MANTLE 2.0

Virtual Network Builds Quick Start Guide

VMware ESXi + Cisco CSR1000v / Catalyst 8000v

REQUIRED ASSETS
- Approved Cisco virtual device OVA (CSR1000v or Catalyst 8000v).
- Virtual network device template used during deployment/configuration.
- ESXi installer ISO and any supporting vCenter ISO required for your workflow.
- Validated platform versions, licenses, and template selections.

REQUIRED BUILD INPUTS
- ESXi host IP, hostname, credentials, subnet, gateway, DNS, NTP, VLAN, and MTU values.
- PXE server address and datastore name for the target host.
- Port group to physical NIC mapping for the site or kit.
- Any BIOS serial-console settings or extra kickstart commands needed for the build.

Workflow at a glance

The build form is the source of truth for ESXi provisioning, networking, and virtual device placement.

WHAT MANTLE HANDLES
- Installs and configures ESXi on the target server.
- Builds vSwitches, port groups, and VMkernel interfaces from form inputs.
- Deploys the selected Cisco OVA and applies the associated network template.
- Tracks execution progress and exposes final artifacts for review.

WORKFLOW AT A GLANCE
- Upload required assets.
- Start a new Virtual Network Build.
- Complete the ESXi and device configuration forms.
- Review, deploy, power on the server, and watch the logs until Success.

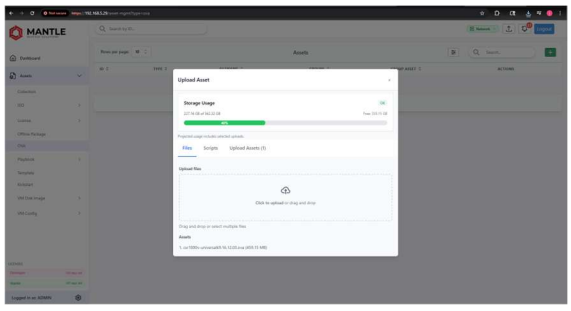
Virtual Network Build

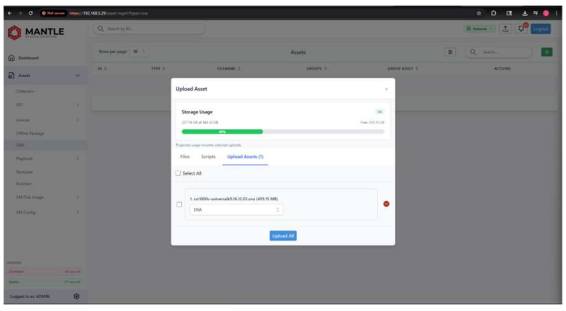
Prepare the asset library before starting a build.

Step 1 - 7 — Upload the OVA, network template, and required ISOs.

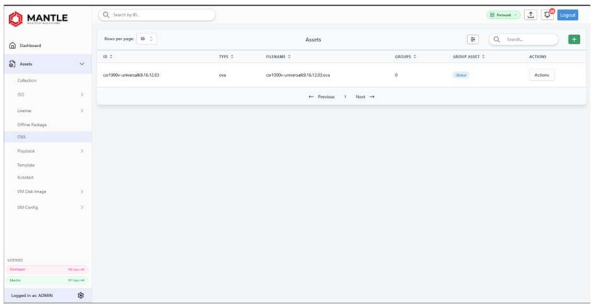
Open Assets, use the upload workflow, and verify each item appears in the library before continuing.

USE THIS PAGE TO
- Upload the approved Cisco OVA.
- Upload the matching virtual network template.
- Upload the ESXi and vCenter ISOs with the correct asset type selected.
- Confirm each asset lands in the table before starting the build.



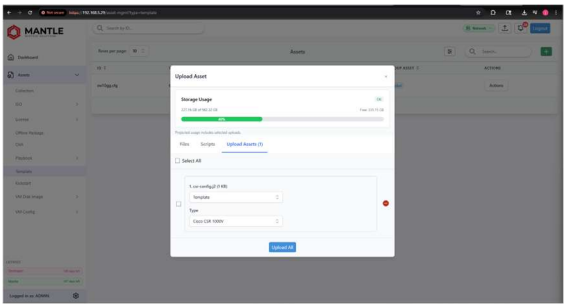


Select the OVA file from the upload dialog.

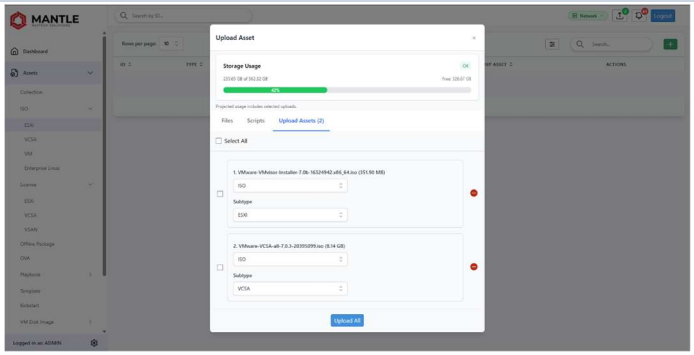


Verify the OVA appears in the Assets table.

Choose the OVA asset type and start the upload.



Repeat the process for the network template.



Upload the ESXi and vCenter ISOs with the correct ISO type.

Virtual Network Build

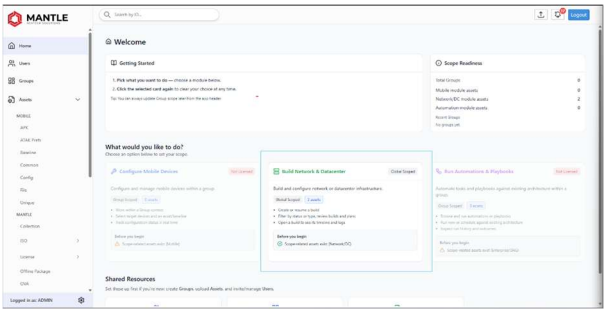
Launch a new build and choose the virtual network path.

Step 8 - 12 — Start a new build and choose the source and BIOS options.

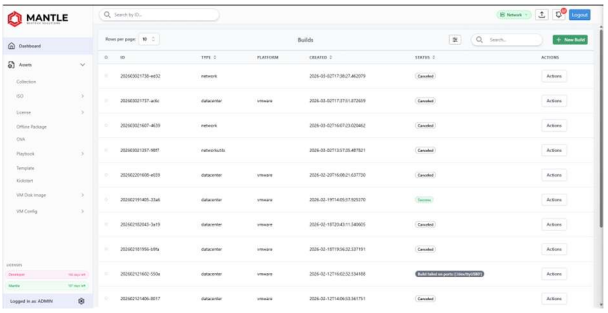
Move from the dashboard into Build Network & Datacenter, then create a new Virtual Network Build and set the initial form options.

USE THIS PAGE TO

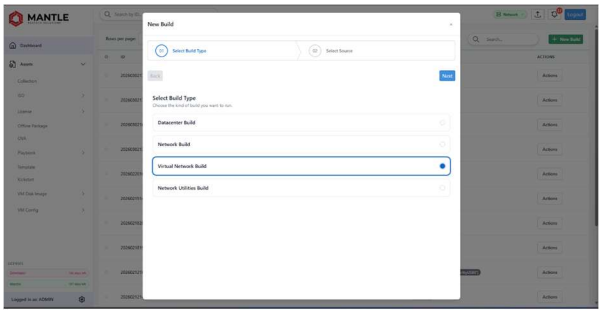
- Open Build Network & Datacenter from the dashboard.
- Create a new build and choose Virtual Network Build.
- Select New, From JSON, or a prior build source as appropriate.
- Set the target device and BIOS serial-port automation options, or disable BIOS when it is not needed.



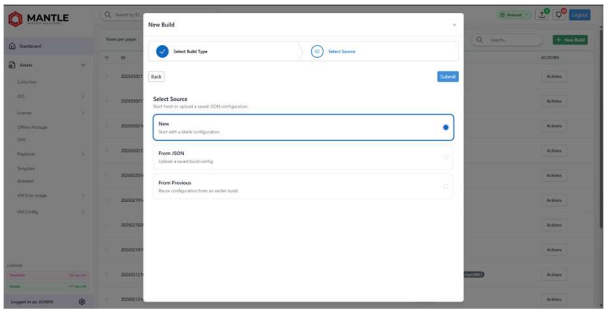
Open Build Network & Datacenter from the dashboard.



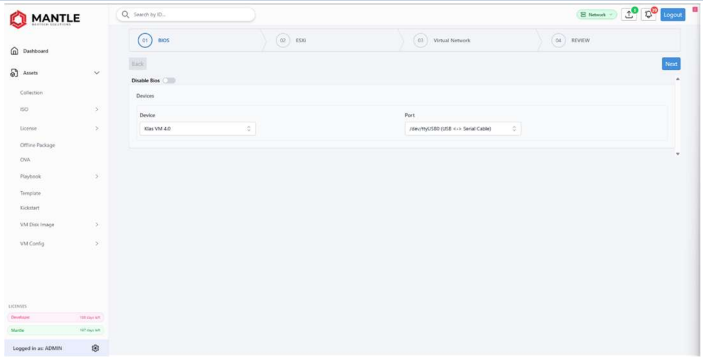
Click + New Build from the Builds view.



Select Virtual Network Build and continue.



Choose New, From JSON, or a previous build source.



Set the device type and BIOS automation settings.

Virtual Network Build

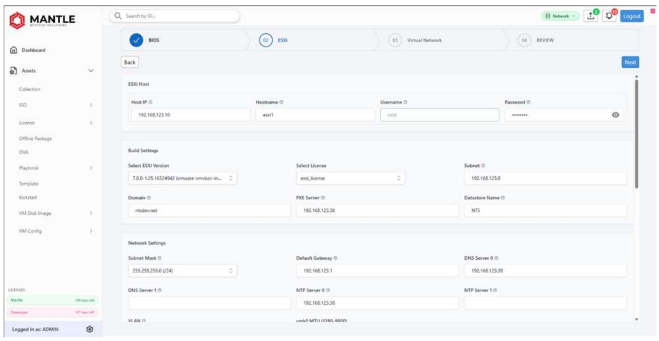
Complete the ESXi section before moving to device deployment.

Step 13 — Complete the ESXi host, networking, and vSwitch sections.

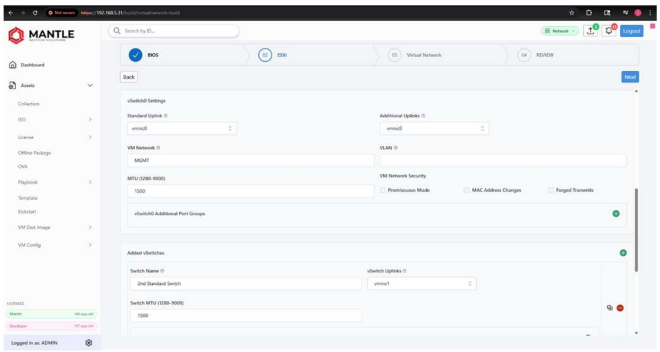
Populate the ESXi form with host identity, provisioning values, management networking, uplinks, port groups, VMkernel adapters, and any optional kickstart customizations.

HAVE THESE VALUES READY

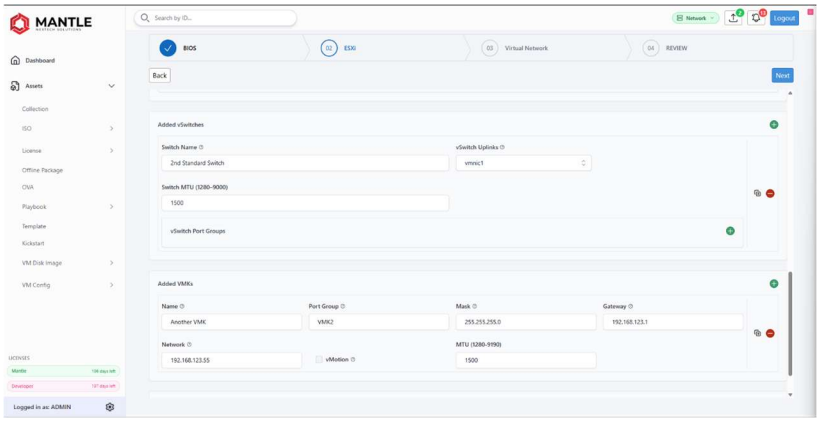
- Host IP, hostname, username, and password for the ESXi target.
- ESXi version, license selection, PXE server, subnet, domain, and datastore name.
- Gateway, DNS, NTP, VLAN, and vmk0 MTU settings for management reachability.
- vSwitch uplinks, additional port groups, VMKs, and any extra kickstart commands required for the site.



Enter the ESXi host identity and shared build settings.



Define management networking, vSwitch0, and additional port groups.



Add extra vSwitches, VMKs, and optional kickstart commands as needed.

Virtual Network Build

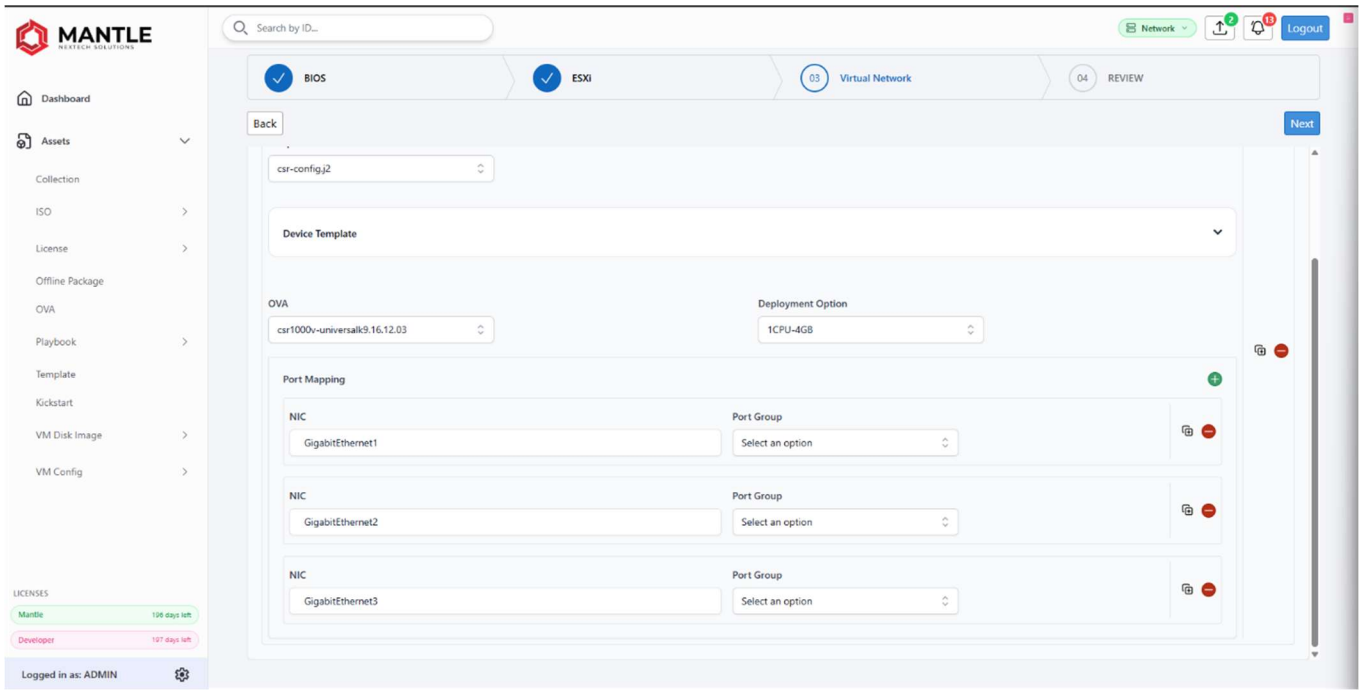
Map the virtual device onto the ESXi networking you defined.

Step 14 - 18 — Select the device, template, OVA, and port mappings.

Move into the Virtual Network configuration form, choose the approved device package, and map each VM interface to the correct ESXi port group.

CONFIRM BEFORE YOU CONTINUE

- Select the correct device type and matching network template.
- Choose the approved OVA and deployment option for the site.
- Map every internal VM port to the intended VMware port group.
- Review the mappings carefully before leaving this form.



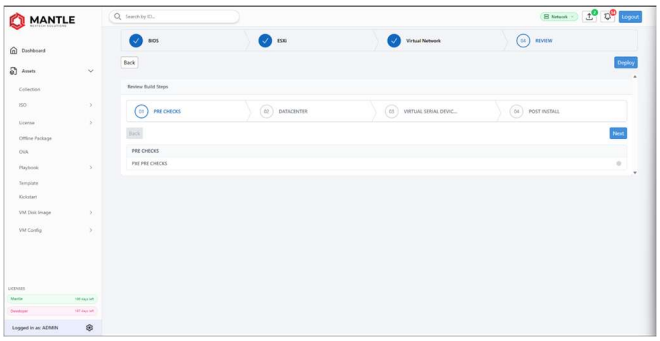
Complete the Virtual Network configuration form and map the VM ports to the correct port groups.

Virtual Network Build
Validate the workflow, deploy it, and begin host provisioning.

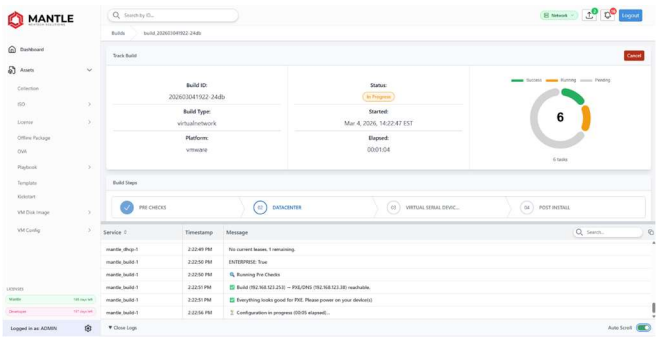
Step 19 - 22 — Review the build, deploy it, and power on the server.

Use the review page to validate the workflow, then deploy the build, watch Track Build open, and power on the target server so PXE and ESXi automation can begin.

USE THIS PAGE TO
- Walk through Review Build Steps and confirm the workflow looks correct.
- Click Deploy to start the Virtual Network Build.
- Wait for Track Build to open and begin reporting progress.
- Power on the target server to start the automated deployment.



Review the build steps and deploy the workflow.



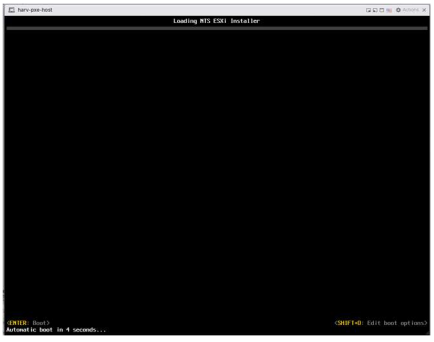
Track Build opens and begins showing live status as the server is powered on.

Virtual Network Build
Observe the host console while ESXi installs.

Step 23–24 — Watch ESXi installation begin and ignore expected warning dialogs.

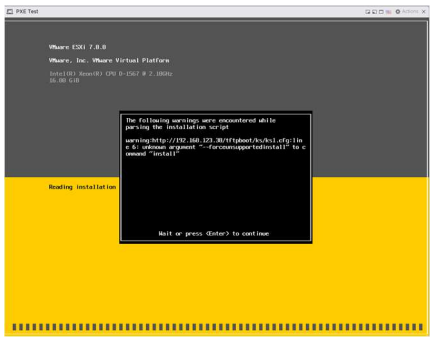
During deployment, the console will move through the custom ESXi install and may show warning screens that are expected for this workflow.

IMPORTANT REMINDERS
- These installation warnings are expected and can be ignored for this workflow.
- Do not assume the build is complete just because the host is progressing through the installer.
- Keep watching Track Build and the host console until Mantle reports final status.

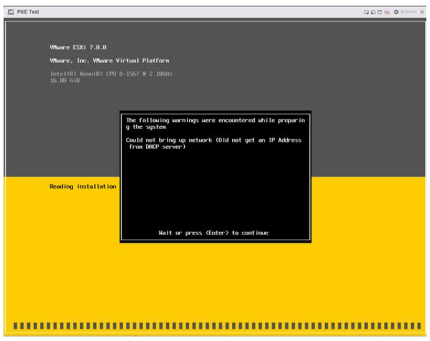


The custom ESXi installer begins on the host console.

Example warning screen during the installation process.



Additional expected installer dialog.



Another harmless warning encountered during install.

Virtual Network Build

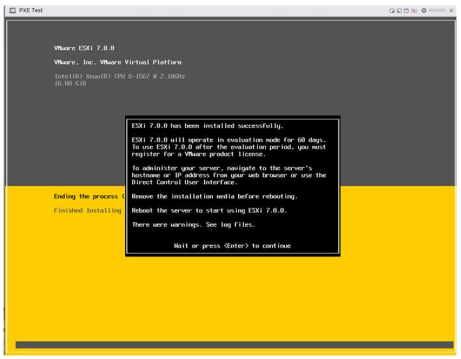
Wait through the reboot and return to the Mantle logs.

Step 25 - 27 — Let the host reboot, watch the DoD banner, and keep tracking the logs.

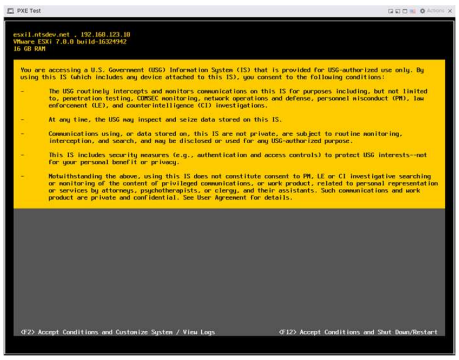
A reboot at the end of ESXi installation is expected, but the overall Virtual Network Build is not complete until Mantle finishes the remaining automation.

WAIT FOR THESE MILESTONES

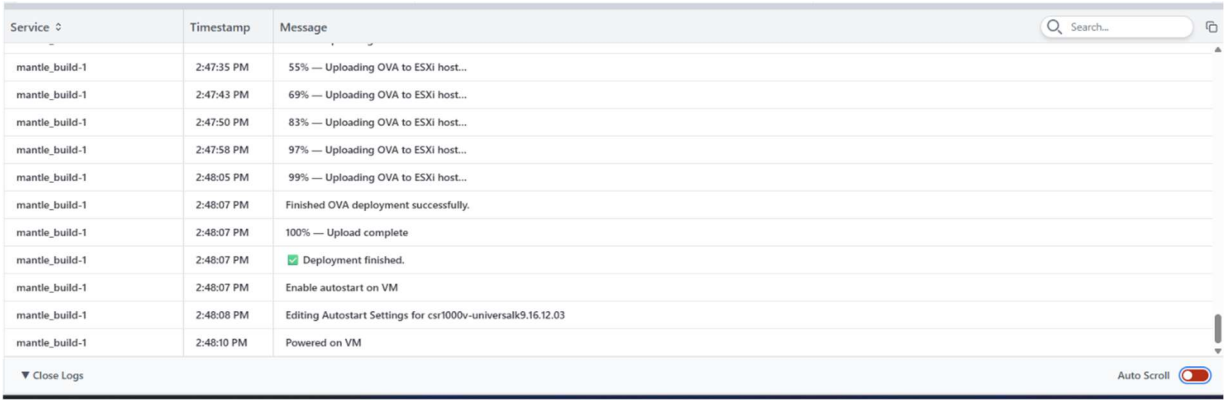
- Allow ESXi to reboot after installation without treating it as final completion.
- Expect the DoD security banner during the later stages of the workflow.
- Use the Mantle logs to watch the remaining deployment tasks continue.



The host reboots after ESXi installation finishes.



The DoD security banner appears near the end of the build.



Mantle logs continue to show the current deployment progress.

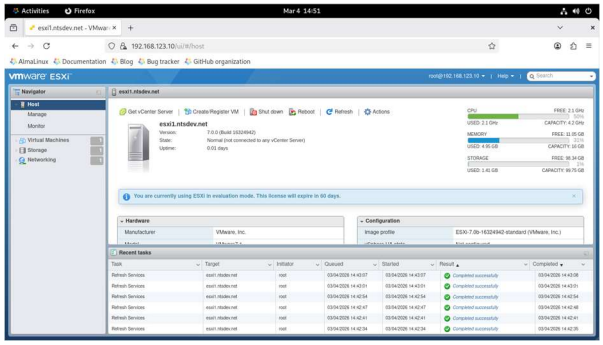
Virtual Network Build
Access ESXi and validate the deployed virtual device.

Step 28 - 29 — Log into the host, review the deployment, and verify the VM console.

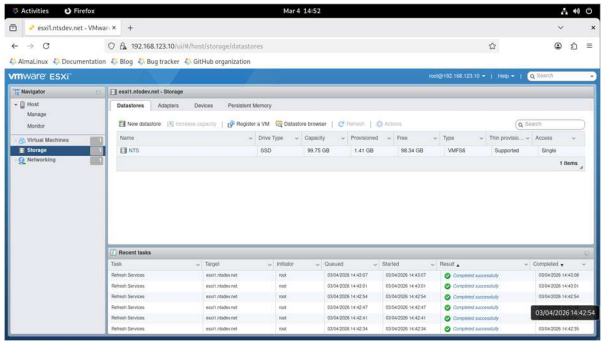
Once ESXi is reachable, you can inspect host activity in vSphere and open the deployed virtual machine console to confirm that configuration is taking place.

LOOK FOR THESE CHECKS

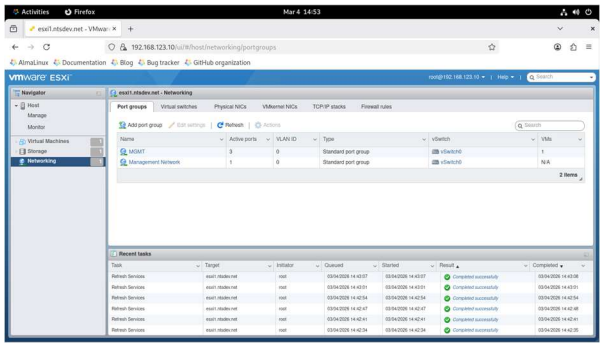
- Confirm ESXi host access is available after management networking comes online.
- Review host inventory and task activity while Mantle continues the workflow.
- Open the deployed virtual machine console to verify the device was instantiated and configured.



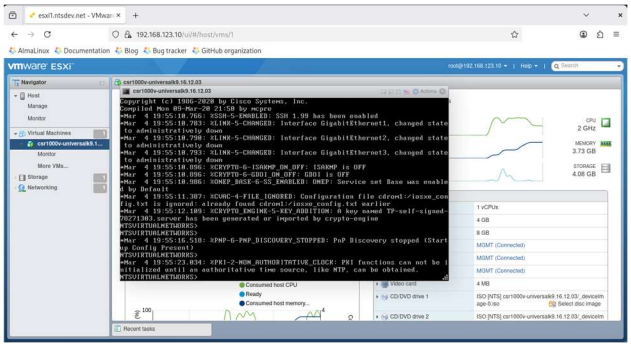
Access the ESXi host once it becomes reachable.



Review the host inventory and deployment activity.



Continue checking host-side progress and VM state.



Open the deployed VM console to verify configuration output.

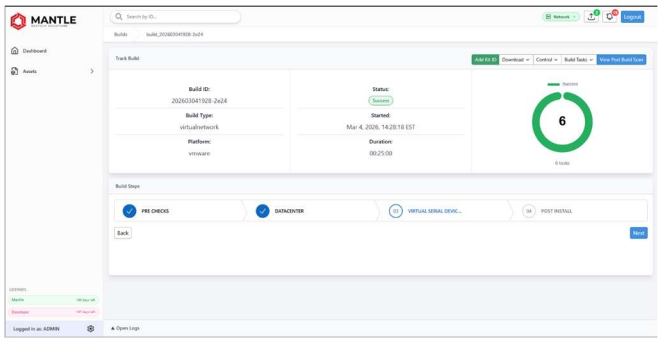
Virtual Network Build
Confirm success, collect artifacts, and run any follow-on actions.

Step 30 - 33 — Wait for Success, download artifacts, and open post-build actions.

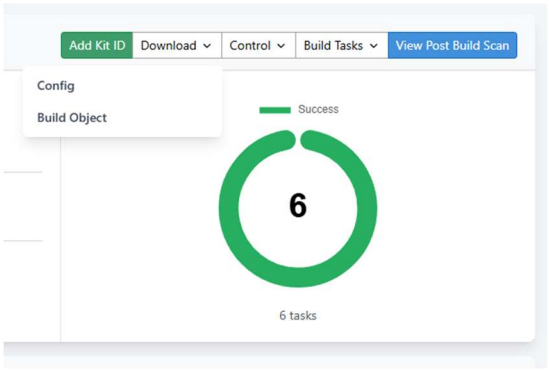
The build is complete only when Mantle marks it Success. From the final screen, you can download artifacts, launch playbooks, and open the post-build scan for review.

FINAL ACTIONS

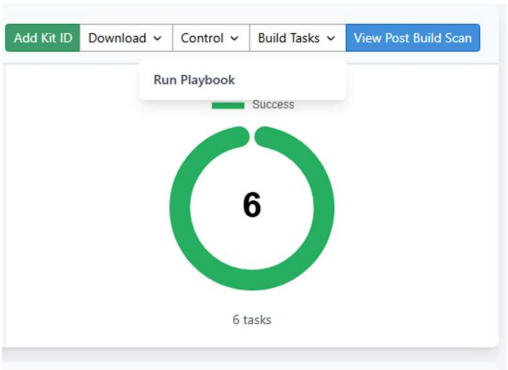
- Wait for the build status to turn green and read Success.
- Download the Mantle configuration file or Build Object for review and support workflows.
- Run playbooks only when the build requires follow-on automation.
- Open View Post Build Scan to review the completed build details.



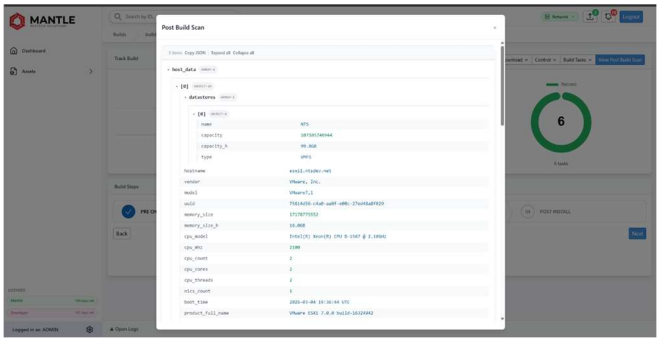
Mantle marks the workflow Success when the build is complete.



Use Download to collect the build config or Build Object.



Use Build Tasks to run playbooks when required.



Open View Post Build Scan to review the completed build details.