L1E1:

Enabling Calm

In this task, you will verify the Data Service IP configuration in **Prism Element** and enable Nutanix Calm on **Prism Central**.

1. Log on to **Prism Element**.
2. Select the cluster name at the upper left to launch the **Cluster Details** dialog box. Verify the **Data Service IP** field is populated.
3. Log on to Prism Central using **Prism Central** using the **admin** user credentials.
4. Click the **?**icon at the upper right and click **New in Prism Central**.
5. Verify **Enable app management** has a green check mark next to it.
6. If **Enable app management** did not have a green check mark, then you would click the In the **Enable app management** window, mark the **Enable app management** check box and click **Save**.

Since the Enable Nutanix seeded blueprints check box is selected by default, a set of preconfigured blueprints will be included when Calm is enabled.

1. If you are enabling app management, click the **Tasks** icon (immediately to the left of ?) on the main menu bar. In the drop-down menu, monitor the tasks related to enabling Calm until these tasks are completed or go to the tasks page by clicking on **View All Tasks**.
2. Once the **Enable app management** task completes, log off of Prism Central.

L2E1:

**In this task, you will configure key-based SSH access from your PuTTY application.**

1. Click the **Start** menu on your desktop, in the search field, type puttygen.  Click **PuTTYgen** to start the **PuTTY Key Generator**.
2. In the **PuTTY Key Generator** window, click **Generate** to generate a key pair. By default, a 2048-bit RSA key pair will be generated.
3. Move the mouse within the blank area, as PuTTY uses mouse movements to collect randomness until the key has been created (watch the progress bar move slower or faster depending on your mouse movement).
4. Once the progress bar becomes full, the actual key generation takes place. This may take from several seconds to several minutes. When complete, the public key should appear in the **Key** window.
5. Save the Public Key to your desktop by clicking **Save public key** and save as **<your initials>-public.PPK**.
6. Save the Private Key to your desktop by clicking **Save private key** and save as **<your initials>-private.PPK**.  Leave the **Key passphrase** and **Confirm passphrase** fields empty.
7. Select and copy the public key inside the **Public key** field.
8. Log on to Prism Element.
9. Click the **Settings** icon and click **Cluster Lockdown** in the **Settings** menu.
10. In the **Cluster Lockdown** window, click **+ New Public Key**.
11. Enter **<your-initials>-Win-Pubkey** into the **Name** field and paste the public key, from your desktop, into the **Key** field in the **Cluster Lockdown** dialog window.
12. Click **Save**.
13. Start **PuTTY** on your desktop,
14. With **Session** selected (default) in the left **Category** column, enter your cluster external IP address into the **Hostname (or IP address)** field.
15. In the left **Category** column, expand **Connection**, then expand **SSH** and select **Auth**.
16. Click **Browse** and select your private key **<your initials>-Win-Priv.PPK**.

Do not click **Open** in the **PuTTY Configuration** window.

1. Return to the **Session** category, enter **KeyTest** into the **Saved Sessions** text field, then click **Save** to save the session configuration.
2. Click **Open** in the **PuTTY Configuration** dialog window. Log on to the cluster control VM using the nutanix user without a password.
3. Exit your **PuTTY** session.

L2E2:

##### **Importing an Image to the Prism Central Image Service**

1. Log on to **Prism Central** as the admin user.
2. Click the **Entities** menu and go to **Virtual Infrastructure > Images**.
3. On the **Images** page, click **Import Images** to get the **Import Images** page.
4. Select **Images on a cluster**. Check the check box for your cluster and click **Select Images**.
5. Deselect all images except the Calm Blueprint image.
6. Click **Next**.
7. Click **Save**.
8. Go to the Tasks view and follow the import progress.

L2E3:

**Creating Test Project**

1. Log on to **Prism Central** using the admin user.
2. Select the **Hamburger Menu** > **Services** > Click **Calm**.

Close the Welcome to Calm pop-up window.

1. Click the Folder Icon on the bottom of the left-hand inventory menu. Hover your mouse cursor to see **Projects**.
2. Click the **+ Create Project** button on the top left.
   1. Under **General** Settings, enter **Test** in the “Project Name” field.
   2. Enter **Test Workloads** as a description for your project in the **Description** field.
   3. For **Users, Groups and Roles** click “**+user**” at the right.
      1. Click in the **Name** field and select **Administrators (groups)**.
      2. In the **Role** field, Select **Project Admin**
      3. Click “Save”
   4. At the far right of **Infrastructure**, click the **Select Provider** dropdown box, and select **Nutanix**
      1. Under this Provider view, the account $NTNX\_LOCAL\_AZ should be pre-selected for you.
      2. Click on **Select Clusters & Subnets.**
      3. In the Select Subnets dialog box, select your cluster.
      4. Click the checkbox next to $**default-net.**
      5. Click **Confirm**.
   5. Ensure that the **Quotas(optional)** portion of this form is left blank. You will not be utilizing quotas in this exercise.
   6. Click **Save & Configure Environment.**
   7. **Project data successfully accepted by server**, in green, will briefly show at the top of the display. You will be switched to the E**nvironments** tab. Leave this at its defaults and click the folders icon in the left column to return to the **Projects** page.
   8. You should now see the **Test** Project listed in the Projects list.

L2L3:

1. Log on to **Prism Central**.
2. Select the Hamburger Menu > Services > Click **Calm**.
3. Click the Folder Icon on the bottom left-hand inventory menu, entitled “Projects”
4. Click on your newly created project name.
5. Click **Environment**.
6. On the **Environment** tab, configure credentials as follows:

|  |  |
| --- | --- |
| Credential Name |  |
| Username |  |
| Secret Type | SSH Private Key |
| SSH Private Key | <Paste from Exercise 1> |
| Passphrase | <Enter Password> |

1. Under **VM Configuration** ensure the **Linux** dropdown is expanded.
2. Under **VM Configuration** in this **Linux** section, enter in the following values:

|  |  |
| --- | --- |
| vCPUs | 1 |
| Cores per vCPU | 1 |
| Memory (GiB) | 2 |

1. Under **Disks** Click on the dropdown and select $DISK\_SERVICE\_IMAGE
2. Next to **Network Adapters (NICS)** click on the **+** to add a new NIC:
   1. Under **NIC 1** click the dropdown and select **default-net.**
   2. Select **Dynamic** next to **Private IP.**
3. Click **Check log-in upon create** underneath **Connection** and select $CREDENTIAL\_NAME
4. Click **Save.**

L2E4:

**Creating a single VM Blueprint**

1. Select the **Hamburger Menu** > **Services** > Click **Calm**.
2. Click the Blueprint icon in the left column (second from top) to get to the Blue Prints page.
3. Click **+ Create Blueprint** button at the top left and select **Single VM Blueprint**.
   1. From the **Create Single VM Blueprint** page under the **Blueprint Setting** tab, enter **My-Single-VM-BP** in the **Name field.**
   2. Under **Projects**, select the **Test** project from the pull-down menu.
   3. Click **VM Details >**.
   4. Under the VM Details tab, enter **TestVM1** in the **Name field**.
   5. Verify **Nutanix** is selected in the **Cloud** field. This was selected previously when defining a provider in the project.
   6. Select **Linux** for the **Operating System** field.
   7. Click **VM Configuration >**.
   8. Under **General Configuration**, change the VM name to **TestVM1** and set the following:
      1. vCPUs: 2
      2. Cores per vCPU: 1
      3. Memory(GiB): 4
   9. Scroll down to the **Disks** section and click the **>** next to **DISKS(1)** to see the disk configuration setting. Set the following:
      1. Type: Disk
      2. Bus Type: iSCSI
      3. Operation: Clone from Image Service
      4. Image: <vm name>
      5. Verify Bootable is checked
   10. Scroll down to **NICs** and click the **>** next to **NETWORK ADAPTERS (NICS)** to see a warning that no network adapters exist.
   11. Click the **blue plus** at the immediate right to add a NIC. In the **NIC1** drop-down menu select **default-net tdaas\_cluster**.
   12. For **Private IP**: Select the **Dynamic** radio button.
   13. At the bottom of the page, click **Advanced Options**.
   14. Scroll to the top of the page and click **Add/Edit credentials**.
   15. A Credentials wizard with start. Click **+ Add Credentials**.
   16. Set the following fields:
       1. Credential Name: **Testcreds**
       2. Username: root
       3. Secret Type: leave default
       4. Password: nutanix/4u
       5. Click **Done**

* 1. Under the **Advanced Options (Optional)** tab, find the **CONNECTION** configuration area and click the **Credentials** pull-down menu. Select **Testcreds**.
  2. Scroll to the bottom of the page and click **Save**.
  3. Click the **Blueprints** icon in the left column to return to the Blueprints page. You should see your **My-Single-VM-BP** blueprint in the list.

L2E5:

**Launching the Blueprint**

1. Select the **Hamburger Menu** > **Services** > Click **Calm**.
2. Click the Blueprint icon in the left column (second from top) to get to the Blueprints page.
3. Click on your blueprint and from your blueprint page, click **Download** at the upper right.
4. Check the box for Downloading credentials and enter the passphrase **nutanix/4u**. Click **Continue** and save the file.
5. At the upper right, click **Launch**. In the new view, you will see three tabs, with the **Profile Configuration** automatically selected. Enter **TestApp** in the **Name of the Application** field.
6. Click Create. the Folder Icon on the bottom of the left-hand inventory menu. Hover your mouse cursor to see **Projects**.
7. When the view changes and you see **PROVISIONING** at the upper left, click **Audit** to show the provisioning steps. Click the **>** next to **Create** to expand the provisioning view. Expand each new component as it appears to follow the provisioning progress to completion.
8. At the upper right, click Launch Console to connect to the VM. You should see the hostname TestVM1 in the login prompt. Login with user root and password nutanix/4u.
9. Type exit and close the console connection by closing the window.

L2E6:

**Publishing the blueprint to the Marketplace.**

1. Select the **Hamburger Menu** > **Services** > Click **Calm**.
2. Click the Blueprint icon in the left column (second from top) to get to the Blueprints page.
3. Click on your blueprint and from your blueprint page, click **Publish** at the upper right.
4. In the **Publish Blueprint** dialog box, verify **Publish as a,** is set to **New Marketplace Blueprint** and the Name fiend has **My-Single-VM-BP**. Enter **1.0.0** to the **Initial Version** field and click **Submit for approval**.
5. Click the **Marketplace Manager** icon in the left column and then select the **Approval Pending** tab. The blueprint should appear under the **Marketplace Blueprints** tab after a minute or two.
6. You should see your blueprints listed. Check the box next to your blueprint name and in the new configuration panel at the right, select your **Test** project in the **Project Shared With** pull-down menu. Click the box with the checkmark to approve the publishing.
7. Under the **Marketplace Blueprints** tab, check the checkbox next to your blueprint, if needed and in the right side configuration panel, review and click **Publish**. The status column for your blueprint will change to **Published**.
8. Click the **Marketplace** icon in the left column (top icon) and you should see your blueprint listed.
9. Mikey! Tried to launch blueprint from Market place and got an error about the Project “Environment” not being configured. I didn’t need the Environment set to create and deploy blueprint so I never configured it. I guess launching from the Marketplace requires it…

Just added the Environment setup to the Test project and re-published to the marketplace. Launched there too and all is well. I will add the environment build steps back in tomorrow.

The delete steps below have changed dramatically as well. I will update that tomorrow too.

# Deleting an Application from Calm

1. Log on to Prism Central using the admin user.
2. Click the **Entities** menu and select **Services**, then click **Calm**.
3. Click the **Applications** icon.
4. Select the checkbox next to your **<STUDENT BLUEPRINT>**.
5. Select **Action**, then **Delete**.
6. Click **Confirm** when prompted if you want to delete the application.

This may take up to 10 minutes to complete.

1. Select **Delete** when prompted.
2. Log off of Prism Central.

L3L1: