Preparing to install Maximo Core on AWS, Azure and IBM Cloud Environments

This document will walk you through the steps on how to prepare your environment to install Maximo Application Suite via the Ecosystem Engineering OpenShift operator.

Prerequisites:

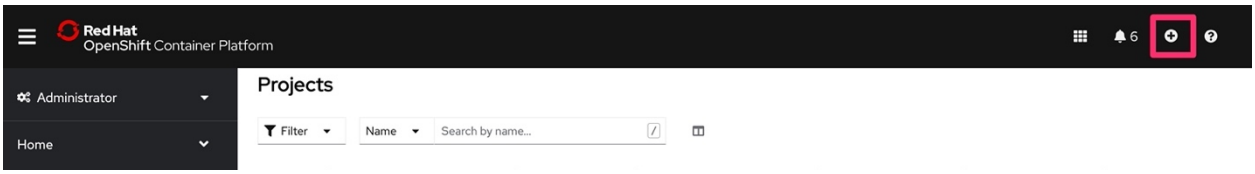
- A valid IBM ID that can be used to access
  - TechZone https://techzone.ibm.com/
- A valid GitHub ID that can be used to create a repository in your own organization
  - GitHub https://github.com/
- Install a code editor, we recommend **VSCode**
  - VS Code https://code.visualstudio.com/
- A properly sized RedHat OpenShift cluster . Minimum guidance from experience is 8 worker nodes, sized 16x32 for a Maximo Core plus Manage install. Adding more applications to the cluster may require additional worker nodes. Please consult the Maximo Application Suite documentation for cluster requirements and proper sizing found here.
- The OpenShift OC CLI installed

Install the Ecosystem catalog

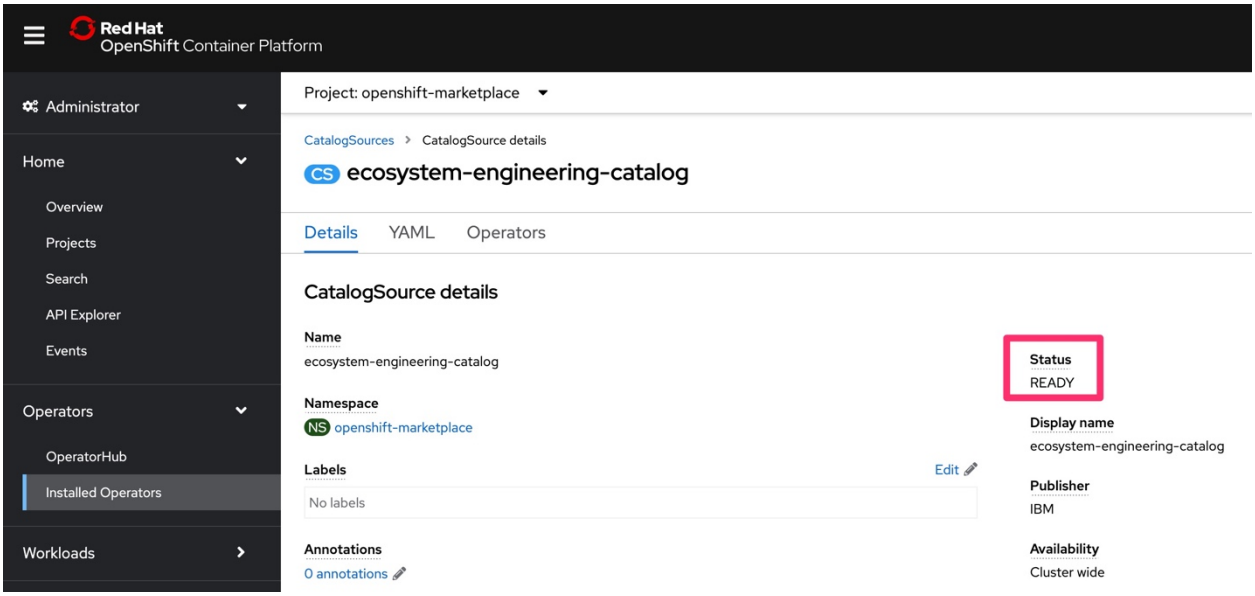
Install the IBM Ecosystem catalog into your OpenShift environment. This will allow you to install the Maximo Automation operator on your cluster to install Maximo Application Suite.

Copy the catalog source from the following github repository found here.

Apply the catalog source into the OpenShift cluster by clicking the plus icon on the admin console, and pasting the yaml into the **import yaml** screen. Then click the **create** button.

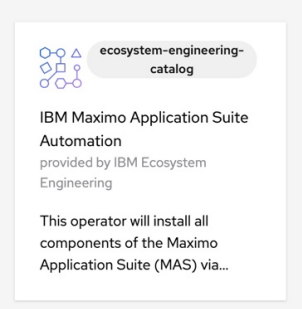


Note the catalog will install and load, wait until the status report **READY**.

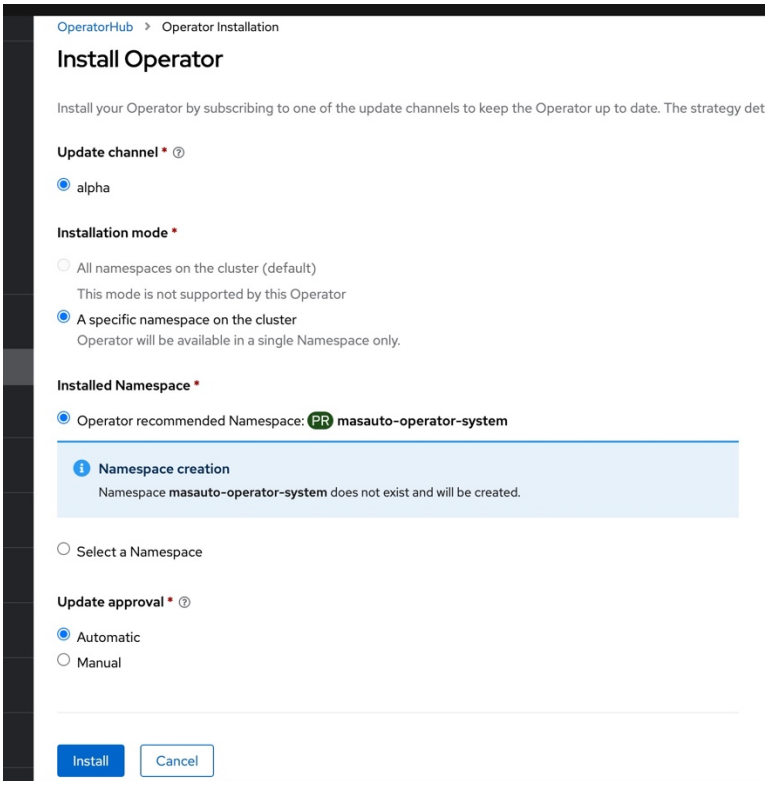


Install the Maximo Automation Operator

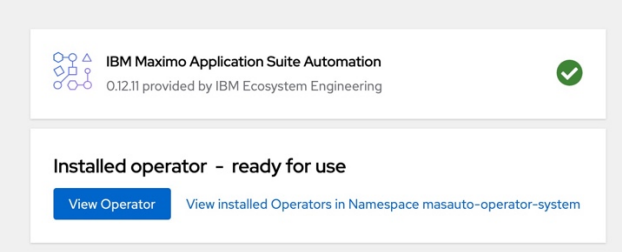
From the OpenShift menu, navigate to Operators->OperatorHub and enter Maximo into the search box. Select the Maximo Automation Operator.



Select the blue **Install** button on the operator. Then take the defaults and select the blue **Install** button.



This will take a few minutes to install the operator, and create a namespace called *masauto-operator-system* on to the cluster.



Obtaining an Entitlement key:

To install Maximo Application Suite you are required to have an entitlement key that provides access to the software components. After the necessary entitlements have been granted, use the following steps to download the entitlement key and apply it to the automation:

1. Visit the Container Software Library site - https://myibm.ibm.com/products-services/containerlibrary
2. Log in with your IBMId credentials
3. Assuming the entitlements are in place, you will be presented with an entitlement key. Click "Copy key".
4. Save this key as you will need it for the installation.

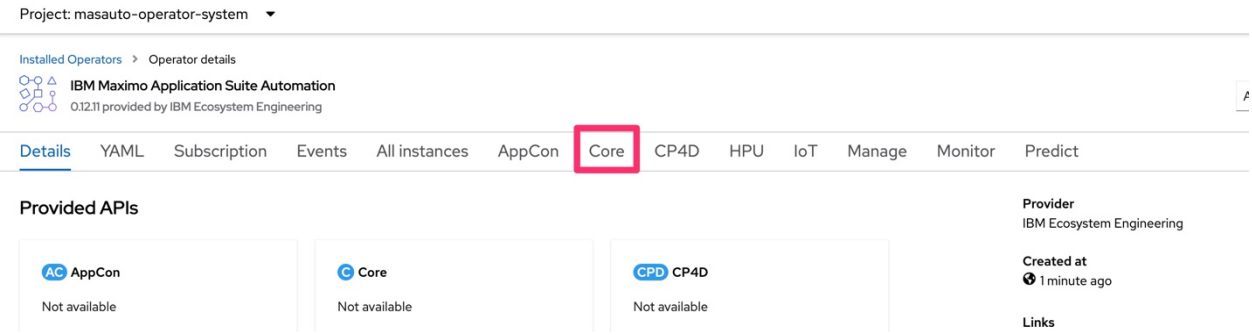
Add your IBM Entitlement Secret to the namespace

Open a terminal, login to the OpenShift cluster. Then create a secret with your IBM Entitlement Key from the previous step.

```
$ oc create secret generic "ibm-entitlement-key" -n masauto-operator-system --from-literal="username=cp" --from-literal="password=<your-ibm-entitlement-key-goes-here>"
```

Install Maximo Core

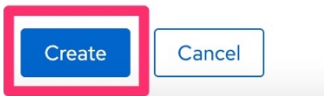
From the OpenShift menu, navigate to Operators->Installed Operators and select the **Maximo Application Suite Automation** operator. Then, select **Core**



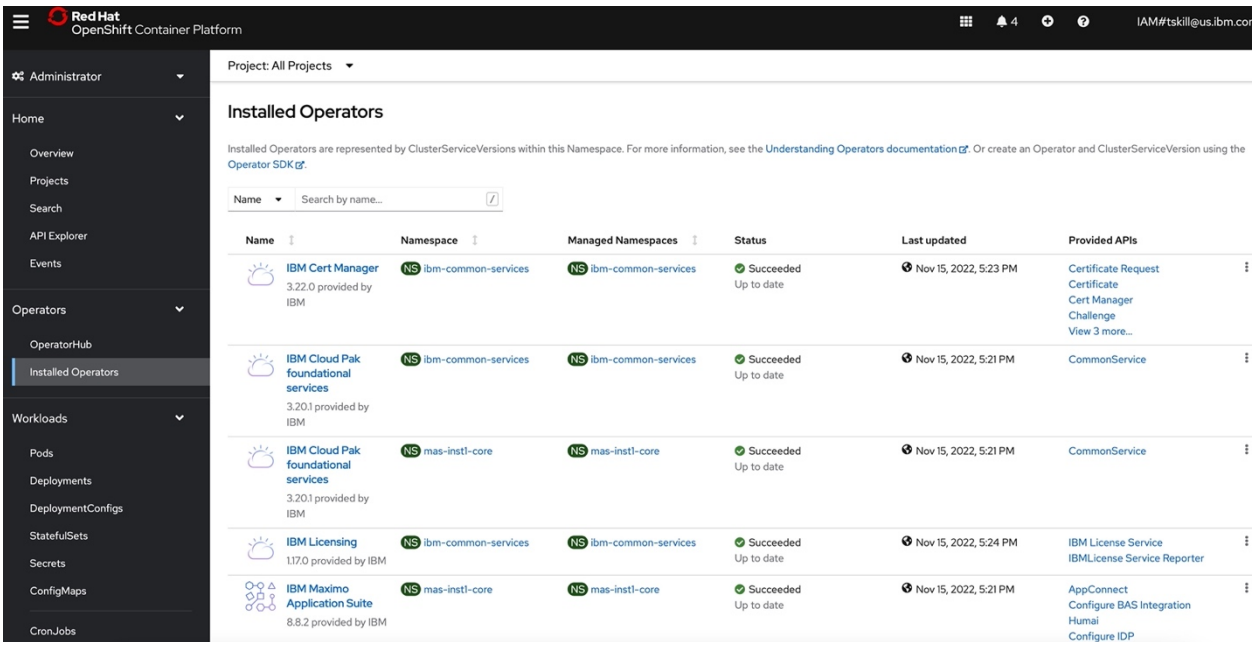
On the next page select the blue **Create Core** button to display the default values for a Core installation.

NOTE: it is highly suggested to change the default UDS contacts listed to suitable values for this particular install.

After editing, select the blue **Create** button. The Install may take up to an hour based on cluster sizing and other resources on the cluster.

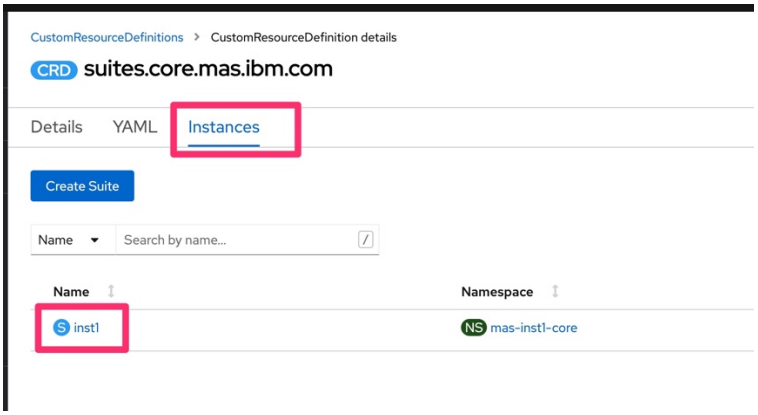


During the install, you will see multiple operators installed into the cluster such as below.



Check if Install is finished

To check if in the installation is finished, navigate on the OpenShift menu to Administration->CustomResourceDefinitions and select Suite. From there select the **Instances** and the **inst1** instance (if you did not take the default install then this instance name will match whatever was used in place of the default).



When the installation is complete, it will look something like the following where Mongo and BAS (now UDS) are installed and configured but the License File is missing and SLS is not ready. At this point you can now apply your license.

Reason	Message
IncompleteConfiguration	Required condition(s) not ready: ['SlsIntegrationReady']
Ready	MongoDB configuration was successfully verified
Ready	BAS configuration was successfully verified
MissingLicenseFile	License key file has not been uploaded

Obtaining a Maximo License Key:

Maximo Application Suite is licensed per Application Point (AppPoints). To use Maximo Application Suite you are required to install a license key with the required app-points to cover the amount of applications and users using those applications.

Accessing a License Key for MAS requires an account within the IBM License Key Center. If you do not have an account, then please see the IBM Getting Started Guide for obtaining an account.

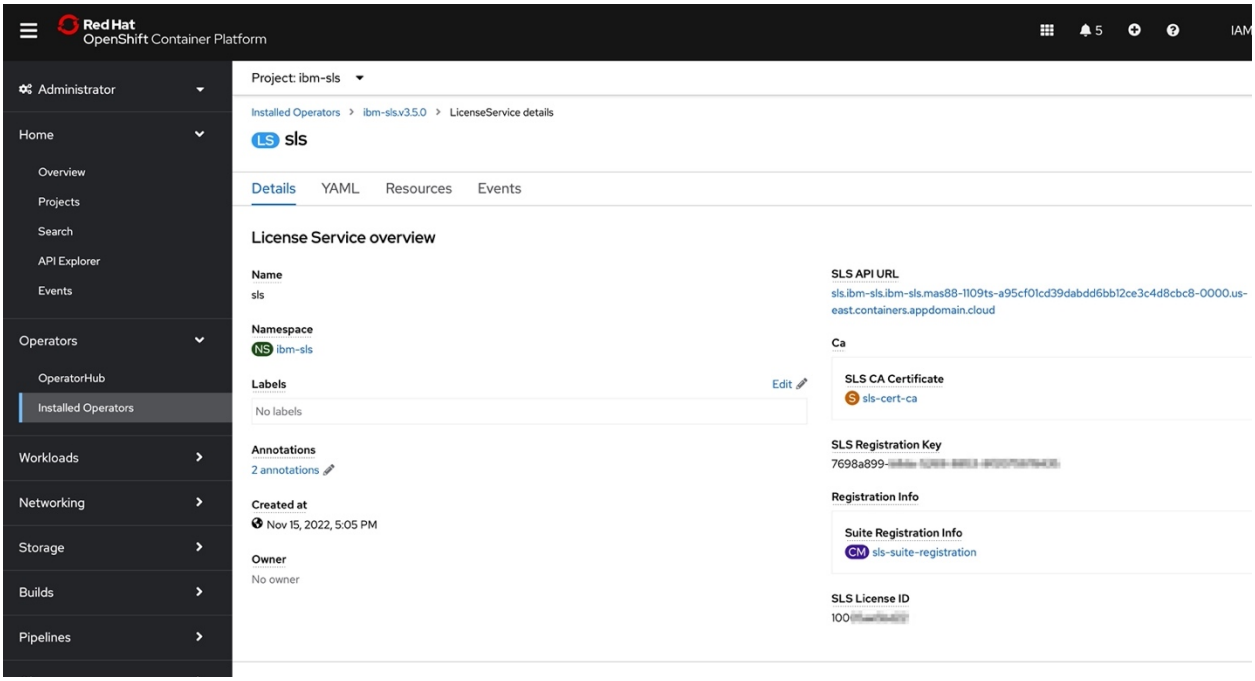
For Partners
Partners that purchase a PartnerWorld membership may have a set number of app-points for MAS already included in their purchase for demo/non-production/educational usage per the PartnerWorld terms & conditions. App Points for production usage are determined and typically accessible at the time of purchase.

For IBMers
IBMers can contact their geo tech sales leaders for the sustainable software brand and ask to be added to their geo-based internal account for MAS app-points, used for non commercials/non production use.

After obtaining a License Key Center login

1. Login to the IBM License Key Center.
2. On the **Get Keys** menu, scroll down and select **IBM AppPoint Suites**
3. Select **IBM MAXIMO APPLICATION SUITE AppPOINT LIC** on this page you will see the number of app-points available to claim
4. Select Next to move to the next page. If you do not have enough app-points for what you will need, please contact your IBM representative.
5. Fill in the information from your installation - NOTE: You must have already completed the installation of MAS-Core at a minimum to obtain the required information for the license file. This information here comes from IBM SLS and is generated according to your cluster.

Note: You can obtain the SLS information required below from your cluster OpenShift console, selecting the **IBM Suite License Service** operator and selecting the License Service tab and sls license service that was created.



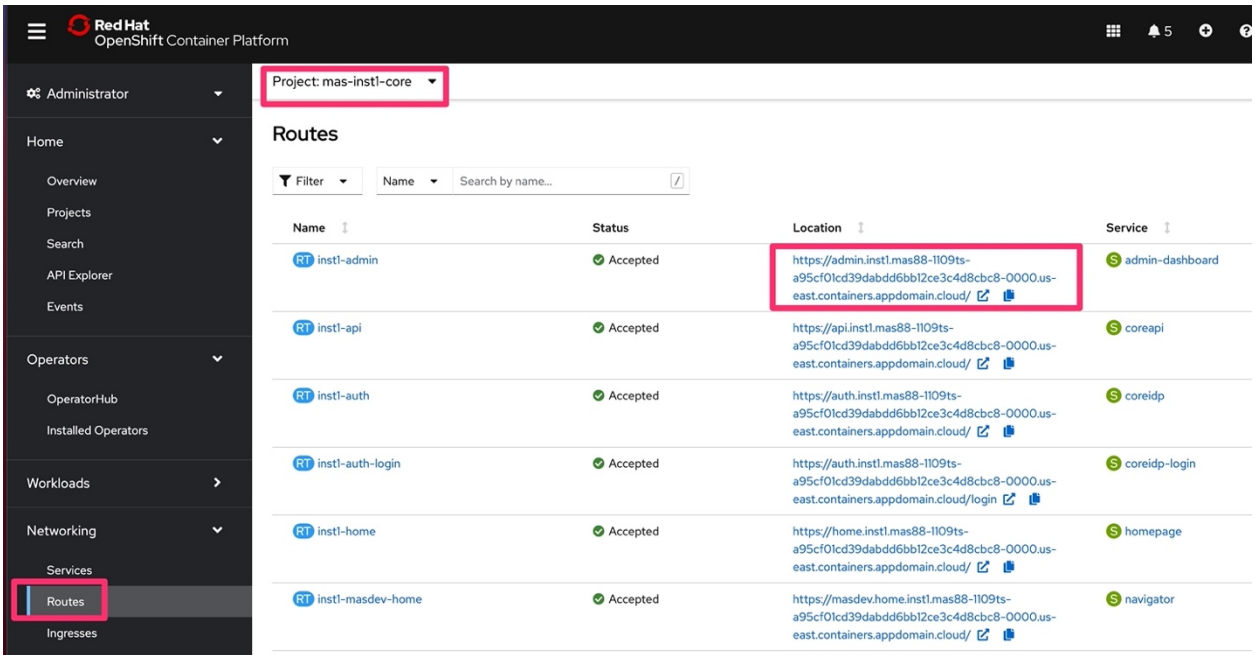
LICENSE VARIABLE	SUGGESTED VALUE
NUMBER OF KEYS	This is the number of app points needed
HOST ID TYPE	Set to Ethernet Address
HOST ID	SLS License ID value found in SLS Operator page
HOSTNAME	Copy/paste SLS API URL from operator page
PORT	Set to 27000

The other values can be left with the default values found on the license generator page.

6. Select **Generate** after completing the above steps.
7. Download the **license.dat** file that was generated on the next page and save this. This is used after installation during the initial setup process.

Apply the License in Maximo Application Suite

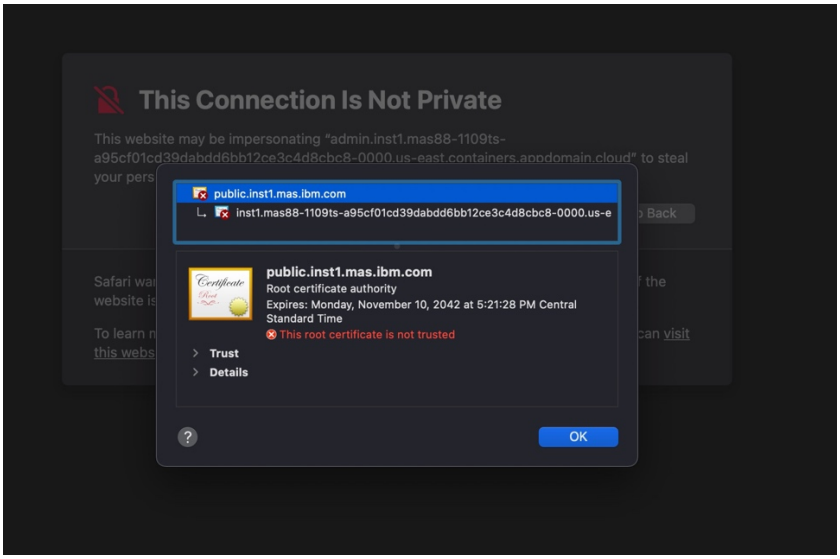
In the OpenShift menu, navigate to **Networking->Routes** and select the project where MAS core was installed. If the defaults were used this will be: **mas-inst1-core**



Copy/paste the admin route url into a browser and append **initialsetup** to the end of the route such as this: **https://admin.inst1.mas88-1109ts.us-east.containers.appdomain.cloud/initialsetup**

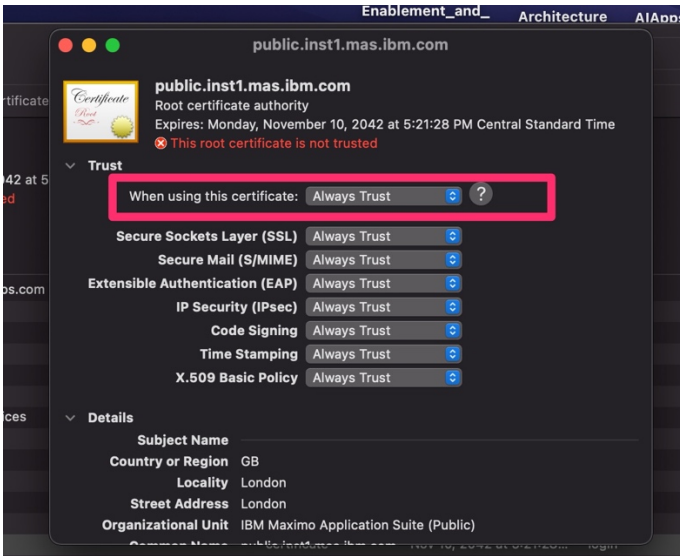
Accept and Trust the Certificate

Trust the certificate for the default install on your browser. For Mac users, you can use Safari, select the view certificate link in the browser warning. Then drag/drop the gold certificate to your desktop (the gold is the root certificate you want that).



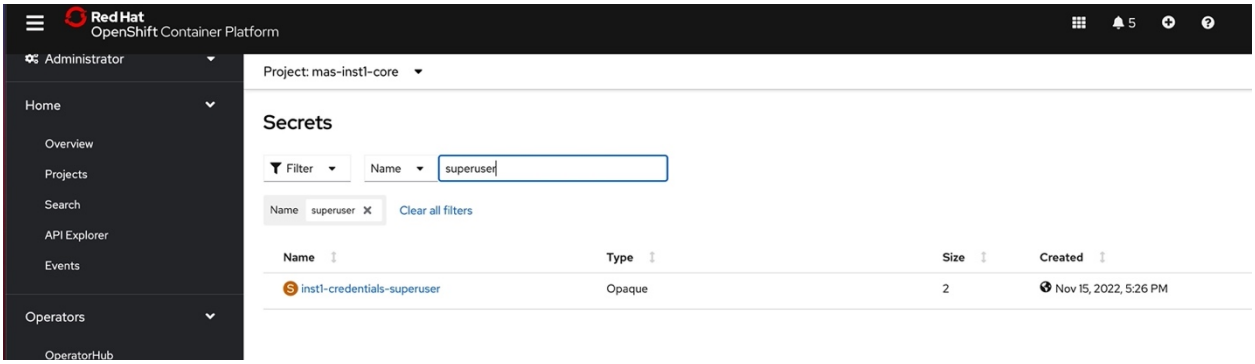
Double click the gold certificate you just dropped on your desktop, to bring up the **keychain access** tool in Mac. Find and select the one certificate listed that will most likely have a **red x** next to it. Right click and select **get info** for the certificate.

Then grant Always Trust to this certificate as shown and exit the keychain tool.



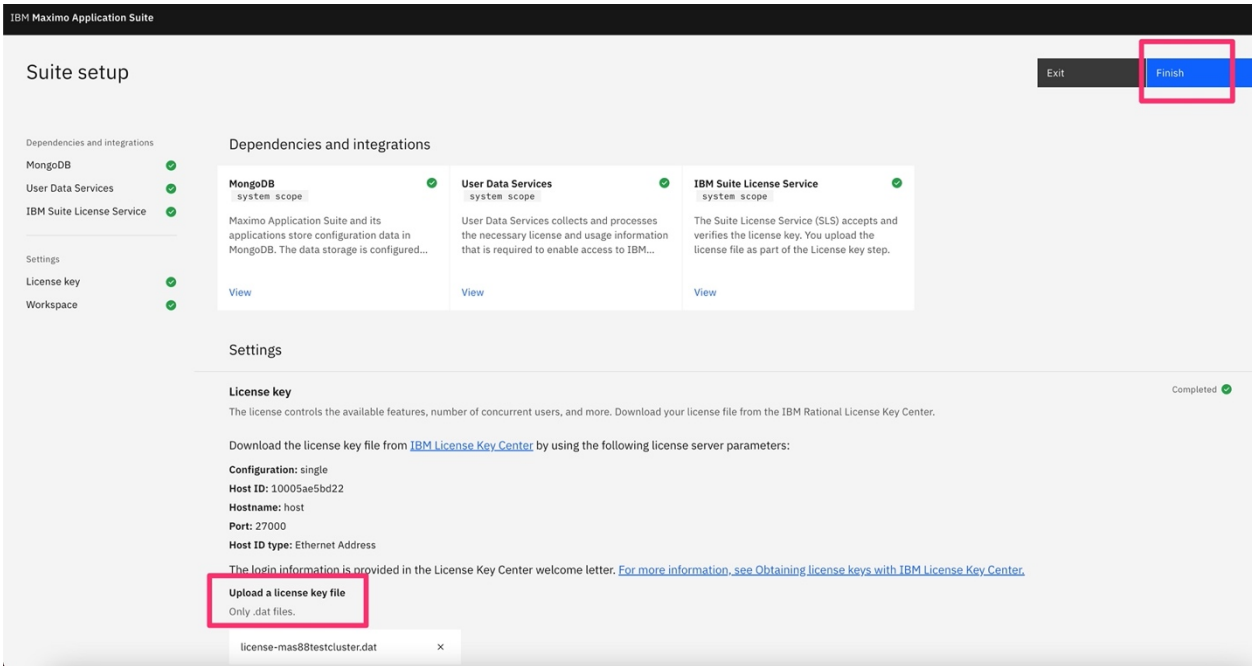
From here you can now proceed to apply the license file.

The Username and Password can be found by navigating in the OpenShift menu to Workloads->Secrets for the mas-inst1-core project, then searching for superuser

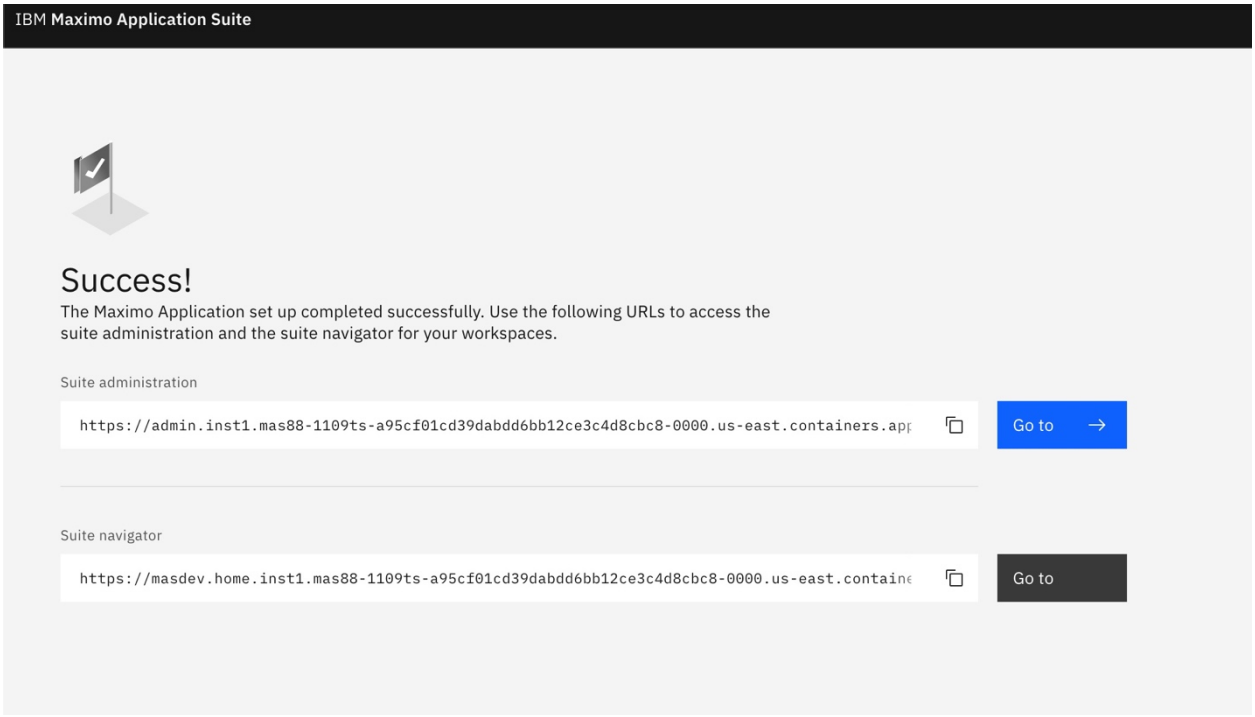


Select the superuser secret. Scroll to the bottom of the page into the **Data** section, select **Reveal values** and copy/paste the username and password into the browser to login to the initial setup screen of MAS.

Scroll to the bottom of the initial setup screen to drag and drop your license file. Then select click **Finish**.



Success



Make note of the Suite administration and navigator URLs displayed. These can be used in the future for login.