Stratusphere™ FIT & Stratusphere™ UX

Migrating to

Stratusphere 6.5.0 Appliances

Introduction

This guide has been authored by Liquidware to provide a step-by-step guide to migrate from Stratusphere 5.8.6 or higher to 6.5.0 or higher appliances.

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Overview

This document is meant for Stratusphere Administrators who need to perform a migration of their existing Stratusphere 5.8.6 or higher appliances to the latest 6.5.x version. Prior versions of Stratusphere appliances cannot be upgraded through the Web UI to the latest 6.5.x version due to underlying operating system related upgrades.

This document provides instructions to migrate settings, certificates, and data from the old appliances to the new appliances. To do so, they are required to be temporarily configured as new appliances prior to migrating and assuming the identities of the older appliances. Please acquire temporary IP addresses, network masks, default gateway IP addresses etc. prior to proceeding. The instructions assume that the new appliances will use the same IP network settings as the older appliances.

The existing 5.8.6 or higher version CID Keys and Network Stations already deployed will continue to function and upload data to the new Stratusphere 6.5.0 appliances. The CID Keys, in turn, could be configured to auto-upgrade themselves to the 6.5.0 version through a simple configuration option within the Administration Web UI. The 5.8.x Network Stations cannot be upgraded to 6.5.0 Collectors but are still compatible with Stratusphere 6.5.0 Hubs and can be replaced in a phased manner. After migrating the Hub and Database appliances, Liquidware recommends making a note of the IP addressing of existing Network Stations or Collectors, then turn them off and delete them from the Stratusphere Web UI. Then add new Stratusphere 6.5.0 Collector appliances to the installation. Please refer to the Stratusphere Installation & Configuration Guide for instructions on how to add Collector appliances to the Stratusphere 6.5.x Hub.

Due to differences on how Stratusphere's Cloud appliances on AWS, Azure, and GCP handle password security and requires certificates for access to appliances, Liquidware has separate instructions sets for its cloud based Stratusphere appliances, compared to the standard instructions for VMware ESX, Microsoft Hyper V, Nutanix Acropolis, and Citrix XenServer based appliances.

Supported Migrations

| Platform	Migrate From Version	Migrate to Version	Status
VMware	5.8.6 and higher	6.5.0	GA
Hyper V	5.8.6 and higher	6.5.0	GA
Nutanix	6.1.3 and higher	6.5.0	GA
XenServer*	6.1.5 and higher	6.5.0	GA
AWS	6.1.3 and higher	6.5.0	QA
Azure	6.1.4 and higher	6.5.0	GA
GCP	6.1.5 and higher	6.5.1	Dev

*XenServer:
1. Only CID Key Collectors are supported at this time. Both or Network Collector role is NOT supported.
2. NTP Time Servers are not populated correctly and may need to be manually set.
3. Roll-up data from versions earlier than 6.1.5 do not come over correctly, thus Migrations from only 6.1.5 are supported.

Estimating Time for Migrating Data

Migrating data from 5.8.6 and higher to 6.5.x involves streaming data from an older version of Postgres to the latest version at Postgres 12. Streamed data could be larger in size compared to the native database storage format. Rate of transfer depends on the performance of your storage and networking. To help estimating the time taken here are some guidelines:

1. Log into the Stratusphere 5.8.6 or higher Web UI's Administration section. Navigate to Hub ADMINISTRATION > DATA RETENTION > STATUS tab. Determine the size of the database as highlighted in the red box below i.e. 23.42 GB:
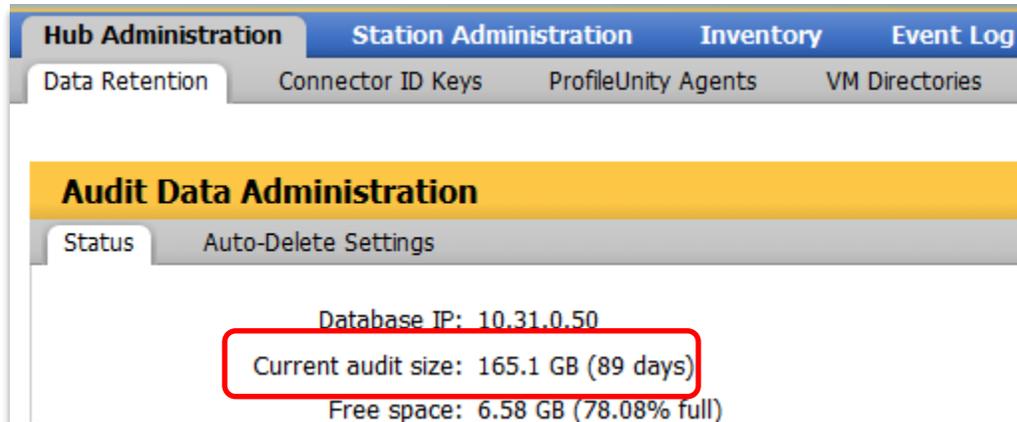
2. When Migration Wizard begins data transfer, it will provide an average rate of transfer in MB/s as shown below:

3. So, to estimated time taken:
    a. Total database size = 165.12 GB = 165.12 x 1024 = 169,082 MB.
    b. At 18 MB/s, 169,082/18 = 1,332 seconds i.e. 9,393/3600 seconds = 2 hours, 36 minutes.
    c. After the data is transferred, the bytes transferred counter will stop incrementing. The database has then started internal operations such as indexing and schema updates. This will take additional time, so please be patient until the Migration Wizard completes the migration.

Migrating On-Premises Appliances:

If your current Stratusphere installation is an on-premises (VMware ESX, Microsoft Hyper V, Nutanix Acropolis, and Citrix XenServer) version, this section provides instructions to migrate your installation for the following scenarios:

1. A single Stratusphere Hub appliance i.e., no separate Stratusphere Database appliance.
2. A Stratusphere Hub with no prior Database migrating to a Hub with a new Database appliance.
3. A Stratusphere Hub and a Database appliance.
4. Multiple sets of Stratusphere Hub and Database appliances.

Once the main Hub and Database appliances are migrated as part of the scenarios above, the instructions include sections for migrating and upgrading the CID Keys deployed and migrating the Network Stations or Collectors deployed as well.

Scenario 1: Migrating a Single Stratusphere Hub Appliance

In this scenario, the instructions will walk you through moving the data from a 5.8.6 or higher Stratusphere Hub appliance into a new 6.5.x Stratusphere Hub appliance as well as updating the Connector ID Key agents to the 6.5.x versions as well.

Preparation for Migration

1. Download a brand-new version of the Stratusphere 6.5.x Hub appliances from https://www.liquidware.com/download. Use the online Stratusphere Sizing Guide to size them appropriately.

2. Acquire the credentials for the **ssconsole, friend** and **root** users for the existing Stratusphere 5.8.6 or higher Hub appliance. The default password for these users is **sspassword**. Please use PuTTY to test and validate if the passwords for each user still work prior to proceeding.

3. This document assumes that a valid DNS name is defined and configured within the Stratusphere 5.8.6 or higher Hub Web UI, which in turn is used by CID Keys to call back to the Stratusphere Hub. If this is the case, acquire a new temporary static IP address for the new 6.5.x Hub.

4. Make sure the remote (old 5.8.6 or higher) Stratusphere Hub is using static IP addressing and is not on DHCP. Acquire the following to temporarily configure the new Stratusphere Hub appliance with static IP addressing as well:

   a) IP Address
   b) Network Mask
   c) Default Gateway IP Address
   d) IPv6 Address
   e) DNS Server Addresses
   f) DNS Search Suffixes
   g) NTP Servers

5. Check if there are any upgrades or hot fixes are available for the version of Stratusphere Hub you have downloaded and are migrating to. *Please apply the upgrades or hot fixes **BEFORE** attempting the migration.*

   a) For upgrades, please follow the instructions in the Stratusphere Upgrade Guide for 6.0.x and 6.1.x guide.

   b) For hot fixes, please refer to the Stratusphere 6.5.0 Unified Hot Fix Patch KB article. It includes the link to the patch(es) and the instructions for applying the patches as well.

Migration Instructions

1. As part of its best practices, Liquidware recommends taking a snapshot of the existing Hub appliances for safety.

2. If you do NOT have any Network Stations or Collectors deployed, skip to the next item. If older Network Stations or Collectors are deployed, please follow the instructions below to get IP addressing and turn off the appliance:

   a) Please open the appliance consoles for each of the existing older Network Stations or Collectors. Hit ENTER key within the console and use **ssconsole** & **sspassword** as credentials when prompted to log into the console.

   b) Enter **N** for the **Network Configuration** menu option and take a screen shot of the network configuration of the appliance so that it can be reused on new 6.5.0 version of Collectors.

   c) Enter **Q** to quit the **Network Configuration** wizard and then select **S** to **Shut down** and power OFF the appliance.

3. Before powering up your new Stratusphere 6.5.x Hub appliance, please use the online Stratusphere Sizing Guide to properly size the new Stratusphere 6.5.x Hub appliance. Based on the sizing guideline, please edit settings of the Stratusphere Hub appliance, and provide the requisite resources for vCPUs, RAM, and storage for the Hub.

4. On the new Stratusphere 6.5.x Hub appliance:

   a) Power ON the new Stratusphere 6.5.x Hub appliance.

   b) Open a local console of the Stratusphere Hub appliance and click into it. Use instructions in the Stratusphere Installation & Configuration Guide under the CONFIGURING STRATUSPHERE HUB APPLIANCE SETTINGS > USING THE CONSOLE UI section to set up the Hub appliance. Stop configuring the appliance after that section and do NOT proceed to joining the database just yet. ***Note****: Please apply NTP settings on the console as these are NOT migrated from the older appliance.*

5. Once configured, the appliance console will show a status screen. Hit ENTER key within the console and use **ssconsole** & **sspassword** as credentials when prompted to log into the console. Enter **M** for the **Migrate certs, settings, and data from remote appliance** menu option.

   a) Follow the instructions to enter the IP address of the old 5.8.6 or higher Stratusphere Hub. It will then test to see if the default credentials for **friend** and **root** users can be used to connect to the remote 5.8.6 or higher Hub. If not, it will prompt the user to enter the **friend** and **root** credentials.

   b) The new 6.5.x appliance will proceed to copy the network configuration, data, and certificate materials from the remote (older 5.8.6 or higher) Hub to the local (new 6.5.x) Hub. It will provide a running counter for data being copied in MB. When it has finished copying all the data from the remote (older 5.8.6 or higher) appliance, the data transfer counter will stop incrementing and only the time counter will keep incrementing. This is expected as the local appliance database is creating new tables and indexes during this time. Please wait until the Migration Wizard completes. Once all information is migrated, the remote Hub will be shut down. Then the network configuration, data, and certificate materials will be applied to the new 6.5.x Hub. Once completed, the appliance will reboot

itself.

6. After the appliance reboots, please wait for least **15 minutes** before using the same DNS name or IP address of the Hub to try to access the Stratusphere Web UI in your favorite browser. Once the login page is available, please verify that it displays 6.5.x in the blue ribbon at the bottom of the web page to confirm the migration to the new version.

7. The login page will display a message (shown below) for the user to contact Licensing@Liquidware.com to update the license since the underlying appliance has been changed. Please take a screen shot of your page and send it to Licensing@Liquidware.com to request an updated License Code and instructions to update your license. The end user has full access to Stratusphere for up to 21 days after which access to the UI will be restricted to the license page only. The CID Key & Network data collection will continue despite the restricted UI access. The message displayed on the login page of the Stratusphere Hub will count down 21 days allowing the user enough time to contact Licensing@Liquidware.com to update and apply the new license.

8. Migrate & Upgrade CID Keys: Any currently deployed 5.8.6 or higher CID Keys will continue to work and upload their data to the new Stratusphere 6.5.x Hub. However, Stratusphere introduced Collector Appliances starting with version 6.0. To complete the migration, use instructions within the Stratusphere Installation & Configuration Guide to install the Collector appliance(s) recommended by the Stratusphere Sizing Guide for your new environment. Collectors can be managed and grouped according to function, location, etc. from the Stratusphere Hub ADMINISTRATION module by navigating to the COLLECTOR ADMINISTRATION > COLLECTORS tab. To upgrade the CID Key to the 6.5.x version, please follow the instructions below:

   a) Log into the ADMINISTRATION section of the Web UI and navigate to the HUB ADMINISTRATION > CONNECTOR ID KEYS > CONNECTOR ID KEY PROPERTIES tab.

   b) Under the main PROPERTIES section, and for a selected Machine Group, you can enable the **AUTOMATICALLY UPDATE CONNECTOR ID KEYS WHEN NEW SOFTWARE VERSIONS ARE INSTALLED IN THE STRATUSPHERE HUB** option.

   c) When the CID Keys call back at their callback frequencies, they will know there is an update available, and get to download the new 6.5.x installer for the CID Key. The CID Keys will then be able to update themselves to the latest version in session with no reboot required. To update any gold or master images, with CID Key built-in, please download the relevant CID Key installer from the Connector ID Key Software tab and update your master images as needed.

9. Migrate Network Stations and/or Collectors: If you do NOT have any Network Stations or Collectors deployed, skip to the next item. If older Network Stations or Collectors are deployed, the administrator should make plans to replace 5.8.6 or higher Network Station appliances with 6.5.x Network Collector appliances in a phased manner. Please follow the instructions below to begin:

   a) Log into the ADMINISTRATION section of the Stratusphere Web UI and navigate to the COLLECTOR ADMINISTRATION > COLLECTORS tab. Select the check box next to each old Network Stations or Collectors you want to migrate and click the DELETE button to remove them from the installation.

   b) Use the instructions within the Stratusphere Installation & Configuration Guide to set up the Collector appliance(s) using the information from the screen shots taken that contain all the necessary IP addressing.

10. Once the CID Keys have been upgraded to the 6.5.x version, those assigned to a particular Machine Group can be assigned to report back to a particular CID Collector Group. Each Collector will then report back to the newly migrated Hub.

11. The migration process is now complete.

Scenario 2: Migrating a Stratusphere Hub with no Prior Database to a Hub with a New Database Appliance

In this scenario, the instructions will walk you through moving the data from a single 5.8.6 or higher Stratusphere Hub appliance to a new 6.5.x Stratusphere Hub with a new Database appliance. Although the 5.8.6 or higher CID Keys will continue to work with the 6.5.x Hub, these instructions will also walk you through how to upgrade CID Keys from the older version to the new 6.5.x version. Similarly, the 5.8.6 or higher Network Stations will continue to work and upload their network metrics to the new 6.5.x Hub. However, 5.8.6 or higher Network Stations cannot be upgraded in place to the 6.5.x version. Administrators can devise a phased plan to install new 6.5.x Collector appliances for collecting CID Key metrics and/or network metrics as part of the Stratusphere 6 Architecture.

Preparation for Migration
1. Download a brand-new version of the Stratusphere 6.5.x Hub and Database appliances from https://www.liquidware.com/download. Use the online Stratusphere Sizing Guide to size them appropriately.

2. Acquire the credentials for the **ssconsole, friend** and **root** users for the existing Stratusphere 5.8.6 or higher Hub appliance. The default password for these users is **sspassword**. Please use PuTTY to test and validate if the passwords for each user still work prior to proceeding.

3. This document assumes that a valid DNS name is defined and configured within the Stratusphere 5.8.5 or higher Hub Web UI, which in turn is used by CID Keys to call back to the Stratusphere Hub. If this is the case, acquire new temporary static IP addresses for the new 6.5.x Hub and Database.

4. Make sure the remote (old 5.8.6 or higher) Stratusphere Hub is using static IP addressing and is **not on DHCP**. Acquire the following to temporarily configure the new Stratusphere Hub appliance with static IP addressing as well:

   a) IP Address
   b) Network Mask
   c) Default Gateway IP Address
   d) IPv6 Address
   e) DNS Server Addresses
   f) DNS Search Suffixes
   g) NTP Servers

5. Acquire the following to temporarily configure the new Stratusphere Database appliance with static IP addressing and is not in DHCP:

   a) IP Address
   b) Network Mask
   c) Default Gateway IP Address
   d) DNS Server Addresses
   e) IPv6 Address
   f) NTP Servers

6. Check if there are any upgrades or hot fixes are available for the version of Stratusphere Hub you have downloaded and are migrating to. *Please apply the upgrades or hot fixes **BEFORE** attempting the migration.*

   a) For upgrades, please follow the instructions in the Stratusphere Upgrade Guide for 6.0.x and 6.1.x guide.

   b) For hot fixes, please refer to the Stratusphere 6.5.0 Unified Hot Fix Patch KB article. It includes the link to the patch(es) and the instructions for applying the patches as well.

Migration Instructions

1. As part of its best practices, Liquidware recommends taking a snapshot of the existing Hub appliance for safety.

2. If you do NOT have any Network Stations or Collectors deployed, skip to the next item. If older Network Stations or Collectors are deployed, please follow the instructions below to get IP addressing and turn off each Network Station or Collector appliance:

   a) Please open the appliance consoles for each of the existing older Network Stations or Collectors. Hit ENTER key within the console and use **ssconsole** & **sspassword** as credentials when prompted to log into the console.

   b) Enter **N** for the **Network Configuration** menu option and take a screen shot of the network configuration of the appliance so that it can be reused on new 6.5.0 version of Collectors.

   c) Enter **Q** to quit the **Network Configuration** wizard and then select **S** to **Shut down** and power off the appliance.

3. Before powering up your new Stratusphere Hub & Database appliances, please use the online Stratusphere Sizing Guide to properly size the new Stratusphere appliances. Based on the sizing guideline, please edit settings of the Stratusphere appliances and provide the requisite resources for vCPUs, RAM, and storage for the Hub & Database.

4. On the new Stratusphere 6.5.x Database appliance:

   a) Power ON the new Stratusphere 6.5.x Database appliance.

   b) Open a local console of the Stratusphere Database appliance and click into it. Use instructions in the Stratusphere Installation & Configuration Guide under the USING THE STRATUSPHERE DATABASE APPLIANCE > CONFIGURING THE STRATUSPHERE DATABASE APPLIANCE section to set up the Database appliance. Stop configuring the appliance after that section and do NOT proceed to the CONNECTING THE HUB AND DATABASE APPLIANCES section yet. *Note: Please apply NTP settings on the console as these are NOT migrated from the older appliance.*

   c) Once configured, the appliance console will show a status screen. Hit ENTER key and use **ssconsole** & **sspassword** as credentials to log into the console. Enter **D** for the **Database Appliance Utilities** menu option.

   d) Enter **C** for the **Copy Database from remote Hub/Database** menu option.

   e) Follow the instructions to enter the IP address of the old 5.8.6 or higher Stratusphere Hub. It will then test to see if the default credentials for **friend** and **root** users can be used to connect to the remote 5.8.6 or higher Hub. If not, it will prompt the user to enter the **friend** and **root** credentials.

   f) The new 6.5.x appliance will proceed to copy just the data from the remote (older 5.8.6 or higher) appliance to the local (new 6.5.x) Database appliance. It will provide a running counter for data being copied in MB. When it has finished copying all the data from the remote (older 5.8.6 or higher) appliance, the data transfer counter will stop incrementing and only the time counter will keep incrementing. This is expected as the local appliance database is creating new tables and indexes during this time. Please wait until the data copy completes and returns to the menu prompt.

   ```
   DB: portal  ( At the end of the import indexes are created.
                 The time will increment but not the bytes copied. )
   _   85,540 Megabytes Copied, 18 Meg/Sec at 77:24
   ```

5. On the new Stratusphere 6.5.x Hub appliance:

   a) Power ON the new Stratusphere 6.5.x Hub appliances. The old Stratusphere Hub is already ON.

   b) Open a local console of the Stratusphere Hub appliance and click into it. Use instructions in the Stratusphere Installation & Configuration Guide under the CONFIGURING STRATUSPHERE HUB APPLIANCE SETTINGS > USING THE CONSOLE UI section to set up the Hub appliance. Stop configuring the appliance after that section and do NOT proceed to joining the database just yet. *Note: Please apply NTP settings on the console as these are NOT migrated from the older appliance.*

   c) Once configured, the appliance console will show a status screen. Hit ENTER key and use **ssconsole** & **sspassword** as credentials to log into the console. Enter **D** for the **Database Utilities** menu option.

d) Enter **G** for the **Get Configuration from a Hub** menu option. Follow the wizard instructions which will first prompt the user to enter credentials for the friend user. Hit ENTER to accept default `sspassword` based credentials or enter custom credentials. The wizard will then test to see if the credentials for **friend** and **root** users can be used to connect to the local (new) Hub. If not, it will prompt the user to enter the **friend** and **root** credentials.

```
-------------------------------------------------------------
    Stratusphere Migration Utility for Hub and Database Appliances
    Copyright 2021, Liquidware Labs Inc.
-------------------------------------------------------------


This program will connect to a remote HUB/DATABASE and export all the
HUB configuration files (reports/certs). They will be copied to
local folder '/home/friend/migrate' and can be pushed to a new HUB.

This will cause no harm to the remote HUB/DB.

Enter the password for user 'friend' on this VM (ENTER to accept current default, q to quit):

Testing user 'friend' connection on localhost
    OK - friend Password on localhost
```

The wizard will then prompt to enter the IP address of the remote (old 5.8.6 or higher) Stratusphere Hub. It will then test to see if the default credentials for **friend** and **root** users can be used to connect to the remote (old 5.8.6 or higher) Hub. If not, it will prompt the user to enter the **friend** and **root** credentials.

```
Enter the IP of the remote HUB/DB (q to quit, enter for [10.0.81.115]): 10.0.81.115

Testing connection to HUB/DB 10.0.81.115
    OK - Connection to remote HUB/DB
Enter the password for user 'friend' on remote HUB/DB 10.0.81.115 (ENTER to accept the current

Testing user 'friend' connection at remote HUB/DB 10.0.81.115
    OK - friend Password on remote HUB/DB
Testing ROOT connection to remote HUB/DB
    OK - ROOT Password
```

The new 6.5.x appliance will proceed to copy the network configuration and certificate materials from the remote (older 5.8.6 or higher) Hub to the local (new 6.5.x) Hub. Please wait until the **Get Configuration from a Hub** completes and prompts whether to shut down the remote (older 5.8.6 or higher) Hub. Please enter `yes`. The remote (older 5.8.6 or higher) Hub will be asked to shut down at this point after a 1-minute timer. The wizard will prompt the user to hit ENTER to continue and return to the **Database Utilities** menu screen.

```
Shutting down LWL-Backend processes on remote HUB/DB
    OK - LWL-Backend is shutdown

Copying config data from remote HUB/DB


Do you want to shutdown the remote HUB/DB (yes/no)? yes
Shutting down remote HUB/DB

Press ENTER to continue_
```

e) Enter **P** for the **Put Configuration on a Hub** menu option. Follow the instructions of the wizard that will state that there is a configuration available for application on the local system. It will prompt the user to enter credentials for the **friend** user. Hit ENTER to accept default `sspassword` based credentials or enter custom credentials. The wizard will then

test to see if the credentials for **friend** and **root** users can be used to connect to the local (new) Hub. If not, it will prompt the user to enter the **friend** and **root** credentials.

```
------------------------------------------------------------
   Stratusphere Migration Utility for Hub and Database Appliances
   Copyright 2021, Liquidware Labs Inc.
------------------------------------------------------------


This program will connect to a remote HUB/DATABASE and put back the
HUB configuration files (reports/certs). They will be copied from
local folder '/home/friend/migrate' and be pushed to a new HUB.

Enter the password for user 'friend' on this VM (ENTER to accept current default, q to quit):

Testing user 'friend' connection on localhost
    OK - friend Password on localhost
```

It will then prompt the end user to enter the IP address of the local (new 6.5.x or higher) Stratusphere Hub which by default is displayed by its loop back address [127.0.0.1]. Hit ENTER to accept this default.

```
Enter the IP of the remote HUB/DB (q to quit, enter for [127.0.0.1]):

Testing connection to HUB/DB 127.0.0.1
    OK - Connection to remote HUB/DB

Testing user 'friend' connection at remote HUB/DB 127.0.0.1
    OK - friend Password on remote HUB/DB
Testing ROOT connection to remote HUB/DB
    OK - ROOT Password
```

The new 6.5.x appliance will then prompt the user whether to apply migration files found to the local (new) Hub. Please enter `yes`. The wizard will proceed to stop the local backend services, delete some files, and apply all the network configuration and certificate materials copied above from the remote (older 5.8.6 or higher) Hub on the local (new 6.5.x) Hub. Please wait until the **Put Configuration on a Hub** completes and prompts you to reboot the local Hub. Please enter `yes` to reboot the Hub after a default timer of 1-minute. Once completed, the wizard will ask the user to hit ENTER to continue and return back to the menu options.

```
Migration files exist, do you want to push them to the new hub (yes/no)? yes

Putting back old HUB files on new HUB

Shutting down LWL-Backend processes on remote HUB/DB

mesg: cannot open /dev/tty1: Permission denied
mesg: cannot open /dev/tty1: Permission denied
mesg: cannot open /dev/tty1: Permission denied
mesg: cannot open /dev/tty1: Permission denied
Deleting activation files on Hub and running Brand-All
Putting 'config' on local Hub
    Untaring 'config.tgz' on local Hub


Put is complete, is it OK to reboot the local HUB now (yes/no)? yes
Rebooting remote HUB/DB

Press ENTER to continue
```

Note: In some cases, the URL address on the console status screen may not match the IP or DNS address of the migrated Hub. Liquidware recommends rebooting the local (new) Hub

appliance again using the following instructions: Hit ᴇɴᴛᴇʀ key and use **ssconsole** & **sspassword** as credentials to log into the console. Enter **R** for the **Reboot Server** menu option. Once the appliance reboots, wait for the console status screen to refresh a couple of times and then please verify if the URL now has the right IP or DNS address.

6. Go back to the new Stratusphere 6.5.x Database appliance console:

   a) You will need to join the new Database to the new Hub. Hit ᴇɴᴛᴇʀ key and use **ssconsole** & **sspassword** as credentials to log into the console. Enter **D** for the **Database Appliance Utilities** menu option.

   b) Enter **J** for the **Join this Database to a Hub** menu option.

   c) Follow the instructions of the wizard to provide all the information it needs to join the new Database appliance to the new Hub appliance.

   d) Once joined, the appliances may reboot. Wait for 15 minutes before using the same DNS name or IP address of the Hub to access the Stratusphere Web UI.

7. The login page will display a message (shown below) for the user to contact Licensing@Liquidware.com to update the license since the underlying appliance has been changed. Please take a screen shot of your page and send it to Licensing@Liquidware.com to request an updated License Code and instructions to update your license. The end user has full access to Stratusphere for up to 21 days after which access to the UI will be restricted to the license page only. The CID Key & Network data collection will continue despite the restricted UI access. The message displayed on the login page of the Stratusphere Hub will count down 21 days allowing the user enough time to contact Licensing@Liquidware.com to update and apply the new license.

   - Thank you for installing the new Stratusphere 6.5 appliance. As per Liquidware policies, Stratusphere appliances require an activation process that generates a license based on a machine-specific Activation Code combined with a License Code. Please contact Licensing at Liquidware (licensing@Liquidware.com) to receive an updated License Code. Your existing license will expire in 1 days.

8. Migrate & Upgrade CID Keys: Any currently deployed 5.8.6 or higher CID Keys will continue to work and upload their data to the new Stratusphere 6.5.x Hub. To upgrade the CID Key to the 6.5.x version, please follow the instructions below:

   a) Log into the Aᴅᴍɪɴɪsᴛʀᴀᴛɪᴏɴ section of the Web UI and navigate to the Hᴜʙ Aᴅᴍɪɴɪsᴛʀᴀᴛɪᴏɴ > Cᴏɴɴᴇᴄᴛᴏʀ ID Kᴇʏs > Cᴏɴɴᴇᴄᴛᴏʀ ID Kᴇʏ Pʀᴏᴘᴇʀᴛɪᴇs tab.

   b) Under the main Pʀᴏᴘᴇʀᴛɪᴇs section, and for a selected Machine Group, you can enable the **Aᴜᴛᴏᴍᴀᴛɪᴄᴀʟʟʏ ᴜᴘᴅᴀᴛᴇ Cᴏɴɴᴇᴄᴛᴏʀ ID Kᴇʏs ᴡʜᴇɴ ɴᴇᴡ sᴏfᴛᴡᴀʀᴇ ᴠᴇʀsɪᴏɴs ᴀʀᴇ ɪɴsᴛᴀʟʟᴇᴅ ɪɴ ᴛʜᴇ Sᴛʀᴀᴛᴜsᴘʜᴇʀᴇ Hᴜʙ** option.

   c) When the CID Keys call back at their callback frequencies, they will know there is an update available, and get to download the new 6.5.x installer for the CID Key. The CID Keys will then be able to update themselves to the latest version in session with no reboot required. To update any gold or master images, with CID Key built-in, please download the relevant CID Key installer from the Connector ID Key Software tab and update your master images as needed.

9. Migrate Network Stations and/or Collectors: Any currently deployed 5.8.6 or higher CID Keys will continue to work and upload their data to the new Stratusphere 6.5.x Hub. However, Stratusphere introduced Collector Appliances starting with version 6.0. Based on the number of machines being monitored, the Stratusphere Sizing Guide may recommend installation of Collectors. To complete the installation, use instructions within the Stratusphere Installation & Configuration Guide to install the Collector appliance(s) recommended by the Stratusphere Sizing Guide. If you do NOT have any Network Stations or Collectors deployed nor recommended by the Sizing Guide, please skip to the next item. Collectors can be managed and grouped according to function, location, etc. from the Stratusphere HUB ADMINISTRATION module by navigating to the COLLECTOR ADMINISTRATION > COLLECTORS tab. If older Network Stations or Collectors are deployed, the administrator should make plans to replace 5.8.6 or higher Network Station appliances with 6.5.x Network Collector appliances in a phased manner. Please follow the instructions below to begin:

   a) Log into the ADMINISTRATION section of the Stratusphere Web UI and navigate to the COLLECTOR ADMINISTRATION > COLLECTORS tab. Select the check box next to each old Network Stations or Collectors you want to migrate and click the DELETE button to remove them from the installation.

   b) Use the instructions within the Stratusphere Installation & Configuration Guide to set up the Collector appliance(s) using the information from the screen shots taken that contain all the necessary IP addressing.

10. Once the CID Keys have been upgraded to the 6.5.x version, those assigned to a particular Machine Group can be assigned to report back to a particular CID Collector Group. Each Collector will then report back to the newly migrated Hub.

11. The migration process is now complete.

Scenario 3: Migrating a Stratusphere Hub and a Database Appliance

In this scenario, the instructions will walk you through moving the data from a single 5.8.6 or higher Stratusphere Hub and Database appliance to a new 6.5.x Stratusphere Hub and Database appliance. Although the 5.8.6 or higher CID Keys will continue to work with the 6.5.x Hub, these instructions will also walk you through how to upgrade CID Keys from the older version to the new 6.5.x version. Similarly, the 5.8.6 or higher Network Stations will continue to work and upload their network metrics to the new 6.5.x Hub. However, 5.8.6 or higher Network Stations cannot be upgraded in place to the 6.5.x version. Administrators can devise a phased plan to install new 6.5.x Collector appliances for collecting CID Key metrics and/or network metrics as part of the Stratusphere 6 Architecture.

Preparation for Migration

1. Download a brand-new version of the Stratusphere 6.5.x Hub and Database appliances from https://www.liquidware.com/download. Use the online Stratusphere Sizing Guide to size them appropriately.

2. Acquire the credentials for the **ssconsole, friend** and **root** users for the existing Stratusphere 5.8.6 or higher Hub appliance. The default password for these users is **sspassword**. Please use PuTTY to test and validate if the passwords for each user still work prior to proceeding.

3. This document assumes that a valid DNS name is defined and configured within the Stratusphere 5.8.6 or higher Hub Web UI, which in turn is used by CID Keys to call back to the Stratusphere Hub. If this is the case, acquire new temporary static IP addresses for the new 6.5.x Hub and Database.

4. Acquire the following to temporarily configure the new Stratusphere Hub appliance:

   a) IP Address
   b) Network Mask
   c) Default Gateway IP Address
   d) IPv6 Address
   e) DNS Server Addresses
   f) DNS Search Suffixes
   g) NTP Servers

5. Acquire the following to temporarily configure the new Stratusphere Database appliance:

   a) IP Address
   b) Network Mask
   c) Default Gateway IP Address
   d) DNS Server Addresses
   e) IPv6 Address
   f) NTP Servers

6. Check if there are any upgrades or hot fixes are available for the version of Stratusphere Hub you have downloaded and are migrating to. *Please apply the upgrades or hot fixes **BEFORE** attempting the migration.*

   a) For upgrades, please follow the instructions in the Stratusphere Upgrade Guide for 6.0.x and 6.1.x guide.

   b) For hot fixes, please refer to the Stratusphere 6.5.0 Unified Hot Fix Patch KB article. It includes the link to the patch(es) and the instructions for applying the patches as well.

Migration Instructions

1. As part of its best practices, Liquidware recommends taking a snapshot of the existing Hub and Database appliances for safety.

2. Before powering up your Stratusphere Hub & Database appliances, please use the online Stratusphere Sizing Guide to properly size the new Stratusphere appliances. Based on the sizing guideline, please edit settings of the Stratusphere appliances and provide the requisite resources for vCPUs, RAM, and storage for the Hub & Database.

3. If you do NOT have any Network Stations or Collectors deployed, skip to the next item. If older Network Stations or Collectors are deployed, please follow the instructions below to get IP addressing and turn off each Network Station or Collector appliance:

   a) Please open the appliance consoles for each of the existing older Network Stations or Collectors. Hit enter key within the console and use **ssconsole** & **sspassword** as credentials when prompted to log into the console.

   b) Enter **N** for the **Network Configuration** menu option and take a screen shot of the network configuration of the appliance so that it can be reused on new 6.5.0 version of Collectors.

c) Enter **Q** to quit the **Network Configuration** wizard and then select **S** to **Shut down** and power off the appliance.

4. Please power down the existing Stratusphere 5.x Hub appliance. To maintain data integrity and consistency, we need to power down the existing Hub from receiving any new data from the CID Keys and Network Stations. The CID Keys and Network Stations will queue up their data on board until the new Hub comes online.

5. On the new Stratusphere 6.5.x Database appliance:

   a) Power ON the new Stratusphere 6.5.x Database appliance.

   b) Open a local console of the Stratusphere Database appliance and click into it. Use instructions in the Stratusphere Installation & Configuration Guide under the USING THE STRATUSPHERE DATABASE APPLIANCE > CONFIGURING THE STRATUSPHERE DATABASE APPLIANCE section to set up the Database appliance. Stop configuring the appliance after that section and do NOT proceed to the CONNECTING THE HUB AND DATABASE APPLIANCES section yet. *Note: Please apply NTP settings on the console as these are NOT migrated from the older appliance.*

   c) Once configured, the appliance console will show a status screen. Hit ENTER key and use **ssconsole** & **sspassword** as credentials to log into the console. Enter **M** for the **Migrate certs, settings, and data from remote appliance** menu option.

   d) Follow the instructions to enter the IP address of the old 5.8.6 or higher Stratusphere Database. It will then test to see if the default credentials for **friend** and **root** users can be used to connect to the remote 5.8.6 or higher Database. If not, it will prompt the user to enter the **friend** and **root** credentials.

   e) The new 6.5.x appliance will proceed to copy the network configuration, data, and certificate materials from the remote (older 5.8.6 or higher) Database to the local (new 6.5.x) Database. It will provide a running counter for data being copied in MB. When it has finished copying all the data from the remote (older 5.8.6 or higher) appliance, the data transfer counter will stop incrementing and only the time counter will keep incrementing. This is expected as the local appliance database is creating new tables and indexes during this time. Please wait until the Migration Wizard completes and prompts you to continue. Once all information is migrated, the remote Database will be shut down. Then the network configuration, data, and certificate materials will be applied to the new 6.5.x Database. Once completed, the appliance will reboot itself.


```
DB: portal  ( At the end of the import indexes are created.
               The time will increment but not the bytes copied. )
_  85,540 Megabytes Copied, 18 Meg/Sec at 77:24
```

6. As the Database appliance is rebooting, on the new Stratusphere 6.5.x Hub appliance:

   a) Power ON the old 5.x Stratusphere Hub and the new Stratusphere 6.5.x Hub appliances.

   b) Open a local console of the Stratusphere Hub appliance and click into it. Use instructions in the Stratusphere Installation & Configuration Guide under the CONFIGURING STRATUSPHERE HUB APPLIANCE SETTINGS > USING THE CONSOLE UI section to set up the Hub appliance. Stop configuring the appliance after that section and do NOT proceed to joining the database just yet. *Note: Please apply NTP settings on the console as these are NOT migrated from the older appliance.*

c) Once configured, the appliance console will show a status screen. Hit ENTER key and use **ssconsole** & **sspassword** as credentials to log into the console. Enter **M** for the **Migrate certs, settings, and data from remote appliance** menu option.

d) Follow the instructions to enter the IP address of the old 5.8.6 or higher Stratusphere Hub. It will then test to see if the default credentials for **friend** and **root** users can be used to connect to the remote 5.8.6 or higher Hub. If not, it will prompt the user to enter the **friend** and **root** credentials.

e) The new 6.5.x appliance will proceed to copy the network configuration, data, and certificate materials from the remote (older 5.8.6 or higher) Hub to the local (new 6.5.x) Hub. It will provide a running counter for data being copied in MB. When it has finished copying all the data from the remote (older 5.8.6 or higher) appliance, the data transfer counter will stop incrementing and only the time counter will keep incrementing. This is expected as the local appliance database is creating new tables and indexes during this time. Please wait until the Migration Wizard completes and prompts you to continue. Once all information is migrated, the remote Hub will be shut down. Then the network configuration, data, and certificate materials will be applied to the new 6.5.x Hub. Once completed, the appliance may reboot itself.

7. After the appliance reboots, please wait for least **15 minutes** before using the same DNS name or IP address of the Hub to try to access the Stratusphere Web UI in your favorite browser.

8. The login page will display a message (shown below) for the user to contact Licensing@Liquidware.com to update the license since the underlying appliance has been changed. Please take a screen shot of your page and send it to Licensing@Liquidware.com to request an updated License Code and instructions to update your license. The end user has full access to Stratusphere for up to 21 days after which access to the UI will be restricted to the license page only. The CID Key & Network data collection will continue despite the restricted UI access. The message displayed on the login page of the Stratusphere Hub will count down 21 days allowing the user enough time to contact Licensing@Liquidware.com to update and apply the new license.

> • Thank you for installing the new Stratusphere 6.5 appliance. As per Liquidware policies, Stratusphere appliances require an activation process that generates a license based on a machine-specific Activation Code combined with a License Code. Please contact Licensing at Liquidware (licensing@Liquidware.com) to receive an updated License Code. Your existing license will expire in 1 days.

9. Migrate & Upgrade CID Keys: Any currently deployed 5.8.6 or higher CID Keys will continue to work and upload their data to the new Stratusphere 6.5.x Hub. To upgrade the CID Key to the 6.5.x version, please follow the instructions below:

a) Log into the ADMINISTRATION section of the Web UI and navigate to the HUB ADMINISTRATION > CONNECTOR ID KEYS > CONNECTOR ID KEY PROPERTIES tab.

b) Under the main PROPERTIES section, and for a selected Machine Group, you can enable the **AUTOMATICALLY UPDATE CONNECTOR ID KEYS WHEN NEW SOFTWARE VERSIONS ARE INSTALLED IN THE STRATUSPHERE HUB** option.

c) When the CID Keys call back at their callback frequencies, they will know there is an update available, and get to download the new 6.5.x installer for the CID Key. The CID Keys will then be able to update themselves to the latest version in session with no reboot required. To update any gold or master images, with CID Key built-in, please download the relevant CID

Key installer from the Connector ID Key Software tab and update your master images as needed.

10. Migrate Network Stations and/or Collectors: Any currently deployed 5.8.6 or higher CID Keys will continue to work and upload their data to the new Stratusphere 6.5.x Hub. However, Stratusphere introduced Collector Appliances starting with version 6.0. Based on the number of machines being monitored, the Stratusphere Sizing Guide may recommend installation of Collectors. To complete the installation, use instructions within the Stratusphere Installation & Configuration Guide to install the Collector appliance(s) recommended by the Stratusphere Sizing Guide. If you do NOT have any Network Stations or Collectors deployed nor recommended by the Sizing Guide, please skip to the next item. Collectors can be managed and grouped according to function, location, etc. from the Stratusphere Hub ADMINISTRATION module by navigating to the COLLECTOR ADMINISTRATION > COLLECTORS tab. If older Network Stations or Collectors are deployed, the administrator should make plans to replace 5.8.6 or higher Network Station appliances with 6.5.x Network Collector appliances in a phased manner. Please follow the instructions below to begin:

   a) Log into the ADMINISTRATION section of the Stratusphere Web UI and navigate to the COLLECTOR ADMINISTRATION > COLLECTORS tab. Select the check box next to each old Network Stations or Collectors you want to migrate and click the DELETE button to remove them from the installation.

   b) Use the instructions within the Stratusphere Installation & Configuration Guide to set up the Collector appliance(s) using the information from the screen shots taken that contain all the necessary IP addressing.

11. Once the CID Keys have been upgraded to the 6.5.x version, those assigned to a particular Machine Group can assigned to report back to a particular CID Collector Group. Each Collector will then report back to the newly migrated Hub.

12. The migration process is now complete.

Scenario 4: Migrating Multiple Sets of Hub and Database Appliances

This scenario references environments with 2 or more sets of Stratusphere Hub and Database appliances installed. With its Highly Scalable Architecture including Collector appliances, Stratusphere 6.5.x can be used to consolidate multiple Hubs into a single Hub providing a true single pane of glass that now supports monitoring up to 20,000 machines calling back every 60 minutes.

Here is the plan to consolidate and monitor all machines in a single set of Stratusphere 6.5.x Hub and Database appliances:

1. In Stratusphere 6.5.x, Liquidware can only support migrating data from a single Hub & Database set. It cannot consolidate historical data from multiple Hubs into a single 6.5.x Hub. So, Liquidware recommends selecting the set of Stratusphere Hub and Database appliances that have the most machines with CID Keys calling back to start the migration to a consolidated Hub. The historical data from this Hub will be migrated and be available for reporting.

2. The remaining sets of Hub and Database appliances that are not consolidated could still live on for reporting purposes. However, no new CID Key data should be uploading to these older historical Hubs.

3. Install new Stratusphere Collector appliances, organized by Collector Groups, to receive CID Key metrics to facilitate and support consolidated capability.

4. All CID Keys, regardless of which Hubs they were calling back to before, will be migrated to the new 6.5.x consolidated Stratusphere Hub and Database. The 5.8.6 or higher CID Keys that were reporting to the other set of Hubs will then be configured through a registry change to point to the new 6.5.x consolidate Hub. The 5.8.6 or higher CID Keys will then call back to the new 6.5.x Hubs, register, and start uploading metrics to the 6.5.x Hub. Once they are migrated, the 5.8.6 or higher CID Keys can be configured to upgrade to 6.5.x by simply enabling a check box under the Administration Web UI. If they are part of a master or gold image, they can be updated to the latest version using the 6.5.x installer within the Administration Web UI.

5. Existing Stratusphere 5.8.6 or higher Network Stations will continue to call back to the consolidated 6.5.x Hub. Network Stations on the other set of 5.8.6 or higher Hubs will need to be replaced by new 6.5.x Network Collector appliances because Network Station appliances cannot be upgraded to 6.5.x Collector appliances.

Preparing for the Migration

1. Download a brand-new version of the Stratusphere 6.5.x Hub and Database appliances from https://www.liquidware.com/download. Use the online Stratusphere Sizing Guide to size them appropriately.

2. Acquire the credentials for the **ssconsole, friend** and **root** users for the existing Stratusphere 5.8.6 or higher Hub appliance. The default password for these users is **sspassword**. Please use PuTTY to test and validate if the passwords for each user still work prior to proceeding.

3. This document assumes that a valid DNS name is defined and configured within the Stratusphere 5.8.6 or higher Hub Web UI, which in turn is used by CID Keys to call back to the Stratusphere Hub. If this is the case, acquire new temporary static IP addresses for the new 6.5.x Hub and Database.

4. Acquire the following to temporarily configure the new Stratusphere Hub appliance:

   a) IP Address
   b) Network Mask
   c) Default Gateway IP Address
   d) IPv6 Address
   e) DNS Server Addresses
   f) DNS Search Suffixes
   g) NTP Servers

5. Acquire the following to temporarily configure the new Stratusphere Database appliance:

   a) IP Address
   b) Network Mask
   c) Default Gateway IP Address
   d) DNS Server Addresses
   e) IPv6 Address
   f) NTP Servers

6. Acquire the following for each new Stratusphere Collector appliance:

   a) Host Name
   b) IP Address

c) Network Mask

d) Default Gateway IP Address

e) DNS Server Addresses

f) IPv6 Address

g) NTP Servers

7. Check if there are any upgrades or hot fixes are available for the version of Stratusphere Hub you have downloaded and are migrating to. *Please apply the upgrades or hot fixes **BEFORE** attempting the migration.*

a) For upgrades, please follow the instructions in the Stratusphere Upgrade Guide for 6.0.x and 6.1.x guide.

b) For hot fixes, please refer to the Stratusphere 6.5.0 Unified Hot Fix Patch KB article. It includes the link to the patch(es) and the instructions for applying the patches as well.

8. Acquire the ability to push a registry key to all the CID Keys that report to the set of Stratusphere Hub & Database appliances that are not going to be consolidated into the 6.5.x Hub. Liquidware recommends using its product, ProfileUnity, to easily perform this and many other helpful functions. The registry key will contain the DNS address of consolidated 6.5.x Hub. The CID Keys will then be able to register themselves with the new 6.5.x consolidated Hub.

Migration Instructions

1. As part of its best practices, Liquidware recommends taking a snapshot of the existing Hub and Database appliances for safety.

2. Before powering up your Stratusphere Hub & Database appliances, please use the online Stratusphere Sizing Guide to properly size the new Stratusphere appliances. Based on the sizing guideline, please edit settings of the Stratusphere appliances and provide the requisite resources for vCPUs, RAM, and storage for the Hub & Database.

3. If you do NOT have any Network Stations or Collectors deployed, skip to the next item. If older Network Stations or Collectors are deployed, please follow the instructions below to get IP addressing and turn off each Network Station or Collector appliance:

a) Please open the appliance consoles for each of the existing older Network Stations or Collectors. Hit enter key within the console and use **ssconsole** & **sspassword** as credentials when prompted to log into the console.

b) Enter **N** for the **Network Configuration** menu option and take a screen shot of the network configuration of the appliance so that it can be reused on new 6.5.0 version of Collectors.

c) Enter **Q** to quit the **Network Configuration** wizard and then select **S** to **Shut down** and power off the appliance.

4. Please power down the existing Stratusphere 5.x Hub appliance. To maintain data integrity and consistency, we need to power down the existing Hub from receiving any new data from the CID Keys and Network Stations. The CID Keys and Network Stations will queue up their data on board until the new Hub comes online.

5. On the new Stratusphere 6.5.x Database appliance:

a) Power ON the new Stratusphere 6.5.x Database Appliance.

b) Open a local console of the Stratusphere Database appliance and click into it. Use instructions in the Stratusphere Installation & Configuration Guide under the USING THE STRATUSPHERE DATABASE APPLIANCE > CONFIGURING THE STRATUSPHERE DATABASE APPLIANCE section to set up the Database appliance. Stop configuring the appliance after that section and do NOT proceed to the CONNECTING THE HUB AND DATABASE APPLIANCES section yet. *Note: Please apply NTP settings on the console as these are NOT migrated from the older appliance.*

c) Once configured, the appliance console will show a status screen. Hit ENTER key and use **ssconsole** & **sspassword** as credentials to log into the console. Enter **M** for the **Migrate certs, settings, and data from remote appliance** menu option.

d) Follow the instructions to enter the IP Address of the old 5.x Stratusphere Database. It will then test to see if the default credentials for **friend** and **root** users can be used to connect to the remote 5.x Database. If not, it will prompt the user for entering the **friend** and **root** credentials.

e) The new 6.5.x appliance will proceed to copy the network configuration, data, and certificate materials from the remote (older 5.x) Database to the local (new 6.5.x) Database. It will provide a running counter for data being copied in MB. When it has finished copying all the data from the remote (older 5.x) appliance, the data transfer counter will stop incrementing and only the time counter will keep incrementing. This is expected as the local appliance database is creating new tables and indexes during this time. Please wait until the Migration Wizard completes and prompts you to continue. Once all information is migrated, the remote Database will be shut down. Then the network configuration, data, and certificate materials will be applied to the new 6.5.x Database. Once completed, the appliance may reboot itself.

```
DB: portal  ( At the end of the import indexes are created.
                The time will increment but not the bytes copied. )
_  85,540 Megabytes Copied, 18 Meg/Sec at 77:24
```

6. As the new Database appliance is rebooting, on the new Stratusphere 6.5.x Hub appliance:

a) Power ON the old Stratusphere 5.x Hub and the new Stratusphere 6.5.x Hub appliances.

b) Open a local console of the Stratusphere Hub appliance and click into it. Use instructions in the Stratusphere Installation & Configuration Guide under the CONFIGURING STRATUSPHERE HUB APPLIANCE SETTINGS > USING THE CONSOLE UI section to set up the Hub appliance. Stop configuring the appliance after that section and do NOT proceed to joining the database just yet. *Note: Please apply NTP settings on the console as these are NOT migrated from the older appliance.*

c) Once configured, the appliance console will show a status screen. Hit ENTER key and use **ssconsole** & **sspassword** as credentials to log into the console. Enter **M** for the **Migrate certs, settings, and data from remote appliance** menu option.

d) Follow the instructions to enter the IP address of the old 5.8.6 or higher Stratusphere Hub that has been selected to be migrated to 6.5.x and the one that will serve as the consolidated 6.5.x Hub. It will then test to see if the default credentials for **friend** and **root** users can be used to connect to the remote 5.8.6 or higher Hub. If not, it will prompt the user to enter the **friend** and **root** credentials.

e) The new 6.5.x appliance will proceed to copy the network configuration, data, and certificate materials from the remote (older 5.8.6 or higher) Hub to the local (new 6.5.x) Hub. It will provide a running counter for data being copied in MB. When it has finished copying all the data from the remote (older 5.8.6 or higher) appliance, the data transfer counter will stop incrementing and only the time counter will keep incrementing. This is expected as the local appliance database is creating new tables and indexes during this time. Please wait until the Migration Wizard completes and prompts you to continue. Once all information is migrated, the remote Hub will be shut down, and then the network configuration, data, and certificate materials will be applied to the new 6.5.x Hub. Once completed, the appliance may reboot itself.

7. After the appliance reboots, please wait for least 15 minutes before using the same DNS name or IP address of the Hub to try to access the Stratusphere Web UI in your favorite browser.

8. The login page will also display a message (shown below) for the user to contact Licensing@Liquidware.com to update the license since the underlying appliance has been changed. Please take a screen shot of your page and send it to Licensing@Liquidware.com to request an updated License Code and instructions to update your license. The end user has full access to Stratusphere for up to 21 days after which access to the UI will be restricted to the license page only. The CID Key & Network data collection will continue despite the restricted UI access. The message displayed on the login page of the Stratusphere Hub will count down 21 days allowing the user enough time to contact Licensing@Liquidware.com to update and apply the new license.

> • Thank you for installing the new Stratusphere 6.5 appliance. As per Liquidware policies, Stratusphere appliances require an activation process that generates a license based on a machine-specific Activation Code combined with a License Code. Please contact Licensing at Liquidware (licensing@Liquidware.com) to receive an updated License Code. Your existing license will expire in 1 days.

9. Migrate & Upgrade CID Keys: Any currently deployed 5.8.6 or higher CID Keys will continue to work and upload their data to the new Stratusphere 6.5.x Hub. To upgrade the CID Key to the 6.5.x version, please follow the instructions below:

a) Log into the ADMINISTRATION section of the Web UI and navigate to the HUB ADMINISTRATION > CONNECTOR ID KEYS > CONNECTOR ID KEY PROPERTIES tab.

b) Under the main PROPERTIES section, and for a selected Machine Group, you can enable the AUTOMATICALLY UPDATE CONNECTOR ID KEYS WHEN NEW SOFTWARE VERSIONS ARE INSTALLED IN THE STRATUSPHERE HUB option.

c) When the CID Keys call back at their callback frequencies, they will know there is an update available, and get to download the new 6.5.x installer for the CID Key. The CID Keys will then be able to update themselves to the latest version in session with no reboot required. To update any gold or master images, with CID Key built-in, please download the relevant CID Key installer from the Connector ID Key Software tab and update your master images as needed.

10. Migrate Network Stations and/or Collectors: Any currently deployed 5.8.6 or higher CID Keys will continue to work and upload their data to the new Stratusphere 6.5.x Hub. However, Stratusphere introduced Collector Appliances starting with version 6.0. Based on the number of machines being monitored, the Stratusphere Sizing Guide may recommend installation of Collectors. To complete the installation, use instructions within the Stratusphere Installation &

Configuration Guide to install the Collector appliance(s) recommended by the Stratusphere Sizing Guide. If you do NOT have any Network Stations or Collectors deployed nor recommended by the Sizing Guide, please skip to the next item. Collectors can be managed and grouped according to function, location, etc. from the Stratusphere Hub ADMINISTRATION module by navigating to the COLLECTOR ADMINISTRATION > COLLECTORS tab. If older Network Stations or Collectors are deployed, the administrator should make plans to replace 5.8.6 or higher Network Station appliances with 6.5.x Network Collector appliances in a phased manner. Please follow the instructions below to begin:

a) Log into the ADMINISTRATION section of the Stratusphere Web UI and navigate to the COLLECTOR ADMINISTRATION > COLLECTORS tab. Select the check box next to each old Network Stations or Collectors you want to migrate and click the DELETE button to remove them from the installation.

b) Use the instructions within the Stratusphere Installation & Configuration Guide to set up the Collector appliance(s) using the information from the screen shots taken that contain all the necessary IP addressing.

11. Once the CID Keys have been upgraded to the 6.5.x version, those assigned to a particular Machine Group can assigned to report back to a particular CID Collector Group. Each Collector will then report back to the newly migrated Hub.

12. All other CID Keys that were reporting to other Hubs should now be migrated to the consolidated 6.5.x Hub. Use any mechanism, including PSTools, to push out a new registry key to the machines that run the CID Keys reporting to other Hubs. Please refer to this Knowledgebase article to get further information on how to push a registry key to migrate the CID Key from one Hub to another Hub. All these migrated CID Keys will start calling to the consolidated Hub and could then be upgraded over time to the 6.5.x version.

13. If data from the older, non-consolidated set of Hubs and Database appliances is no longer required, then they should be shut down and their resources reused for new virtual machines.

14. The migration process is now complete.

Migrating Cloud based Appliances

If your current Stratusphere installation is a Stratusphere Cloud appliance (Amazon Web Services, Microsoft Azure) version, this section provides instructions for a Cloud Platform Administrator to migrate your installation for the following scenarios:

1. A single Stratusphere Hub appliance i.e., no separate Stratusphere Database appliance.
2. A Stratusphere Hub and a Database appliance.

Once the main Hub and Database appliances are migrated as part of the scenarios above, the instructions include sections for migrating and upgrading the CID Keys deployed and migrating the Collectors deployed as well.

Stratusphere Cloud appliances can be migrated to newer versions of appliances using the processes as on-premises appliances with slight changes before and after migration. There are some differences in what can be migrated within Cloud environments compared to on-premises appliances.

Note: These instructions are meant for Administrators that have knowledge and experience working with Cloud environments, IT infrastructure such as DNS, and Linux operating systems.

Differences between on-premises and cloud appliance migrations:

1. Cloud platforms are mostly advocating using SSH Key pairs as the default mechanism to provide secure access to computing environments when accessing Linux based consoles. The Stratusphere Migration Wizard still uses password-based mechanism to connect and migrate settings, configurations, certificates, and database information. Each Cloud platform appliance has a script that can temporarily enable password-based authentication on appliances that have disabled password authentication and use only SSH Key pairs. If your Stratusphere Cloud appliances use SSH Key pairs only, then these scripts need to be downloaded and executed before beginning a migration to temporarily enable password authentication AND after the migration to disable password authentication.

2. All Stratusphere Cloud appliances are assigned automatic pre-created IP addresses. So, the following network configuration items will NOT be migrated from the old appliance to the new appliance:

   a) Hostname
   b) IP address
   c) Network mask
   d) Default Gateway IP address
   e) DNS servers
   f) NTP servers

3. Administrators will need to update DNS entries of their Hub and CID Key Callback addresses to point to the new appliance IP addresses manually.

4. Browser based SSL certificates may need to be redone since the Hub appliance now has a different host name and IP address.

Supported Migrations

Platform	Migrate From Version	Migrate to Version
AWS	6.1.3 and higher	6.5.0
Azure	6.1.4 and higher	6.5.0
GCP	6.1.5 and higher	6.5.1

Scenario 1: Migrating a Single Stratusphere Hub Appliance

In this scenario, the instructions will walk you through moving the data from a 6.1.x or higher Stratusphere Hub appliance into a new 6.5.x Stratusphere Hub appliance as well as updating the Connector ID Key agents to the 6.5.x versions as well.

Preparation for Migration

1. Create a new instance of the Stratusphere 6.5.x Hub appliances from the Marketplace of the cloud platform of your preference. Use the online Stratusphere Sizing Guide to size them appropriately.

   Depending on your Cloud platform use the instructions in the Stratusphere Installation and Configuration Guide within the *Installing Stratusphere Appliances on Microsoft Azure* or *Installing Stratusphere Appliances on Amazon Web Services* sections.

2. Acquire the credentials for the users (Azure: `az-user or azureuser`; AWS: `ec2-user`) for the existing Stratusphere 6.1.x or higher Hub appliance. Please test and validate if the credentials for the user still work prior to proceeding.

3. If using SSH Key Pairs to connect to instances of our appliances on AWS and Azure, Liquidware now strongly recommends using **Microsoft Windows 10 Command Prompt** as the **SSH client**.

4. These instructions are for Administrators and assumes that a valid DNS name is defined and configured within the Stratusphere 6.1.x or higher Hub Web UI, which in turn is used by CID Keys to call back to the Stratusphere Hub. If this is the case, acquire permissions to associate a new IP with these DNS entries with the new 6.5.0 Hub's new static IP address.

5. Check if there are any upgrades or hot fixes are available for the version of Stratusphere Hub you have downloaded and are migrating to. *Please apply the upgrades or hot fixes **BEFORE** attempting the migration.*

   a) For upgrades, please follow the instructions in the Stratusphere Upgrade Guide for 6.0.x and 6.1.x guide.

   b) For hot fixes, please refer to the Stratusphere 6.5.0 Unified Hot Fix Patch KB article. It includes the link to the patch(es) and the instructions for applying the patches as well.

Migration Instructions

1. As part of its best practices, Liquidware recommends taking a snapshot of the existing Hub appliances for safety.

2. If you do NOT have any Collectors deployed, skip to the next item. If older Collectors are deployed, please follow the instructions below to get DNS / IP addressing and turn off the appliance:

   a) Please open an SSH connection using Microsoft Windows 10 Command Prompt as an SSH client to the Collector appliance consoles for each of the existing older Collectors. Use the following command on the prompt to connect to your appliance using the relevant user's credentials and SSH Key pairs (Azure: `az-user, azureuser`; AWS: `ec2-user`).

      ```
      ssh -i <path-to-private-key> username@ip.or.dns.addr
      ```

   b) Once logged in, use the following command to launch the LIQUIDWARE LABS HUB APPLIANCE MENU:

      ```
      sudo lwl
      ```

   c) Enter **N** for the **Network Configuration** menu option and make a note of the DNS resolvable Hostname assigned to each Collector. This DNS entry would need to point to the IP address of the new 6.5.0 version of Collector appliances after the migration.

   d) Enter **Q** to quit the **Network Configuration** wizard and then select **S** to **Shut down** and power OFF the appliance.

3. Please use the online Stratusphere Sizing Guide to properly size the new Stratusphere 6.5.x Hub appliance. Based on the sizing guideline, please provide the recommended resources for vCPUs, RAM, and storage for the Hub.

4. On the new Stratusphere 6.5.x Hub appliance:

   a) Power ON the new Stratusphere 6.5.x Hub appliance. After it powers ON determine the IP address of the appliance from your Cloud Instance page.

   b) Now open an SSH connection to the appliance console. Use Microsoft Windows 10 Command Prompt to SSH into your appliance using the relevant user's credentials and SSH Key pairs (Azure: `az-user, azureuser`; AWS: `ec2-user`) using the following command on the Windows Command Prompt:

      ```
      ssh -i <path-to-private-key> username@ip.or.dns.addr
      ```

5. If **Password-based Authentication** is enabled on your **both** old **and** new Hub appliances, please log in to the new Hub appliance using your preferred SSH client and skip to the next step. However, if any one of the appliances involved in the migration, old or new, was created using **SSH Key pairs**, then there is a preparatory step at the very beginning of a migration and then another step at the very end after completing migration that must be performed on the appliance where password-based authentication is disabled. On each of those old and new Hub appliances:

   a) Before performing any migrations, open the consoles to the old AND new Stratusphere Hub appliance. Log into each of the consoles with Microsoft Windows 10 Command Prompt as an SSH Client using the SSH Key pairs credentials for the user account it was created with [Azure: `az-user, azureuser`; AWS: `ec2-user`] using the following command:

      ```
      ssh -i <path-to-private-key> username@ip.or.dns.addr
      ```

b) Execute the following commands to download the migrate script using `wget` command and give it permission to be executable:

```
sudo wget https://cdn.liquidware.com/6.5.0/migrate.sh

sudo chmod 755 migrate.sh

sudo bash migrate.sh -pre
```

Note: If the appliance is isolated from the Internet, please download the relevant migrate script from a machine that has access to the Internet, and then use an SCP client to copy the script to the home folder of the user account (Azure: `az-user, azureuser`; AWS: `ec2-user`) on the Hub appliance.

c) On executing the script, it checks if it is running on the right platform and whether it can acquire the settings to check if password-based authentication is enabled or not. If it is enabled, the script will exit immediately, and you can continue the migration steps below. If password-based authentication is disabled, it will then acquire the current Admin Username automatically or use platform (Azure: `az-user, azureuser`; AWS: `ec2-user`), temporarily enable password authentication on the appliance, and set the password to **sspassword**.

6. On the command line prompt, use the following command to launch the LIQUIDWARE LABS HUB APPLIANCE MENU:

```
sudo lwl
```

7. Enter **M** for the **Migrate certs, settings, and data from remote appliance** menu option.

a) Follow the instructions to enter the IP address of the old 6.1.3 or higher Stratusphere Hub. It will then test to see if the default credentials for **az-user, azureuser** or **ec2-user** and **root** users can be used to connect to the remote 6.1.3 or higher Hub. If not, it will prompt the user to enter the credentials for **az-user, azureuser or ec2-user** and **root** credentials.

b) The new 6.5.x appliance will proceed to copy the data and certificate materials from the remote (older 6.1.3 or higher) Hub to the local (new 6.5.x) Hub. It will provide a running counter for data being copied in MB. When it has finished copying all the data from the remote (older 5.8.6 or higher) appliance, the data transfer counter will stop incrementing and only the time counter will keep incrementing. This is expected as the local appliance database is creating new tables and indexes during this time. Please wait until the Migration Wizard completes. Once all information is migrated, the remote Hub will be shut down. Then the network configuration, data, and certificate materials will be applied to the new 6.5.x Hub. Once completed, the appliance will reboot itself.


```
DB: portal  ( At the end of the import indexes are created.
                The time will increment but not the bytes copied. )
_    85,540 Megabytes Copied, 18 Meg/Sec at 77:24
```

8. If **Password-based Authentication** is enabled on your **both** old **and** new Hub appliances, please skip to the next step. However, if any one of the appliances involved in the migration, old or new, was created using **SSH Key pairs**, then there is a step at the very end after completing migration that must be performed on the appliance where password-based authentication is disabled again. On each of those old and new Hub appliances:

   a) After performing any migrations, open the consoles to the old AND new Stratusphere Hub appliance. Log into each of the consoles with Microsoft Windows 10 Command Prompt as an SSH Client using the SSH Key pairs credentials for the user account it was created with [Azure: `az-user, azureuser`; AWS: `ec2-user`] using the following command:

      ```
      ssh -i <path-to-private-key> username@ip.or.dns.addr
      ```

      Note: The old appliance may have to be powered ON again as it was automatically shut down after completing the migration. Once the command below is executed on the old appliance as well, it must be shut down again.

   b) Execute the following command:

      ```
      sudo bash migrate.sh -post
      ```

   c) On executing the script, it checks if it is running on the right platform and whether it can acquire the settings to check if password-based authentication is enabled or not. If it is enabled, the script will exit immediately, and you can continue the steps below. If password-based authentication was temporarily disabled, it will then acquire the current Admin Username automatically or use defaults (Azure: `az-user, azureuser`; AWS: `ec2-user`), and disable password-based authentication on the appliance. Now only SSH Key pairs can be used to access the console of these appliances.

9. Regarding DNS, depending on your Cloud platform:

   a) Update the DNS entry of the Hub and Connector ID Key Callback address to point to the IP address of the new 6.5.0 Hub.

   b) Disassociate the DNS resource from the old IP address of the old Hub and update the DNS entry associated with the new 6.5.0 Hub.

   c) Once updated, please allow some minimum amount of time for the DNS propagation to take effect.

10. Please wait for least **15 minutes** before using the same DNS name or IP address of the Hub to try to access the Stratusphere Web UI in your favorite browser. Once the login page is available, please verify that it displays 6.5.x in the blue ribbon at the bottom of the web page to confirm the migration to the new version.

11. If using a BYOL License, the login page will display a message (shown below) for the user to contact Licensing@Liquidware.com to update the license since the underlying appliance has been changed. Please take a screen shot of your page and send it to Licensing@Liquidware.com to request an updated License Code and instructions to update your license. The end user has full access to Stratusphere for up to 21 days after which access to the UI will be restricted to the license page only. The CID Key data collection will continue despite the restricted UI access. The message displayed on the login page of the Stratusphere Hub will count down 21 days allowing

the user enough time to contact Licensing@Liquidware.com to update and apply the new license.

> - Thank you for installing the new Stratusphere 6.5 appliance. As per Liquidware policies, Stratusphere appliances require an activation process that generates a license based on a machine-specific Activation Code combined with a License Code. Please contact Licensing at Liquidware (licensing@Liquidware.com) to receive an updated License Code. Your existing license will expire in 1 days.

12. Migrate & Upgrade CID Keys: Any currently deployed 6.1.x or higher CID Keys will continue to work and upload their data to the new Stratusphere 6.5.x Hub. To upgrade the CID Key to the 6.5.x version, please follow the instructions below:

    a) Log into the ADMINISTRATION section of the Web UI and navigate to the HUB ADMINISTRATION > CONNECTOR ID KEYS > CONNECTOR ID KEY PROPERTIES tab.

    b) Under the main PROPERTIES section, and for a selected Machine Group, you can enable the **AUTOMATICALLY UPDATE CONNECTOR ID KEYS WHEN NEW SOFTWARE VERSIONS ARE INSTALLED IN THE STRATUSPHERE HUB** option.

    c) When the CID Keys call back at their callback frequencies, they will know there is an update available, and get to download the new 6.5.x installer for the CID Key. The CID Keys will then be able to update themselves to the latest version in session with no reboot required. To update any gold or master images, with CID Key built-in, please download the relevant CID Key installer from the HUB ADMINISTRATION > CONNECTOR ID KEY > CONNECTOR ID KEY SOFTWARE tab and update your master images as needed.

13. Migrate Collectors: If you do NOT have any Collectors deployed, skip to the next item. If older Collectors are deployed, the administrator should make plans to replace 6.1.x or higher Collector appliances with 6.5.x Collector appliances in a phased manner. Please follow the instructions below to begin:

    a) Log into the ADMINISTRATION section of the Stratusphere Web UI and navigate to the COLLECTOR ADMINISTRATION > COLLECTORS tab. Make a note of which Collector Group each Collector belongs to. Then, select the check box next to each old Collector you want to migrate and click the DELETE button to remove them from the installation.

    b) Use the instructions within the Stratusphere Installation & Configuration Guide to set up the new Collector appliance(s) on your Cloud platform.

    c) To ensure existing CID Keys deployed continue calling back, make sure the DNS resolvable Hostnames of the old Collectors are pointed to the IP address of the new 6.5.0 Collectors.

14. Once the CID Keys have been upgraded to the 6.5.x version, those assigned to a particular Machine Group can be assigned to report back to a particular CID Collector Group.

15. The migration process is now complete.

Scenario 2: Migrating a Stratusphere Hub and a Database Appliance

In this scenario, the instructions will walk you through moving the data from a single 6.1.3 or higher Stratusphere Hub and Database appliance to a new 6.5.x Stratusphere Hub and Database appliance.

Although the 6.1.x or higher CID Keys will continue to work with the 6.5.x Hub, these instructions will also walk you through how to upgrade CID Keys from the older version to the new 6.5.x version. Similarly, the 6.1.x or higher Collectors will continue to work and insert their data into the Stratusphere Database. However, 6.1.x or higher Collectors cannot be upgraded in place to the 6.5.x version. Administrators can devise a phased plan to install new 6.5.x Collector appliances for collecting CID Key metrics as part of the Stratusphere 6 Architecture.

Preparation for Migration

1. Create a new instance of the Stratusphere 6.5.x Hub and Database appliances from the Marketplace of the cloud platform of your preference. Use the online Stratusphere Sizing Guide to size them appropriately.

    Depending on your Cloud platform use the instructions in the Stratusphere Installation and Configuration Guide within the *Installing Stratusphere Appliances on Microsoft Azure* or *Installing Stratusphere Appliances on Amazon Web Services* sections.

2. Acquire the credentials for the users (Azure: `az-user, azureuser`; AWS: `ec2-user`) for the existing Stratusphere 6.1.x or higher Hub appliance. Please test and validate if the credentials for the user still work prior to proceeding.

3. If using SSH Key Pairs to connect to instances of our appliances on AWS and Azure, Liquidware now strongly recommends using **Microsoft Windows 10 Command Prompt** as the **SSH client**.

4. These instructions are for Administrators and assumes that a valid DNS name is defined and configured within the Stratusphere 6.1.x or higher Hub Web UI, which in turn is used by CID Keys to call back to the Stratusphere Hub. If this is the case, acquire permissions to associate a new IP with these DNS entries with the new 6.5.0 Hub's new static IP address.

5. Check if there are any upgrades or hot fixes are available for the version of Stratusphere Hub you have downloaded and are migrating to. *Please apply the upgrades or hot fixes **BEFORE** attempting the migration.*

    a) For upgrades, please follow the instructions in the Stratusphere Upgrade Guide for 6.0.x and 6.1.x guide.

    b) For hot fixes, please refer to the Stratusphere 6.5.0 Unified Hot Fix Patch KB article. It includes the link to the patch(es) and the instructions for applying the patches as well.

Migration Instructions

1. As part of its best practices, Liquidware recommends taking a snapshot of the existing Hub appliances for safety.

2. If you do NOT have any Collectors deployed, skip to the next item. If older Collectors are deployed, please follow the instructions below to get IP addressing and turn off the appliance:

    a) Please open an SSH connection using Microsoft Windows 10 Command Prompt as an SSH client to the Collector appliance consoles for each of the existing older Collectors. Use the following command on the prompt to connect to your appliance using the relevant user's credentials and SSH Key pairs (Azure: `az-user, azureuser`; AWS: `ec2-user`).

    ```
    ssh -i <path-to-private-key> username@ip.or.dns.addr
    ```

    b) Once logged in, use the following command to launch the LIQUIDWARE LABS HUB APPLIANCE MENU:

```
           sudo lwl
```

c) Enter **N** for the **Network Configuration** menu option and make a note of the DNS resolvable Hostname assigned to each Collector. This DNS entry would need to point to the IP address of the new 6.5.0 version of Collector appliances after the migration.

d) Enter **Q** to quit the **Network Configuration** wizard and then select **S** to Shut down and power OFF the appliance.

3. Please use the online Stratusphere Sizing Guide to properly size the new Stratusphere appliances. Based on the sizing guideline, please provide the recommended resources for vCPUs, RAM, and storage for the Hub & Database.

4. Please power down the old / existing Stratusphere 6.1.x Hub appliance. To maintain data integrity and consistency, we need to power down the existing Hub from receiving any new data from the CID Keys. The CID Keys will queue up their data on board until the new Hub comes online.

5. On the new Stratusphere 6.5.x Database appliance:

a) Power ON the new Stratusphere 6.5.x Database appliance. After it powers ON determine the IP address of the appliance from your Cloud Instance page and prepare to use SSH to that address.

b) Now open an SSH connection to the appliance console. Use Microsoft Windows 10 Command Prompt to SSH into your appliance using the relevant user's credentials and SSH Key pairs (Azure: `az-user, azureuser;` AWS: `ec2-user`) using the following command on the Windows Command Prompt:

```
           ssh -i <path-to-private-key> username@ip.or.dns.addr
```

6. If **Password-based Authentication** is enabled on your both old and new Database appliances, please skip to the next step. However, if any one of the appliances involved in the migration, old or new, was created using **SSH Key pairs**, then there is a preparatory step at the very beginning of a migration and then another step at the very end after completing migration that must be performed on the appliance where password-based authentication is disabled. On each of those old and new Database appliances:

a) Before performing any migrations, open the consoles to the old AND new Stratusphere Database appliance. Log into each of the consoles with Microsoft Windows 10 Command Prompt as an SSH Client using the SSH Key pairs credentials for the user account it was created with [Azure: `az-user, azureuser;` AWS: `ec2-user`] using the following command:

```
           ssh -i <path-to-private-key> username@ip.or.dns.addr
```

a) Execute the following commands to download the migrate script using `wget` command and give it permission to be executable:

```
           sudo wget https://cdn.liquidware.com/6.5.0/migrate.sh

           sudo chmod 755 migrate.sh

           sudo bash migrate.sh -pre
```

Note: If the appliance is isolated from the Internet, please download the relevant migration script from a machine that has access to the Internet, and then use an SCP client to copy the script to the home folder of the user account (Azure: `az-user, azureuser`; AWS: `ec2-user`) on the appliance.

b) On executing the script, it checks if it is running on the right platform and whether it can acquire the settings to check if password-based authentication is enabled or not. If it is enabled, the script will exit immediately, and you can continue the migration steps below. If password-based authentication is disabled, it will then acquire the current Admin Username automatically or use platform defaults (Azure: `az-user, azureuser`; AWS: `ec2-user`), temporarily enable password authentication on the appliance, and set the password to **sspassword**.

7. On the command prompt, run the following command to launch the LIQUIDWARE LABS DATABASE APPLIANCE MENU:

```
sudo lwl
```

Use instructions in the Stratusphere Installation & Configuration Guide under the CONFIGURING STRATUSPHERE DATABASE APPLIANCE section to set up the appliance. Stop configuring the appliance after that section and do NOT proceed to the next section.

Note: Please apply DNS & NTPS settings only as other network configuration settings such as host name and IP address, network mask, and default gateway settings are assigned to the appliance and should not be changed within the console.

8. Enter **M** for the **Migrate certs, settings, and data from remote appliance** menu option.

a) Follow the instructions to enter the IP address of the old 6.1.x or higher Stratusphere Database. It will then test to see if the default credentials for **az-user, azureuser** or **ec2-user** and **root** users can be used to connect to the remote 6.1.x or higher Database. If not, it will prompt the user to enter the **az-user, azureuser** or **ec2-user** and **root** credentials.

b) The new 6.5.x appliance will proceed to copy the data and certificate materials from the remote (older 6.1.x or higher) Database to the local (new 6.5.x) Database. It will provide a running counter for data being copied in MB. When it has finished copying all the data from the remote (older 6.1.x or higher) appliance, the data transfer counter will stop incrementing and only the time counter will keep incrementing. This is expected as the local appliance database is creating new tables and indexes during this time. Please wait until the Migration Wizard completes and prompts you to continue. Once all information is migrated, the remote Database will be shut down. Then the network configuration, data, and certificate materials will be applied to the new 6.5.x Database. Once completed, the appliance will reboot itself.


```
DB: portal  ( At the end of the import indexes are created.
              The time will increment but not the bytes copied. )
 _   85,540 Megabytes Copied, 18 Meg/Sec at 77:24
```

9. As the Database appliance is rebooting, on the new Stratusphere 6.5.x Hub appliance:

   a) Power ON the new Stratusphere 6.5.x Hub appliance. After it powers ON determine the IP address of the appliance from your Cloud Instance page and prepare to use SSH to that address.

   b) Now open an SSH connection to the appliance console. Use Microsoft Windows 10 Command Prompt to SSH into your appliance using the relevant user's credentials and SSH Key pairs (Azure: `az-user, azureuser`; AWS: `ec2-user`) using the following command on the Windows Command Prompt:

      ```
      ssh -i <path-to-private-key> username@ip.or.dns.addr
      ```

10. If **Password-based Authentication** is enabled on your both old and new Hub appliances, please log in to the new Hub appliance using your preferred SSH client and skip to the next step. However, if any one of the appliances involved in the migration, old or new, was created using **SSH Key pairs**, then there is a preparatory step at the very beginning of a migration and then another step at the very end after completing migration that must be performed on the appliance where password-based authentication is disabled. On each of those old and new Hub appliances:

    a) Before performing any migrations, open the consoles to the old AND new Stratusphere Hub appliance. Log into each of the consoles with Microsoft Windows 10 Command Prompt as an SSH Client using the SSH Key pairs credentials for the user account it was created with [Azure: az-user, azureuser; AWS: ec2-user] using the following command:

       ```
       ssh -i <path-to-private-key> username@ip.or.dns.addr
       ```

    b) Execute the following command:

       ```
       sudo wget https://cdn.liquidware.com/6.5.0/migrate.sh

       sudo chmod 755 migrate.sh

       sudo bash migrate.sh -pre
       ```

    c) Note: If the appliance is isolated from the Internet, please download the relevant migrate script from a machine that has access to the Internet, and then use an SCP client to copy the script to the home folder of the user account (Azure: az-user, azureuser; AWS: ec2-user) on the Hub appliance.

    d) On executing the script, it checks if it is running on the right platform and whether it can acquire the settings to check if password-based authentication is enabled or not. If it is enabled, the script will exit immediately, and you can continue the migration steps below. If password-based authentication is disabled, it will then acquire the current Admin Username automatically or use platform defaults (Azure: az-user, azureuser; AWS: ec2-user), temporarily enable password authentication on the appliance, and set the password to sspassword.

11. On the command line prompt, use the following command to launch the LIQUIDWARE LABS HUB APPLIANCE MENU:

    ```
    sudo lwl
    ```

12. Enter **M** for the **Migrate certs, settings, and data from remote appliance** menu option.

   a) Follow the instructions to enter the IP address of the old 6.1.3 or higher Stratusphere Hub. It will then test to see if the default credentials for **az-user, azureuser** or **ec2-user** and **root** users can be used to connect to the remote 6.1.3 or higher Hub. If not, it will prompt the user to enter the credentials for **az-user, azureuser** or **ec2-user** and **root** credentials.

   b) The new 6.5.x appliance will proceed to copy the data and certificate materials from the remote (older 6.1.3 or higher) Hub to the local (new 6.5.x) Hub. It will provide a running counter for data being copied in MB. When it has finished copying all the data from the remote (older 5.8.6 or higher) appliance, the data transfer counter will stop incrementing and only the time counter will keep incrementing. This is expected as the local appliance database is creating new tables and indexes during this time. Please wait until the Migration Wizard completes. Once all information is migrated, the remote Hub will be shut down. Then the network configuration, data, and certificate materials will be applied to the new 6.5.x Hub. Once completed, the appliance will reboot itself.

   ```
   DB: portal  ( At the end of the import indexes are created.
                 The time will increment but not the bytes copied. )
   _   85,540 Megabytes Copied, 18 Meg/Sec at 77:24
   ```

13. We have now migrated settings, data and certificates for each Hub and Database appliance. Before we can join the Hub and Database to talk to each other we still need to establish trust between the Hub and Database appliances. Please refer to the instructions in the Stratusphere Installation & Configuration Guide under:

   Amazon Web Services
   INSTALLING STRATUSPHERE APPLIANCES ON AMAZON WEB SERVICES > ESTABLISH TRUST BETWEEN STRATUSPHERE HUB AND DATABASE section

   Microsoft Azure
   INSTALLING STRATUSPHERE APPLIANCES ON MICROSOFT AZURE > ESTABLISH TRUST BETWEEN STRATUSPHERE HUB AND DATABASE section for Microsoft Azure to do so.

14. Now that we have established trust between the Hub and Database appliances, we can join the Database to the Hub. Going back to the new Stratusphere 6.5.x Database appliance console:

   a) Open an SSH connection to the appliance console. Use Microsoft Windows 10 Command Prompt as an SSH Client to connect to your appliance using the relevant user's credentials and SSH Key pairs (Azure: `az-user, azureuser`; AWS: `ec2-user`) with the following command:

   ```
   ssh -i <path-to-private-key> username@ip.or.dns.addr
   ```

   b) On the command prompt, run the following command to launch the LIQUIDWARE LABS DATABASE APPLIANCE MENU:

   ```
   sudo lwl
   ```

   c) Enter **D** for the **Database Appliance Utilities** menu option.

   d) Enter **J** for the **Join this Database to a Hub** menu option.

   e) Follow the instructions of the wizard to provide all the information it needs to join the new Database appliance to the new Hub appliance.

f) Once joined, the appliances may reboot. Wait for 15 minutes before using the same DNS name or IP address of the Hub to access the Stratusphere Web UI.

15. If **Password-based Authentication** was enabled on your **both** old **and** new Hub & Database appliances, please skip to the next step. However, if any one of the appliances involved in the migration, old or new, was created using **SSH Key pairs**, then there is a step at the very end after completing migration that must be performed on the appliance where password-based authentication was temporarily disabled. On each of those old and new Hub and Database appliances:

b) Open an SSH session to the consoles of the old AND new Stratusphere Hub and Database appliances. Log into each of the consoles with Microsoft Windows 10 Command Prompt as an SSH Client using the SSH Key pairs credentials for the user account it was created with [Azure: `az-user, azureuser`; AWS: `ec2-user`] using the following command:

```
ssh -i <path-to-private-key> username@ip.or.dns.addr
```

a) **Note**: The old appliances may have to be powered ON again as they were automatically shut down after completing the migration. Once the command below is executed on the old appliances as well, all the old appliances must be shut down again.

b) Execute the following command:

```
sudo bash migrate.sh –post
```

c) On executing the script, it checks if it is running on the right platform and whether it can acquire the settings to check if password-based authentication is enabled or not. If it is enabled, the script will exit immediately, and you can continue the steps below. If password-based authentication was temporarily enabled, it will then acquire the current Admin Username automatically or use defaults (Azure: `az-user, azureuser`; AWS: `ec2-user`), and disable password authentication on the appliance. Now only SSH Key pairs can be used to access the console of these appliances.

16. Regarding DNS, depending on your Cloud platform:

a) Update the DNS entry of the Hub and Connector ID Key Callback address to point to the IP address of the new 6.5.0 Hub.

b) Disassociate the DNS resource from the old IP address of the old Hub and update the DNS entry associated with the new 6.5.0 Hub.

c) Once updated, please allow some minimum amount of time for the DNS propagation to take effect.

17. Please wait for least **15 minutes** before using the same DNS name or IP address of the Hub to try to access the Stratusphere Web UI in your favorite browser.

18. The login page will display a message (shown below) for the user to contact Licensing@Liquidware.com to update the license since the underlying appliance has been changed. Please take a screen shot of your page and send it to Licensing@Liquidware.com to request an updated License Code and instructions to update your license. The end user has full access to Stratusphere for up to 21 days after which access to the UI will be restricted to the license page only. The CID Key & Network data collection will continue despite the restricted UI

access. The message displayed on the login page of the Stratusphere Hub will count down 21 days allowing the user enough time to contact Licensing@Liquidware.com to update and apply the new license.

> • Thank you for installing the new Stratusphere 6.5 appliance. As per Liquidware policies, Stratusphere appliances require an activation process that generates a license based on a machine-specific Activation Code combined with a License Code. Please contact Licensing at Liquidware (licensing@Liquidware.com) to receive an updated License Code. Your existing license will expire in 1 days.

19. Migrate & Upgrade CID Keys: Any currently deployed 6.1.x or higher CID Keys will continue to work and upload their data to the new Stratusphere 6.5.x Hub. To upgrade the CID Key to the 6.5.x version, please follow the instructions below:

    a) Log into the ADMINISTRATION section of the Web UI and navigate to the HUB ADMINISTRATION > CONNECTOR ID KEYS > CONNECTOR ID KEY PROPERTIES tab.

    b) Under the main PROPERTIES section, and for a selected Machine Group, you can enable the AUTOMATICALLY UPDATE CONNECTOR ID KEYS WHEN NEW SOFTWARE VERSIONS ARE INSTALLED IN THE STRATUSPHERE HUB option.

    c) When the CID Keys call back at their callback frequencies, they will know there is an update available, and get to download the new 6.5.x installer for the CID Key. The CID Keys will then be able to update themselves to the latest version in session with no reboot required. To update any gold or master images, with CID Key built-in, please download the relevant CID Key installer from the Connector ID Key Software tab and update your master images as needed.

20. Migrate Collectors: If you do NOT have any Collectors deployed, skip to the next item. If older Collectors are deployed, the administrator should make plans to replace 6.1.x or higher Collector appliances with 6.5.x Collector appliances in a phased manner. Please follow the instructions below to begin:

    a) Log into the ADMINISTRATION section of the Stratusphere Web UI and navigate to the COLLECTOR ADMINISTRATION > COLLECTORS tab. Make a note of which Collector Group each Collector belongs to. Then, select the check box next to each old Collector you want to migrate and click the DELETE button to remove them from the installation.

    b) Use the instructions within the Stratusphere Installation & Configuration Guide to set up the new Collector appliance(s) on your Cloud platform.

21. Once the CID Keys have been upgraded to the 6.5.x version, those assigned to a particular Machine Group can be assigned to report back to a particular CID Collector Group.

22. The migration process is now complete.

Getting Help with Stratusphere

If you have questions or run into issues while migrating or using Stratusphere, Liquidware is here to help. Our goal is to provide you with the knowledge, tools, and support you need to be productive.

Using Online Resources

Liquidware maintains various kinds of helpful resources on our Customer Support Portal. If you have questions about your product, please use these online resources to your full advantage. The Support Portal includes product forums, a searchable Knowledge Base, documentation, and best practices among other items. You can visit our website at https://www.liquidware.com/.

Contacting Support

If you wish to contact our Support staff for technical assistance, please either log a request on the Liquidware Customer Support Portal or give us a call. Prior to Logging a Case you may want to review these helpful tips:

- Check the Product Documentation included with your Liquidware Product.
- Try to see if the problem is reproducible.
- Check to see if the problem is isolated to one machine or more.
- Note any recent changes to your system and environment.
- Note the version of your Liquidware product and environment details such as operating system, virtualization platform version, etc.

To speak directly with Support, please use the following numbers:

Main Line: 1-678-397-0460

Toll Free in US & Canada: 1-866-914-9665

Europe/Middle East/Africa: +44 800 014 8097

    Toll Free in Europe

        UK: 0800 014 8097

        Netherlands: 0800 022 5973

        Switzerland: 0800 561 271