SYNTASA

www.syntasa.com

SYNTASA Installation for Air-Gapped Environments

SYNTASA 6.2+ Infrastructure setup document for Air-Gapped environments running in AWS Cloud.

Prepared by SYNTASA

Prepared on 03/07/2022

Table of Contents

1. INTRODUCTION

1.1 PURPOSE

This document is a guideline for the installation and setup of SYNTASA Application withing a Rancher RKE Environment in an Air-Gapped Setting.

1.2 DOCUMENT INFORMATION

Produced Date: 03/07/2022
Prepared By: SYNTASA DevOps
Produced For: SYNTASA Customers / General Release
Revisions: N/A

ORIGINAL DOCUMENT PREPARED ON – March 7th, 2022

a.) No Additions

2. INSTALLATION PRE-REQUISITES

Before beginning the installation of the SYNTASA platform, ensure proper access to the “Installation Server” machine* which contains the following applications:

Applications Required: AWS CLI, Docker, Kubectl, Helm

Additionally, the installation server should be configured to push/pull from a private registry (if required).

*If you followed the infrastructure document for setting up the environment using the Air-Gapped Infrastructure Installation document, then an “Installation Server” and a Rancher RKE Cluster were created as part of those steps.

3. INSTALLATION PACKAGES AND SOFTWARE

The installation packages and helm chart to deploy the Syntasa application resources into a Kubernetes cluster are available on AWS S3 (see links below). If you cannot access these files or need another medium through which to access, contact the SYNTASA engineers, and we can provide other methods to deliver the installation packages over to the client site.

SYNTASA PLATFORM IMAGES

The Syntasa platform is made up of multiple microservices, each of which has images associated with them. The images, along with the loading/saving scripts, are readily available below in two formats. Use whichever one is easier to download and work with.

MD5 Checksum: https://syn-install.s3.amazonaws.com/syntasa-package-rancher/syntasa-packages-620.md5

Single Package (~15GB in size)

File Name: syntasa-packages-620.tar.gz
https://syn-install.s3.amazonaws.com/syntasa-package-rancher/syntasa-packages-620.tar.gz

Multiple Files (15 files each ~1GB in size)

File Name Pattern: syntasa-620-part-a* (where the asterisk can be replaced by a character between 'a' and 'p')

https://syn-install.s3.amazonaws.com/syntasa-package-rancher/part-files/syntasa-620-part-aa
https://syn-install.s3.amazonaws.com/syntasa-package-rancher/part-files/syntasa-620-part-ab
https://syn-install.s3.amazonaws.com/syntasa-package-rancher/part-files/syntasa-620-part-ac
https://syn-install.s3.amazonaws.com/syntasa-package-rancher/part-files/syntasa-620-part-ad
https://syn-install.s3.amazonaws.com/syntasa-package-rancher/part-files/syntasa-620-part-ae
https://syn-install.s3.amazonaws.com/syntasa-package-rancher/part-files/syntasa-620-part-af
https://syn-install.s3.amazonaws.com/syntasa-package-rancher/part-files/syntasa-620-part-ag
https://syn-install.s3.amazonaws.com/syntasa-package-rancher/part-files/syntasa-620-part-ah
https://syn-install.s3.amazonaws.com/syntasa-package-rancher/part-files/syntasa-620-part-ai
https://syn-install.s3.amazonaws.com/syntasa-package-rancher/part-files/syntasa-620-part-aj
https://syn-install.s3.amazonaws.com/syntasa-package-rancher/part-files/syntasa-620-part-ak
https://syn-install.s3.amazonaws.com/syntasa-package-rancher/part-files/syntasa-620-part-al
https://syn-install.s3.amazonaws.com/syntasa-package-rancher/part-files/syntasa-620-part-am
https://syn-install.s3.amazonaws.com/syntasa-package-rancher/part-files/syntasa-620-part-an
https://syn-install.s3.amazonaws.com/syntasa-package-rancher/part-files/syntasa-620-part-ao
https://syn-install.s3.amazonaws.com/syntasa-package-rancher/part-files/syntasa-620-part-ap

SYNTASA HELM DEPLOYMENT CHART

File Name: syntasa-agent.tar.gz
https://syn-install.s3.amazonaws.com/syntasa-package-rancher/syntasa-agent.tar.gz

MD5 CHECKSUM VERIFICATION

Once the images package is downloaded, you can verify the checksum of the files to make sure that the file are in-tact and ready to use.

If you are downloading the individual split files, run the following command to reconstitute it back to a single package (after transferring them to the destination environment):

```
cat syntasa-620-part-a* > syntasa-packages-620.tar.gz
```

Once the package is ready and you have the checksum file you can verify if the checksum matches.

```
vinjamurik@DESKTOP-4COCGUJ:/mnt/d$  cat syntasa-packages-620.md5
72c4b96d971921533ad76fa5765a8165  syntasa-packages-620.tar.gz

vinjamurik@DESKTOP-4COCGUJ:/mnt/d$  md5sum syntasa-packages-620.tar.gz
72c4b96d971921533ad76fa5765a8165  syntasa-packages-620.tar.gz
```

ADDITIONAL STEPS

At this time, transfer both the Helm Chart and the Syntasa Images Package to the proper installation environment to continue.

4. SYNTASA IMAGES IMPORT

Once the images package is transferred to the “Installation Server”, you will need to import the images into a private Docker Repository that RKE can use to pull the images. To make this process simple, there is an image load script that can be used to import the images into the “Installation Server” local docker repository, re-tag to the private registry, and then push to the private registry.

1.) Pre-Requisite - make sure the that you have logged into the private registry using docker by running the following command:

```
vinjamurik@DESKTOP-4COCGUJ:/mnt/d$ docker login {my_registry_url}:{my_repository_port}
```

Where {my_registry_url} is replaced with the location of your private registry (IP or hostname)
And {my_repository_port} is replaced with the port the registry is listening on (443/8443/5000 etc.)

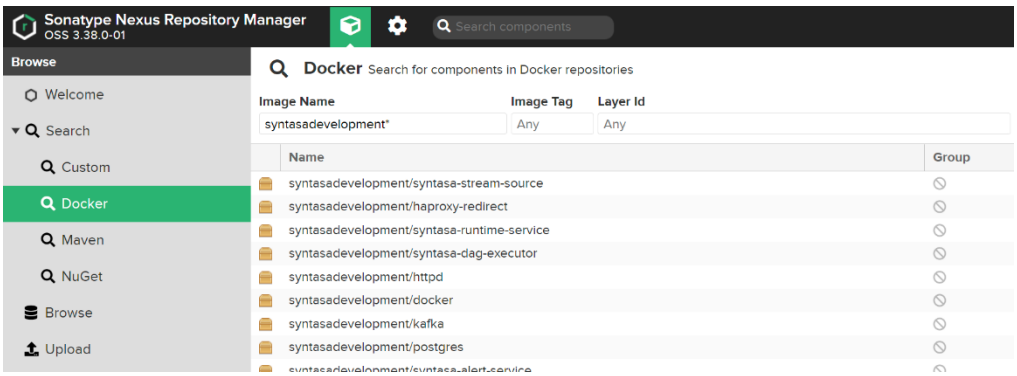
2.) Un-tar the images package (here we are assuming the tar file is in your home folder and you are already in your home folder path):

```
vinjamurik@DESKTOP-4COCGUJ:/mnt/d$ tar -xvf syntasa-packages-620.tar.gz
```

3.) Once untarred, proceed to the `syntasa-packges-620` folder and begin the image import. (Images are already within their own tar.gz file in the folder.

```
vinjamurik@DESKTOP-4COCGUJ:/mnt/d$ cd syntasa-packages-620/
vinjamurik@DESKTOP-4COCGUJ:/mnt/d$ ./syntasa-load-images.sh --image-list syntasa-images.txt --registry
{my_registry_url}:{my_registry_port}
```

4.) The images will be pulled into the local docker repo and then re-tagged and pushed to the remote private registry. This process may take some time, so grab some coffee while this command runs. Once finished, you should be able to login into your private repository and see the SYNTASA images loaded. For reference, see below for a screenshot of Nexus OSS as a Docker repository.



5. SYNTASA PLATFORM INSTALLATION (HELM)

After the images are loaded into the private registry, install the SYNTASA platform using the included helm package chart.

1.) Un-tar the syntasa-agent.tar.gz file

```
vinjamurik@DESKTOP-4COCGUJ:/mnt/d$   tar -xvf syntasa-agent.tar.gz
```

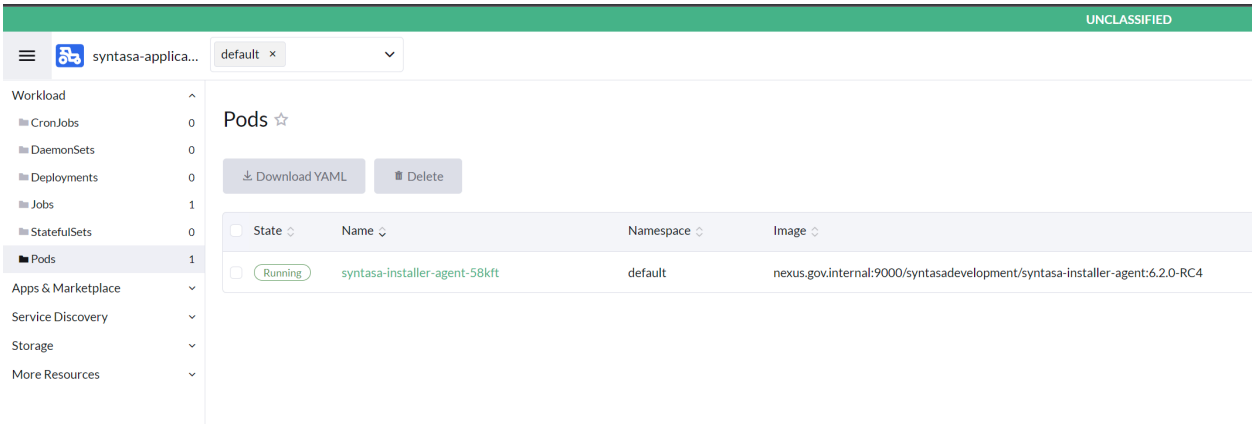
2.) Once untarred, head into the agent folder and look at the values.yaml file in a text editor of your choice and edit the values appropriately to match your environment.

Once this is complete, apply the helm chart by running the following command:

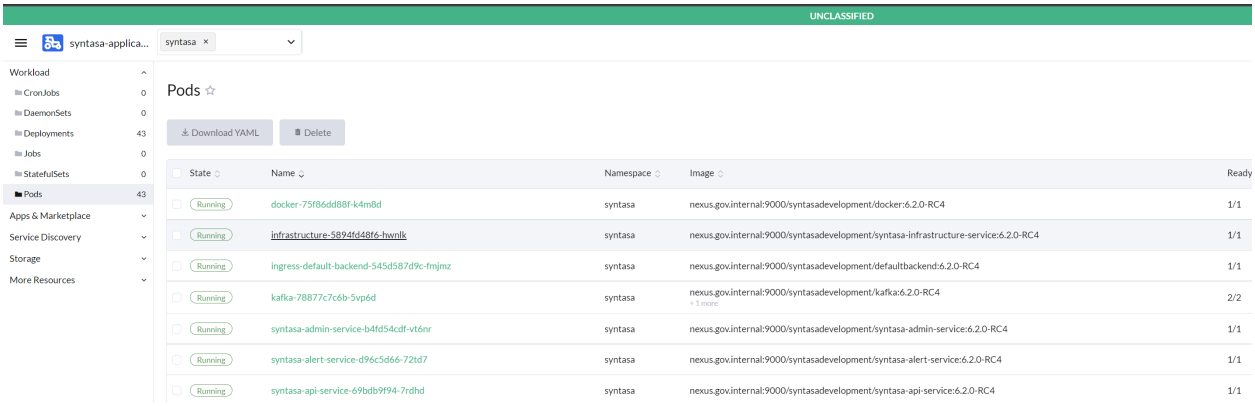
```
helm install syntasa-agent . --namespace default
```

At this point, the Installer Agent container (installed in the default namespace) will create all the pods for the SYNTASA application in the syntasa namespace. Here is a screenshot of what both the agent and the SYNTASA pods look like.

SYNTASA Agent Pod



SYNTASA Application Pods



INSTALLATION COMPLETE

Congratulations, the installation of the SYNTASA platform should be complete. There might be some minor issues which require modifying configuration properties in the RKE Cluster (Config Maps), but these can be modified from the UI after installation is complete.

For any questions or comments, please contact:

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