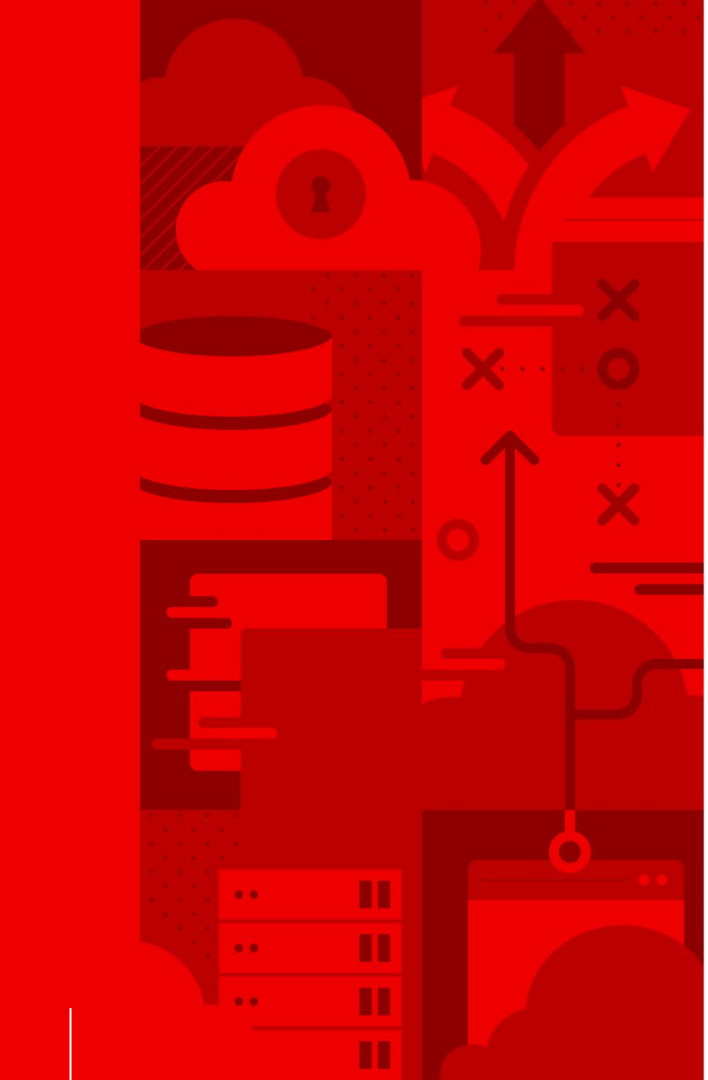

Migration Toolkit for Virtualization

DevConf.CZ

November 3, 2022

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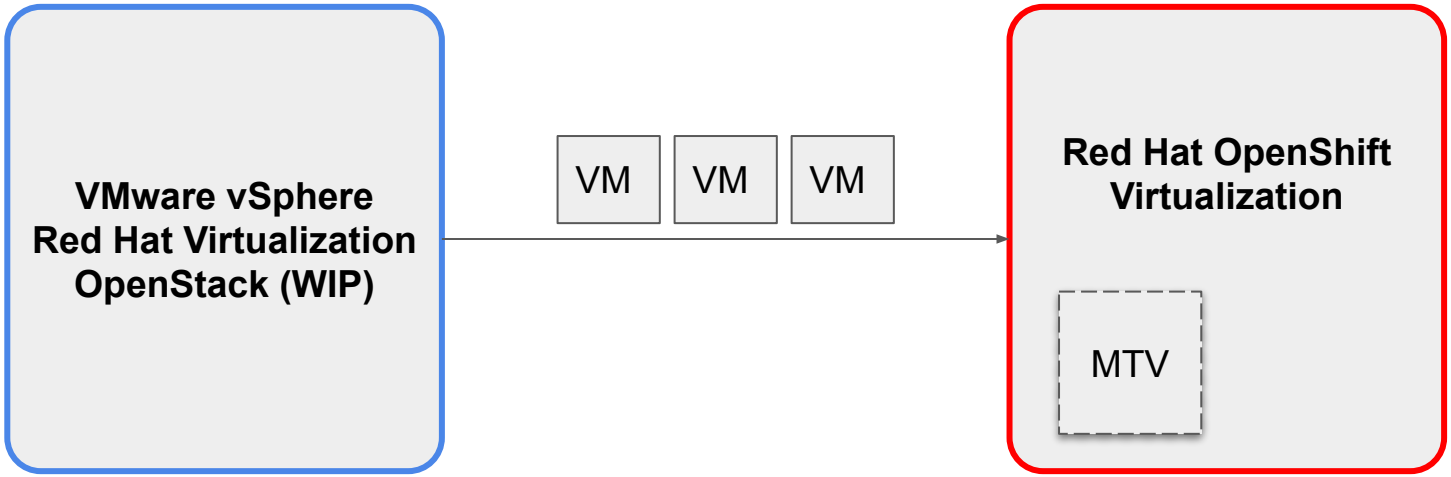
Migration Toolkit for Virtualization

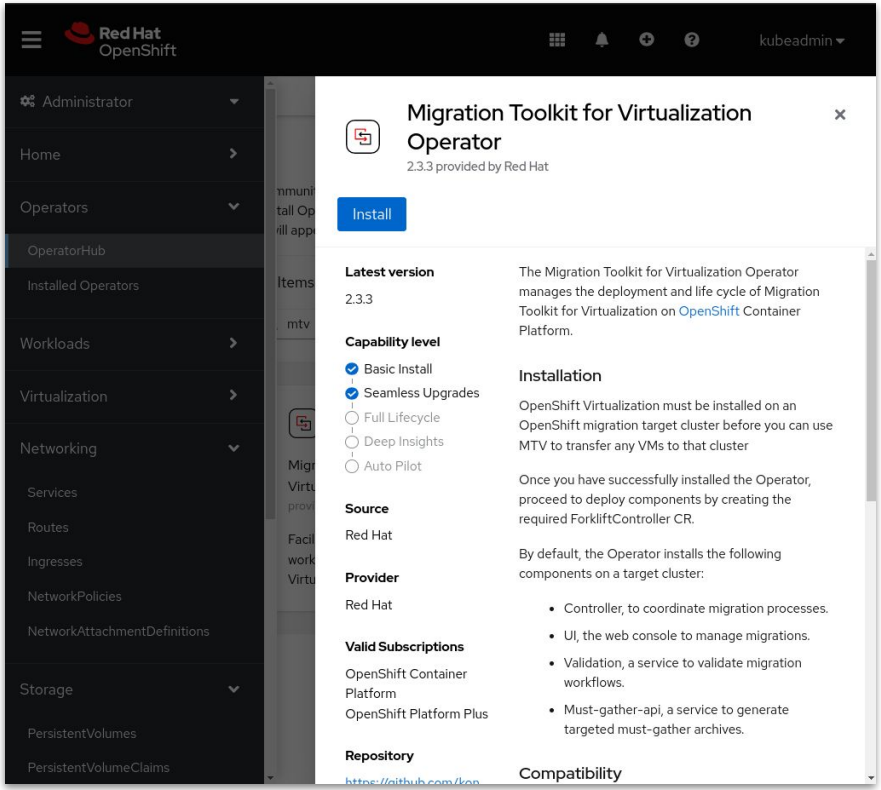
Forklift

https://github.com/kubev2v/forklift

Migration Toolkit for Virtualization



Installation



- The MTV can be installed from OperatorHub
- Managed by Operator Lifecycle Manager
- Installed CRDs
  - Provider - RHV/VMware/CNV
  - NetworkMap
  - StorageMap
  - Plan
  - Hook
  - Migration

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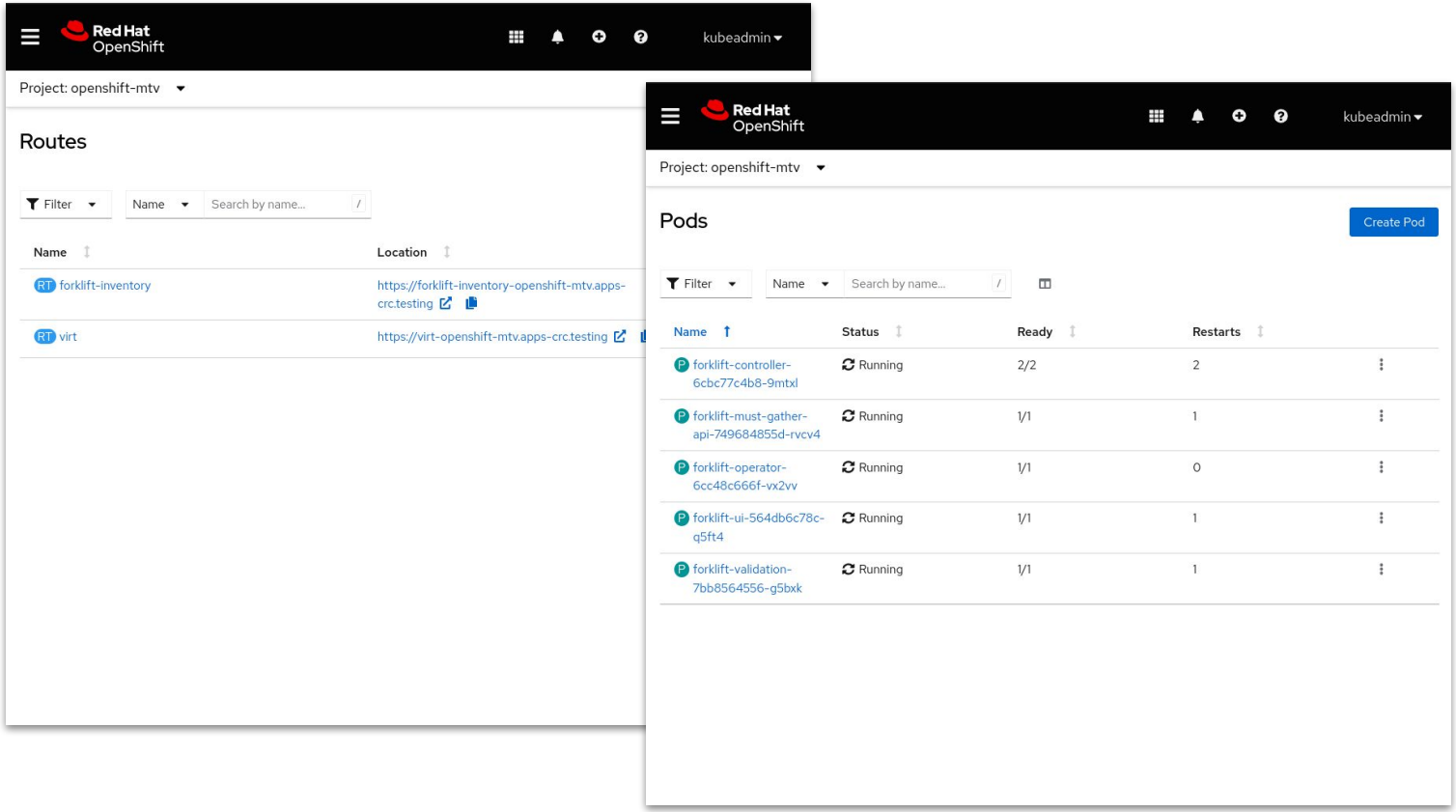
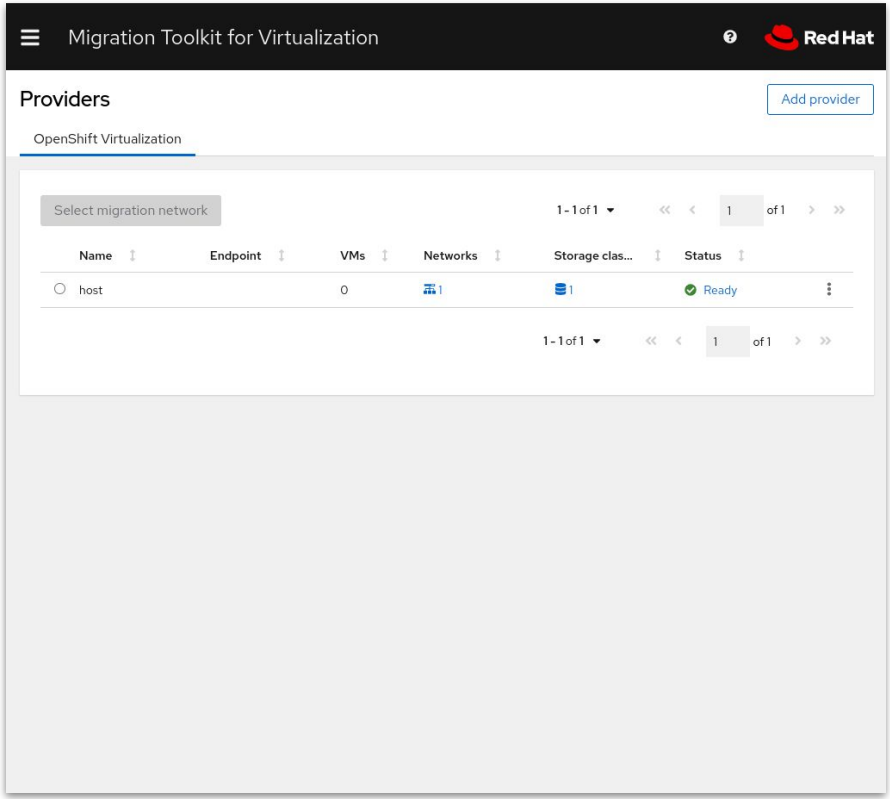
Installation

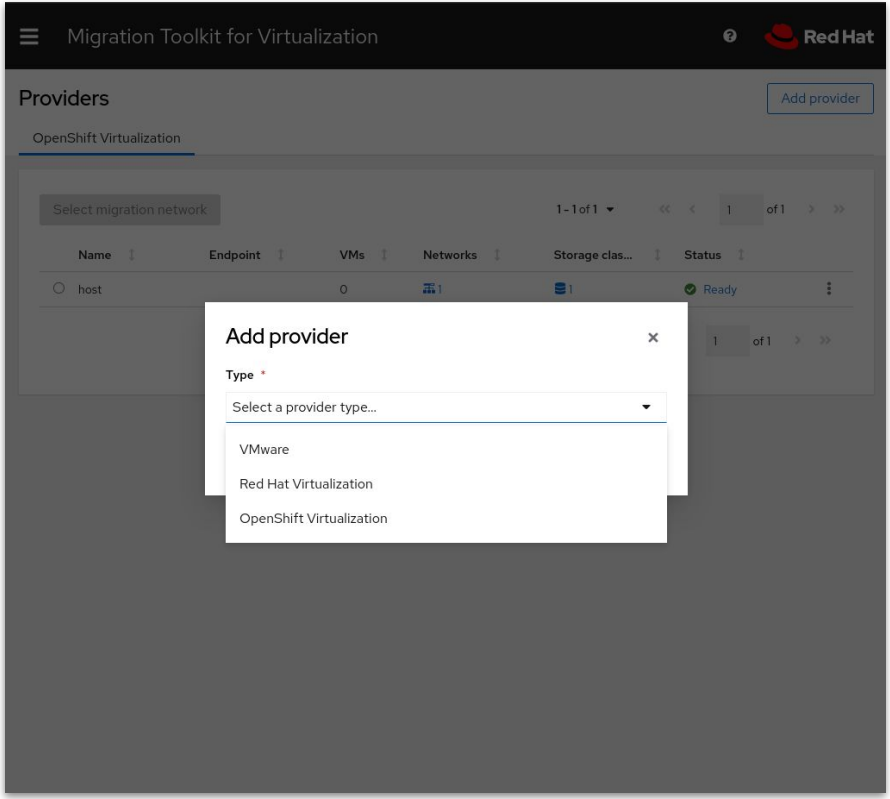


Usage



- Main page for adding providers
- The OpenShift cluster needs to have already configured storage and networking

Adding provider



- VMware and RHV are migration **sources**
- OpenShift Virtualization is migration **target**
  - Can be a different OpenShift cluster

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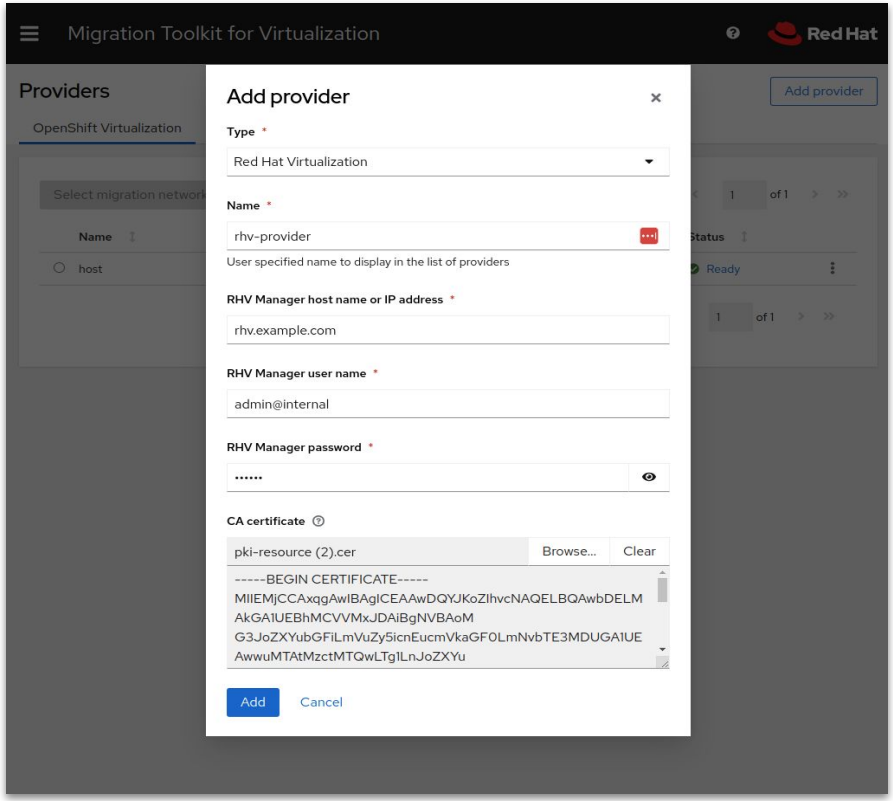
Adding a provider



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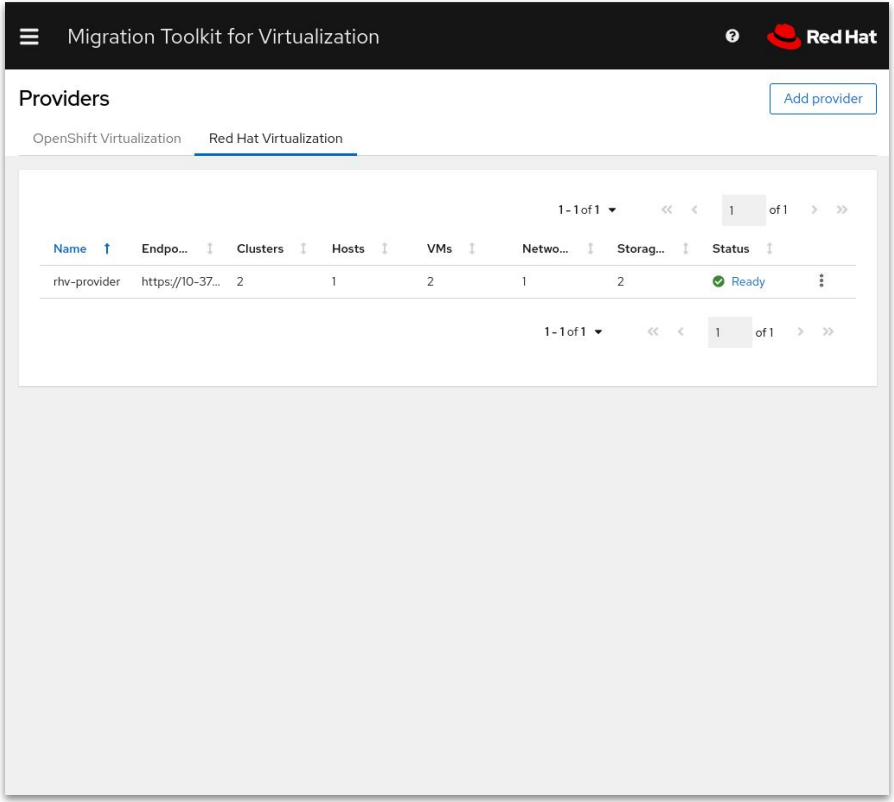
Gathering information



- Validating the provider is ready for migration
- Gather all information about provider
  - Cluster
  - Hosts
  - VMs
  - Networks
  - Storages

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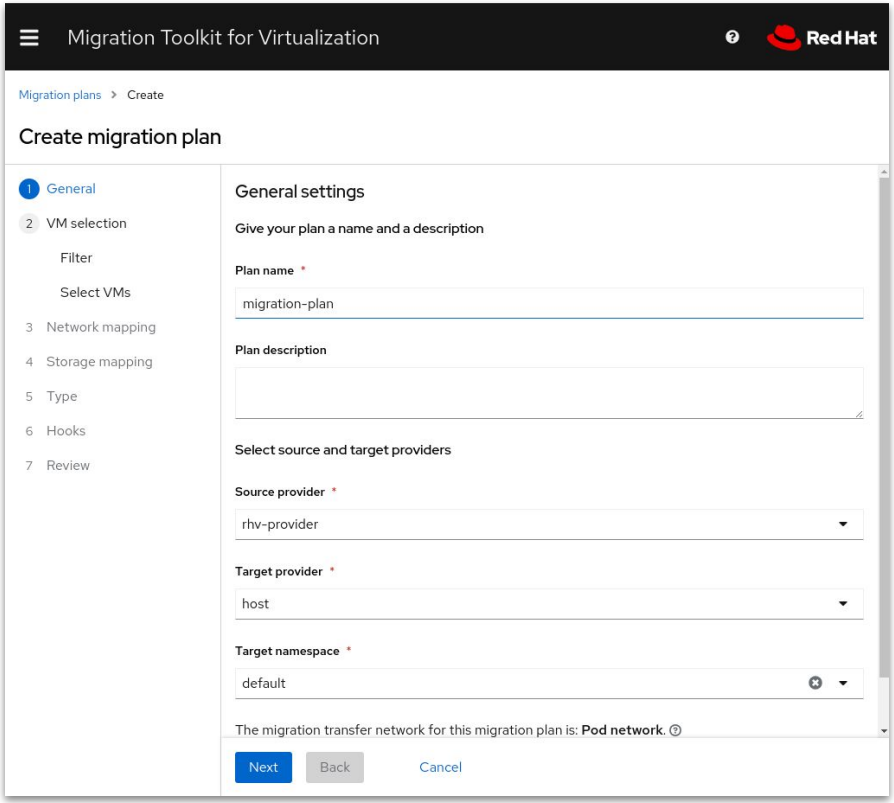
Adding a migration plan



- Source provider
- Target provider
- Target namespace
  - The namespace in which the VMs should be defined in the target OpenShift cluster

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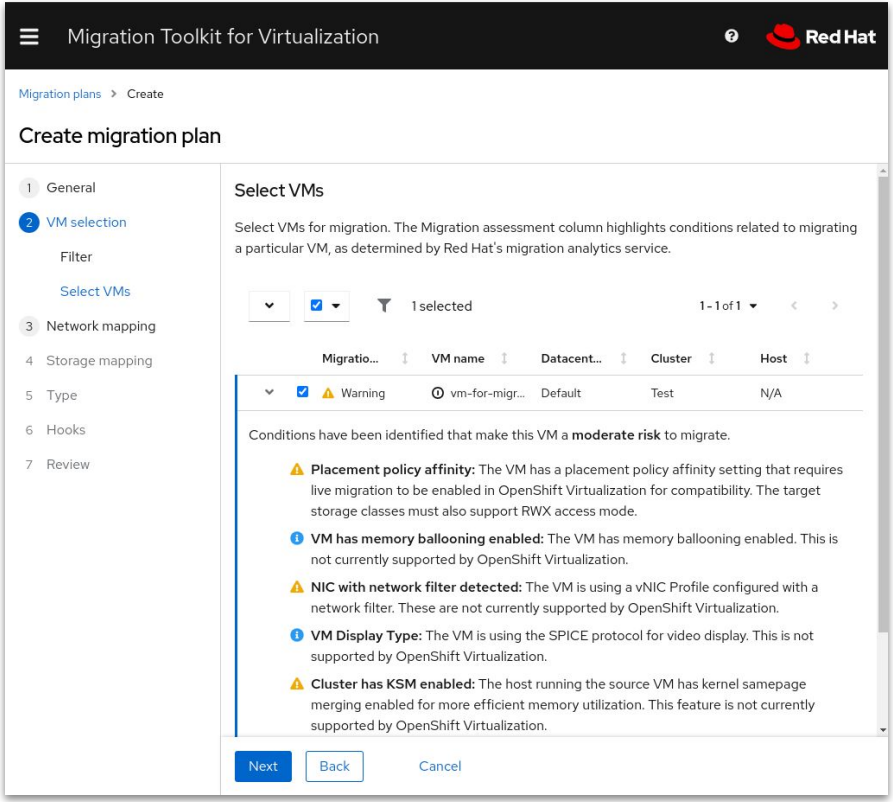
Validation



- Open Policy Agent
- Prespecified rules to inform you about the VMs
  - Check if the migration is possible
  - Show what can change during migration or limitations

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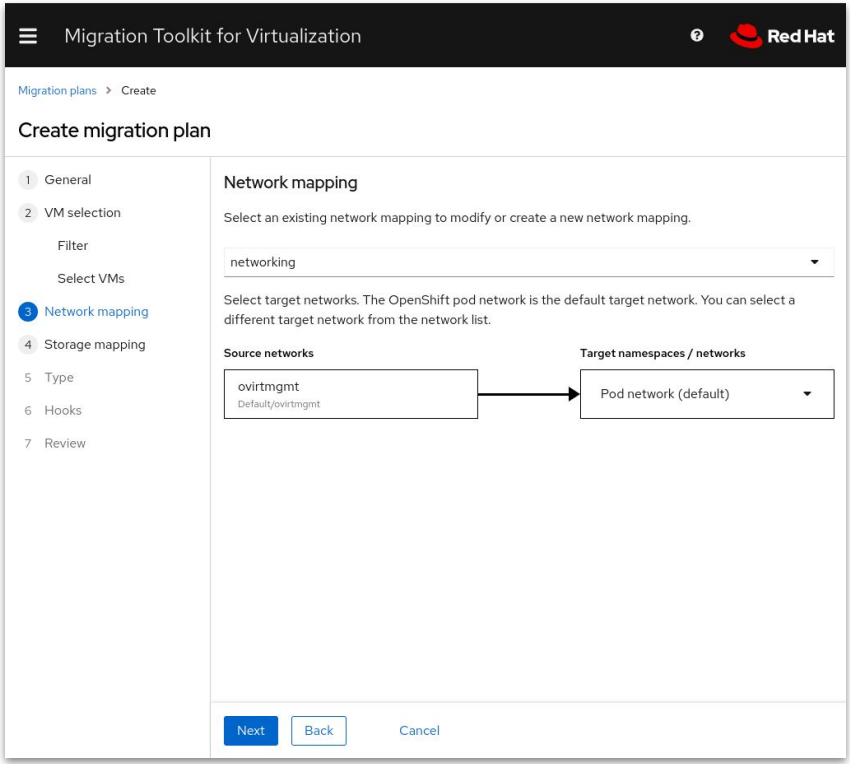
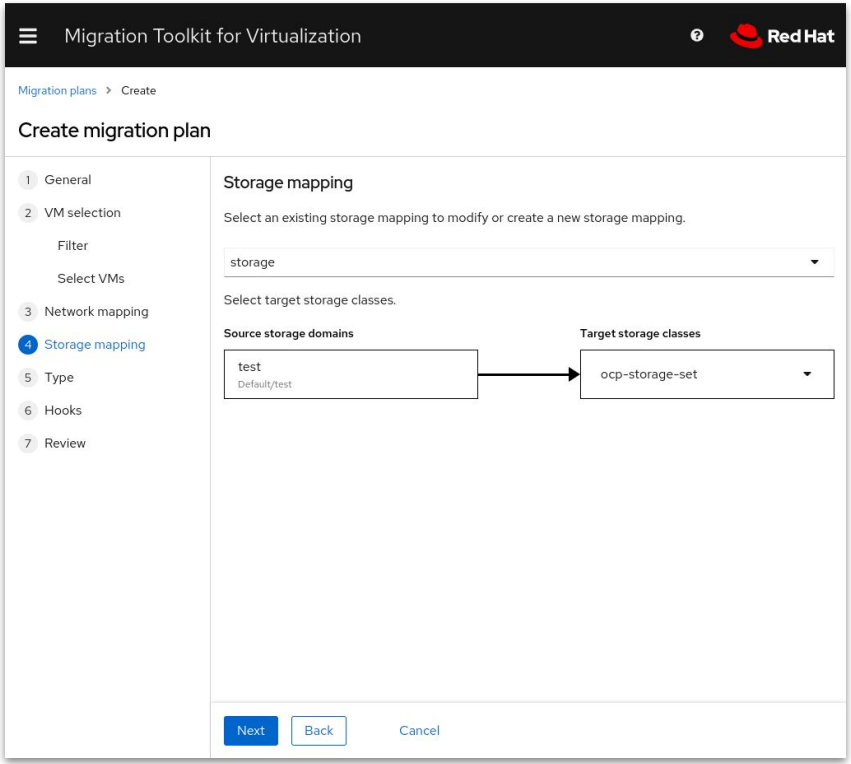
Mappings





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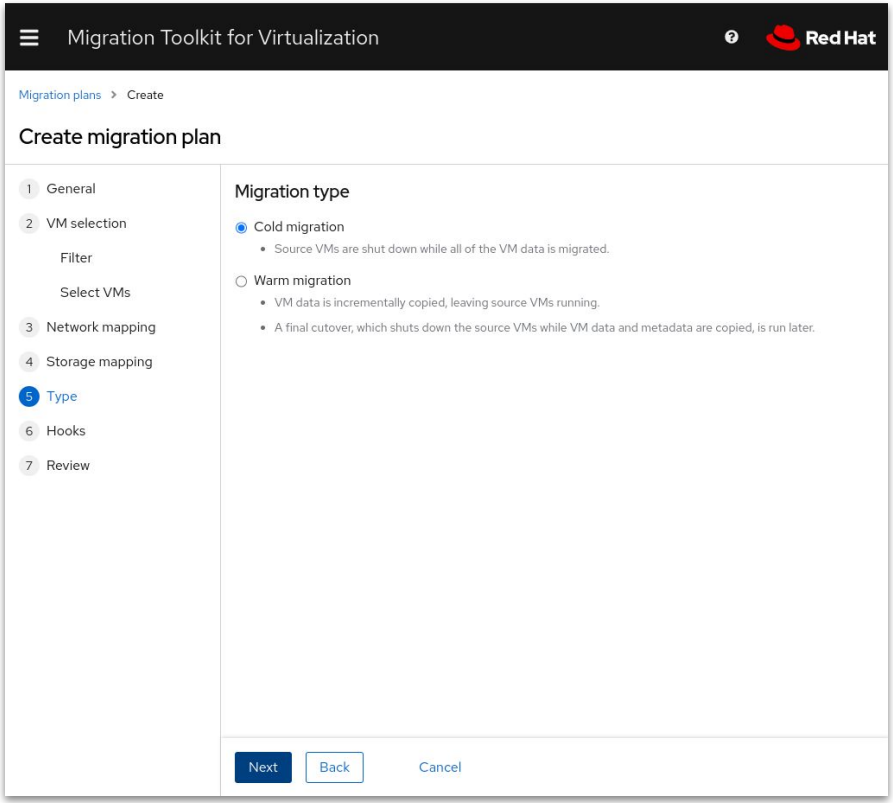
Migration type



- Cold
  - Shutdown VM
  - Migrate disks
- Warm
  - Create a snapshot(s)
  - Copy a snapshot(s)
  - Shutdown VM
  - Create final snapshot
  - Copy final snapshot

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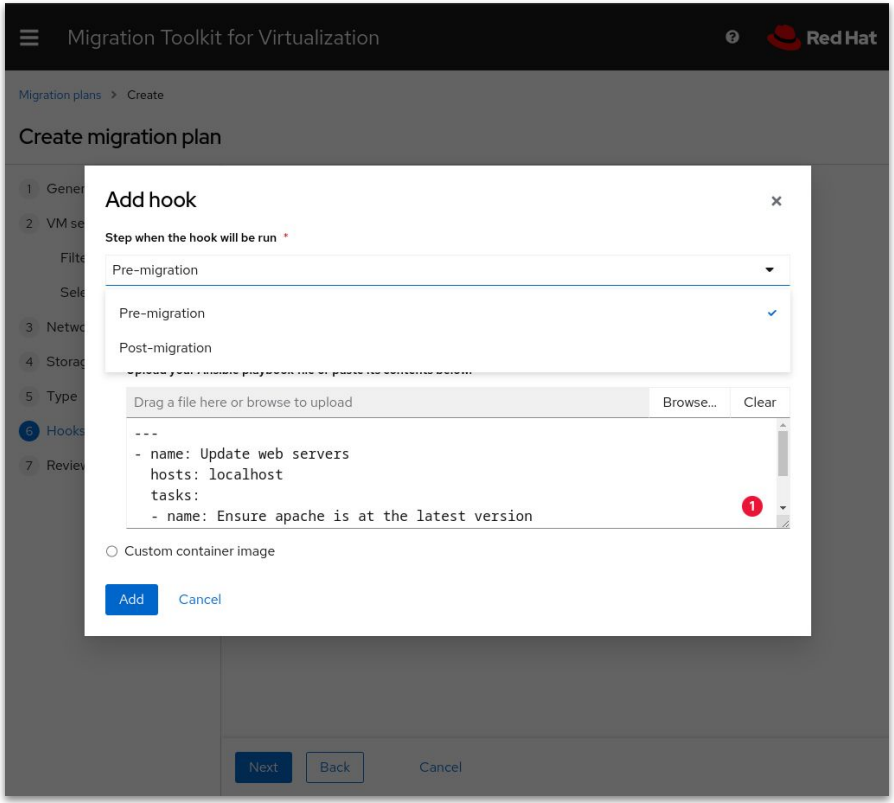
Ansible hooks



- Pre-migration
- Post-migration

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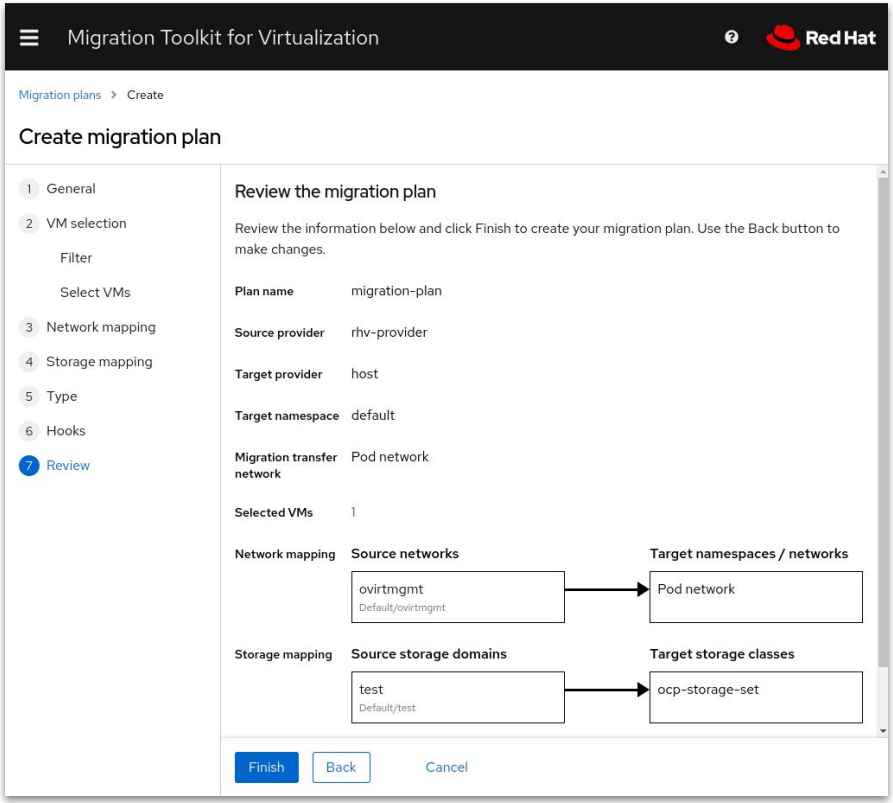
Review


Migration Toolkit for Virtualization
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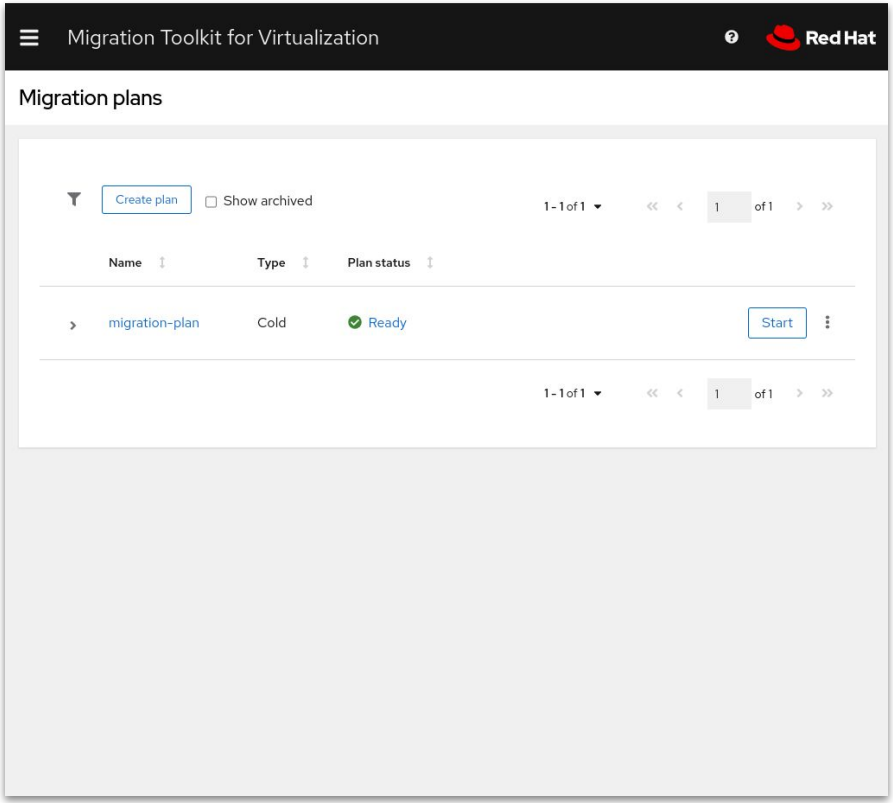
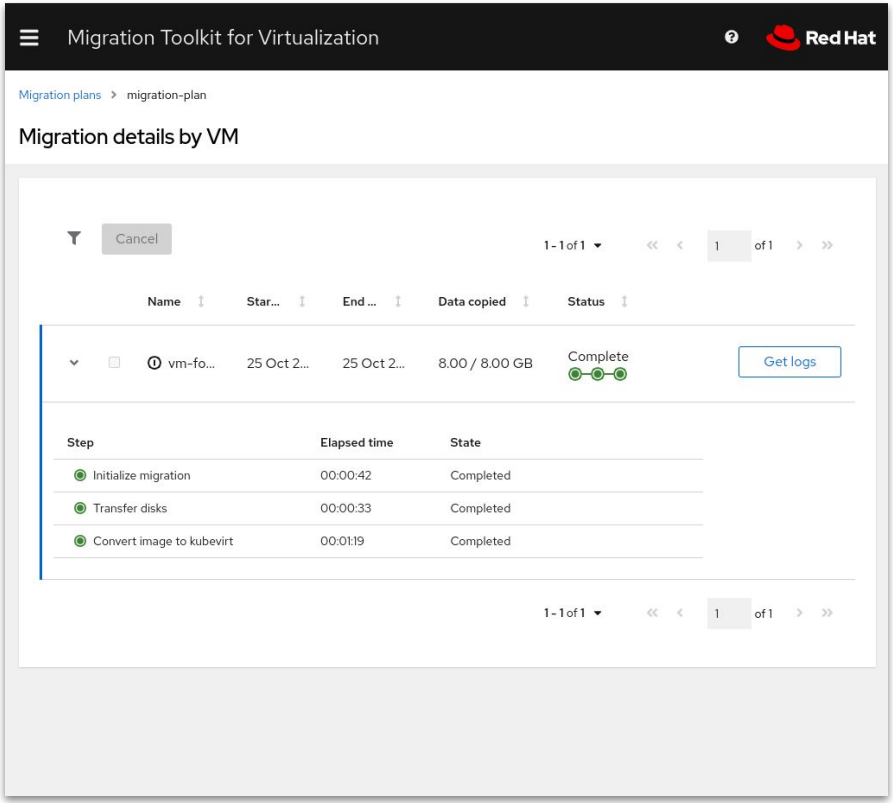
Migration plans
Create
Create migration plan
1 General
2 VM selection
Filter
Select VMs
3 Network mapping
4 Storage mapping
5 Type
6 Hooks
7 Review
Review the migration plan
Review the information below and click Finish to create your migration plan. Use the Back button to make changes.
Plan name
migration-plan
Source provider
rhv-provider
Target provider
host
Target namespace
default
Migration transfer network
Pod network
Selected VMs
1
Network mapping
Source networks
Target namespaces / networks
ovirtmgmt
Default/ovirtmgmt
Pod network
Storage mapping
Source storage domains
Target storage classes
test
Default/test
ocp-storage-set
Finish
Back
Cancel

Plans


Migration Toolkit for Virtualization
Red Hat
Migration plans
Create plan
Show archived
1 - 1 of 1
1
of 1
Name
Type
Plan status
migration-plan
Cold
Ready
Start
1 - 1 of 1
1
of 1

Migration



- Example of cold migration
- Create CNV VM
- Copy the disk to the created VM
- Convert vSphere image to OpenShift Virtualization with virt-v2v

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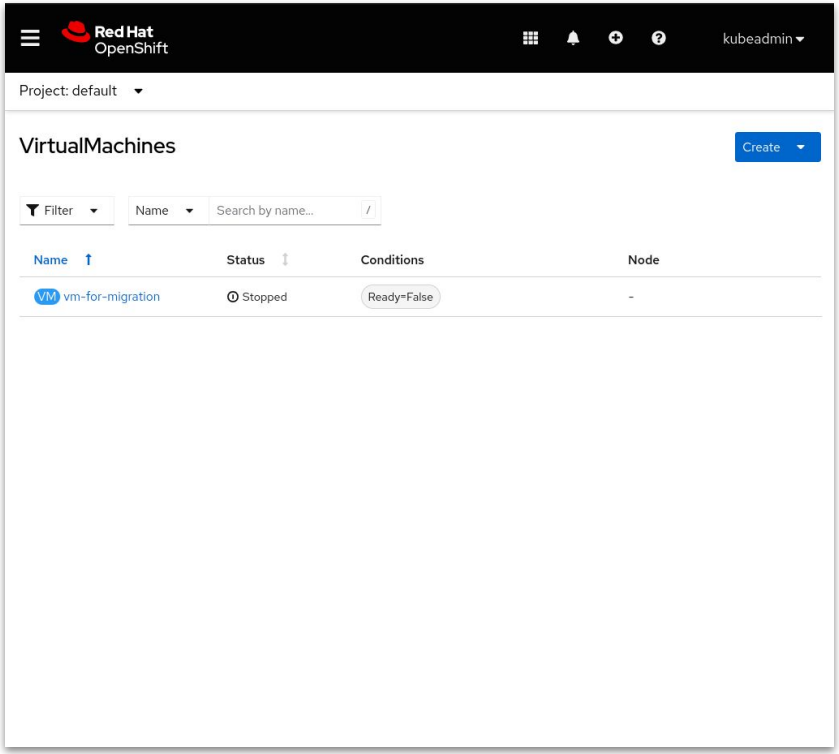
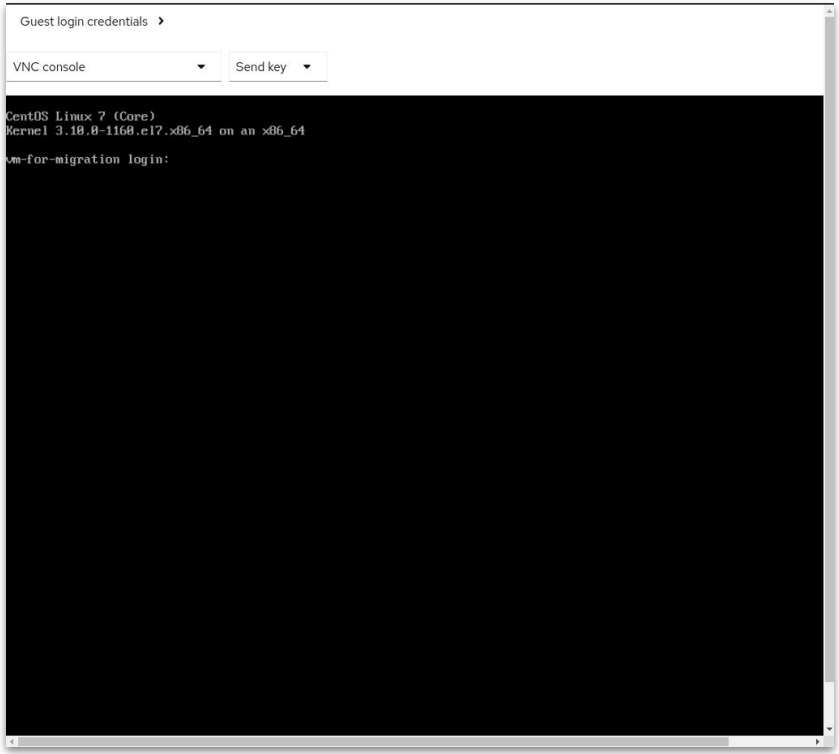
Results





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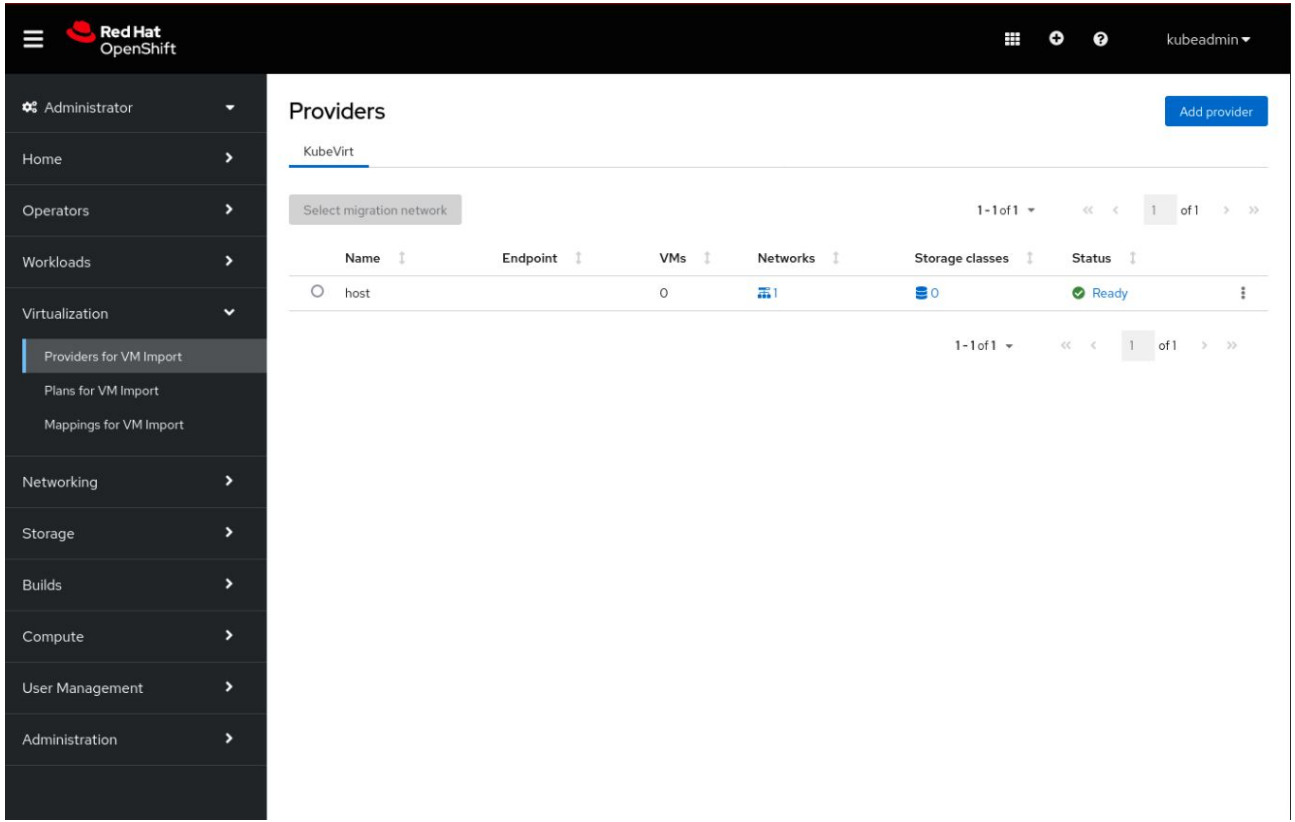
Ongoing / planned (technical) efforts

- Replacing the standalone UI with a plugin to Openshift console
- RHV 4.4 compatibility
  - Examples: uefi/secure boot, dedicated CPUs
- Adding OpenStack provider
- Add continuous integration

Integrated console



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