data Protector

Client is counted if any of the following bullets apply:

- The backup specification is active
- The client was backed up (or had a backup attempt) within the last 7 days. This includes decommissioned clients.
- The client is a media server or a primary server.

IBM Spectrum Protect (TSM)

Node's client is counted if any of the following bullets apply:

- The client is a media server or a primary server.
- The client was backed up (or had a backup attempt) within the last 7 days. This includes decommissioned clients.
- Counts all unique TSM clients for which any of the corresponding nodes on those clients have communicated with their TSM server/instance within the past 45 days (In TSM, this is NODES.LASTACC_TIME)

NAKIVO Backup & Replication

- Counts unique objects such as datastores, resource pools, virtual machines, etc. that have had a backup job in the last 7 days.
- Counts unique clients for objects such as NAS, Directory and files that have had a backup job in the last 7 days.

Oracle Recovery Manager (RMAN)

Counts unique databases listed in the Oracle RMAN recovery catalogs for which the database has had an Oracle RMAN backup job attempt within the last 90 days.

Rubrik Cloud Data Management

- Counts unique objects such as datastores, resource pools, virtual machines, etc. and files that have had a backup job in the last 7 days.
- Counts unique clients for objects such as NAS, Directory and files that have had a backup job in the last 7 days.

Veeam Backup & Replication

- Counts unique objects such as datastores, resource pools, virtual machines, etc. and files that have had a backup job in the last 7 days.

- Counts unique clients for objects such as NAS, Directory and files that have had a backup job in the last 7 days.

Veritas Backup Exec

Client is counted if any of the following bullets apply:

- Data was collected within the last 7 days.
- The client was backed up (or had a backup attempt) within the last 7 days. This includes decommissioned clients.
- The client is a media server or a primary server.

Veritas NetBackup

Client is counted if any of the following bullets apply:

- The client is part of an active backup policy and the policy exists in the NetBackup catalog (if deleted in NetBackup, the Portal does not count them).
- The client was backed up (or had a backup attempt) in the last 7 days. This includes decommissioned clients.
- The client is a media server or a primary server.

Virtualization Manager

Counts the number of VM servers.

Complete suite

This license suite comprises of products under Storage and Protection Suites, with an additional component of File Analytics. See [Storage suite](#) and [Protection suite](#) sections for respective license inclusions.

The criteria of license consumption of products under Storage and Protection Suites is explained above. The Complete Suite uses RAW Terabyte as a meter for license consumption. The consumption criteria of products included in File Analytics is explained in the subsequent sections.

File Analytics

Counts the total utilized capacity of all the shares and volumes. For NetBackup File Analytics, the count includes shares and volumes backed up by NetBackup.

Note: Once File Analytics data is collected, it cannot be removed from the license count.

Overview

The Foundation license enables only a limited set of features supporting only Veritas NetBackup and Veritas Backup Exec. This license being a Shared Services edition, it requires you to have your own Oracle license. The Foundation license uses Front End Terabyte (FETB) as the meter to consume a license. This license supports limited reports and alerts that are relevant to the Veritas NetBackup and Veritas Backup Exec policies.

Managing licenses

Data is collected either directly from individual enterprise objects, such as backup servers or storage arrays; or from a centralized system, such as Hitachi Device Manager or vCenter. There may be times when you no longer want to collect data from an object. You cannot simply delete that object, because the next time data collection retrieves data, the object will once again appear in your database. In most cases, objects must be excluded and then deleted; however, there are some exceptions. Use the guidance provided in the following sections to determine how to remove objects from license counts.

Managing objects collected from centralized systems

When collecting from a centralized system, such as Hitachi Device Manager or vCenter, NetBackup IT Analytics relies on the system to supply the information on the devices and resources that are available. For objects collected via a centralized system, there are two methods for removing collected objects:

- **Preferred Method:** Go to the Data Collector policy in the Portal and use the “Exclude” field to exclude objects from collection. For example, for Hitachi Data Systems, you would exclude arrays in the Data Collector policy. Similarly, for VMware, you would exclude ESX servers in the Data Collector policy. When you exclude objects through a Data Collector policy, NetBackup IT Analytics will automatically delete these objects from the reporting database.
- Alternatively, you can go to the centralized system and decommission the object. In this case, you must also delete the object from the NetBackup IT Analytics database.

See [“Removing objects from the license count”](#) on page 34.

See [“Deleting objects using the Inventory List view”](#) on page 36.

Managing directly probed enterprise objects

Many enterprise objects are probed directly to collect metadata. For objects that are probed directly, follow these steps to remove them from license counts:

- **Exclude from Collection:** If the object was captured during data collection, you will need to exclude it from collection so that future collections do not recapture the object.
See [“Exclude objects from future data collections”](#) on page 30.
For Backup Manager, you can go directly to the backup software and remove the client from the backup policy, according to the vendor’s instructions. In this case, you do not have to delete the object from the database.
- **Remove from License Count:** To remove a directly probed object from licensing consideration, you must delete the object via the Object Maintenance tool in the Portal.
See [“Removing objects from the license count”](#) on page 34.
See [“Deleting objects using the Inventory List view”](#) on page 36.

What happens to historical data?

Backup Manager operates differently from other products. Refer to the following section to determine the conditions under which backup clients are counted against your license. Typically, a client must be part of a backup policy or it must have been backed up recently, usually in the last 7 days.

See [“Consumption criteria of license suites”](#) on page 19.

Since Backup Manager involves transaction-based data rather than just object metadata, when an object is excluded from data collection, these time-sensitive transactions are retained for historical reporting.

All Other Licensed Modules, such as Capacity Manager and Virtualization Manager, do not keep historical data when objects are permanently deleted from the reporting database.

See [“Removing objects from the license count”](#) on page 34.

See [“What happens to historical data?”](#) on page 26.

Processes to manage license counts

Use the following strategies to determine how your licenses are being utilized and to work with the current license configuration.

- See [“Identify counted and excluded objects”](#) on page 27.
- See [“View the current license”](#) on page 29.

- See [“Delete clients”](#) on page 30.
- See [“Expand your license configuration”](#) on page 30.
- See [“Exclude objects from future data collections”](#) on page 30.
- See [“Removing objects from the license count”](#) on page 34.

Identify counted and excluded objects

- To list the objects that are being counted for licensing purposes, run the following utility:

Windows:

```
\opt\oracle\database\tools\debug\get_license_info.sql
```

Linux:

```
/opt/aptare/database/tools/debug/get_license_info.sql
```

- To list the clients that are not being included in reporting because the license limit has been exceeded, run the following SQL query:

```
select * from apt_rejected_object where is_obsolete != 'Y';
```

- To exclude objects that are not being included in reporting because the license limit has been exceeded, refer to the following section.
See [“Exclude objects from future data collections”](#) on page 30.

Stack multiple licenses

You can stack multiple licenses either from the Portal UI or through the command line.

To add a license from the Portal UI, follow the steps described in [Installing a License](#) section of this document. See [“Install a license”](#) on page 15.

To add a license from the command line, install using these OS-specific commands as applicable:

- On Linux:

```
/opt/aptare/utills/installlicenseUI.sh <path of the license file>
```

- On Windows:

```
C:\opt\aptare\utills\installlicenseUI.bat <path of the license file>
```

Note: When a permanent license is installed, any evaluation license that is installed will be removed.

Add license with higher entitlement

You can add licenses with higher entitlement either from the Portal UI or through the command line.

To add a license from the Portal UI, follow the steps described in [Installing a License](#) section of this document. See [“Install a license”](#) on page 15.

To add a license from the command line, install using these OS-specific commands as applicable:

- On Linux:

```
/opt/aptare/utils/installlicenseUI.sh <path of the license file>
```

- On Windows:

```
C:\opt\aptare\utils\installlicenseUI.bat <path of the license file>
```

Note: When a permanent license is installed, any evaluation license that is installed will be removed.

Change the license edition

NetBackup IT Analytics 11.3 does not allow adding a new license of a different edition than what is currently installed. To install a license of a different edition, you must remove the existing NetBackup IT Analytics 11.3 license and then install the new license.

To remove the current licenses, run these commands based on the OS:

- On Linux, execute this script as a root user.

```
/opt/aptare/utils/removeLicenseFiles.sh
```

- On Windows, execute this script as an administrator:

```
C:\opt\aptare\utils\removeLicenseFiles.bat
```

Portal behavior with stacked license suites

Protection or Complete suite over Foundation license

When Protection or Complete suite license is installed on top of a valid Foundation license, the Foundation license is deleted. Additional policies/capabilities will become available for configuration. Data collection from policies configured with the Foundation license remain unchanged, as they become a subset of either the Protection or Complete suite of license.

Foundation over Protection suite license

When the Foundation license is installed on top of an existing valid Protection suite license, the Protection suite license is deleted. Data collection from policies that are not available in Foundation license continues but reporting is suppressed. You must delete or disable the policies that are not supported by the Foundation license before switching the license. Also, you must restart the Tomcat portal and Tomcat agent user services to make the license change effective.

Foundation over Complete suite license

When a Foundation license is installed on top of an existing valid Complete suite license, the Complete Suite license is deleted. Data collection from Protection type of policies that are not available in the Foundation license continue until the license coverage but reporting is suppressed. Data collection from Storage type of policies is stopped as RAWTB is exhausted. You must delete or disable the policies that are not supported in the Foundation license before switching the license type. You must also restart the Tomcat portal and Tomcat agent services to make the license type effective.

Start Tomcat portal and Tomcat agent

On Linux:

- `/opt/aptare/bin/tomcat-agent restart`
- `/opt/aptare/bin/tomcat-portal restart`

On Windows, restart the Tomcat agent and Tomcat portal from the Windows Services console.

View the current license

See [“Verify the current license configuration”](#) on page 39.

Delete clients

For Backup Manager, if you purge clients, the table that tracks rejected clients automatically frees up the license slots so that other clients can be added. Use the host group management features to delete old clients.

Front End Terabyte (FETB) is used as a meter to calculate the licenses freed when the clients are purged. The below conversion factor is used to convert the number of clients to FETB:

1 FETB = 2.5 clients

Note: Clients decommissioned in the native backup product, via removal from all active backup policies, consume an NetBackup IT Analytics license until after 48 hours from the last backup.

Expand your license configuration

Purchase additional licenses to enable reporting for all objects to be collected. Contact Veritas Sales.

Exclude objects from future data collections

Two methods can be used to exclude objects from data collection, depending on the type of object to be excluded.

- See [“Configure the Data Collector policy to exclude the object”](#) on page 30.
- See [“Add objects to the Object Exclusion Database table”](#) on page 33.

Configure the Data Collector policy to exclude the object

Certain Data Collector Policies can be configured to exclude an object from data collection. This method should be used if it's available for the object you want to exclude.

- Exclude Arrays: EMC Symmetrix and Hitachi Data Systems
- Exclude ESX Servers: VMware
- Exclude Switches: Brocade

Example of configuring a Data Collector policy to exclude arrays

1. In the Portal, **Admin>Data Collection>Collector Administration**
2. Select a Collector and a relevant policy. For this example, Hitachi Block Storage is shown.

Hitachi Block Storage Data Collector Policy

Collector Domain:
 qaproduct80

Policy Domain:
 qaproduct80

Hitachi Device Manager Server:*

User ID:*

Password:*

Repeat Password:*

Exclude Arrays:

Active Probes

Array Details

Array Performance

HDT Collection

Schedules

Every day at 02:01

Every 15 minutes

HTnM Install Location:

Notes:

Enter one or more array names to be excluded. Comma-separated names are supported. Example:
 USPV_1@172.16.1.13, USPV_2@172.16.1.14.

OK Cancel Help Privacy Policy

3. If the object is already in the database, the object also will need to be deleted from the database in order to exclude it from the license count.

See [“Removing objects from the license count”](#) on page 34.

Add objects to the Object Exclusion Database table

To exclude objects (such as clients, ESX hosts, and arrays) from data collection, the object must be inserted into the `apt_exclude_object` table. If the object is already in the database, the object also will need to be deleted from the database in order to exclude it from the license count.

See [“Removing objects from the license count”](#) on page 34.

See [“Deleting objects using the Inventory List view”](#) on page 36.

1. Open a terminal to the Portal server (Linux) or a command prompt on the Portal server (Windows)

For Linux, `su - aptare`

2. Execute: `sqlplus <ID>/<password>`
3. Use the following SQL statement to view the exclude object table:

```
SQL> desc apt_exclude_object;
Name Null? Type
-----
DOMAIN_IDNOT NULLNUMBER(6)
OBJECT_NAMENOT NULLVARCHAR2(64)
CREATION_DATENOT NULLDATE
APTARE_PRODUCT_TYPENOT NULLNUMBER(2)
```

Note: For `APTARE_PRODUCT_TYPE` you will substitute one of the following numeric values in the command line execution of the procedure, listed later in these steps.

- Backup Manager = 1
 - Capacity Manager = 2 (used for Array objects)
 - Virtualization Manager = 4
 - Replication Manager = 8
 - Fabric Manager = 16
 - File Analytics = 32
4. Execute: `select domain_name, domain_id from apt_domain;`
This is to capture the domain ID, needed for subsequent script executions.

Typically, the domain ID will be 100000, however, in a multi-tenancy, Managed Services environment, the domain ID will be specific to the client's domain.

```
SQL> select domain_name, domain_id from apt_domain;
DOMAIN_NAME DOMAIN_ID
-----
CORP07 100000
```

5. Execute the following, substituting your specific values:

```
SQL> insert into apt_exclude_object (domain_id, object_name,
aptare_product_type, creation_date) values (100000, 'Array 123',2,
sysdate);
```

This step adds (inserts) this object into the object exclusion database table. For object_name substitution, use the name, such as the host or array name.

6. Repeat step 5 for all objects that need to be excluded from data collection.
7. After completing all the inserts, execute: **commit**;
8. If the clients are already in the database, you will need to delete them from the database so they will not be counted against your license.

See [“Removing objects from the license count”](#) on page 34.

Removing objects from the license count

To remove the object from the license count, you must completely remove the object and its data from the system.

Objects are maintained in the Inventory and Object Maintenance.

Use the following table to determine which area to use to delete the objects.

Table 1-4

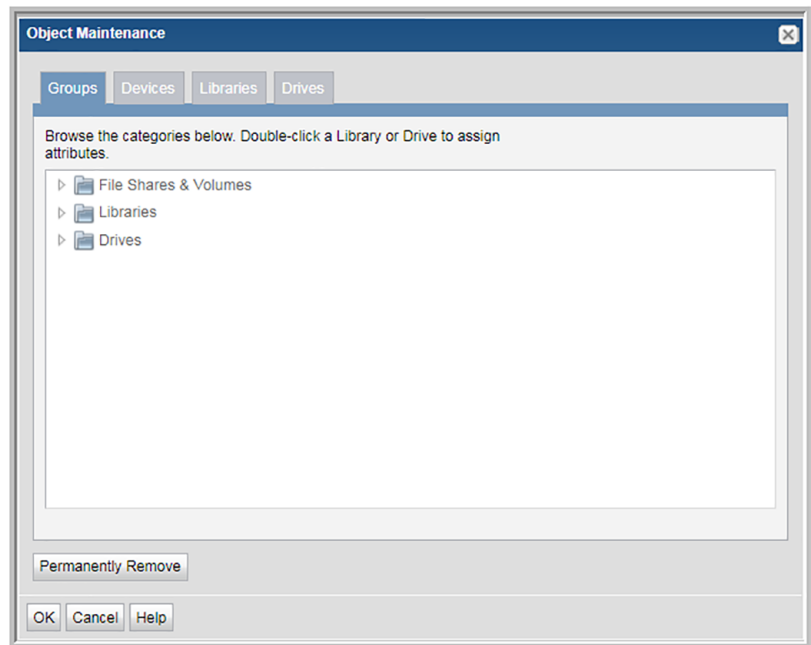
Object Type	Product Area for Management
Arrays	Inventory
Backup Servers	Inventory
Dedupe Appliances	Inventory
File Shares and Volumes	Inventory
Drives	Object Maintenance

Table 1-4 (continued)

Object Type	Product Area for Management
Hosts	Inventory
Libraries	Object Maintenance
Switches	Inventory
VM Servers	Inventory

To delete objects using Object Maintenance

- 1 Navigate to **Admin>Advanced>Object Maintenance**.



- 2 Locate the object to delete.
- 3 Select the object and click **Permanently Remove**.

As the button suggests, you are not just removing the object from the license count; you are completely removing it and any data collected from the system.

Deleting objects using the Inventory List view

If you choose to delete an **object** (if you have privileges) you are irretrievably deleting the object from the reporting database. All related historical data will also be permanently deleted from the database and unavailable in all reports. A pop-up window warns you of this action to prevent inadvertent deletions.

When you delete a host, it removes everything related to the host except the VM Server. To remove the related VM Server, you just explicitly delete it using the Inventory window. This prevents servers from being orphaned in the database.

In most cases, you should remove a host from a group, thereby un-linking it from its relationship with other machines in that group.

To delete objects using the Inventory

Note: VM Guests, individual LUNs, S3 Buckets, EC2 Instances, Azure Storage Accounts, Azure Virtual Machines and datastores cannot be deleted.

- 1 Select **Inventory**.
- 2 Select the object type category and expand to view.
- 3 Toggle to the **Inventory List** view.
- 4 Select an individual object or you can multi-select.
- 5 Click **Delete**. Remember all related historical data will also be permanently deleted from the database and unavailable in all reports. A confirmation dialog is displayed.

License management from command line

This chapter includes the following topics:

- [Overview](#)
- [Install a license on Microsoft Windows Portal platform](#)
- [Install a license on Linux Portal platform](#)
- [Verify the current license configuration](#)
- [Removing a Portal license](#)

Overview

As a best practice, install your license directly through the Portal. Alternatively, a command-line installation is available.

See [“Install a license on Microsoft Windows Portal platform”](#) on page 37.

See [“Install a license on Linux Portal platform”](#) on page 38.

Install a license on Microsoft Windows Portal platform

Receive and save the license file on your portal server and then complete all of the following steps.

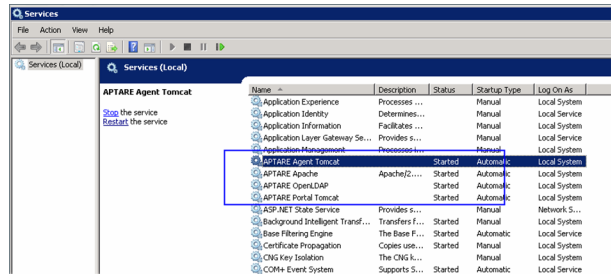
1. Ensure that the Oracle Processes are Running.

```
C:\opt\aptare\utils\startoracle.bat
```

2. Open a DOS command prompt window using **Start > Run > cmd**
3. Run the license installer utility: `C:\opt\aptare\utils\installLicense.bat`
4. Enter the complete path to the license key file you saved on your server when prompted for the name of the license file. A sample dialog is shown below:

```
Enter the name of the license file you wish to install [*.*.slf] :
C:\Users\Administrator\Documents\Slic\
A3351334429_QTY200_APTARE_ITA_10_6_COMPLETE_STANDARD_DR_LIC_NNL_4756411672.slf
Verifying license...
License installed
```

Verify that the services are running by viewing the Services panel:



5. Verify the License Installation.
 See [“Run license verification utility”](#) on page 40.

Note: After you apply a new license or when you remove an existing license, restart the Portal to display the changes.

Install a license on Linux Portal platform

Receive and save the license file on your portal server and then complete all of the following steps.

1. Ensure that the Oracle Processes are Running: Log in as **root** on your NetBackup IT Analytics Database server (the Database and Portal servers are usually the same physical server).

```
/opt/aptare/bin/oracle start
```

2. Run the Installation Script: Log in as **root** on your NetBackup IT Analytics Portal server.

```
/opt/aptare/utils/installlicenseUI.sh
```

3. When prompted for the name of the license file, enter the complete path to the license key file you saved on your server.

For example:

```
Enter the name of the license file
you wish to install [*.slf]: /opt/aptare/license.slf
Verifying license...
License installed.
```

4. Verify the license installation.

See [“Run license verification utility”](#) on page 40.

Note: After you apply a new license or when you remove an existing license, restart the Portal to display the changes.

Verify the current license configuration

There are a number of ways that you can validate your current license configuration.

- In the Portal, either run the License Summary report or see the Help About.
See [“Run the License Summary report”](#) on page 17.
See [“Help About”](#) on page 17.
- See [“Run report configuration utility”](#) on page 39.
- See [“Run license verification utility”](#) on page 40.

Run report configuration utility

Typically, you'll run this report when requesting a license key file so that you can include actual hostname or Host Lock String in your license request. If you already have installed the Portal software, run the following command and include the output in the email.

- Windows:

```
C:\opt\aptare\utils\reportconfig.bat
```

- Linux:

```
/opt/aptare/utils/reportConfig.sh
```

Sample Output:

```
Veritas Get Host Lock utility v1.0.0.0  
Copyright (c) 2021 Veritas Technologies LLC.  
All rights reserved.
```

```
FQDN: sclcplnx18vm17.rsv.ven.veritas.com  
Host Lock String: [sha512]8593c605127b368a9cde7158a704  
adcce15db165539adbdc7f8dafcf76bdf75cc3af0d3069c925a571  
d498d2d7b9cd2908441835891885ac3266768ca6d28efc
```

```
Veritas Get Host Lock utility v1.0.0.0  
Copyright (c) 2021 Veritas Technologies LLC.  
All rights reserved.
```

```
FQDN: myhost.mycompany.com  
Host Lock String:  
[sha512]8593xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxc3266768ca6d28efc
```

Run license verification utility

Typically, you will run this utility after you install the license key.

This utility connects to the database and then compares the counts and names of the licensed components with the values contained within the installed license key. For an evaluation license, the report will show the date/time that the license key will expire--that is, when the software will no longer function.

Log in as a user with super-user privileges and use the following utility to check the licensed components that are currently enabled in your environment.

Windows:

```
C:\opt\aptare\utils\verifyLicense.bat
```

Linux:

```
/opt/aptare/utils/verifyLicense.sh
```

The most important part of this report is the last section titled: VERIFYING LICENSE AGAINST CONFIGURATION. If this section is blank, there are no license violations and you have correctly installed the license and, in addition, the number of licensed components within the product matches the installed license key.

The LICENSE DETAILS portion of this report shows the specific capabilities that are associated with the license that was purchased for your environment.

Sample output:

```
===== LICENSE DETAILS =====  
  
Main Portal License:  
  
Path to license: c:\opt\aptare\portalconf\licenses  
License Issued on Jan 12, 2021 12:00:00AM IST  
Product Edition: STANDARD  
  
Licensed Modules:  
    Backup Manager is licensed  
    Capacity Manager is licensed  
Features:  
Max SAN capacity (TB): 300  
Backup Manager Capacity: 300  
  
Max SAN Ports: Unlimited  
Max File Analytics Utilization (TB): Unlimited  
Number of allowed vm servers: Unlimited  
  
Activation State: The license is active.  
===== REPORT COMPLETE =====
```

Removing a Portal license

To remove a portal license or to address issues while license installation, use the following steps to first remove the license and then reinstall.

Windows

1. On the Portal, shut down the data receiver by running:

```
C:\opt\aptare\utils\stopagent.bat
```

2. Shut down the Portal by running:

```
C:\opt\aptare\utils\stopportal.bat
```

3. Run the script to remove license files:

```
C:\opt\aptare\utils\removelicensefiles.bat
```

License removal screen is displayed.

Note: You can remove single/multiple/all licenses. Enter comma separated options to delete multiple licenses.

For example: In the below image, if you want to delete license with option 1 and 3 as displayed, specify **1,3** and then press Enter key.

4. Select the appropriate option(s) as displayed in the below screen.

```
C:\opt\aptare\utils>removeLicenseFiles.bat
List of license(s) found:
1. License Name: NETBACKUP IT ANALYTICS COMPLETE WIN/LX ONPREMISE STANDARD SUBSCRIPTION (expired)
   License Type: SUBSCRIPTION
   Entitlement Id: A6749928643
   License Expiry: Fri Sep 27 23:59:59 PDT 2024
2. License Name: NETBACKUP IT ANALYTICS PROTECTION SUITE WIN/LX 1 TB ONPREMISE STANDARD SUBSCRIPTION (expired)
   License Type: SUBSCRIPTION
   Entitlement Id: A7983572736
   License Expiry: Sat Aug 31 23:59:59 PDT 2024
3. License Name: NETBACKUP IT ANALYTICS STANDARD EDITION STORAGE MANAGEMENT SUITE WIN/LX 1 RAW TB ONPREMISE STANDARD SUBSCRIPTION (expired)
   License Type: SUBSCRIPTION
   Entitlement Id: A7633862288
   License Expiry: Wed Jul 31 23:59:59 PDT 2024
4. Delete expired license files.
5. Delete all license files.
6. Exit
```

Note: Once the task is completed successfully, ensure to **restart tomcat-portal service**.

Linux

1. On the Portal, shut down the data receiver.

```
/opt/aptare/bin/tomcat-agent stop
```

2. Shut down the Portal.

```
/opt/aptare/bin/tomcat-portal stop
```

3. Run the script to remove license files:

```
/opt/aptare/utils/removeLicenseFiles.sh
```

License removal screen is displayed

Note: You can remove single/multiple/all licenses. Enter comma separated options to delete multiple licenses.

For example: In the below image, if you want to delete license with option 1 and 3 as displayed, specify **1,3** and then press Enter key.

4. Select the appropriate option(s) as displayed in the below screen.

```
[root@ipun740-16-vm0 Downloads]# /opt/apptare/utils/removeLicenseFiles.sh
List of license(s) found:
1. License Name: NETBACKUP IT ANALYTICS COMPLETE WIN/LX ONPREMISE STANDARD SUBSCRIPTION (expired)
   License Type: SUBSCRIPTION
   Entitlement Id: A6740928649
   License Expiry: Fri Sep 27 23:59:59 IST 2024
2. License Name: NETBACKUP IT ANALYTICS PROTECTION SUITE WIN/LX 1 TB ONPREMISE STANDARD SUBSCRIPTION (expired)
   License Type: SUBSCRIPTION
   Entitlement Id: A7085572736
   License Expiry: Sat Aug 31 23:59:59 IST 2024
3. License Name: NETBACKUP IT ANALYTICS STANDARD EDITION STORAGE MANAGEMENT SUITE WIN/LX 1 RAW TB ONPREMISE STANDARD SUBSCRIPTION (expired)
   License Type: SUBSCRIPTION
   Entitlement Id: A7633862288
   License Expiry: Wed Jul 31 23:59:59 IST 2024
4. Delete expired license files.
5. Delete all license files.
6. Exit
```

Note: Once the task is completed successfully, ensure to **restart tomcat-portal service**.

Note: After you apply a new license or when you remove an existing license, the Portal takes about 30 seconds to display the changes.

Troubleshooting

This chapter includes the following topics:

- [License install fails with 'License is already issued for another host' error](#)

License install fails with 'License is already issued for another host' error

Sometimes, the NetBackup IT Analytics license installation fails with the below error:

```
License is already issued for another host.
```

This error is mainly observed on Linux-based systems.

To fix this error:

- 1** Ensure you enter the correct host string on the VEMS portal as displayed by the utilities, such as:

```
/opt/aptare/utlils/reportConfig.sh
```

or

```
/opt/aptare/utlils/VxLicGetHostLock.sh
```

The host string entered on VEMS must also include [sha512].

- 2** `reportConfig.sh` and `VxLicGetHostLock.sh` use `hostname --fqdn` command to get the hostname of the system and to create the host string.

Ensure `hostname --fqdn` returns a fully qualified host name. For example, the command output must have at least one dot (.) character.

- 3** If the host is not configured with DNS, ensure that `/etc/hosts` file on the system has the host resolution of the IP of the system with the fully qualified host name as the first entry (*<IP of the system> <FQHN of the system>*).

For example, a host with `abc` as host name and `xyz.com` as domain name:

```
1.2.3.4 abc.xyz.com
```