Agility Platform

Upgrade Guide

Agility Platform 11.3

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Preparing for the Upgrade

Agility Platform 11.3 runs in a Docker swarm cluster, which must be created prior to upgrading your Agility Platform installation. Each node of the Docker swarm is a separate instance in a supported cloud provider. Each individual instance must meet the minimum requirements, so ensure that you have enough database storage, and that you follow the proper installation path.

Important: The upgrade process described in this document applies to only Agility Platform 11.2.x. If you are using a version earlier than 11.2, you must first upgrade to 11.2, and then proceed with this process.

Read the *Agility Platform Release Notes* for information about new or deprecated features.

Meeting System Requirements

Agility Platform must be upgraded in a Docker swarm environment and each node of the swarm must meet the following minimum system requirements:

Agility Platform minimum requirements per Docker swarm node

Configure each node of the docker swarm for the Agility Platform with the following minimum resources, based on the number of instances:

Number of instances	0-100	100-500	>500
Cores	4	4	8
Memory (GB)	16	16	32
Local Storage (GB)	200	400	600
External Storage	NAS/NFS	NAS/NFS	NAS/NFS
Ethernet (IP) Ports*	1	2	2

Note: Although a single Ethernet port is required by the Agility Platform, two ports are recommended for multi-homed environments or segmented network environments.

Important: Java 8 is required. It is pre-installed in the Agility Platform appliance. Certain features require a browser that supports Java applets, and applets must be enabled.

The base stack for managed Agility Platform instances includes approximately 200 GB of local storage.

If you require more storage for managing additional instances, add a storage volume and move the MySQL data directory to the larger storage volume. For more information, refer to the the *Agility Platform Administrator Guide*.

Navigate to the DXC Technology FTP site for releases and associated information:
ftp://ftp.servicemesh.com

To request appropriate user IDs and passwords for the site, contact DXC Technology Support.

Images are supplied as *OVA* files based on ESX/ESXi version 4.0 to ensure forward compatibility, and as .ami files for EC2.

Supported installations

The DXC Technology Agility Platform 11.3 is supported when installed on VMware vSphere 5.1 (on ESX 5.1), VMware vSphere 5.5 (on ESX 5.5). and on Amazon EC2.

Ethernet recommendations

You must log in to the virtual machine session and configure an IP address for the DXC Technology Agility Platform instances running under VM.

The DXC Technology Agility Platform can then be accessed through the following URL:

```
https://<ip-address>/agility/login.html
```

where `<ip-address>` is the address of any one of the nodes in the swarm.

DXC Technology recommends that your networking IT department create a way to access the swarm through a single access point and then use that IP address.

Upgrading from Agility Platform 11.2. x

To upgrade from Agility Platform 11.2.x, complete the following steps.

To upgrade Agility Platform:

1. Download the following files for **each** node in the Agility swarm cluster:
   - agility-images-11.3.x.tar.gz
   - utilities-images-11.3.x.tar.gz
   - agility-base-upgrade-11.3-x.rpm
2. Download the latest version of all the cloud adapters on your platform from the following location:

   http://dl.bintray.com/csc/opensource/
3. Make sure that all Agility Platform jobs have been stopped or have ended, for example daily provider sync, backups, etc.
4. From the Manager node, shut down Agility Platform by issuing the following command:

```
/home/smadmin/cli/swarm-stop
```

5. Wait until all the containers have shut down. You can monitor the shutdown status by issuing the following commands:
   - `docker service ls` (services should be 0/x)
   - `docker ps` (there should be an empty list on each node)
6. This step is optional but recommended. Take a snapshot of all the VMs on your Agility swarm. This will help you restore Agility Platform to its original state.
7. Clear all Docker containers and images by issuing the following commands:

```
docker container prune -f
docker image prune -af
```

8. Upgrade each node of the Agility swarm with Docker version 18.09CE by issuing the following commands:

```
sudo rpm -ivh agility-base-upgrade-11.3-0.r69.a493787.el7.x86_64.rpm;
sudo /var/tmp/agility-base/agility-base-upgrade.sh
```

9. Verify that Docker has been upgraded for each node by issuing the following command:

```
docker -v
```

10. Upload the new images on **each** node of the Agility swarm cluster by issuing the following commands:

```
docker image load -i agility-images-11.3.x.tar.gz
docker image load -i utilities-images-11.3.x.tar.gz
```

11. On each node, download the **agility-cli-11.2.x.tar.gz** file and extract it to */home/smadmin/cli* by issuing the following command:

```
tar xzvf agility-cli-11.3.x.tar.gz
```

12. Scale your swarm down to one node Agility Platform by issuing the following command:

```
/home/smadmin/cli/swarm-scale 1
```

13. Run the **Upgrade Preparation for 11.x to 11.3** script by issuing the following command:

```
/home/smadmin/cli/upgradePrepFor11.xto-11.3+.sh
```

This command removes the existing *agility_archiva* volume. All external adapters will be restored from backup

14. Start Agility Platform by issuing the following command:

```
/home/smadmin/cli/swarm-start
```

15. Wait for all containers to be started. You can check the status of your services by issuing the following command:

```
docker service ls
```

16. After Agility Platform is up and running, verify the Agility Platform version from the UI by clicking **Help** -> **About**. Make sure the version is 11.3.x.

17. Uninstall and delete all of the adapters one by one as required by the adapter dependencies, for example remove **ec2** before **core.aws**.

18. If you haven't already done so, download the new version of the cloud adapters from: http://dl.bin-tray.com/csc/opensource/.

19. Upload and install all adapters one after the other. Make sure to maintain the appropriate order that is required for adapter dependencies, for example install **core.aws** before installing the **ec2** adapter.

20. Wait for 5 to 10 minutes to make sure the adapters backup has been synchronized.

21. Scale your cluster back to the original number of nodes, for example from 3 to 5 nodes, by issuing the following command:

```
/home/smadmin/cli/swarm-scale 3
```

22. Wait until all the services have been scaled up. You can check the status of your services by issuing the following command:

```
docker service ls
```

23. This step is optional. Perform an "image-update" by doing the following:

    a. Go into Agility Container and locate the container id by issuing the following command:

```
docker ps
```

    b. Log into the container by issuing the following command:

```
docker exec -it <id> bash
```

    c. Perform the image update by issuing the following command:

```
image-update.sh
```

24. From the Agility Platform **Admin** perspective, synchronize your cloud providers by selecting the cloud provider and clicking **Synchronize**.

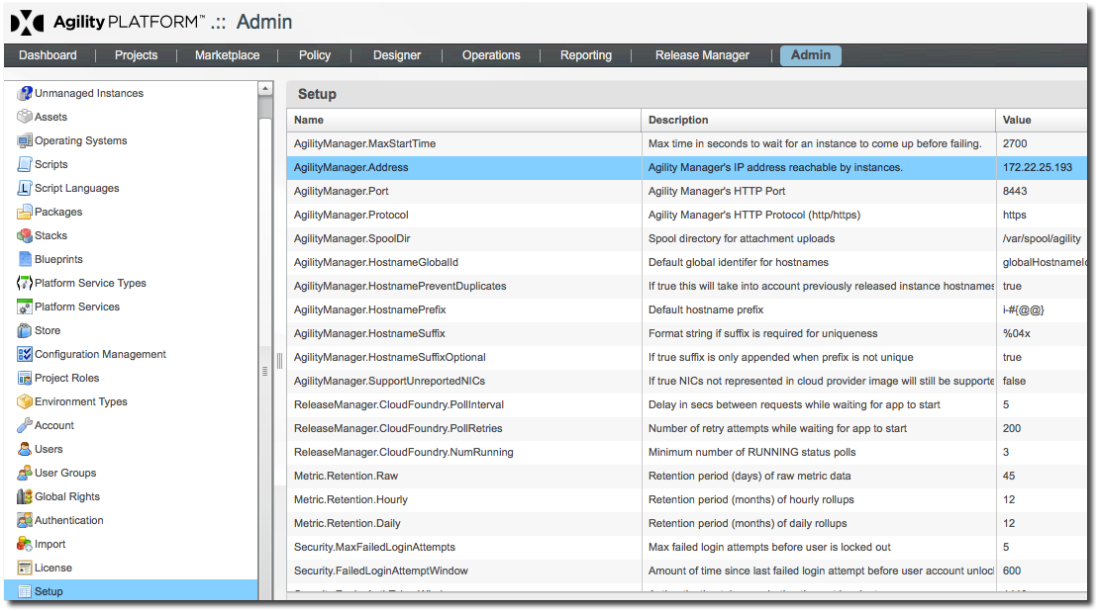
Post Upgrade Activities

Configuring the AgilityManager IP Address

After you have successfully upgraded to Agility Platform version 11.3, you must ensure the correct IP address is configured for the *AgilityManager.Address* variable in the **Admin** perspective to ensure your Agility Platform instance is reachable.

To configure the AgilityManager IP address:

1. In Agility Platform go to the **Admin** perspective.
2. In the left nav column, click **Setup**.
3. On the **Setup** page verify that the *AgilityManager.Address* variable is set to the correct IP address. This value must set to one of the IP addresses of the nodes that were created earlier.



Configuring the InfluxDB Password

After you have successfully upgraded to Agility Platform version 11.3, you must set the password for the automatically installed third-party metric database, InfluxDB using the `PUT /credentials` call in the metrics API.

You must use Agility Platform administrator credentials. The call expects a JSON file and works for any valid metrics user including *admin*, *apm_user*, *vmm_user*, *apm_reader*, and *vmm_reader*. The password must be 4 to 16 characters, may contain: letters, numbers, and underscores, and must start with a letter or underscore.

The call changes the `com.servicemesh.agility.metrics.cfg` file, which is under `etc/` inside the Agility Platform instance. Do not change the file manually.

The following is an example call to change the metrics password:

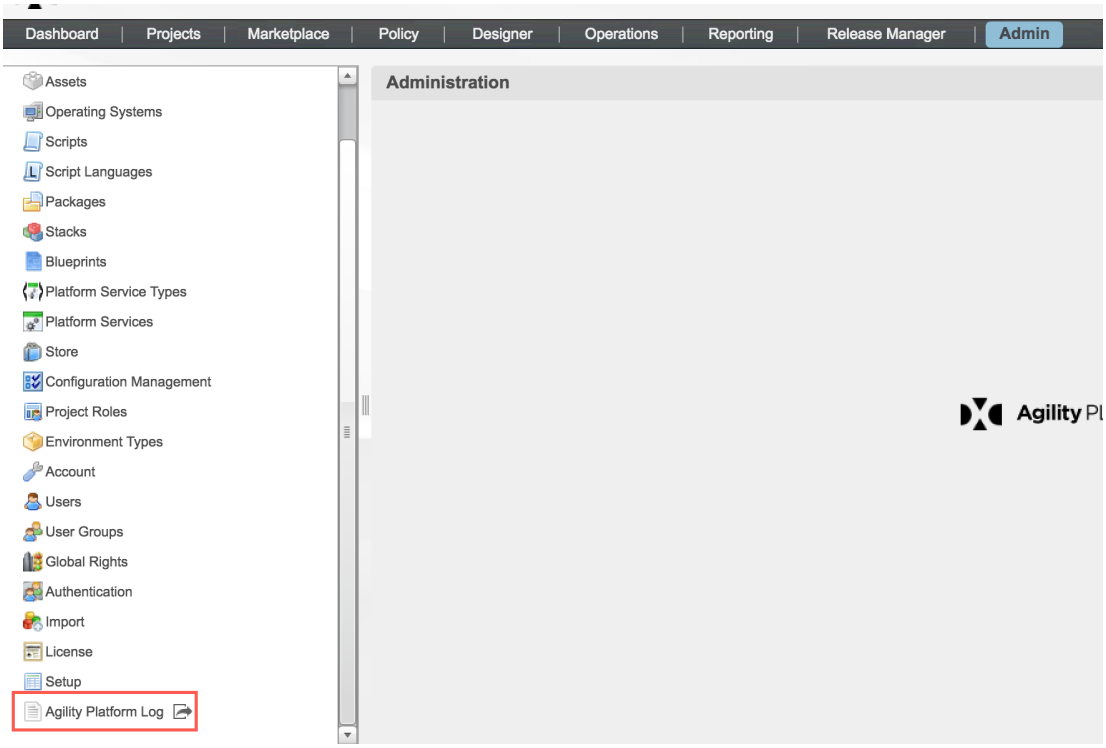
```
curl -X PUT -u 'admin:adminPassword'
https://localhost:8443/agility/api/metrics/v1.0/credentials \
   -H 'Accept: application/json' \
   -H 'Content-Type: application/json' \
   -d '{"username": "apm_reader", "password": "example_password"}'

// example response
{
   "influxdb_code": "200",
   "influxdb_message": "OK",
   "response_time": "5",
   "time": "03-18-2019 02:26:17.726 PM"
}
```

Activating the Kibana Logging UI

Agility Platform 11.3 provides a Kibana Logging UI. After you have installed Agility Platform you need to activate the Kibana Logging UI.

To Activate the Kibana Logging UI:

1. In Agility Platform go to the **Admin** perspective.
2. In the left nav column, scroll to the bottom and then click **Agility Platform Log**.



This will launch the Kibana Logging UI.

Note: For the first time after setting up Agility Platform11.3, when you click **Agility Platform Log**, the page will not show you the log as expected. Wait for the process to self-correct in the background after your first visit to the **Agility Platform Log** page. Close this page and re-open it after a few minutes by clicking the **Agility Platform Log** link from the **Admin** perspective. The page should work now and display your Agility Platform log messages.

About This Guide

This guide is provided for staff responsible for updating and maintaining the infrastructure that hosts the Agility Platform virtual images. You should have a working knowledge of the cloud providers used at your company and Windows and Linux operating system administration and use.

Important: If the Release Notes provided with the Agility Platform contains details that differ from the information in this guide, the information in the Release Notes supersedes the information in this guide.

Note: Applicable Agility Platform product guides are available in Adobe Acrobat Reader Portable Document Format (PDF) in the customer area of the DXC Technology FTP site:

ftp://ftp-aus.servicemesh.com

Agility Platform Web Client Prerequisites

The Agility Platform provides web-based client control through platform interfaces. The prerequisites for web clients are the following:

- **Supported web browser** :
  - Microsoft Internet Explorer version 11 or greater.
  - Microsoft Edge version 39 or greater.
  - Google Chrome version 57 or greater.
  - Mozilla Firefox version 52 or greater.
  - Apple Safari version 9 or greater.
- **Flash**: Flash version 10.x. The Flex loading page of the Agility Platform web application performs a Flash version check when loading. Your browser may not enable flash support by default. Refer to your browser's documentation for assistance.
- **Java**: Java Runtime Environment (JRE)/browser plug-in version 8 that is enabled.

  Note: The Console and Desktop features in the Designer perspective only work on browsers (Safari and Internet Explorer, for example) that support Java plugins (applets). The Java plugin must also be enabled in the browser. Ensure that you have the plugin installed and refer to the browser documentation to ensure it is enabled in the browser. Google Chrome 45 and greater and Mozilla Firefox 52 and greater have dropped support for Java applets. Earlier versions of both browsers support Java applets but are no longer officially available or supported.

Note: For optimal viewing and interactions in the primary Agility Platform web application, set your system resolution to at least 1440 x 900. Lower resolutions can result in application resources displayed out of view.

Important: When you connect to instances through the Agility Platform, SSH software must be loaded to run the client successfully. The .SSH directory is created under the user's account on the client.

Load times

Application page load times might vary after a stop or start of the Agility Platform, depending on whether the visited page was previously cached. You might experience longer load times when you do the following:

- Log into the Agility Platform instance with a fresh browser after an administrator performs a cold start.
- Access Agility Platform the first time after an administrator performs a cold start. It takes longer to calculate a deployment plan for a blueprint or template. This happens only during the first access unless the Agility Platform hibernate cache is cleared.

Note: Administrators should notify users before doing a cold start or before starting or stopping the Agility Platform.

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