Deploy and Configure ONTAP Select in the VMware Virtual Infrastructure (Automated Deployment)

NetApp Solutions

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To deploy and configure an ONTAP Select instance within the VMware Virtual Infrastructure, complete the following steps:

1. From the Deployment Jump VM, login to the NetApp Support Site and download the ONTAP Select OVA for ESXi.
2. Create a directory OTS and obtain the Ansible roles for deploying ONTAP Select.

```
mkdir OTS
cd OTS
git clone https://github.com/NetApp/ansible.git
cd ansible
```

3. Install the prerequisite libraries.

```
pip install requests
pip install pyvmomi
Open a VI Editor and create a playbook ``ots_setup.yaml`' with the below
content to deploy the ONTAP Select OVA and initialize the ONTAP cluster.
---
- name: Create ONTAP Select Deploy VM from OVA (ESXi)
  hosts: localhost
  gather_facts: false
  connection: 'local'
  vars_files:
    - ots_deploy_vars.yaml
  roles:
    - na_ots_deploy
- name: Wait for 1 minute before starting cluster setup
  hosts: localhost
  gather_facts: false
  tasks:
  - pause:
      minutes: 1
- name: Create ONTAP Select cluster (ESXi)
  hosts: localhost
  gather_facts: false
  vars_files:
  - ots_cluster_vars.yaml
  roles:
    - na_ots_cluster
```

4. Open a VI editor, create a variable file `ots_deploy_vars.yaml`, and fill in hte following parameters:

```
target_vcenter_or_esxi_host: "10.xxx.xx.xx"# vCenter IP
host_login: "yourlogin@yourlab.local"  # vCenter Username
ovf_path: "/run/deploy/ovapath/ONTAPdeploy.ova"# Path to OVA on
Deployment Jump VM
datacenter_name: "your-Lab"# Datacenter name in vCenter
esx_cluster_name: "your Cluster"# Cluster name in vCenter
datastore_name: "your-select-dt"# Datastore name in vCenter
mgt_network: "your-mgmt-network"# Management Network to be used by OVA
deploy_name: "test-deploy-vm"# Name of the ONTAP Select VM
deploy_ipAddress: "10.xxx.xx.xx"# Management IP Address of ONTAP Select
VM
deploy_gateway: "10.xxx.xx.1"# Default Gateway
deploy_proxy_url: ""# Proxy URL (Optional and if used)
deploy_netMask: "255.255.255.0"# Netmask
deploy_product_company: "NetApp"# Name of Organization
deploy_primaryDNS: "10.xxx.xx.xx"# Primary DNS IP
deploy_secondaryDNS: ""# Secondary DNS (Optional)
deploy_searchDomains: "your.search.domain.com"# Search Domain Name
```

Update the variables to match your environment.

5. Open a VI editor, create a variable file `ots_cluster_vars.yaml`, and fill it out with the following parameters:

```
node_count: 1#Number of nodes in the ONTAP Cluster
monitor_job: truemonitor_deploy_job: true
deploy_api_url: #Use the IP of the ONTAP Select VM
deploy_login: "admin"
vcenter_login: "administrator@vsphere.local"
vcenter_name: "172.21.232.100"
esxi_hosts:
  - host_name: 172.21.232.102
  - host_name: 172.21.232.103
cluster_name: "hci-ai-ots"# Name of ONTAP Cluster
cluster_ip: "172.21.232.118"# Cluster Management IP
cluster_netmask: "255.255.255.0"
cluster_gateway: "172.21.232.1"
cluster_ontap_image: "9.7"
cluster_ntp:
  - "10.61.186.231"
cluster_dns_ips:
  - "10.61.186.231"
cluster_dns_domains:
  - "sddc.netapp.com"
mgt_network: "NetApp HCI VDS 01-Management_Network"# Name of VM Port
Group for Mgmt Network
data_network: "NetApp HCI VDS 01-NFS_Network"# Name of VM Port Group for
NFS Network
internal_network: ""# Not needed for Single Node Cluster
instance_type: "small"
cluster_nodes:
  - node_name: "{{ cluster_name }}-01"
    ipAddress: 172.21.232.119# Node Management IP
    storage_pool: NetApp-HCI-Datastore-02 # Name of Datastore in vCenter
to use
    capacityTB: 1# Usable capacity will be ~700GB
    host_name: 172.21.232.102# IP Address of an ESXi host to deploy node
```

Update the variables to match your environment.

6. Start ONTAP Select setup.

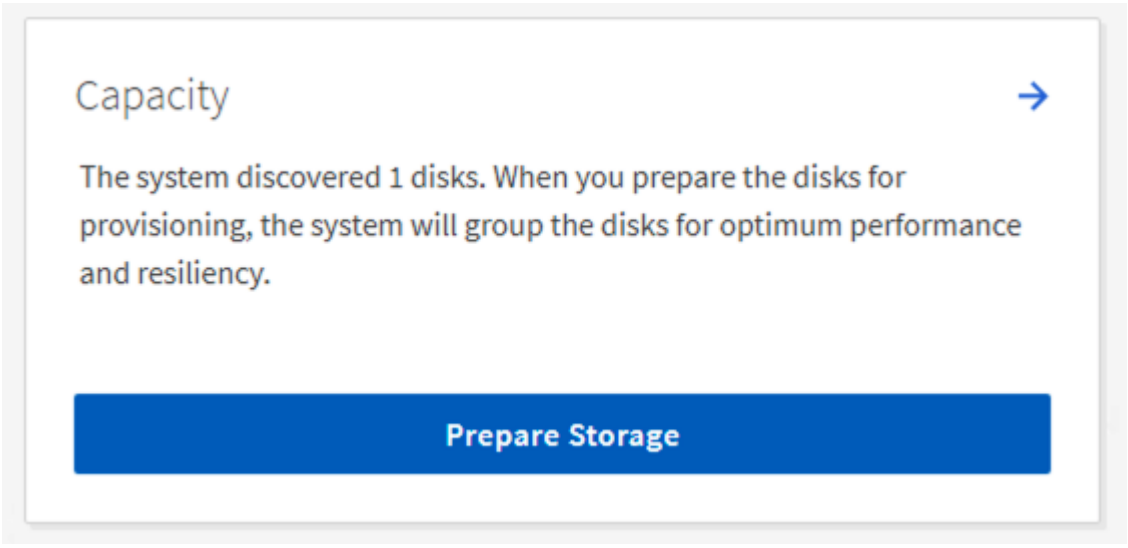
```
ansible-playbook ots_setup.yaml --extra-vars deploy_pwd=$'"P@ssw0rd"'
--extra-vars vcenter_password=$'"P@ssw0rd"' --extra-vars
ontap_pwd=$'"P@ssw0rd"' --extra-vars host_esx_password=$'"P@ssw0rd"'
--extra-vars host_password=$'"P@ssw0rd"' --extra-vars
deploy_password=$'"P@ssw0rd"'
```

7. Update the command with `deploy_pwd `(ONTAP Select VM instance), `vcenter_password`(vCenter), `ontap_pwd` (ONTAP login password), `host_esx_password` (VMware ESXi), `host_password` (vCenter), and `deploy_password` (ONTAP Select VM instance).

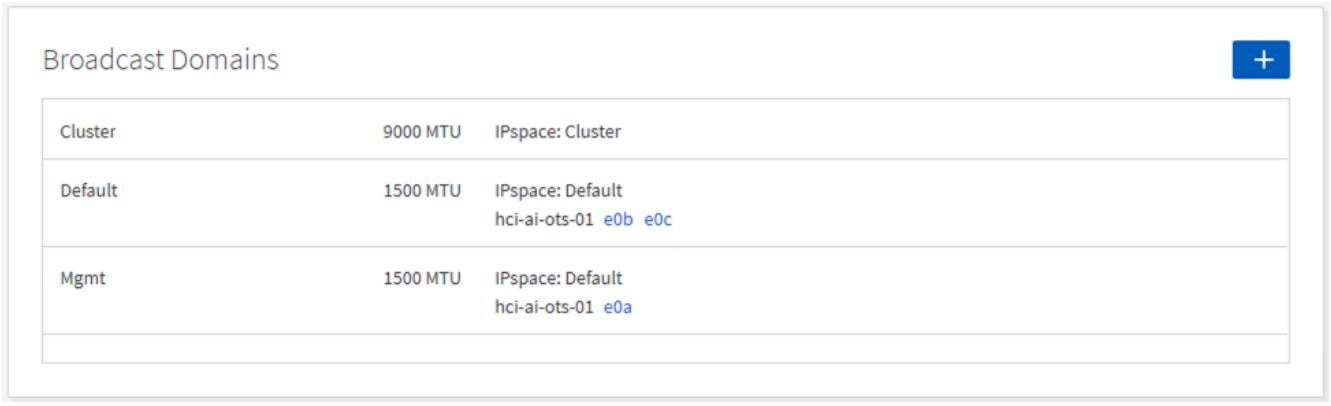
Configure the ONTAP Select Cluster – Manual Deployment

To configure the ONTAP Select cluster, complete the following steps:

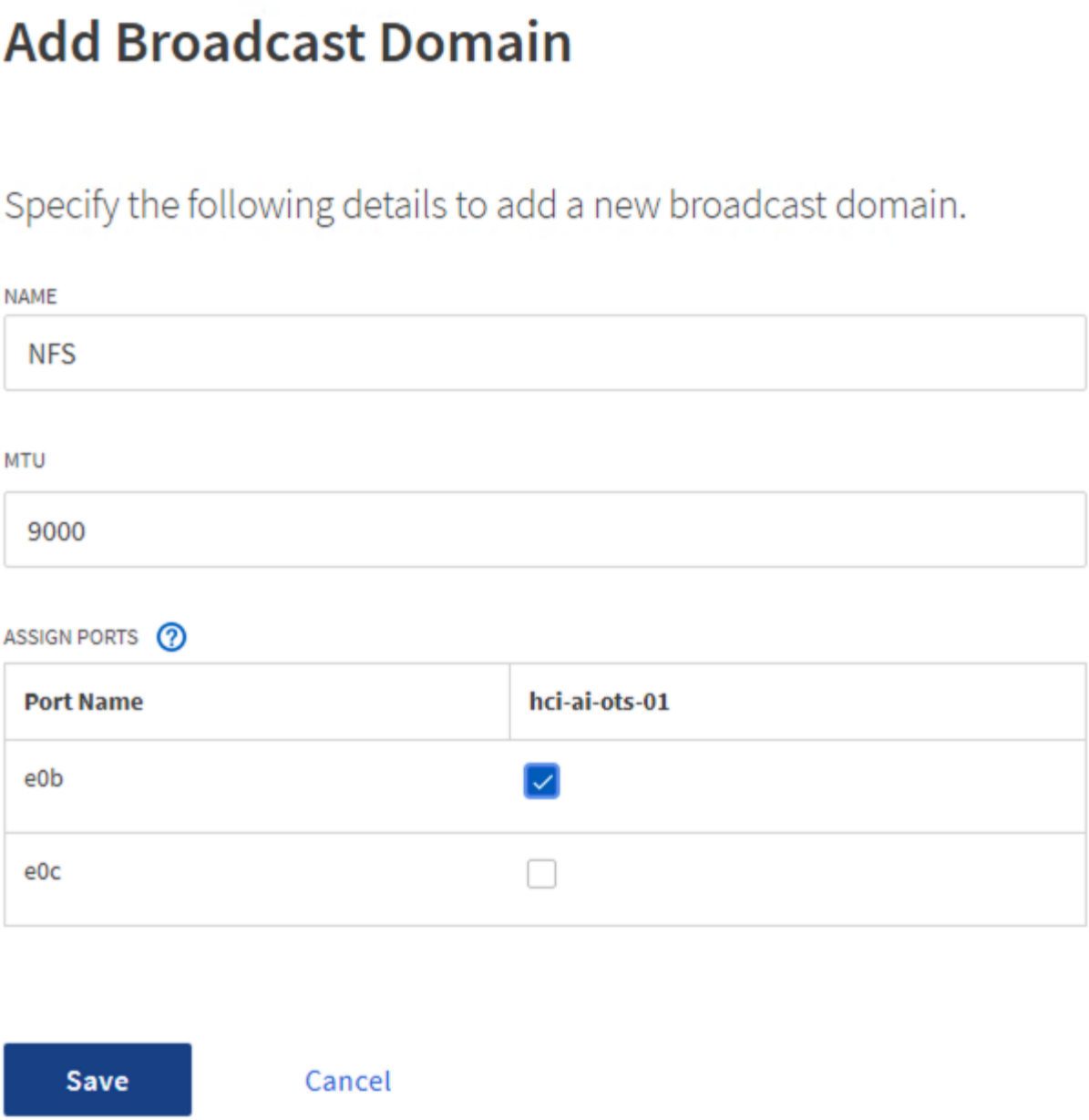
1. Open a browser and log into the ONTAP cluster's System Manager using its cluster management IP.
2. On the DASHBOARD page, click Prepare Storage under Capacity.



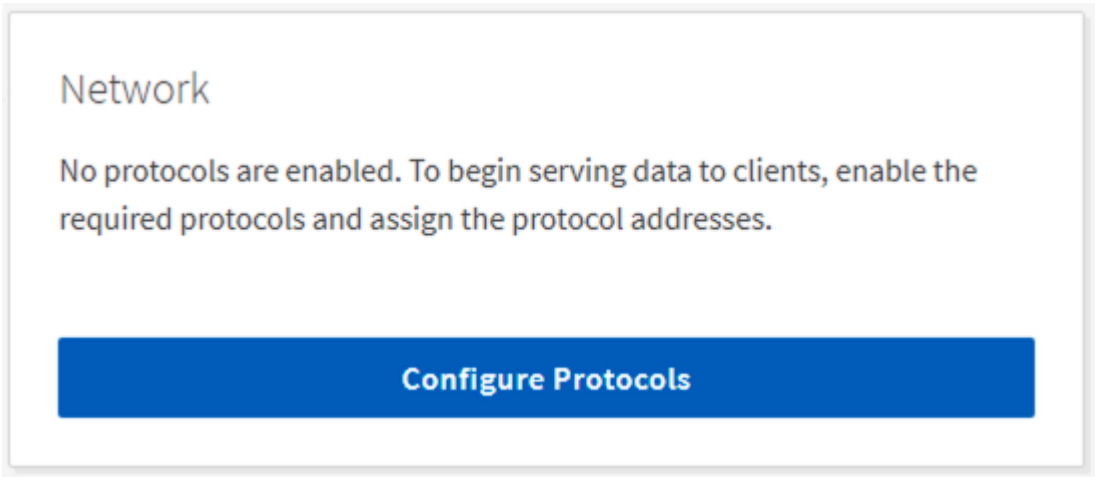
3. Select the radio button to continue without onboard key manager, and click Prepare Storage.
4. On the NETWORK page, click the + sign in the Broadcast Domains window.



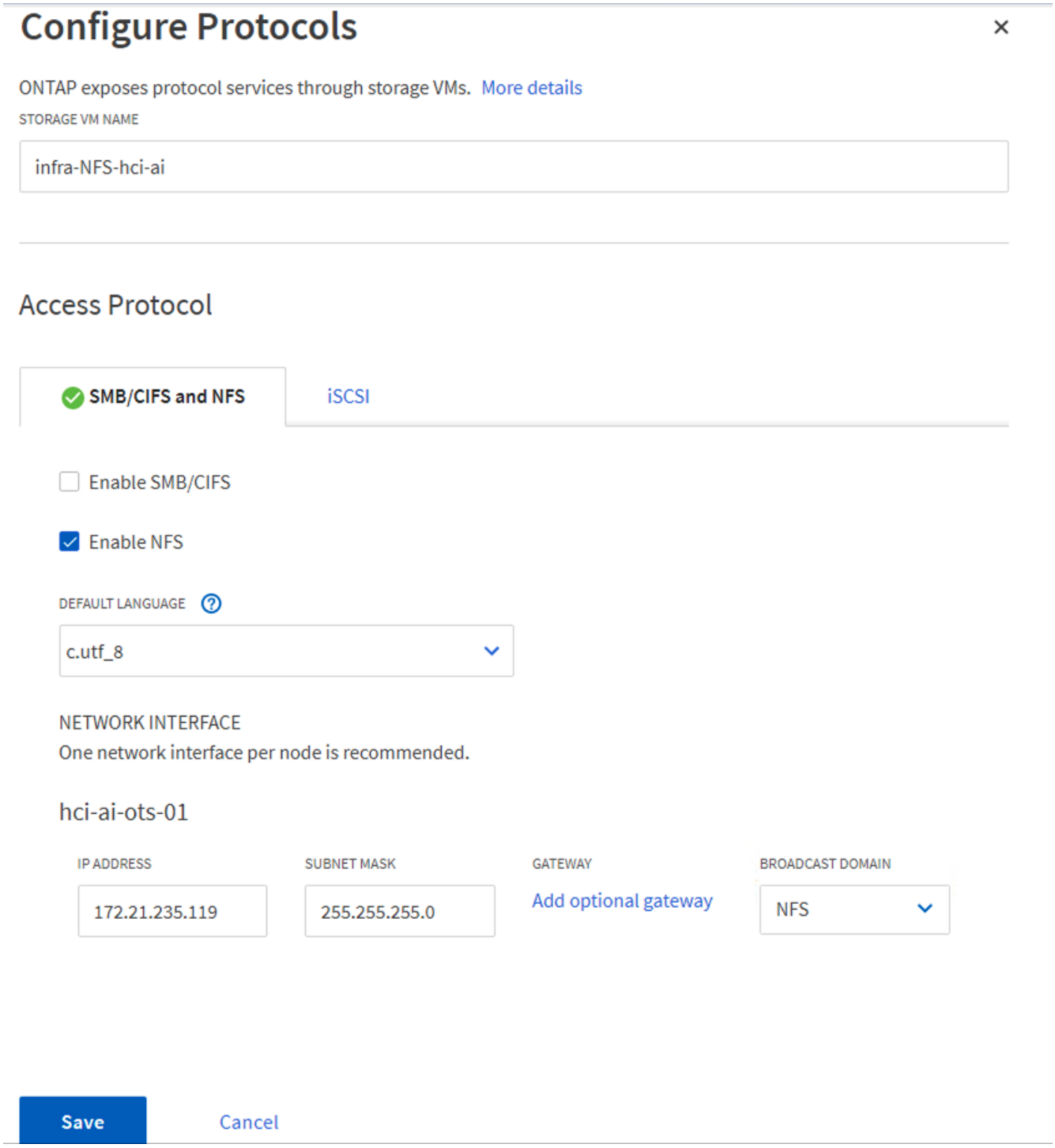
5. Enter the Name as `NFS`, set the MTU to `9000`, and select the port `e0b`. Click Save.



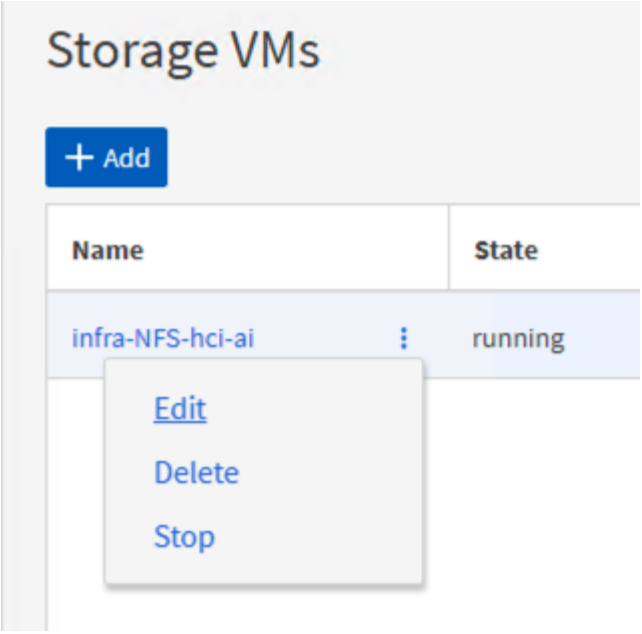
6. On the DASHBOARD page, click `Configure Protocols` under Network.



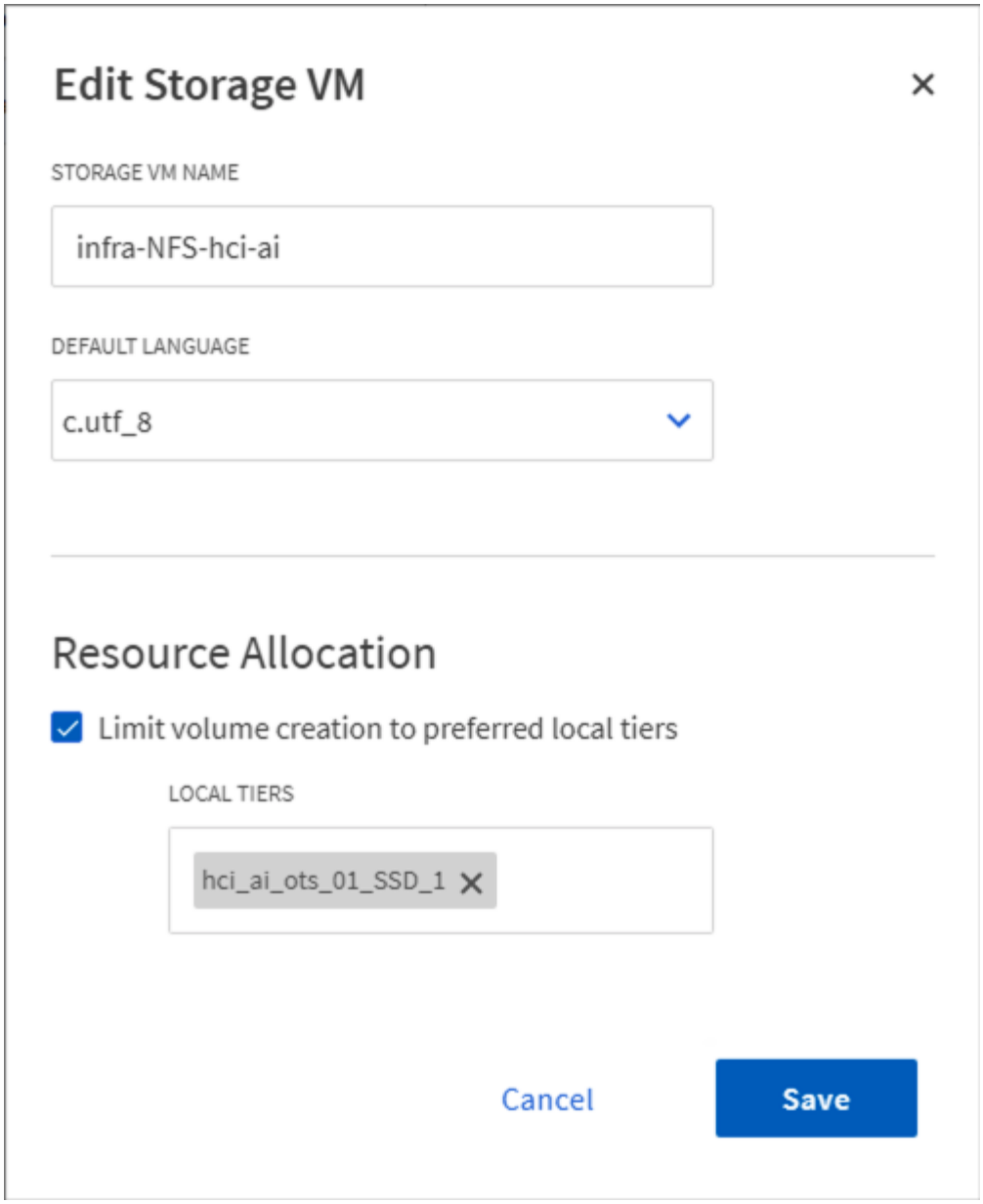
7. Enter a name for the SVM, select Enable NFS, provide an IP and subnet mask for the NFS LIF, set the Broadcast Domain to NFS, and click Save.



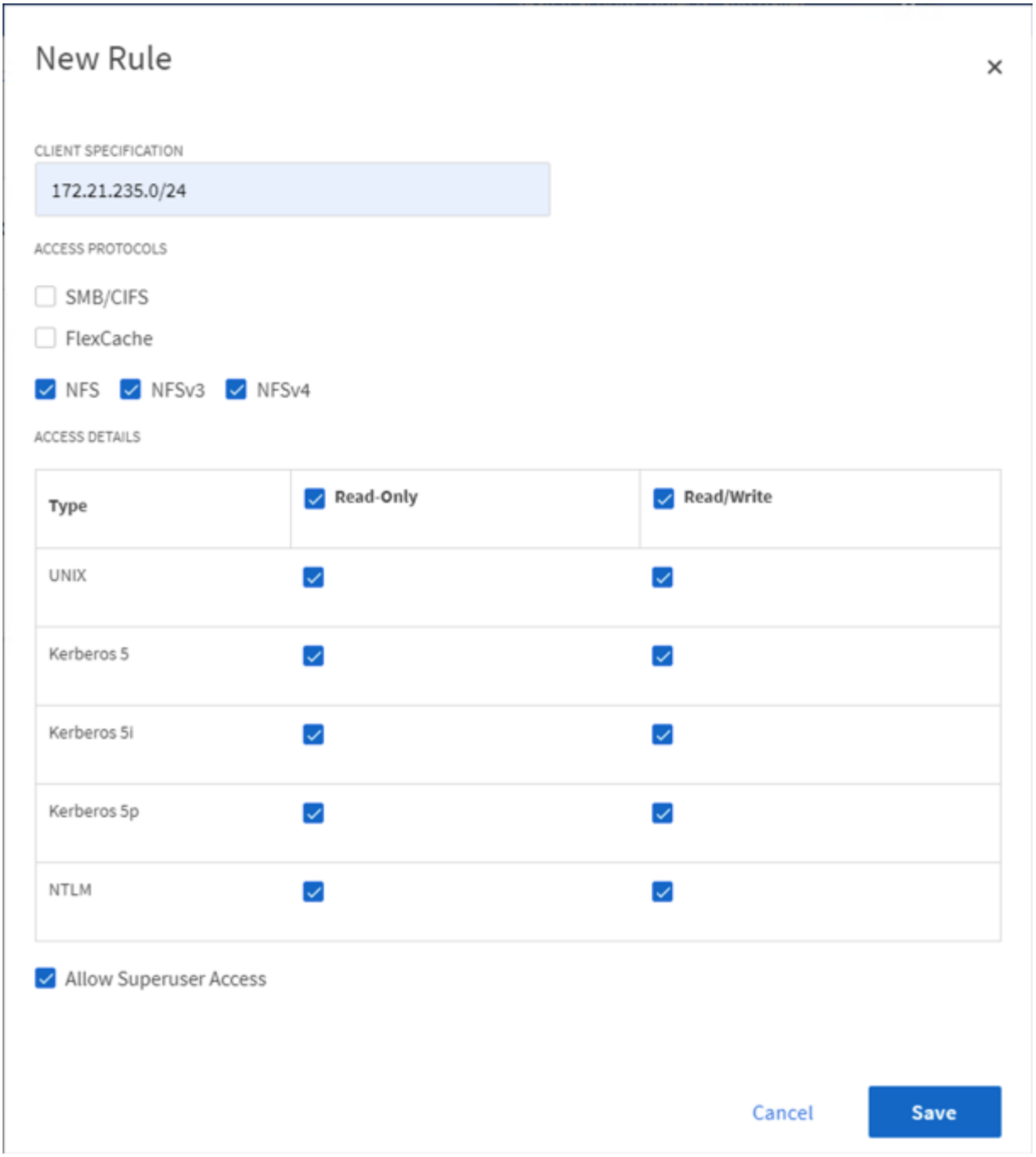
8. Click STORAGE in the left pane, and from the dropdown select Storage VMs
   a. Edit the SVM.



b. Select the checkbox under Resource Allocation, make sure that the local tier is listed, and click Save.



9. Click the SVM name, and on the right panel scroll down to Policies.
10. Click the arrow within the Export Policies tile, and click the default policy.
11. If there is a rule already defined, you can edit it; if no rule exists, then create a new one.
    a. Select NFS Network Clients as the Client Specification.
    b. Select the Read-Only and Read/Write checkboxes.
    c. Select the checkbox to Allow Superuser Access.



Next: Deploy NetApp Trident (Automated Deployment)