Field installation services

Configuring a cluster, bare metal imaging, and reimaging a node

Field installation services overview

Field installs using the bare-metal Foundation tool should be done by Professional Service or business partner. The Nutanix Foundation tool version 3.0.5 or later can be used to install and configure the appliances. Every appliance from the factory has the CVM-based Foundation tool. In some circumstances, using the bare-metal Foundation tool to reimage the node may be required.

A node may report a failure during the Foundation installation process if a remote console session is simultaneously open to the TMM, IMM, or LXCC. The following error message is reported in the Foundation log for the node that failed:

```
20160203 233208: Command 'sudo /home/nutanix/foundation/lib/bin/asu/rdcli-
x86_64/rdumount 12750' returned error code 255
```

In the event that a node cannot be installed (and it should wait until other nodes have finished imaging) close any open TMM, IMM, or LXCC console sessions, and then select the **Retry imaging failed nodes** option to reimage the failed nodes.

The details can be found in the *Nutanix Field Installation Guide – Foundation 3.8*. Refer to the "Helpful links" section for a list of more resources.

Users need to register with the Web site before they are allowed access to the guide.

> **Note:** Field installation services is include by contract for Lenovo ThinkAgile HX Certified Nodes.

Lenovo

Configuring a cluster (Foundation)

The prerequisite for this procedure is to have three or more nodes with functioning CVMs. The most common case is a node that is shipped directly from the factory is networked and powered on. Access to the TMM, IMM, LXCC is not required although it is recommended that you network the TMM, IMM, or LXCC into a 1-GbE switch.

All of the nodes should be connected to the same 1-GbE or 10-GbE switch. The Nutanix discovery applet runs to find the available nodes using an IPv6 scanning mechanism. One node is selected and the Foundation is invoked. The user can configure the cluster and has the option of deploying a different hypervisor if needed. The most common case is to deploy ESXi instead of the factory default of AHV. The BMC IP address can also be configured at this time.

The imaging process first images one node and then that node will image the remaining nodes in parallel. Parallel imaging is limited to 20 nodes at a time so larger clusters will take more time to image.

The details can be found in the *Nutanix Field Installation Guide – Foundation 3.8*. Refer to the Chapter 2 "Creating a Cluster" section for a list of more resources.

Bare metal imaging (Foundation)

"Bare metal" nodes are those that are not factory prepared or cannot be detected through discovery.

The pre-requisite for this procedure is that one or more nodes need to be connected to a separate server or services technician's notebook computer that is running the Foundation VM. The Foundation VM is deployed into a hypervisor using the OVF format. Foundation requires an ISO image for the target hypervisor and a tarball for the target Acropolis version. The Foundation VM server needs connections to both the BMC and a 1-GbE or 10-GbE network port on each node being imaged. The IMM port is required due to its virtual media load capability through the OneCLI Utility rdmount. All of the target nodes are re-imaged in parallel.

The details can be found in the *Nutanix Field Installation Guide – Foundation 3.8*. Refer to Chapter 3 for a list of more resources on both setting up the Foundation VM and then using it to install and configure bare-metal nodes.

Lenovo

Reimaging a node (Phoenix)

This procedure is used to reimage a node when Foundation is not a viable option. One such case is when the boot drive has been replaced, but the data drives are still intact and need to remain intact.

The first step is to reinstall the hypervisor onto the boot drive by connecting to the TMM, IMM, or LXCC and using the virtual media load. When the node is rebooted, the hypervisor is configured and installed.

The second step is to perform a virtual media load of the GUI version of Phoenix which is used to install the CVM. The system restarts one more time and the CMV resurrects the node with the data intact.

The details can be found in the *Nutanix Field Installation Guide – Foundation 3.8*. Refer to Appendix "Imaging Lenovo Converged HX Series Nodes" for the Lenovo-specific procedures.