



Avi Vantage Installation on Nutanix Acropolis Hypervisor

Avi Technical Reference (v17.1)

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Avi Vantage supports running in the Nutanix Acropolis hypervisor orchestrated by Prism. This guide walks through the steps required to install Avi Vantage in this environment.

VM Hardware Requirements

The resources suggested in this installation guide are minimum recommendations for a proof of concept. See also the [hardware requirements KB](#) for more sizing help.

- **Avi Controller:** The Controller needs at least 4 vCPUs and 12 GB memory. Also needed is a NIC for the management network. This is the network used for accessing the web interface. The Controller also uses this network to communicate with the Avi Service Engines (SEs).
- **SEs:** Each SE needs at least 2 vCPUs and 2 GB memory. Also needed is a NIC for the management network as the first interface, and additional NICs for the data networks.

Software Requirements

- **Avi Vantage 16.1+:** The Controller image file is obtained from the avinetworks.com/portal. From the image repository, select the latest software version > OpenStack section > controller.qcow2 image. The SE image will be downloaded from the Controller.
- **Nutanix Acropolis 4.6+:** Prism is required for creating the Avi VMs. For a refresher, refer to this brief [tutorial](#) on creating VMs.

Deploy the Controller

1. Upload the Controller image to the Prism Image Service. (Select the Settings button at the top right and go to Image Configuration to upload the files.)

[See Illustration 1](#)

- Name
- Image Type: Disk.

2. Create the Controller VM from Prism.

[See Illustration 2](#)

- Name
- vCPUs: 1
- Number of Cores per vCPU: 4 (or more)
- Memory: 12 GB
- Disks:

```
<li>Remove CD-ROM</li>
<li>Add new Disk</li>
```

```
<li>Operation: Clone from Image Service</li>
<li>Image: [Select the name of the image created in the previous steps]</li>
<li>Size: Default to 64 GB</li>
</ul> </li>
```

- **NIC > VLAN Name:** Select a network that will be used for management. This network will be used for the access to the Controller by administrators and for Controller-to-Service Engine communication. For production environments this should be a static address.

A note on configuring networks and IP addresses for the Controller and SEs: Usually, networks will have been created by the customer beforehand (refer to step 8 in the [Nutanix Acropolis 101: Creating VMs tutorial](#)). One simply selects that network when adding a vNIC to a Controller or SE. Based on how the network was originally set up, the IP will be static or picked via DHCP and assigned to the vNIC.

- Power on the Controller VM. During the initial boot-up, the Controller will initialize databases and run through internal setup tasks (may take several minutes).
- Connect to the GUI of the Controller via `https://[IP Address]`
- Set up the Controller. From the GUI setup wizard, perform the initial configuration of the Controller. Provide a password, DNS, and set the Infrastructure Type to No-Orchestrator.

Deploy the Service Engine



1. Download SE image. From the Controller web interface, navigate to Infrastructure > Clouds. Click the download icon shown on the right. A small prompt asks which type of SE image is desired. Select qcow2. The first time this operation is executed, the Controller will create the new SE image, which may take several minutes, depending on disk performance. Once the image is created it will automatically download to your browser.
2. Upload SE image to Prism > Image Creation > Upload Image
[See Illustration 3](#)

```
<li>Name</li>
<li>Image Type: Disk</li>
<li>Image Source: se.qcow2<a href="img/AuthToken2.png"><img class="alignright wp-image-11912" s
```

3. Copy the auth token. The new SE will be required to authenticate to the Controller by presenting a valid token that is generated by the Controller and placed on the SE. This token may be used only once, and expires if not used within one hour. From the Controller, navigate to Infrastructure > Clouds. Click the key icon to generate a new token. Copy the token, which will be used at the end of the next step.
4. Create the SE VM from Prism.[See Illustration 4](#)

```
<li>Name</li>
<li>vCPUs: 1</li>
<li>Cores per vCPU: 2</li>
<li>Memory: 2 GB</li>
<li>Disks:
<ul>
<li>Remove CD-ROM</li>
<li>Add Disk:
<ul>
<li>Operation: Clone from Image Service</li>
<li>Image: Select the SE image name</li>
<li>Size: 10 GB</li>
</ul> </li>
</ul> </li>
<li>Network Adapters:
<ul>
<li>Create one NIC in the management network used by the Controller. This NIC is reserved for
<li>Create additional NICs as necessary for access to client and server networks for load balanc
</ul> </li>
<li>Custom Scripts: Paste the following information into this section. This info is used to tel
<!-- Crayon Syntax Highlighter v2.7.1 --> <pre><code class="language-lua">AVICNTRL: [Controller
```

AVICNTRL_AUTHTOKEN: [Auth token]

```
<!-- [Format Time: 0.0003 seconds] --> </li>
```

5. Verify connectivity between the SE and Controller. Power on the SE VM. From the Controller, navigate to Infrastructure > Dashboard. The SE icon should be present and green.
6. Repeat as necessary to create any additional Service Engines.

Illustration 1 - Create Controller Image

Create Image ? X

NAME
Avi_Controller

ANNOTATION

IMAGE TYPE
DISK

CONTAINER
default-container-42076

IMAGE SOURCE

From URL

Upload a file controller-16.2.1-9013.qcow2

Illustration 2 - Create Controller VM

Create VM

General Configuration

NAME
Controller-VM

DESCRIPTION
Optional

Compute Details

VCPU(S)
1

NUMBER OF CORES PER VCPU
4

MEMORY
12 GIB

Disks

+ Add new disk

TYPE	ADDRESS	PARAMETERS
DISK		SIZE=64GiB; BUS=scsi

Volume Groups

+ Add volume group

Please create a VM before you can add a volume group.

Network Adapters (NIC)

+ Add new NIC

VLAN ID	MAC	REQUESTED IP
vlan.18		

Custom Script

Cancel Save

Illustration 3 - Create SE Image

Create Image ? X

NAME
SE-VM

ANNOTATION

IMAGE TYPE
DISK

CONTAINER
default-container-42076

IMAGE SOURCE

From URL

Upload a file se.qcow2

Cancel Save

Illustration 4 - Create SE VM

Create VM ? X

General Configuration

NAME
ServiceEngine

DESCRIPTION
Optional

Compute Details

VCPUS
1

NUMBER OF CORES PER VCPU
2

MEMORY

2 GiB

Disks

[+ Add new disk](#)

TYPE	ADDRESS	PARAMETERS
DISK		SIZE=10GiB; BUS=scsi ✎ ✕

Volume Groups

[+ Add volume group](#)

Please create a VM before you can add a volume group.

Network Adapters (NIC)

[+ Add new NIC](#)

VLAN ID	MAC	REQUESTED IP
vlan.18		10.20.18.201 ✕
vlan.18		10.20.18.202 ✕

Custom Script

Provide a Cloudinit or Sysprep script to customize this VM.

ADSF path

Start typing for suggestions

Upload a file

[Browse...](#) No file selected.

Type or paste script

```
AVICNTRL: 10.20.18.152
AVICNTRL_AUTHTOKEN: 8cdf839f-3f14-41a7-90b1-ca7c45b911df
```

FILES TO COPY

Specify external files to copy inside of the guest VM.

Note: This document is based on Avi Vantage version 16.2 and Nutanix AHV version 5.1