Introduction

This guide has been authored by experts at Liquidware Labs in order to provide information and guidance concerning the upgrade procedures of RHEL Stratusphere™ FIT and Stratusphere™ UX appliances versions 5.8.X versions.

This document is meant for consultants and customers who are deploying desktop virtualization in pilots or production and who may have use for a diagnostic tool to help measure user experience or identify performance issues. Technical skills required are minimal, however familiarity with deploying virtual desktops and virtual machines is expected.

Information in this document is subject to change without notice. No part of this publication may be reproduced in whole or in part, stored in a retrieval system, or transmitted in any form or any means electronic or mechanical, including photocopying and recording for any external use by any person or entity without the express prior written consent of Liquidware Labs.

Liquidware Labs, Inc.
3600 Mansell Road
Suite 200
Alpharetta, Georgia 30022
U.S.A.
Phone: 678-397-0450
www.liquidwarelabs.com
Contents
Stratusphere™ 5.8.8 Upgrade Instructions for RHEL ................................................................. 5

Overview ................................................................................................................................. 5
Upgrading ................................................................................................................................. 5
Order of Upgrading Stratusphere appliances ................................................................. 6
Upgrading online Stratusphere appliances................................................................. 6
Upgrading offline or firewall isolated Stratusphere appliances ................................. 7
Troubleshooting ..................................................................................................................... 10

Stratusphere™ 5.8.7 Upgrade Instructions for RHEL ............................................................... 12

Overview ................................................................................................................................. 12
Upgrading ................................................................................................................................. 12
Order of Upgrading Stratusphere appliances ................................................................. 13
Upgrading online Stratusphere appliances................................................................. 13
Upgrading offline or firewall isolated Stratusphere appliances ................................. 14
Troubleshooting ..................................................................................................................... 17

Stratusphere™ 5.8.6 Upgrade Instructions for RHEL ............................................................... 19

Overview ................................................................................................................................. 19
Upgrading ................................................................................................................................. 19
Order of Upgrading Stratusphere appliances ................................................................. 20
Upgrading online Stratusphere appliances................................................................. 20
Upgrading offline or firewall isolated Stratusphere appliances ................................. 21
Troubleshooting ..................................................................................................................... 23

Stratusphere™ 5.8.5 Upgrade Instructions for RHEL ............................................................... 25

Overview ................................................................................................................................. 25
Upgrading ................................................................................................................................. 25
Order of Upgrading Stratusphere appliances .......................................................................................... 26
Upgrading online Stratusphere appliances ............................................................................................ 26
Upgrading offline or firewall isolated Stratusphere appliances ............................................................... 27
Troubleshooting ........................................................................................................................................ 29
Stratusphere™ 5.8.4 Upgrade Instructions for RHEL ............................................................................. 31
Overview .................................................................................................................................................. 31
Upgrading .................................................................................................................................................. 31
Order of Upgrading Stratusphere appliances .......................................................................................... 32
Upgrading online Stratusphere appliances ............................................................................................ 32
Upgrading offline or firewall isolated Stratusphere appliances ............................................................... 33
Troubleshooting ........................................................................................................................................ 35
Stratusphere™ 5.8.3 Upgrade Instructions for RHEL ............................................................................. 37
Overview .................................................................................................................................................. 37
Upgrading .................................................................................................................................................. 37
Order of Upgrading Stratusphere appliances .......................................................................................... 38
Upgrading online Stratusphere appliances ............................................................................................ 38
Upgrading offline or firewall isolated Stratusphere appliances ............................................................... 39
Troubleshooting ........................................................................................................................................ 41
Stratusphere™ 5.8.2 Upgrade Instructions for RHEL ............................................................................. 43
Overview .................................................................................................................................................. 43
Upgrading .................................................................................................................................................. 43
Order of Upgrading Stratusphere appliances .......................................................................................... 44
Upgrading online Stratusphere appliances ............................................................................................ 44
Upgrading offline or firewall isolated Stratusphere appliances ............................................................... 46
Troubleshooting ........................................................................................................................................ 48
Stratusphere™ 5.8.8 Upgrade Instructions for RHEL

Overview
These upgrade instructions are for all appliances running Stratusphere 5.8.2, 5.8.3, 5.8.4, 5.8.5, 5.8.6 or 5.8.7. If your appliances are on an earlier version like 5.8.1, please refer to the ‘Upgrading’ section of the next higher version, 5.8.2, for specific instructions as they may have changed.

The upgrades involve downloading just one large 1.1GB master image for performing upgrades across Hub, Database, and Network Station appliances on all types of hypervisors i.e. one image for VMware ESX, Citrix XenServer, and Microsoft Hyper V. Depending on the download bandwidth available, please allow for adequate time for the download to finish.

Upgrading
If running Stratusphere 4.8.x version, please visit our Support documentation site and look for the “Stratusphere Upgrade Guide for 5.0” document created specifically to help customers upgrade from 4.8.x to the 5.0 version of Stratusphere. Alternatively, contact Support@LiquidwareLabs.com for further assistance.

If the current installation of Stratusphere 5.7.x or earlier has performance issues and has more than 1,000 CID Keys with a separate Hub and Database Appliances, Liquidware Labs recommends using the 5.8.x version of the appliance. The configuration changes made are available only within a newly downloaded 5.8.x version of the appliance. These performance enhancements are not available in 5.7.x or earlier version of the appliance upgraded in place to 5.7.x version. To get all the performance enhancements, Liquidware Labs recommends migration from a 5.6.x appliance to a 5.8.1 appliance. Please get in touch with Liquidware Labs Customer Support at Support@LiquidwareLabs.com or search for a KB article titled “Migrating to Stratusphere 5.7.0” on our Support Site.

Depending on whether your Stratusphere appliances have direct access to the Internet or not, Liquidware Labs provides 2 options:

1. **Online Upgrades:** If your appliances have direct access to the Internet use the instructions in the ‘Upgrading online Stratusphere appliances’ section.
2. **Offline Upgrades:** If your appliance is in a secure, air-gapped environment with no direct access to the Internet, use the instructions in the ‘Upgrading offline Stratusphere appliances’ section. You would need to download upgrades files first, copy them to the appliances, and then apply them to the appliances through the command line console.

Please refer to the order in which appliances need to be upgraded below as well. If you encounter any errors, use the troubleshooting section at the end of this document.
Order of Upgrading Stratusphere appliances

1. Beginning with Stratusphere 5.8.1, the Hub Web UI HUB ADMINISTRATION > UPDATES tab and/or Hub Console based Upgrade commands do the following:
   a. Halt all services on the Hub,
   b. If there is a separate Database appliance attached:
      i. Upgrades the database appliance
      ii. Reboots it.
   c. The Hub then upgrades and reboots itself in an automated operation.

2. Use the NETWORK ADMINISTRATION > NETWORK STATIONS tab, to re-register and upgrade each Network Station from within the Web UI. Let the appliance reboot and let all services start up in the background.

Upgrading online Stratusphere appliances

- The following section applies specifically to Stratusphere appliances running 5.8.2, 5.8.3, 5.8.4, 5.8.5, 5.8.6 or 5.8.7 ONLY. If your appliances are on an earlier version like 5.8.1, please refer to the ‘Upgrading’ section of the next higher version, 5.8.2, for specific instructions as they may have changed. Apply the following instructions on each 5.8.2, 5.8.3, 5.8.4, 5.8.5, 5.8.6 or 5.8.7 appliances in order.
- Take a snapshot of the Hub and Database appliances.
- Log into the ADMINISTRATION section of the Stratusphere Hub Web UI. Navigate to the HUB ADMINISTRATION > UPDATES tab.
- If your Stratusphere Hub has access to the Internet, it should display a message “An update (5.8.8) is available for download.”
- Click the DOWNLOAD UPDATE button to download the upgrade image within the Stratusphere Hub.
- The UI will display a blue progress bar with the message “Download in Progress (This may take several minutes)”. The upgrade image file is about 1.1GB so depending on your connection, it may take some time to finish downloading.
- Once downloaded, the UI should display a green status bar at the top of the page with the message “Download completed successfully”. Click the x at the extreme right of the message to dismiss it.
- **NOTE:** If the default passwords (sspassword) for the friend or root users have been changed on the Database Appliance, do the following on the Database Appliance console window, otherwise skip to the next step:
  o Log into the command line console of the Database Appliance using User ID: sconsole and Password: sspassword as credentials.
  o Enter option U for the ‘U’) Update Software Menu’ option.
  o Enter option S for the ‘S) Software Update Site’ option.
  o The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it
to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.

- Enter option C for the ‘C) Check for Updates’ option.
- If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
- Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
- Once the appliance reboots, give it a few minutes to start all required services. Proceed to the next step within the browser of Stratusphere Web UI.

- Click on the INSTALL UPDATE button. The UI will display a blue progress bar with the message “Install in Progress (This may take several minutes)”. The update is being installed now.
- If this installation of Stratusphere has a Database Appliance attached with default passwords (sspassword) for the friend and root users, the Hub will automatically upgrade the Database Appliance to 5.8.8 and reboot it as well. The Hub will then upgrade itself and reboot.
- When the install is complete, the UI will display the following message “Hub has been unresponsive for 25 seconds. You will be logged out in 10 seconds”. The user will be logged out of the Web UI automatically. Please wait for at least **10-15 minutes** before trying to refresh the Stratusphere Web UI Login page as the appliance reboots itself.
- Refresh the Login page of the Web UI and verify if it states 5.8.8 in the bottom blue ribbon. Check the Web UI for standard functionality and if all looks well, delete the snapshot taken prior to starting the upgrade.
- Network Station appliances
  - After updating the Hub to 5.8.8, log into the Web UI’s ADMINISTRATION product. Navigate to the STATION ADMINISTRATION > NETWORK STATIONS tab.
  - Select the check box for the Network Station you want to upgrade. If this Network Station is a version prior to 5.8.0, please refer to that version’s Upgrading section within the Release Notes. If the Network Station is at 5.8.0, then click the RE-REGISTER button.
  - Then select the check box for that Network Station again, and click on the UPGRADE button.
  - Repeat these steps for each Network Station that needs to be updated to 5.8.8.

- Upgrade is now complete.

### Upgrading offline or firewall isolated Stratusphere appliances

- If your appliances are on a version earlier than 5.7.x then please refer to the specific release version’s ‘Upgrading’ section in the Release Notes for additional instructions. Once upgraded to 5.8.0, please come back to this section and use these instructions below.
- Until 5.8.0, offline upgrades only support incremental updates. So, if you are on 5.7.0, you will need to download offline upgrade packs that will take you from 5.7.0 to 5.7.1, 5.7.1 to 5.7.2 and then from 5.7.2 to 5.8.0. Please use the links provided with each release for incremental upgrades. Liquidware Labs has now implemented one step cumulative upgrades and will work from 5.8.1 onwards from within the Web UI Administration product.
The following section applies specifically to Stratusphere appliances running 5.8.2, 5.8.3, 5.8.4, 5.8.5, 5.8.6 or 5.8.7 ONLY. If your appliances are on an earlier version like 5.8.1, please refer to the ‘Upgrading’ section of the next higher version, 5.8.2, for specific instructions as they may have changed. Apply the following instructions on each 5.8.2, 5.8.3, 5.8.4, 5.8.5, 5.8.6 or 5.8.7 appliances in order.

Please note these instructions may have changed since the last time you upgraded. There is only one version of the image file across VMware, XenServer, and Hyper V environments.

On a local desktop with access to the Internet:

- Download the single offline upgrade image from the link below to your local desktop:

- Take a snapshot of the Hub and Database appliances.

- **NOTE:** While performing an Offline upgrade from 5.8.6 specifically, the HUB ADMINISTRATION > UPGRADES > OFFLINE tab may not display the INSTALL UPDATE button after the 5.8.8 image has been uploaded. Please use this link in the Stratusphere Knowledge Base (KB) article for instructions on how to apply a patch to fix the offline upgrade issue. Once the patch has been applied, proceed with the regular offline upgrade instructions below. In case of any problems, please contact Support@LiquidwareLabs.com to get help. There are no known upgrade issues for offline upgrades on 5.8.5 or earlier versions of Stratusphere.

- Log into the ADMINISTRATION section of the Stratusphere Hub Web UI.
  - Navigate to the HUB ADMINISTRATION > UPGRADES tab.
  - If your Stratusphere Hub is isolated from the Internet within a secure, air-gapped environment the Hub is in offline mode AND is 5.8.6 and newer, it should automatically display the ADMINISTRATION > UPGRADES > OFFLINE tab.
  - Within the tab, it will display a page with a BROWSE button. Click the BROWSE button to navigate to the location where the stratusphere_5.8.8.img file is stored, select it, and open it.
  - Click on the UPLOAD UPDATE button. On clicking, a blue progress bar with the message “Upload in Progress (This may take several minutes)” will be displayed. The upgrade image is now being uploaded to the Hub. This is a 1.1GB file, so depending your network connection it will take some time to upload this large file. If you observe a yellow warning message “Please select a file to upload” – please refer to the troubleshooting section at the end of this section.
  - Once finished uploading, a green progress bar with the message “Download Completed. Verifying image.” will be displayed. Here the Hub is verifying the integrity of image file uploaded. Once verified, it will display “Upload completed successfully” at the top of the page. Click the ‘x’ at the extreme right to dismiss this message.
  - **NOTE:** If the default password (sspassword) for friend or root users have been changed on the Database Appliance, do the following on the Database Appliance console window, otherwise skip to the next step:
    - Log into the command line console of the Database Appliance using User ID: ssconsole and Password: sspassword as credentials.
    - Enter option U for the ‘U) Update Software Menu’ option.
▪ Enter option S for the ‘S) Software Update Site’ option.
▪ The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.
▪ Enter option C for the ‘C) Check for Updates’ option.
▪ If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
▪ Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
▪ Once the appliance reboots, give it a few minutes to start all required services. Proceed to the next step within the browser of Stratusphere Web UI.
  o Click the INSTALL UPDATE button to now install the 5.8.8 upgrade on the Stratusphere Hub. The UI will display a green progress bar with the message “Install in Progress (This may take several minutes)”. The update is being installed now.
  o If this installation of Stratusphere has a Database Appliance attached with default password (sspassword) for the friend and root users, the Hub will automatically upgrade the Database Appliance to 5.8.8 and reboot it as well. The Hub will then upgrade itself and reboot.
  o When the install is complete, the UI will display the following message “Hub has been unresponsive for 25 seconds. You will be logged out in 10 seconds”. The user will be logged out of the Web UI automatically. Please wait for at least 10-15 minutes before trying to refresh the Stratusphere Web UI Login page as the appliance reboots itself.
  o Refresh the Login page of the Web UI and verify if it states 5.8.8 in the bottom blue ribbon. Check the Web UI for standard functionality and if all looks well, delete the snapshot taken prior to starting the upgrade.
• Network Station appliances
  o After updating the Hub to 5.8.8, log into the Web UI’S ADMINISTRATION product. Navigate to the STATION ADMINISTRATION > NETWORK STATIONS tab.
  o Select the check box for the Network Station you want to upgrade. If this Network Station is a version prior to 5.8.0, please refer to that version’s Upgrading section within the Release Notes. If the Network Station is at 5.8.0, then click the RE-REGISTER button.
  o Then select the check box for that Network Station again, and click on the UPGRADE button.
  o Repeat these steps for each Network Station that needs to be updated to 5.8.8.
• Upgrade is now complete.
Troubleshooting

SCP fails to log into the appliance
- The RHEL is a security hardened appliance. It has policies enabled where passwords expire after a certain amount of time. An expired password may be preventing the user from logging into the appliance.
- Log into the local command line console and it will prompt you to change and update your password immediately. Once updated, you should be able to use the SCP tool again to upload files to the appliance.

Hub Administration > Upgrades page is blank after clicking Upload Image button
- After browsing for the offline upgrade image and clicking Upload Image button, the page might not display any progress bars or become blank.
- Please use the following KB article link for instructions to install a patch on the Hub appliance.
- Once the patch is applied in the KB article, try the offline upgrade process again.

Warning message “Please select a file to upload” while uploading file in offline mode
- The browser may have cached some of the code and thus may not be running the latest version of the page. Please log out of the UI, clear the cache in the browser, and start over. If the problem persists then depending on your browser do the following:
  - In Firefox, right-click anywhere within the yellow warning message bar and choose THIS FRAME -> RELOAD FRAME menu option.
  - In Chrome, right-click anywhere within the yellow warning message bar and choose RELOAD FRAME menu option.
  - In Internet Explorer, right-click anywhere within the yellow warning message bar and choose REFRESH menu option.

Hub upgraded to 5.8.8 but the Database Appliance is still on 5.8.2, 5.8.3, 5.8.4, 5.8.5, 5.8.6, or 5.8.7
In most cases, the default password (sspassword) for the friend or root users may have been changed on the Database Appliance, thus causing the connection failures between the Hub and Database.
- Log into the command line console of the Database Appliance using User ID: ssconsole and Password: sspassword as credentials.
- Enter option U for the ‘U) Update Software Menu’ option.
- Enter option S for the ‘S) Software Update Site’ option.
- The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update
the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.

- Enter option C for the ‘C) Check for Updates’ option.
- If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
- Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
- Once the appliance reboots, give it a few minutes to start all required services.
**Overview**

These upgrade instructions are for all appliances running **Stratusphere 5.8.2, 5.8.3, 5.8.4, 5.8.5 or 5.8.6**. If your appliances are on an earlier version like 5.8.1, please refer to the ‘Upgrading’ section of the next higher version, 5.8.2, for specific instructions as they may have changed.

The upgrades involve downloading just one large 1.1GB master image for performing upgrades across Hub, Database, and Network Station appliances on all types of hypervisors i.e. one image for VMware ESX, Citrix XenServer, and Microsoft Hyper V. Depending on the download bandwidth available, please allow for adequate time for the download to finish.

**Upgrading**

If running Stratusphere 4.8.x version, please visit our [Support documentation site](https://www.liquidwarelabs.com/support) and look for the “Stratusphere Upgrade Guide for 5.0” document created specifically to help customers upgrade from 4.8.x to the 5.0 version of Stratusphere. Alternatively, contact [Support@LiquidwareLabs.com](mailto:Support@LiquidwareLabs.com) for further assistance.

If the current installation of Stratusphere 5.7.x or earlier has performance issues and has more than 1,000 CID Keys with a separate Hub and Database Appliances, Liquidware Labs recommends using the 5.8.x version of the appliance. The configuration changes made are available only within a newly downloaded 5.8.x version of the appliance. These performance enhancements are not available in 5.7.x or earlier version of the appliance upgraded in place to 5.7.x version. To get all the performance enhancements, Liquidware Labs recommends migration from a 5.6.x appliance to a 5.8.1 appliance. Please get in touch with Liquidware Labs Customer Support at [Support@LiquidwareLabs.com](mailto:Support@LiquidwareLabs.com) or search for a KB article titled “Migrating to Stratusphere 5.7.0” on our Support Site.

Depending on whether your Stratusphere appliances have direct access to the Internet or not, Liquidware Labs provides 2 options:

3. **Online Upgrades:** If your appliances have direct access to the Internet use the instructions in the ‘Upgrading online Stratusphere appliances’ section.

4. **Offline Upgrades:** If your appliance is in a secure, air-gapped environment with no direct access to the Internet, use the instructions in the ‘Upgrading offline Stratusphere appliances’ section. You would need to download upgrades files first, copy them to the appliances, and then apply them to the appliances through the command line console.

Please refer to the order in which appliances need to be upgraded below as well. If you encounter any errors, use the [troubleshooting](https://www.liquidwarelabs.com/support) section at the end of this document.
Order of Upgrading Stratusphere appliances

3. Beginning with Stratusphere 5.8.1, the Hub Web UI HUB ADMINISTRATION > UPDATES tab and/or Hub Console based Upgrade commands do the following:
   a. Halt all services on the Hub,
   b. If there is a separate Database appliance attached:
      i. Upgrades the database appliance
      ii. Reboots it.
   c. The Hub then upgrades and reboots itself in an automated operation.

4. Use the NETWORK ADMINISTRATION > NETWORK STATIONS tab, to re-register and upgrade each Network Station from within the Web UI. Let the appliance reboot and let all services start up in the background.

Upgrading online Stratusphere appliances

- The following section applies specifically to Stratusphere appliances running 5.8.2, 5.8.3, 5.8.4, 5.8.5 or 5.8.6 ONLY. If your appliances are on an earlier version like 5.8.1, please refer to the ‘Upgrading’ section of the next higher version, 5.8.2, for specific instructions as they may have changed. Apply the following instructions on each 5.8.2, 5.8.3, 5.8.4, 5.8.5 or 5.8.6 appliances in order.
- Take a snapshot of the Hub and Database appliances.
- Log into the ADMINISTRATION section of the Stratusphere Hub Web UI. Navigate to the HUB ADMINISTRATION > UPDATES tab.
- If your Stratusphere Hub has access to the Internet, it should display a message “An update (5.8.7) is available for download.”
- Click the DOWNLOAD UPDATE button to download the upgrade image within the Stratusphere Hub.
- The UI will display a blue progress bar with the message “Download in Progress (This may take several minutes)”. The upgrade image file is about 1.1GB so depending on your connection, it may take some time to finish downloading.
- Once downloaded, the UI should display a green status bar at the top of the page with the message “Download completed successfully”. Click the x at the extreme right of the message to dismiss it.
- **NOTE:** If the default passwords (sspassword) for the friend or root users have been changed on the Database Appliance, do the following on the Database Appliance console window, otherwise skip to the next step:
  o Log into the command line console of the Database Appliance using User ID: ssconsole and Password: sspassword as credentials.
  o Enter option U for the ‘U) Update Software Menu’ option.
  o Enter option S for the ‘S) Software Update Site’ option.
  o The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it
to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update
the site and ask again if you want to make a change – press N and ENTER to finish. If it
matches, press N and ENTER to proceed.
  o Enter option C for the ‘C) Check for Updates’ option.
  o If there are updates available, enter option U for the ‘U) Update’ option to apply the
    update on the appliance.
  o Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’
    option if it is not scheduled automatically.
  o Once the appliance reboots, give it a few minutes to start all required services. Proceed
to the next step within the browser of Stratusphere Web UI.
• Click on the INSTALL UPDATE button. The UI will display a blue progress bar with the message
  “Install in Progress (This may take several minutes)”. The update is being installed now.
• If this installation of Stratusphere has a Database Appliance attached with default passwords
  (sspassword) for the friend and root users, the Hub will automatically upgrade the
  Database Appliance to 5.8.7 and reboot it as well. The Hub will then upgrade itself and reboot.
• When the install is complete, the UI will display the following message “Hub has been
  unresponsive for 25 seconds. You will be logged out in 10 seconds”. The user will be logged out
  of the Web UI automatically. Please wait for at least 10-15 minutes before trying to refresh the
  Stratusphere Web UI Login page as the appliance reboots itself.
• Refresh the Login page of the Web UI and verify if it states 5.8.7 in the bottom blue ribbon.
  Check the Web UI for standard functionality and if all looks well, delete the snapshot taken prior
to starting the upgrade.
• Network Station appliances
  o After updating the Hub to 5.8.7, log into the Web UI’s ADMINISTRATION product. Navigate
to the STATION ADMINISTRATION > NETWORK STATIONS tab.
  o Select the check box for the Network Station you want to upgrade. If this Network
    Station is a version prior to 5.8.0, please refer to that version’s Upgrading section within
    the Release Notes. If the Network Station is at 5.8.0, then click the RE-REGISTER button.
  o Then select the check box for that Network Station again, and click on the UPGRADE
    button.
  o Repeat these steps for each Network Station that needs to be updated to 5.8.7.
• Upgrade is now complete.

Upgrading offline or firewall isolated Stratusphere appliances
• If your appliances are on a version earlier than 5.7.x then please refer to the specific release
  version’s ‘Upgrading’ section in the Release Notes for additional instructions. Once upgraded to
  5.8.0, please come back to this section and use these instructions below.
• Until 5.8.0, offline upgrades only support incremental updates. So, if you are on 5.7.0, you will
  need to download offline upgrade packs that will take you from 5.7.0 to 5.7.1, 5.7.1 to 5.7.2 and
  then from 5.7.2 to 5.8.0. Please use the links provided with each release for incremental
  upgrades. Liquidware Labs has now implemented one step cumulative upgrades and will work
  from 5.8.1 onwards from within the Web UI Administration product.
• The following section applies specifically to Stratusphere appliances running 5.8.2, 5.8.3, 5.8.4, 5.8.5 or 5.8.6 ONLY. If your appliances are on an earlier version like 5.8.1, please refer to the ‘Upgrading’ section of the next higher version, 5.8.2, for specific instructions as they may have changed. Apply the following instructions on each 5.8.2, 5.8.3, 5.8.4, 5.8.5 or 5.8.6 appliances in order.

• Please note these instructions may have changed since the last time you upgraded. There is only one version of the image file across VMware, XenServer, and Hyper V environments.

• On a local desktop with access to the Internet:
  o Download the single offline upgrade image from the link below to your local desktop: http://download.liquidwarelabs.com/rhel/587/stratusphere-5.8.7.img

• Take a snapshot of the Hub and Database appliances.

• NOTE: While performing an Offline upgrade from 5.8.6 specifically, the HUB ADMINISTRATION > UPGRADES > OFFLINE tab may not display the INSTALL UPDATE button after the 5.8.7 image has been uploaded. Please use this link in the Stratusphere Knowledge Base (KB) article for instructions on how to apply a patch to fix the offline upgrade issue. Once the patch has been applied, proceed with the regular offline upgrade instructions below. In case of any problems, please contact Support@LiquidwareLabs.com to get help. There are no known upgrade issues for offline upgrades on 5.8.5 or earlier versions of Stratusphere.

• Log into the ADMINISTRATION section of the Stratusphere Hub Web UI.
  o Navigate to the HUB ADMINISTRATION > UPGRADES tab.
  o If your Stratusphere Hub is isolated from the Internet within a secure, air-gapped environment the Hub is in offline mode AND is 5.8.6 and newer, it should automatically display the ADMINISTRATION > UPGRADES > OFFLINE tab.
  o Within the tab, it will display a page with a BROWSE button. Click the BROWSE button to navigate to the location where the stratusphere_5.8.7.img file is stored, select it, and open it.
  o Click on the UPLOAD UPDATE button. On clicking, a blue progress bar with the message “Upload in Progress (This may take several minutes)” will be displayed. The upgrade image is now being uploaded to the Hub. This is a 1.1GB file, so depending your network connection it will take some time to upload this large file. If you observe a yellow warning message “Please select a file to upload” – please refer to the troubleshooting section at the end of this section.
  o Once finished uploading, a green progress bar with the message “Download Completed. Verifying image.” will be displayed. Here the Hub is verifying the integrity of image file uploaded. Once verified, it will display “Upload completed successfully” at the top of the page. Click the ‘x’ at the extreme right to dismiss this message.
  o NOTE: If the default password (sspassword) for friend or root users have been changed on the Database Appliance, do the following on the Database Appliance console window, otherwise skip to the next step:
    ▪ Log into the command line console of the Database Appliance using User ID: ssconsole and Password: sspassword as credentials.
    ▪ Enter option U for the ‘U) Update Software Menu’ option.
- Enter option S for the ‘S) Software Update Site’ option.
- The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.
- Enter option C for the ‘C) Check for Updates’ option.
- If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
- Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
- Once the appliance reboots, give it a few minutes to start all required services. Proceed to the next step within the browser of Stratusphere Web UI.
  - Click the INSTALL UPDATE button to now install the 5.8.7 upgrade on the Stratusphere Hub. The UI will display a green progress bar with the message “Install in Progress (This may take several minutes)”. The update is being installed now.
  - If this installation of Stratusphere has a Database Appliance attached with default password (sspassword) for the friend and root users, the Hub will automatically upgrade the Database Appliance to 5.8.7 and reboot it as well. The Hub will then upgrade itself and reboot.
  - When the install is complete, the UI will display the following message “Hub has been unresponsive for 25 seconds. You will be logged out in 10 seconds”. The user will be logged out of the Web UI automatically. Please wait for at least 10-15 minutes before trying to refresh the Stratusphere Web UI Login page as the appliance reboots itself.
  - Refresh the Login page of the Web UI and verify if it states 5.8.7 in the bottom blue ribbon. Check the Web UI for standard functionality and if all looks well, delete the snapshot taken prior to starting the upgrade.
  - **Network Station appliances**
    - After updating the Hub to 5.8.7, log into the Web UI’s ADMINISTRATION product. Navigate to the STATION ADMINISTRATION > NETWORK STATIONS tab.
    - Select the check box for the Network Station you want to upgrade. If this Network Station is a version prior to 5.8.0, please refer to that version’s Upgrading section within the Release Notes. If the Network Station is at 5.8.0, then click the RE-REGISTER button.
    - Then select the check box for that Network Station again, and click on the UPGRADE button.
    - Repeat these steps for each Network Station that needs to be updated to 5.8.7.
  - Upgrade is now complete.
Troubleshooting

**SCP fails to log into the appliance**
- The RHEL is a security hardened appliance. It has policies enabled where passwords expire after a certain amount of time. An expired password may be preventing the user from logging into the appliance.
- Log into the local command line console and it will prompt you to change and update your password immediately. Once updated, you should be able to use the SCP tool again to upload files to the appliance.

**Hub Administration > Upgrades page is blank after clicking Upload Image button**
- After browsing for the offline upgrade image and clicking Upload Image button, the page might not display any progress bars or become blank.
- Please use the following [KB article link] for instructions to install a patch on the Hub appliance.
- Once the patch is applied in the KB article, try the offline upgrade process again.

**Warning message “Please select a file to upload” while uploading file in offline mode**
- The browser may have cached some of the code and thus may not be running the latest version of the page. Please log out of the UI, clear the cache in the browser, and start over. If the problem persists then depending on your browser do the following:
  - In Firefox, right-click anywhere within the yellow warning message bar and choose THIS FRAME -> RELOAD FRAME menu option.
  - In Chrome, right-click anywhere within the yellow warning message bar and choose RELOAD FRAME menu option.
  - In Internet Explorer, right-click anywhere within the yellow warning message bar and choose REFRESH menu option.

**Hub upgraded to 5.8.6 but the Database Appliance is still on 5.8.2, 5.8.3, 5.8.4 or 5.8.5**
In most cases, the default password (sspassword) for the friend or root users may have been changed on the Database Appliance, thus causing the connection failures between the Hub and Database.
- Log into the command line console of the Database Appliance using User ID: ssconsole and Password: sspassword as credentials.
- Enter option U for the ‘U) Update Software Menu’ option.
- Enter option S for the ‘S) Software Update Site’ option.
- The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.
o Enter option C for the ‘C) Check for Updates’ option.
o If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
o Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
o Once the appliance reboots, give it a few minutes to start all required services.
Stratusphere™ 5.8.6 Upgrade Instructions for RHEL

Overview
These upgrade instructions are for all appliances running Stratusphere 5.8.2, 5.8.3, 5.8.4 or 5.8.5. If your appliances are on an earlier version like 5.8.1, please refer to the ‘Upgrading’ section of the next higher version, 5.8.2, for specific instructions as they may have changed.

The upgrades involve downloading just one large 1.1GB master image for performing upgrades across Hub, Database, and Network Station appliances on all types of hypervisors i.e., one image for VMware ESX, Citrix XenServer, and Microsoft Hyper V. Depending on the download bandwidth available, please allow for adequate time for the download to finish.

Upgrading
If running Stratusphere 4.8.x version, please visit our Support documentation site and look for the “Stratusphere Upgrade Guide for 5.0” document created specifically to help customers upgrade from 4.8.x to the 5.0 version of Stratusphere. Alternatively, contact Support@LiquidwareLabs.com for further assistance.

If the current installation of Stratusphere 5.7.x or earlier has performance issues and has more than 1,000 CID Keys with a separate Hub and Database Appliances, Liquidware Labs recommends using the 5.8.x version of the appliance. The configuration changes made are available only within a newly downloaded 5.8.x version of the appliance. These performance enhancements are not available in 5.7.x or earlier version of the appliance upgraded in place to 5.7.x version. To get all the performance enhancements, Liquidware Labs recommends migration from a 5.6.x appliance to a 5.8.1 appliance. Please get in touch with Liquidware Labs Customer Support at Support@LiquidwareLabs.com or search for a KB article titled “Migrating to Stratusphere 5.7.0” on our Support Site.

Depending on whether your Stratusphere appliances have direct access to the Internet or not, Liquidware Labs provides 2 options:

5. Online Upgrades: If your appliances have direct access to the Internet use the instructions in the ‘Upgrading online Stratusphere appliances’ section.

6. Offline Upgrades: If your appliance is in a secure, air-gapped environment with no direct access to the Internet, use the instructions in the ‘Upgrading offline Stratusphere appliances’ section. You would need to download upgrades files first, copy them to the appliances, and then apply them to the appliances through the command line console.

Please refer to the order in which appliances need to be upgraded below as well. If you encounter any errors, use the troubleshooting section at the end of this document.
Order of Upgrading Stratusphere appliances

5. Beginning with Stratusphere 5.8.1, the Hub Web UI HUB ADMINISTRATION > UPGRADES tab and/or Hub Console based Upgrade commands do the following:
   a. Halt all services on the Hub,
   b. If there is a separate Database appliance attached:
      i. Upgrades the database appliance
      ii. Reboots it.
   c. The Hub then upgrades and reboots itself in an automated operation.

6. Use the NETWORK ADMINISTRATION > NETWORK STATIONS tab, to re-register and upgrade each Network Station from within the Web UI. Let the appliance reboot and let all services start up in the background.

Upgrading online Stratusphere appliances

- The following section applies specifically to Stratusphere appliances running 5.8.2, 5.8.3, 5.8.4 or 5.8.5 ONLY. If your appliances are on an earlier version like 5.8.1, please refer to the ‘Upgrading’ section of the next higher version, 5.8.2, for specific instructions as they may have changed. Apply the following instructions on each 5.8.2, 5.8.3, 5.8.4 or 5.8.5 appliances in order.
- Take a snapshot of the Hub and Database appliances.
- Log into the ADMINISTRATION section of the Stratusphere Hub Web UI. Navigate to the HUB ADMINISTRATION > UPGRADES tab.
- If your Stratusphere Hub has access to the Internet, it should display a message “An update (5.8.6) is available for download.”
- Click the DOWNLOAD UPDATE button to download the upgrade image within the Stratusphere Hub.
- The UI will display a blue progress bar with the message “Download in Progress (This may take several minutes)”. The upgrade image file is about 1.1GB so depending on your connection, it may take some time to finish downloading.
- Once downloaded, the UI should display a green status bar at the top of the page with the message “Download completed successfully”. Click the x at the extreme right of the message to dismiss it.
- NOTE: If the default passwords (sspassword) for the friend or root users have been changed on the Database Appliance, do the following on the Database Appliance console window, otherwise skip to the next step:
  o Log into the command line console of the Database Appliance using User ID: ssconsole and Password: sspassword as credentials.
  o Enter option U for the ‘U) Update Software Menu’ option.
  o Enter option S for the ‘S) Software Update Site’ option.
  o The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update
the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.

- Enter option C for the ‘C) Check for Updates’ option.
- If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
- Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
- Once the appliance reboots, give it a few minutes to start all required services. Proceed to the next step within the browser of Stratusphere Web UI.

- Click on the INSTALL UPDATE button. The UI will display a blue progress bar with the message “Install in Progress (This may take several minutes)”. The update is being installed now.
- If this installation of Stratusphere has a Database Appliance attached with default passwords (sspassword) for the friend and root users, the Hub will automatically upgrade the Database Appliance to 5.8.6 and reboot it as well. The Hub will then upgrade itself and reboot.
- When the install is complete, the UI will display the following message “Hub has been unresponsive for 25 seconds. You will be logged out in 10 seconds”. The user will be logged out of the Web UI automatically. Please wait for at least 10-15 minutes before trying to refresh the Stratusphere Web UI Login page as the appliance reboots itself.
- Refresh the Login page of the Web UI and verify if it states 5.8.6 in the bottom blue ribbon. Check the Web UI for standard functionality and if all looks well, delete the snapshot taken prior to starting the upgrade.
- Network Station appliances
  - After updating the Hub to 5.8.6, log into the Web UI’s ADMINISTRATION product. Navigate to the STATION ADMINISTRATION > NETWORK STATIONS tab.
  - Select the check box for the Network Station you want to upgrade. If this Network Station is a version prior to 5.8.0, please refer to that version’s Upgrading section within the Release Notes. If the Network Station is at 5.8.0, then click the RE-REGISTER button.
  - Then select the check box for that Network Station again, and click on the UPGRADE button.
  - Repeat these steps for each Network Station that needs to be updated to 5.8.6.
- Upgrade is now complete.

**Upgrading offline or firewall isolated Stratusphere appliances**

- If your appliances are on a version earlier than 5.7.x then please refer to the specific release version’s ‘Upgrading’ section in the Release Notes for additional instructions. Once upgraded to 5.8.0, please come back to this section and use these instructions below.
- Until 5.8.0, offline upgrades only support incremental updates. So, if you are on 5.7.0, you will need to download offline upgrade packs that will take you from 5.7.0 to 5.7.1, 5.7.1 to 5.7.2 and then from 5.7.2 to 5.8.0. Please use the links provided with each release for incremental upgrades. Liquidware Labs has now implemented one step cumulative upgrades and will work from 5.8.1 onwards from within the Web UI Administration product.
The following section applies specifically to Stratusphere appliances running **5.8.2, 5.8.3, 5.8.4 or 5.8.5 ONLY**. If your appliances are on an earlier version like 5.8.1, please refer to the ‘Upgrading’ section of the next higher version, 5.8.2, for specific instructions as they may have changed. Apply the following instructions on each **5.8.2, 5.8.3, 5.8.4 or 5.8.5** appliances in order.

Please note these instructions may have changed since the last time you upgraded. There is only one version of the image file across VMware, XenServer, and Hyper V environments.

On a local desktop with access to the Internet:

- Download the single offline upgrade image from the link below to your local desktop:

**Take a snapshot of the Hub and Database appliances.**

Log into the ADMINISTRATION section of the Stratusphere Hub Web UI.

- Navigate to the HUB ADMINISTRATION > UPGRADES tab.
- If your Stratusphere Hub is isolated from the Internet within a secure, air-gapped environment the Hub is in offline mode. It will display a page with a BROWSE button. Click the BROWSE button to navigate to the location where the stratusphere_5.8.6.img file is stored, select it, and open it.
- Click on the UPLOAD UPDATE button. On clicking, a blue progress bar with the message “Upload in Progress (This may take several minutes)” will be displayed. The upgrade image is now being uploaded to the Hub. This is a 1.1GB file, so depending your network connection it will take some time to upload this large file. If you observe a yellow warning message “Please select a file to upload” – please refer to the troubleshooting section at the end of this section.
- Once finished uploading, a green progress bar with the message “Download Completed. Verifying image.” will be displayed. Here the Hub is verifying the integrity of image file uploaded. Once verified, it will display “Upload completed successfully” at the top of the page. Click the ‘x’ at the extreme right to dismiss this message.

**NOTE:** If the default password (sspassword) for friend or root users have been changed on the Database Appliance, do the following on the Database Appliance console window, otherwise skip to the next step:

- Log into the command line console of the Database Appliance using User ID: ssconsole and Password: sspassword as credentials.
- Enter option U for the ‘U) Update Software Menu’ option.
- Enter option S for the ‘S) Software Update Site’ option.
- The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to [http://download.liquidwarelabs.com/upgrades/yum/](http://download.liquidwarelabs.com/upgrades/yum/) then press Y and edit it to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.
- Enter option C for the ‘C) Check for Updates’ option.
▪ If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
▪ Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
▪ Once the appliance reboots, give it a few minutes to start all required services. Proceed to the next step within the browser of Stratusphere Web UI.
  o Click the INSTALL UPDATE button to now install the 5.8.6 upgrade on the Stratusphere Hub. The UI will display a green progress bar with the message “Install in Progress (This may take several minutes)”. The update is being installed now.
  o If this installation of Stratusphere has a Database Appliance attached with default password (sspassword) for the friend and root users, the Hub will automatically upgrade the Database Appliance to 5.8.6 and reboot it as well. The Hub will then upgrade itself and reboot.
  o When the install is complete, the UI will display the following message “Hub has been unresponsive for 25 seconds. You will be logged out in 10 seconds”. The user will be logged out of the Web UI automatically. Please wait for at least 10-15 minutes before trying to refresh the Stratusphere Web UI Login page as the appliance reboots itself.
  o Refresh the Login page of the Web UI and verify if it states 5.8.6 in the bottom blue ribbon. Check the Web UI for standard functionality and if all looks well, delete the snapshot taken prior to starting the upgrade.

▪ Network Station appliances
  o After updating the Hub to 5.8.6, log into the Web UI’s ADMINISTRATION product. Navigate to the STATION ADMINISTRATION > NETWORK STATIONS tab.
  o Select the check box for the Network Station you want to upgrade. If this Network Station is a version prior to 5.8.0, please refer to that version’s Upgrading section within the Release Notes. If the Network Station is at 5.8.0, then click the RE-REGISTER button.
  o Then select the check box for that Network Station again, and click on the UPGRADE button.
  o Repeat these steps for each Network Station that needs to be updated to 5.8.6.

▪ Upgrade is now complete.

Troubleshooting

SCP fails to log into the appliance
  o The RHEL is a security hardened appliance. It has policies enabled where passwords expire after a certain amount of time. An expired password may be preventing the user from logging into the appliance.
  o Log into the local command line console and it will prompt you to change and update your password immediately. Once updated, you should be able to use the SCP tool again to upload files to the appliance.
**Warning message “Please select a file to upload” while uploading file in offline mode**

- The browser may have cached some of the code and thus may not be running the latest version of the page. Please log out of the UI, clear the cache in the browser, and start over. If the problem persists then depending on your browser do the following:
  - In Firefox, right-click anywhere within the yellow warning message bar and choose THIS FRAME -> RELOAD FRAME menu option.
  - In Chrome, right-click anywhere within the yellow warning message bar and choose RELOAD FRAME menu option.
  - In Internet Explorer, right-click anywhere within the yellow warning message bar and choose REFRESH menu option.

**Hub upgraded to 5.8.6 but the Database Appliance is still on 5.8.2, 5.8.3, 5.8.4 or 5.8.5**

In most cases, the default password (sspassword) for the friend or root users may have been changed on the Database Appliance, thus causing the connection failures between the Hub and Database.

- Log into the command line console of the Database Appliance using User ID: ssconsole and Password: sspassword as credentials.
- Enter option U for the ‘U) Update Software Menu’ option.
- Enter option S for the ‘S) Software Update Site’ option.
- The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.
- Enter option C for the ‘C) Check for Updates’ option.
- If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
- Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
- Once the appliance reboots, give it a few minutes to start all required services.
Stratusphere™ 5.8.5 Upgrade Instructions for RHEL

Overview
These upgrade instructions are for all appliances running Stratusphere 5.8.2, 5.8.3 or 5.8.4. If your appliances are on an earlier version like 5.8.1, please refer to the ‘Upgrading’ section of the next higher version, 5.8.2, for specific instructions as they may have changed.

The upgrades involve downloading just one large 1.1GB master image for performing upgrades across Hub, Database, and Network Station appliances on all types of hypervisors i.e. one image for VMware ESX, Citrix XenServer, and Microsoft Hyper V. Depending on the download bandwidth available, please allow for adequate time for the download to finish.

Upgrading
If running Stratusphere 4.8.x version, please visit our Support documentation site and look for the “Stratusphere Upgrade Guide for 5.0” document created specifically to help customers upgrade from 4.8.x to the 5.0 version of Stratusphere. Alternatively, contact Support@LiquidwareLabs.com for further assistance.

If the current installation of Stratusphere 5.7.x or earlier has performance issues and has more than 1,000 CID Keys with a separate Hub and Database Appliances, Liquidware Labs recommends using the 5.8.x version of the appliance. The configuration changes made are available only within a newly downloaded 5.8.x version of the appliance. These performance enhancements are not available in 5.7.x or earlier version of the appliance upgraded in place to 5.7.x version. To get all the performance enhancements, Liquidware Labs recommends migration from a 5.6.x appliance to a 5.8.1 appliance. Please get in touch with Liquidware Labs Customer Support at Support@LiquidwareLabs.com or search for a KB article titled “Migrating to Stratusphere 5.7.0” on our Support Site.

Depending on whether your Stratusphere appliances have direct access to the Internet or not, Liquidware Labs provides 2 options:

1. Online Upgrades: If your appliances have direct access to the Internet use the instructions in the ‘Upgrading online Stratusphere appliances’ section.
2. Offline Upgrades: If your appliance is in a secure, air-gapped environment with no direct access to the Internet, use the instructions in the ‘Upgrading offline Stratusphere appliances’ section. You would need to download upgrades files first, copy them to the appliances, and then apply them to the appliances through the command line console.

Please refer to the order in which appliances need to be upgraded below as well. If you encounter any errors, use the troubleshooting section at the end of this document.
Order of Upgrading Stratusphere appliances

7. Beginning with Stratusphere 5.8.1, the Hub Web UI HUB ADMINISTRATION > UPGRADERS tab and/or Hub Console based Upgrade commands do the following:
   a. Halt all services on the Hub,
   b. If there is a separate Database appliance attached:
      i. Upgrades the database appliance
      ii. Reboots it.
   c. The Hub then upgrades and reboots itself in an automated operation.

8. Use the NETWORK ADMINISTRATION > NETWORK STATIONS tab, to re-register and upgrade each Network Station from within the Web UI. Let the appliance reboot and let all services start up in the background.

Upgrading online Stratusphere appliances

• The following section applies specifically to Stratusphere appliances running 5.8.2, 5.8.3 or 5.8.4 ONLY. If your appliances are on an earlier version like 5.8.1, please refer to the ‘Upgrading’ section of the next higher version, 5.8.2, for specific instructions as they may have changed. Apply the following instructions on each 5.8.2, 5.8.3 or 5.8.4 appliances in order.
• Take a snapshot of the Hub and Database appliances.
• Log into the ADMINISTRATION section of the Stratusphere Hub Web UI. Navigate to the HUB ADMINISTRATION > UPGRADERS tab.
• If your Stratusphere Hub has access to the Internet, it should display a message “An update (5.8.5) is available for download.”
• Click the DOWNLOAD UPDATE button to download the upgrade image within the Stratusphere Hub.
• The UI will display a blue progress bar with the message “Download in Progress (This may take several minutes)”. The upgrade image file is about 1.1GB so depending on your connection, it may take some time to finish downloading.
• Once downloaded, the UI should display a green status bar at the top of the page with the message “Download completed successfully”. Click the x at the extreme right of the message to dismiss it.
• NOTE: If the default passwords (sspassword) for the friend or root users have been changed on the Database Appliance, do the following on the Database Appliance console window, otherwise skip to the next step:
  o Log into the command line console of the Database Appliance using User ID: ssconsole and Password: sspassword as credentials.
  o Enter option U for the ‘U) Update Software Menu’ option.
  o Enter option S for the ‘S) Software Update Site’ option.
  o The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update
the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.
  o Enter option C for the ‘C) Check for Updates’ option.
  o If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
  o Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
  o Once the appliance reboots, give it a few minutes to start all required services. Proceed to the next step within the browser of Stratusphere Web UI.
• Click on the INSTALL UPDATE button. The UI will display a blue progress bar with the message “Install in Progress (This may take several minutes)”. The update is being installed now.
• If this installation of Stratusphere has a Database Appliance attached with default passwords (sspassword) for the friend and root users, the Hub will automatically upgrade the Database Appliance to 5.8.5 and reboot it as well. The Hub will then upgrade itself and reboot.
• When the install is complete, the UI will display the following message “Hub has been unresponsive for 25 seconds. You will be logged out in 10 seconds”. The user will be logged out of the Web UI automatically. Please wait for at least 5-10 minutes before trying to refresh the Stratusphere Web UI Login page as the appliance reboots itself.
• Refresh the Login page of the Web UI and verify if it states 5.8.5 in the bottom blue ribbon. Check the Web UI for standard functionality and if all looks well, delete the snapshot taken prior to starting the upgrade.
• Network Station appliances
  o After updating the Hub to 5.8.5, log into the Web UI’s ADMINISTRATION product. Navigate to the STATION ADMINISTRATION > NETWORK STATIONS tab.
  o Select the check box for the Network Station you want to upgrade. If this Network Station is a version prior to 5.8.0, please refer to that version’s Upgrading section within the Release Notes. If the Network Station is at 5.8.0, then click the RE-REGISTER button.
  o Then select the check box for that Network Station again, and click on the UPGRADE button.
  o Repeat these steps for each Network Station that needs to be updated to 5.8.5.
• Upgrade is now complete.

Upgrading offline or firewall isolated Stratusphere appliances
• If your appliances are on a version earlier than 5.7.x then please refer to the specific release version’s ‘Upgrading’ section in the Release Notes for additional instructions. Once upgraded to 5.8.0, please come back to this section and use these instructions below.
• Until 5.8.0, offline upgrades only support incremental updates. So if you are on 5.7.0, you will need to download offline upgrade packs that will take you from 5.7.0 to 5.7.1, 5.7.1 to 5.7.2 and then from 5.7.2 to 5.8.0. Please use the links provided with each release for incremental upgrades. Liquidware Labs has now implemented one step cumulative upgrades and will work from 5.8.1 onwards from within the Web UI Administration product.
The following section applies specifically to Stratusphere appliances running 5.8.2, 5.8.3 or 5.8.4 ONLY. If your appliances are on an earlier version like 5.8.1, please refer to the ‘Upgrading’ section of the next higher version, 5.8.2, for specific instructions as they may have changed. Apply the following instructions on each 5.8.2, 5.8.3 or 5.8.4 appliances in order.

Please note these instructions may have changed since the last time you upgraded. There is only one version of the image file across VMware, XenServer, and Hyper V environments.

On a local desktop with access to the Internet:
- Download the single offline upgrade image from the link below to your local desktop:
  - [http://download.liquidwarelabs.com/rhel/585/stratusphere-5.8.5.img](http://download.liquidwarelabs.com/rhel/585/stratusphere-5.8.5.img)

- Take a snapshot of the Hub and Database appliances.
- Log into the ADMINISTRATION section of the Stratusphere Hub Web UI.
  - Navigate to the HUB ADMINISTRATION > UPGRADES tab.
  - If your Stratusphere Hub is isolated from the Internet within a secure, air-gapped environment the Hub is in offline mode. It will display a page with a BROWSE button. Click the BROWSE button to navigate to the location where the stratusphere_5.8.5.img file is stored, select it, and open it.
  - Click on the UPLOAD UPDATE button. On clicking, a blue progress bar with the message “Upload in Progress (This may take several minutes)” will be displayed. The upgrade image is now being uploaded to the Hub. This is a 1.1GB file, so depending your network connection it will take some time to upload this large file. If you observe a yellow warning message “Please select a file to upload” – please refer to the troubleshooting section at the end of this section.
  - Once finished uploading, a green progress bar with the message “Download Completed. Verifying image.” will be displayed. Here the Hub is verifying the integrity of image file uploaded. Once verified, it will display “Upload completed successfully” at the top of the page. Click the ‘x’ at the extreme right to dismiss this message.
  - NOTE: If the default password (sspassword) for friend or root users have been changed on the Database Appliance, do the following on the Database Appliance console window, otherwise skip to the next step:
    - Log into the command line console of the Database Appliance using User ID: ssconsole and Password: sspassword as credentials.
    - Enter option U for the ‘U) Update Software Menu’ option.
    - Enter option S for the ‘S) Software Update Site’ option.
    - The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to [http://download.liquidwarelabs.com/upgrades/yum/](http://download.liquidwarelabs.com/upgrades/yum/) then press Y and edit it to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.
    - Enter option C for the ‘C) Check for Updates’ option.
▪ If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
▪ Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
▪ Once the appliance reboots, give it a few minutes to start all required services. Proceed to the next step within the browser of Stratusphere Web UI.

  o Click the INSTALL UPDATE button to now install the 5.8.5 upgrade on the Stratusphere Hub. The UI will display a green progress bar with the message “Install in Progress (This may take several minutes)”. The update is being installed now.
  o If this installation of Stratusphere has a Database Appliance attached with default password (sspassword) for the friend and root users, the Hub will automatically upgrade the Database Appliance to 5.8.5 and reboot it as well. The Hub will then upgrade itself and reboot.
  o When the install is complete, the UI will display the following message “Hub has been unresponsive for 25 seconds. You will be logged out in 10 seconds”. The user will be logged out of the Web UI automatically. Please wait for at least 5-10 minutes before trying to refresh the Stratusphere Web UI Login page as the appliance reboots itself.
  o Refresh the Login page of the Web UI and verify if it states 5.8.5 in the bottom blue ribbon. Check the Web UI for standard functionality and if all looks well, delete the snapshot taken prior to starting the upgrade.

• Network Station appliances
  o After updating the Hub to 5.8.5, log into the Web UI’s ADMINISTRATION product. Navigate to the STATION ADMINISTRATION > NETWORK STATIONS tab.
  o Select the check box for the Network Station you want to upgrade. If this Network Station is a version prior to 5.8.0, please refer to that version’s Upgrading section within the Release Notes. If the Network Station is at 5.8.0, then click the RE-REGISTER button.
  o Then select the check box for that Network Station again, and click on the UPGRADE button.
  o Repeat these steps for each Network Station that needs to be updated to 5.8.5.

• Upgrade is now complete.

Troubleshooting

SCP fails to log into the appliance
  o The RHEL is a security hardened appliance. It has policies enabled where passwords expire after a certain amount of time. An expired password may be preventing the user from logging into the appliance.
  o Log into the local command line console and it will prompt you to change and update your password immediately. Once updated, you should be able to use the SCP tool again to upload files to the appliance.
Warning message “Please select a file to upload” while uploading file in offline mode

- The browser may have cached some of the code and thus may not be running the latest version of the page. Please log out of the UI, clear the cache in the browser, and start over. If the problem persists then depending on your browser do the following:
  - In Firefox, right-click anywhere within the yellow warning message bar and choose THIS FRAME -> RELOAD FRAME menu option.
  - In Chrome, right-click anywhere within the yellow warning message bar and choose RELOAD FRAME menu option.
  - In Internet Explorer, right-click anywhere within the yellow warning message bar and choose REFRESH menu option.

Hub upgraded to 5.8.5 but the Database Appliance is still on 5.8.2, 5.8.3 or 5.8.4

In most cases, the default password (sspassword) for the friend or root users may have been changed on the Database Appliance, thus causing the connection failures between the Hub and Database.

- Log into the command line console of the Database Appliance using User ID: ssconsole and Password: sspassword as credentials.
- Enter option U for the ‘U) Update Software Menu’ option.
- Enter option S for the ‘S) Software Update Site’ option.
- The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.
- Enter option C for the ‘C) Check for Updates’ option.
- If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
- Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
- Once the appliance reboots, give it a few minutes to start all required services.
Stratusphere™ 5.8.4 Upgrade Instructions for RHEL

Overview
These upgrade instructions are for all appliances running Stratusphere 5.8.2 or 5.8.3. If your appliances are on an earlier version like 5.8.1, please refer to the ‘Upgrading’ section of the next higher version, 5.8.2, for specific instructions as they may have changed.

The upgrades involve downloading just one large 1.1GB master image for performing upgrades across Hub, Database, and Network Station appliances on all types of hypervisors i.e. one image for VMware ESX, Citrix XenServer, and Microsoft Hyper V. Depending on the download bandwidth available, please allow for adequate time for the download to finish.

Upgrading
If running Stratusphere 4.8.x version, please visit our Support documentation site and look for the “Stratusphere Upgrade Guide for 5.0” document created specifically to help customers upgrade from 4.8.x to the 5.0 version of Stratusphere. Alternatively, contact Support@LiquidwareLabs.com for further assistance.

If the current installation of Stratusphere 5.7.x or earlier has performance issues and has more than 1,000 CID Keys with a separate Hub and Database Appliances, Liquidware Labs recommends using the 5.8.x version of the appliance. The configuration changes made are available only within a newly downloaded 5.8.x version of the appliance. These performance enhancements are not available in 5.7.x or earlier version of the appliance upgraded in place to 5.7.x version. To get all the performance enhancements, Liquidware Labs recommends migration from a 5.6.x appliance to a 5.8.1 appliance. Please get in touch with Liquidware Labs Customer Support at Support@LiquidwareLabs.com or search for a KB article titled “Migrating to Stratusphere 5.7.0” on our Support Site.

Depending on whether your Stratusphere appliances have direct access to the Internet or not, Liquidware Labs provides 2 options:

9. Online Upgrades: If your appliances have direct access to the Internet use the instructions in the ‘Upgrading online Stratusphere appliances’ section.
10. Offline Upgrades: If your appliance is in a secure, air-gapped environment with no direct access to the Internet, use the instructions in the ‘Upgrading offline Stratusphere appliances’ section. You would need to download upgrades files first, copy them to the appliances, and then apply them to the appliances through the command line console.

Please refer to the order in which appliances need to be upgraded below as well. If you encounter any errors, use the troubleshooting section at the end of this document.
Order of Upgrading Stratusphere appliances

9. Beginning with Stratusphere 5.8.1, the Hub Web UI HUB ADMINISTRATION > UPDATES tab and/or Hub Console based Upgrade commands do the following:
   a. Halt all services on the Hub,
   b. If there is a separate Database appliance attached:
      i. Upgrades the database appliance
      ii. Reboots it.
   c. The Hub then upgrades and reboots itself in an automated operation.

10. Use the NETWORK ADMINISTRATION > NETWORK STATIONS tab, to re-register and upgrade each Network Station from within the Web UI. Let the appliance reboot and let all services start up in the background.

Upgrading online Stratusphere appliances

• The following section applies specifically to Stratusphere appliances running 5.8.2 or 5.8.3 ONLY. If your appliances are on an earlier version like 5.8.1, please refer to the ‘Upgrading’ section of the next higher version, 5.8.2, for specific instructions as they may have changed. Apply the following instructions on each 5.8.2 or 5.8.3 appliances in order.

• Take a snapshot of the Hub and Database appliances.

• Log into the ADMINISTRATION section of the Stratusphere Hub Web UI. Navigate to the HUB ADMINISTRATION > UPDATES tab.

• If your Stratusphere Hub has access to the Internet, it should display a message “An update (5.8.4) is available for download.”

• Click the DOWNLOAD UPDATE button to download the upgrade image within the Stratusphere Hub.

• The UI will display a blue progress bar with the message “Download in Progress (This may take several minutes)”. The upgrade image file is about 1.1GB so depending on your connection, it may take some time to finish downloading.

• Once downloaded, the UI should display a green status bar at the top of the page with the message “Download completed successfully”. Click the x at the extreme right of the message to dismiss it.

• NOTE: If the default passwords (sspassword) for the friend or root users have been changed on the Database Appliance, do the following on the Database Appliance console window, otherwise skip to the next step:
  o Log into the command line console of the Database Appliance using User ID: ssconsole and Password: sspassword as credentials.
  o Enter option U for the ‘U) Update Software Menu’ option.
  o Enter option S for the ‘S) Software Update Site’ option.
  o The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update
the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.
  o Enter option C for the ‘C) Check for Updates’ option.
  o If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
  o Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
  o Once the appliance reboots, give it a few minutes to start all required services. Proceed to the next step within the browser of Stratusphere Web UI.

• Click on the INSTALL UPDATE button. The UI will display a blue progress bar with the message “Install in Progress (This may take several minutes)”. The update is being installed now.

• If this installation of Stratusphere has a Database Appliance attached with default passwords (sspassword) for the friend and root users, the Hub will automatically upgrade the Database Appliance to 5.8.4 and reboot it as well. The Hub will then upgrade itself and reboot.

• When the install is complete, the UI will display the following message “Hub has been unresponsive for 25 seconds. You will be logged out in 10 seconds”. The user will be logged out of the Web UI automatically. Please wait for at least 5-10 minutes before trying to refresh the Stratusphere Web UI Login page as the appliance reboots itself.

• Refresh the Login page of the Web UI and verify if it states 5.8.4 in the bottom blue ribbon. Check the Web UI for standard functionality and if all looks well, delete the snapshot taken prior to starting the upgrade.

• Network Station appliances
  o After updating the Hub to 5.8.4, log into the Web UI’s ADMINISTRATION product. Navigate to the STATION ADMINISTRATION > NETWORK STATIONS tab.
  o Select the check box for the Network Station you want to upgrade. If this Network Station is a version prior to 5.8.0, please refer to that version’s Upgrading section within the Release Notes. If the Network Station is at 5.8.0, then click the RE-REGISTER button.
  o Then select the check box for that Network Station again, and click on the UPGRADE button.
  o Repeat these steps for each Network Station that needs to be updated to 5.8.4.

• Upgrade is now complete.

Upgrading offline or firewall isolated Stratusphere appliances

• If your appliances are on a version earlier than 5.7.x then please refer to the specific release version’s ‘Upgrading’ section in the Release Notes for additional instructions. Once upgraded to 5.8.0, please come back to this section and use these instructions below.

• Until 5.8.0, offline upgrades only support incremental updates. So if you are on 5.7.0, you will need to download offline upgrade packs that will take you from 5.7.0 to 5.7.1, 5.7.1 to 5.7.2 and then from 5.7.2 to 5.8.0. Please use the links provided with each release for incremental upgrades. Liquidware Labs has now implemented one step cumulative upgrades and will work from 5.8.1 onwards from within the Web UI Administration product.
• The following section applies specifically to Stratusphere appliances running 5.8.2 or 5.8.3 ONLY. If your appliances are on an earlier version like 5.8.1, please refer to the ‘Upgrading’ section of the next higher version, 5.8.2, for specific instructions as they may have changed. Apply the following instructions on each 5.8.2 or 5.8.3 appliances in order.

• Please note these instructions may have changed since the last time you upgraded. There is only one version of the image file across VMware, XenServer, and Hyper V environments.

• On a local desktop with access to the Internet:
  o Download the single offline upgrade image from the link below to your local desktop:
    ▪  http://download.liquidwarelabs.com/rhel/584/stratusphere-5.8.4.img

• Take a snapshot of the Hub and Database appliances.

• Log into the ADMINISTRATION section of the Stratusphere Hub Web UI.
  o Navigate to the HUB ADMINISTRATION > UPGRADES tab.
  o If your Stratusphere Hub is isolated from the Internet within a secure, air-gapped environment the Hub is in offline mode. It will display a page with a BROWSE button. Click the BROWSE button to navigate to the location where the stratusphere_5.8.4.img file is stored, select it, and open it.
  o Click on the UPLOAD UPDATE button. On clicking, a blue progress bar with the message “Upload in Progress (This may take several minutes)” will be displayed. The upgrade image is now being uploaded to the Hub. This is a 1.1GB file, so depending your network connection it will take some time to upload this large file. If you observe a yellow warning message “Please select a file to upload” – please refer to the troubleshooting section at the end of this section.
  o Once finished uploading, a green progress bar with the message “Download Completed. Verifying image.” will be displayed. Here the Hub is verifying the integrity of image file uploaded. Once verified, it will display “Upload completed successfully” at the top of the page. Click the ‘x’ at the extreme right to dismiss this message.
  o NOTE: If the default password (sspassword) for friend or root users have been changed on the Database Appliance, do the following on the Database Appliance console window, otherwise skip to the next step:
    ▪  Log into the command line console of the Database Appliance using User ID: ssconsole and Password: sspassword as credentials.
    ▪  Enter option U for the ‘U) Update Software Menu’ option.
    ▪  Enter option S for the ‘S) Software Update Site’ option.
    ▪  The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.
    ▪  Enter option C for the ‘C) Check for Updates’ option.
▪ If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
▪ Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
▪ Once the appliance reboots, give it a few minutes to start all required services. Proceed to the next step within the browser of Stratusphere Web UI.

  ○ Click the INSTALL UPDATE button to now install the 5.8.4 upgrade on the Stratusphere Hub. The UI will display a green progress bar with the message “Install in Progress (This may take several minutes)”. The update is being installed now.
  ○ If this installation of Stratusphere has a Database Appliance attached with default password (sspassword) for the friend and root users, the Hub will automatically upgrade the Database Appliance to 5.8.4 and reboot it as well. The Hub will then upgrade itself and reboot.
  ○ When the install is complete, the UI will display the following message “Hub has been unresponsive for 25 seconds. You will be logged out in 10 seconds”. The user will be logged out of the Web UI automatically. Please wait for at least 5-10 minutes before trying to refresh the Stratusphere Web UI Login page as the appliance reboots itself.
  ○ Refresh the Login page of the Web UI and verify if it states 5.8.2 or 5.8.3 in the bottom blue ribbon. Check the Web UI for standard functionality and if all looks well, delete the snapshot taken prior to starting the upgrade.

- Network Station appliances
  ○ After updating the Hub to 5.8.4, log into the Web UI’s ADMINISTRATION product. Navigate to the STATION ADMINISTRATION > NETWORK STATIONS tab.
  ○ Select the check box for the Network Station you want to upgrade. If this Network Station is a version prior to 5.8.0, please refer to that version’s Upgrading section within the Release Notes. If the Network Station is at 5.8.0, then click the RE-REGISTER button.
  ○ Then select the check box for that Network Station again, and click on the UPGRADE button.
  ○ Repeat these steps for each Network Station that needs to be updated to 5.8.4.

- Upgrade is now complete.

**Troubleshooting**

*SCP fails to log into the appliance*
  ○ The RHEL is a security hardened appliance. It has policies enabled where passwords expire after a certain amount of time. An expired password may be preventing the user from logging into the appliance.
  ○ Log into the local command line console and it will prompt you to change and update your password immediately. Once updated, you should be able to use the SCP tool again to upload files to the appliance.
Warning message “Please select a file to upload” while uploading file in offline mode
  o The browser may have cached some of the code and thus may not be running the latest version of the page. Please log out of the UI, clear the cache in the browser, and start over. If the problem persists then depending on your browser do the following:
    ▪ In Firefox, right-click anywhere within the yellow warning message bar and choose THIS FRAME -> RELOAD FRAME menu option.
    ▪ In Chrome, right-click anywhere within the yellow warning message bar and choose RELOAD FRAME menu option.
    ▪ In Internet Explorer, right-click anywhere within the yellow warning message bar and choose REFRESH menu option.

Hub upgraded to 5.8.4 but the Database Appliance is still on 5.8.2 or 5.8.3
In most cases, the default password (sspassword) for the friend or root users may have been changed on the Database Appliance, thus causing the connection failures between the Hub and Database.
  o Log into the command line console of the Database Appliance using User ID: ssconsole and Password: sspassword as credentials.
  o Enter option U for the ‘U) Update Software Menu’ option.
  o Enter option S for the ‘S) Software Update Site’ option.
  o The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.
  o Enter option C for the ‘C) Check for Updates’ option.
  o If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
  o Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
  o Once the appliance reboots, give it a few minutes to start all required services.
**Overview**

These upgrade instructions are for all appliances running the latest version of Stratusphere i.e. 5.8.2. If your appliances are on an earlier version like 5.8.1, please refer to the ‘Upgrading’ section of the next higher version, 5.8.2, for specific instructions as they may have changed.

The upgrades involve downloading just one large 1.2GB master image for performing upgrades across Hub, Database, and Network Station appliances on all types of hypervisors i.e. one image for VMware ESX, Citrix XenServer, and Microsoft Hyper V. Depending on the download bandwidth available, please allow for adequate time for the download to finish.

**Upgrading**

If running Stratusphere 4.8.x version, please visit our Support documentation site and look for the “Stratusphere Upgrade Guide for 5.0” document created specifically to help customers upgrade from 4.8.x to the 5.0 version of Stratusphere. Alternatively, contact Support@LiquidwareLabs.com for further assistance.

If the current installation of Stratusphere 5.7.x or earlier has performance issues and has more than 1,000 CID Keys with a separate Hub and Database Appliances, Liquidware Labs recommends using the 5.8.x version of the appliance. The configuration changes made are available only within a newly downloaded 5.8.x version of the appliance. These performance enhancements are not available in 5.7.x or earlier version of the appliance upgraded in place to 5.7.x version. To get all the performance enhancements, Liquidware Labs recommends migration from a 5.6.x appliance to a 5.8.1 appliance. Please get in touch with Liquidware Labs Customer Support at Support@LiquidwareLabs.com or search for a KB article titled “Migrating to Stratusphere 5.7.0” on our Support Site.

Depending on whether your Stratusphere appliances have direct access to the Internet or not, Liquidware Labs provides 2 options:

1. **Online Upgrades**: If your appliances have direct access to the Internet use the instructions in the ‘Upgrading online Stratusphere appliances’ section.

2. **Offline Upgrades**: If your appliance is in a secure, air-gapped environment with no direct access to the Internet, use the instructions in the ‘Upgrading offline Stratusphere appliances’ section. You would need to download upgrades files first, copy them to the appliances, and then apply them to the appliances through the command line console.

Please refer to the order in which appliances need to be upgraded below as well. If you encounter any errors, use the troubleshooting section at the end of this document.
Order of Upgrading Stratusphere appliances

11. Beginning with Stratusphere 5.8.1, the Hub Web UI HUB ADMINISTRATION > UPGRDES tab and/or Hub Console based Upgrade commands do the following:
   a. Halt all services on the Hub,
   b. If there is a separate Database appliance attached:
      i. Upgrades the database appliance
      ii. Reboots it.
   c. The Hub then upgrades and reboots itself in an automated operation.

12. Use the NETWORK ADMINISTRATION > NETWORK STATIONS tab, to re-register and upgrade each Network Station from within the Web UI. Let the appliance reboot and let all services start up in the background.

Upgrading online Stratusphere appliances

- The following section applies specifically to Stratusphere appliances running 5.8.2 ONLY. If your appliances are on an earlier version like 5.8.1, please refer to the ‘Upgrading’ section of the next higher version, 5.8.2, for specific instructions as they may have changed. Apply the following instructions on each 5.8.2 appliances in order.
- Take a snapshot of the Hub and Database appliances.
- Log into the ADMINISTRATION section of the Stratusphere Hub Web UI. Navigate to the HUB ADMINISTRATION > UPGRDES tab.
- If your Stratusphere Hub has access to the Internet, it should display a message “An update (5.8.3) is available for download.”
- Click the DOWNLOAD UPDATE button to download the upgrade image within the Stratusphere Hub.
- The UI will display a blue progress bar with the message “Download in Progress (This may take several minutes)”. The upgrade image file is about 1.2GB so depending on your connection, it may take some time to finish downloading.
- Once downloaded, the UI should display a green status bar at the top of the page with the message “Download completed successfully”. Click the x at the extreme right of the message to dismiss it.
- **NOTE:** If the default passwords (sspassword) for the friend or root users have been changed on the Database Appliance, do the following on the Database Appliance console window, otherwise skip to the next step:
  - Log into the command line console of the Database Appliance using User ID: ssconsole and Password: sspassword as credentials.
  - Enter option U for the ‘U) Update Software Menu’ option.
  - Enter option S for the ‘S) Software Update Site’ option.
  - The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update
the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.

- Enter option C for the ‘C) Check for Updates’ option.
- If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
- Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
- Once the appliance reboots, give it a few minutes to start all required services. Proceed to the next step within the browser of Stratusphere Web UI.

  - Click on the INSTALL UPDATE button. The UI will display a blue progress bar with the message “Install in Progress (This may take several minutes)”. The update is being installed now.
  - If this installation of Stratusphere has a Database Appliance attached with default passwords (sspassword) for the friend and root users, the Hub will automatically upgrade the Database Appliance to 5.8.3 and reboot it as well. The Hub will then upgrade itself and reboot.
  - When the install is complete, the UI will display the following message “Hub has been unresponsive for 25 seconds. You will be logged out in 10 seconds”. The user will be logged out of the Web UI automatically. Please wait for at least 5-10 minutes before trying to refresh the Stratusphere Web UI Login page as the appliance reboots itself.
  - Refresh the Login page of the Web UI and verify if it states 5.8.3 in the bottom blue ribbon. Check the Web UI for standard functionality and if all looks well, delete the snapshot taken prior to starting the upgrade.
  - Network Station appliances
    - After updating the Hub to 5.8.3, log into the Web UI’s ADMINISTRATION product. Navigate to the STATION ADMINISTRATION > NETWORK STATIONS tab.
    - Select the check box for the Network Station you want to upgrade. If this Network Station is a version prior to 5.8.0, please refer to that version’s Upgrading section within the Release Notes. If the Network Station is at 5.8.0, then click the RE-REGISTER button.
    - Then select the check box for that Network Station again, and click on the UPGRADE button.
    - Repeat these steps for each Network Station that needs to be updated to 5.8.3.

- Upgrade is now complete.

**Upgrading offline or firewall isolated Stratusphere appliances**

- If your appliances are on a version earlier than 5.7.x then please refer to the specific release version’s ‘Upgrading’ section in the Release Notes for additional instructions. Once upgraded to 5.8.0, please come back to this section and use these instructions below.

- Until 5.8.0, offline upgrades only support incremental updates. So if you are on 5.7.0, you will need to download offline upgrade packs that will take you from 5.7.0 to 5.7.1, 5.7.1 to 5.7.2 and then from 5.7.2 to 5.8.0. Please use the links provided with each release for incremental upgrades. Liquidware Labs has now implemented one step cumulative upgrades and will work from 5.8.1 onwards from within the Web UI Administration product.
• The following section applies specifically to Stratusphere appliances running **5.8.2 ONLY**. If your appliances are on an earlier version like 5.8.1, please refer to the ‘Upgrading’ section of the next higher version, 5.8.2, for specific instructions as they may have changed. Apply the following instructions on each **5.8.2** appliances in order.

• Please note these instructions may have changed since the last time you upgraded. There is only one version of the image file across VMware, XenServer, and Hyper V environments.

• On a local desktop with access to the Internet:
  o Download the single offline upgrade image from the link below to your local desktop:
    ▪ [http://download.liquidwarelabs.com/rhel/583/stratusphere-5.8.3.img](http://download.liquidwarelabs.com/rhel/583/stratusphere-5.8.3.img)

• Take a snapshot of the Hub and Database appliances.

• Log into the ADMINISTRATION section of the Stratusphere Hub Web UI.
  o Navigate to the HUB ADMINISTRATION > UPGRADES tab.
  o If your Stratusphere Hub is isolated from the Internet within a secure, air-gapped environment the Hub is in offline mode. It will display a page with a BROWSE button. Click the BROWSE button to navigate to the location where the stratusphere_5.8.3.img file is stored, select it, and open it.
  o Click on the UPLOAD UPDATE button. On clicking, a blue progress bar with the message “Upload in Progress (This may take several minutes)” will be displayed. The upgrade image is now being uploaded to the Hub. This is a 1.2GB file, so depending your network connection it will take some time to upload this large file. If you observe a yellow warning message “Please select a file to upload” – please refer to the troubleshooting section at the end of this section. 
  o Once finished uploading, a green progress bar with the message “Download Completed. Verifying image.” will be displayed. Here the Hub is verifying the integrity of image file uploaded. Once verified, it will display “Upload completed successfully” at the top of the page. Click the ‘x’ at the extreme right to dismiss this message.
  o **NOTE**: If the default password (**sspassword**) for friend or root users have been changed on the Database Appliance, do the following on the Database Appliance console window, otherwise skip to the next step:
    ▪ Log into the command line console of the Database Appliance using User ID: **ssconsole** and Password: **sspassword** as credentials.
    ▪ Enter option U for the ‘U) Update Software Menu’ option.
    ▪ Enter option S for the ‘S) Software Update Site’ option.
    ▪ The update site should be set to the Stratusphere Hub IP or DNS such as [https://Hub.IP.or.DNS/upgrades/latest](https://Hub.IP.or.DNS/upgrades/latest). **Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to [http://download.liquidwarelabs.com/upgrades/yum/](http://download.liquidwarelabs.com/upgrades/yum/) then press Y and edit it to match [https://Hub.IP.or.DNS/upgrades/latest](https://Hub.IP.or.DNS/upgrades/latest) and hit ENTER. It will update the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.
    ▪ Enter option C for the ‘C) Check for Updates’ option.
▪ If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
▪ Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
▪ Once the appliance reboots, give it a few minutes to start all required services. Proceed to the next step within the browser of Stratusphere Web UI.
  o Click the INSTALL UPDATE button to now install the 5.8.3 upgrade on the Stratusphere Hub. The UI will display a green progress bar with the message “Install in Progress (This may take several minutes)”. The update is being installed now.
  o If this installation of Stratusphere has a Database Appliance attached with default password (sspassword) for the friend and root users, the Hub will automatically upgrade the Database Appliance to 5.8.3 and reboot it as well. The Hub will then upgrade itself and reboot.
  o When the install is complete, the UI will display the following message “Hub has been unresponsive for 25 seconds. You will be logged out in 10 seconds”. The user will be logged out of the Web UI automatically. Please wait for at least 5-10 minutes before trying to refresh the Stratusphere Web UI Login page as the appliance reboots itself.
  o Refresh the Login page of the Web UI and verify if it states 5.8.2 in the bottom blue ribbon. Check the Web UI for standard functionality and if all looks well, delete the snapshot taken prior to starting the upgrade.
  • Network Station appliances
    o After updating the Hub to 5.8.3, log into the Web UI’s ADMINISTRATION product. Navigate to the STATION ADMINISTRATION > NETWORK STATIONS tab.
    o Select the check box for the Network Station you want to upgrade. If this Network Station is a version prior to 5.8.0, please refer to that version’s Upgrading section within the Release Notes. If the Network Station is at 5.8.0, then click the RE-REGISTER button.
    o Then select the check box for that Network Station again, and click on the UPGRADE button.
    o Repeat these steps for each Network Station that needs to be updated to 5.8.3.
  • Upgrade is now complete.

Troubleshooting

SCP fails to log into the appliance
  o The RHEL is a security hardened appliance. It has policies enabled where passwords expire after a certain amount of time. An expired password may be preventing the user from logging into the appliance.
  o Log into the local command line console and it will prompt you to change and update your password immediately. Once updated, you should be able to use the SCP tool again to upload files to the appliance.
**Warning message “Please select a file to upload” while uploading file in offline mode**

- The browser may have cached some of the code and thus may not be running the latest version of the page. Please log out of the UI, clear the cache in the browser, and start over. If the problem persists then depending on your browser do the following:
  - In Firefox, right-click anywhere within the yellow warning message bar and choose THIS FRAME -> RELOAD FRAME menu option.
  - In Chrome, right-click anywhere within the yellow warning message bar and choose RELOAD FRAME menu option.
  - In Internet Explorer, right-click anywhere within the yellow warning message bar and choose REFRESH menu option.

**Hub upgraded to 5.8.3 but the Database Appliance is still on 5.8.2**

In most cases, the default password (sspassword) for the friend or root users may have been changed on the Database Appliance, thus causing the connection failures between the Hub and Database.

- Log into the command line console of the Database Appliance using User ID: ssconsole and Password: sspassword as credentials.
- Enter option U for the ‘U) Update Software Menu’ option.
- Enter option S for the ‘S) Software Update Site’ option.
- The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.
- Enter option C for the ‘C) Check for Updates’ option.
- If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
- Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
- Once the appliance reboots, give it a few minutes to start all required services.
Stratusphere™ 5.8.2 Upgrade Instructions for RHEL

Overview
This specific version of 5.8.2 is a transition from the older version of upgrades to a web UI based updates in the future version. So the instructions for upgrades in this version are different from the past versions and will be used to transition to the new update mechanism.

In this version, using the older instructions to update appliances will not work. There is a need to execute some command line instructions that are new compared to the past. Also, there will be just one large 1.2GB master image for performing upgrades across Hub, Database, and Network Station appliances on all types of hypervisors i.e. one image for VMware ESX, Citrix XenServer, and Microsoft Hyper V. Depending on the download bandwidth available, please allow for adequate time for the download to finish.

Upgrading
If running Stratusphere 4.8.x version, please visit our Support documentation site and look for the “Stratusphere Upgrade Guide for 5.0” document created specifically to help customers upgrade from 4.8.x to the 5.0 version of Stratusphere. Alternatively, contact Support@LiquidwareLabs.com for further assistance.

If the current installation of Stratusphere 5.7.x or earlier has performance issues and has more than 1,000 CID Keys with a separate Hub and Database Appliances, Liquidware Labs recommends using the 5.8.x version of the appliance. The configuration changes made are available only within a newly downloaded 5.8.x version of the appliance. These performance enhancements are not available in 5.7.x or earlier version of the appliance upgraded in place to 5.7.x version. To get all the performance enhancements, Liquidware Labs recommends migration from a 5.6.x appliance to a 5.8.1 appliance. Please get in touch with Liquidware Labs Customer Support at Support@LiquidwareLabs.com or search for a KB article titled “Migrating to Stratusphere 5.7.0” on our Support Site.

Depending on whether your Stratusphere appliances have direct access to the Internet or not, Liquidware Labs provides 2 options:

1. Online Upgrades: If your appliances have direct access to the Internet use the instructions in the ‘Upgrading online Stratusphere appliances’ section.

2. Offline Upgrades: If your appliance is in a secure, air-gapped environment with no direct access to the Internet, use the instructions in the ‘Upgrading offline Stratusphere appliances’ section. You would need to download upgrades files first, copy them to the appliances, and then apply them to the appliances through the command line console.

Please refer to the order in which appliances need to be upgraded below as well. If you encounter any errors, use the troubleshooting section at the end of this document.
Order of Upgrading Stratusphere appliances
1. Beginning with Stratusphere 5.8.1, the Hub Web UI HUB ADMINISTRATION > UPGRADES tab and/or Hub Console based Upgrade commands do the following:
   a. Halt all services on the Hub,
   b. If there is a separate Database appliance attached:
      i. Upgrades the database appliance
      ii. Reboots it.
   c. The Hub then upgrades and reboots itself in an automated operation.
2. Use the NETWORK ADMINISTRATION > NETWORK STATIONS tab, to re-register and upgrade each Network Station from within the Web UI. Let the appliance reboot and let all services start up in the background.

Upgrading online Stratusphere appliances
- The following section applies specifically to Stratusphere appliances running 5.8.1 ONLY. If your appliances are on an earlier version, please refer to that specific release version’s ‘Upgrading’ section in the Release Notes for specific instructions as they have changed. Apply the following instructions on each 5.8.1 appliance in order.
- Take a snapshot of the Hub and Database appliances.
- Hub Appliance Console
  - Use a tool like PuTTY to log into the command line console of the Hub appliance using User ID: friend and Password: sspassword as credentials first and then switch to the root super user using command: ‘su –’ and Password: sspassword. The local console offered by the hypervisors can also be used but PuTTY is recommended as it allows for commands to be copied from this document and pasted in for easier execution whereas the other consoles may not always support the paste feature.
  - Copy (CTRL+C) and paste (RIGHT-CLICK) this command in PuTTY on RHEL appliances only:
    - rpm -e wireshark tcpdump tnt-cap
  - Copy (CTRL+C) and paste (RIGHT-CLICK) this command in PuTTY to restart the web server:
    - /etc/init.d/lwl-httpd22 restart
  - Log out of the console by entering CTRL+D twice.
- Log into the ADMINISTRATION section of the Stratusphere Hub Web UI. Navigate to the HUB ADMINISTRATION > UPGRADES tab.
- If your Stratusphere Hub has access to the Internet, it should display a message “An update (5.8.2) is available for download.”
- Click the DOWNLOAD UPDATE button to download the upgrade image within the Stratusphere Hub.
- The UI will display a blue progress bar with the message “Download in Progress (This may take several minutes)”. The upgrade image file is about 1.2GB so depending on your connection, it may take some time to finish downloading.
- Once downloaded, the UI should display a green status bar at the top of the page with the message “Download completed successfully”. Click the x at the extreme right of the message to dismiss it.
• **NOTE:** If the default passwords (*sspassword*) for the friend or root users have been changed on the Database Appliance, do the following on the Database Appliance console window, otherwise skip to the next step:
  
  o Log into the command line console of the Database Appliance using User ID: *ssconsole* and Password: *sspassword* as credentials.
  o Enter option U for the ‘U) Update Software Menu’ option.
  o Enter option S for the ‘S) Software Update Site’ option.
  o The update site should be set to the Stratusphere Hub IP or DNS such as:
    
    ```
    https://Hub.IP.or.DNS/upgrades/latest
    ```
    
    Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to:
    
    ```
    http://download.liquidwarelabs.com/upgrades/yum/
    ```
    
    then press Y and edit it to match:
    
    ```
    https://Hub.IP.or.DNS/upgrades/latest
    ```
    
    and hit ENTER. It will update the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.
  o Enter option C for the ‘C) Check for Updates’ option.
  o If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
  o Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
  o Once the appliance reboots, give it a few minutes to start all required services. Proceed to the next step within the browser of Stratusphere Web UI.

• Click on the INSTALL UPDATE button. The UI will display a blue progress bar with the message "Install in Progress (This may take several minutes)". The update is being installed now.

• If this installation of Stratusphere has a Database Appliance attached with default passwords (*sspassword*) for the friend and root users, the Hub will automatically upgrade the Database Appliance to 5.8.2 and reboot it as well. The Hub will then upgrade itself and reboot.

• When the install is complete, the UI will display the following message “Hub has been unresponsive for 25 seconds. You will be logged out in 10 seconds”. The user will be logged out of the Web UI automatically. Please wait for at least 5-10 minutes before trying to refresh the Stratusphere Web UI Login page as the appliance reboots itself.

• Refresh the Login page of the Web UI and verify if it states 5.8.2 in the bottom blue ribbon. Check the Web UI for standard functionality and if all looks well, delete the snapshot taken prior to starting the upgrade.

• Network Station appliances
  
  o After updating the Hub to 5.8.2, log into the Web UI’s ADMINISTRATION product. Navigate to the STATION ADMINISTRATION > NETWORK STATIONS tab.
  o Select the check box for the Network Station you want to upgrade. If this Network Station is a version prior to 5.8.0, please refer to that version’s Upgrading section within the Release Notes. If the Network Station is at 5.8.0, then click the RE-REGISTER button.
  o Then select the check box for that Network Station again, and click on the UPGRADE button.
Repeat these steps for each Network Station that needs to be updated to 5.8.2.

- Upgrade is now complete.

Upgrading offline or firewall isolated Stratusphere appliances

- If your appliances are on a version earlier than 5.7.x then please refer to the specific release version’s ‘Upgrading’ section in the Release Notes for additional instructions. Once upgraded to 5.8.0, please come back to this section and use these instructions below.

- Until 5.8.0, offline upgrades only support incremental updates. So if you are on 5.7.0, you will need to download offline upgrade packs that will take you from 5.7.0 to 5.7.1, 5.7.1 to 5.7.2 and then from 5.7.2 to 5.8.0. Please use the links provided with each release for incremental upgrades. Liquidware Labs has now implemented one step cumulative upgrades and will work from 5.8.1 onwards from within the Web UI Administration product.

- The following section applies specifically to Stratusphere appliances running **5.8.1 ONLY**.

- Please note these instructions have changed since the last version. There is only one version of the image file across VMware, XenServer, and Hyper V environments.

- On a local desktop with access to the Internet:
  - Download the single offline upgrade image from the link below to your local desktop:
    - [http://download.liquidwarelabs.com/rhel/582/stratusphere-5.8.2.img](http://download.liquidwarelabs.com/rhel/582/stratusphere-5.8.2.img)
  - Download an RPM update from the link below to your local desktop:
    - [http://download.liquidwarelabs.com/stratusphere/releases/lwl-stratusphere-web-2.0.4-63154.noarch.rpm](http://download.liquidwarelabs.com/stratusphere/releases/lwl-stratusphere-web-2.0.4-63154.noarch.rpm)

- **Take a snapshot of the Hub and Database appliances.**

- **Hub Appliance Console**
  - Download and install a SCP tool such as **WinSCP** or **FileZilla** to upload the two files above to the Stratusphere Hub. Use User ID: friend & Password: sspassword as credentials for transferring file into the /home/friend folder.
  - Using the SCP tool, copy the downloaded lwl-stratusphere-web-2.0.4-63154.noarch.rpm file to the Hub’s /home/friend folder.
  - Use a tool like PuTTY to log into the command line console of the Hub appliance using User ID: friend and Password: sspassword as credentials first and then switch to the root super user using command: ‘su -’ and Password: sspassword. The local console offered by the hypervisors can also be used but PuTTY is recommended as it allows for commands to be copied from this document and pasted in for easier execution whereas the other consoles may not always support the paste feature.
  - Copy (CTRL+C) and paste (RIGHT-CLICK) this command in PuTTY on RHEL appliances only:
    - `rpm -e wireshark tcpdump tnt-cap`
  - Copy (CTRL+C) and paste (RIGHT-CLICK) this command in PuTTY to install a small update:
    - `rpm -Uvh /home/friend/lwl-stratusphere-web-2.0.4-63154.noarch.rpm`
  - Copy (CTRL+C) and paste (RIGHT-CLICK) this command in PuTTY to delete the file:
    - `rm /home/friend/lwl-stratusphere-web-2.0.4-63154.noarch.rpm`
  - Copy (CTRL+C) and paste (RIGHT-CLICK) this command in PuTTY to restart the web server:
    - `/etc/init.d/lwl-httpd22 restart`
  - Log out of the console by entering CTRL+D twice.
• Log into the ADMINISTRATION section of the Stratusphere Hub Web UI.
  o Navigate to the HUB ADMINISTRATION > UPGRADES tab.
  o If your Stratusphere Hub is isolated from the Internet within a secure, air-gapped environment the Hub is in offline mode. It will display a page with a BROWSE button. Click the BROWSE button to navigate to the location where the stratusphere_5.8.2.img file is stored, select it, and open it.
  o Click on the UPLOAD UPDATE button. On clicking, a blue progress bar with the message “Upload in Progress (This may take several minutes)” will be displayed. The upgrade image is now being uploaded to the Hub. This is a 1.2GB file, so depending your network connection it will take some time to upload this large file. If you observe a yellow warning message “Please select a file to upload” – please refer to the troubleshooting section at the end of this section.
  o Once finished uploading, a green progress bar with the message “Download Completed. Verifying image.” will be displayed. Here the Hub is verifying the integrity of image file uploaded. Once verified, it will display “Upload completed successfully” at the top of the page. Click the x at the extreme right to dismiss this message.
  o **NOTE**: If the default password (sspassword) for friend or root users have been changed on the Database Appliance, do the following on the Database Appliance console window, otherwise skip to the next step:
    ▪ Log into the command line console of the Database Appliance using User ID: ssconsole and Password: sspassword as credentials.
    ▪ Enter option U for the ‘U) Update Software Menu’ option.
    ▪ Enter option S for the ‘S) Software Update Site’ option.
    ▪ The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.
    ▪ Enter option C for the ‘C) Check for Updates’ option.
    ▪ If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
    ▪ Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
    ▪ Once the appliance reboots, give it a few minutes to start all required services. Proceed to the next step within the browser of Stratusphere Web UI.
  o Click the INSTALL UPDATE button to now install the 5.8.2 upgrade on the Stratusphere Hub. The UI will display a green progress bar with the message “Install in Progress (This may take several minutes)”. The update is being installed now.
If this installation of Stratusphere has a Database Appliance attached with default password (sspassword) for the friend and root users, the Hub will automatically upgrade the Database Appliance to 5.8.2 and reboot it as well. The Hub will then upgrade itself and reboot.

When the install is complete, the UI will display the following message “Hub has been unresponsive for 25 seconds. You will be logged out in 10 seconds”. The user will be logged out of the Web UI automatically. Please wait for at least 5-10 minutes before trying to refresh the Stratusphere Web UI Login page as the appliance reboots itself.

Refresh the Login page of the Web UI and verify if it states 5.8.2 in the bottom blue ribbon. Check the Web UI for standard functionality and if all looks well, delete the snapshot taken prior to starting the upgrade.

- Network Station appliances

  - After updating the Hub to 5.8.2, log into the Web UI’s ADMINISTRATION product. Navigate to the STATION ADMINISTRATION > NETWORK STATIONS tab.
  
  - Select the check box for the Network Station you want to upgrade. If this Network Station is a version prior to 5.8.0, please refer to that version’s Upgrading section within the Release Notes. If the Network Station is at 5.8.0, then click the RE-REGISTER button.
  
  - Then select the check box for that Network Station again, and click on the UPGRADE button.
  
  - Repeat these steps for each Network Station that needs to be updated to 5.8.2.

- Upgrade is now complete.

**Troubleshooting**

**SCP fails to log into the appliance**

  - The RHEL is a security hardened appliance. It has policies enabled where passwords expire after a certain amount of time. An expired password may be preventing the user from logging into the appliance.
  
  - Log into the local command line console and it will prompt you to change and update your password immediately. Once updated, you should be able to use the SCP tool again to upload files to the appliance.

**Warning message “Please select a file to upload” while uploading file in offline mode**

  - The browser may have cached some of the code and thus may not be running the latest version of the page. Please log out of the UI, clear the cache in the browser, and start over. If the problem persists then depending on your browser do the following:
    
    - In Firefox, right-click anywhere within the yellow warning message bar and choose THIS FRAME -> RELOAD FRAME menu option.
    - In Chrome, right-click anywhere within the yellow warning message bar and choose RELOAD FRAME menu option.
    - In Internet Explorer, right-click anywhere within the yellow warning message bar and choose REFRESH menu option.
Hub upgraded to 5.8.2 but the Database Appliance is still on 5.8.1

In most cases, the default password (sspassword) for the friend or root users may have been changed on the Database Appliance, thus causing the connection failures between the Hub and Database.

- Log into the command line console of the Database Appliance using User ID: ssconsole and Password: sspassword as credentials.
- Enter option U for the ‘U) Update Software Menu’ option.
- Enter option S for the ‘S) Software Update Site’ option.
- The update site should be set to the Stratusphere Hub IP or DNS such as https://Hub.IP.or.DNS/upgrades/latest. Hub.IP.or.DNS needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it to match https://Hub.IP.or.DNS/upgrades/latest and hit ENTER. It will update the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.
- Enter option C for the ‘C) Check for Updates’ option.
- If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
- Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
- Once the appliance reboots, give it a few minutes to start all required services.
Overview
This specific version of 5.8.1 is a transition from the older version of upgrades to a web UI based updates in the future version. So the instructions for upgrades in this version are different from the past versions and will be used to transition to the new update mechanism.

In this version, using the older instructions to update appliances will not work. There is a need to execute some command line instructions that are new compared to the past. Also, there will be just one large 1.2GB master image for performing upgrades across Hub, Database, and Network Station appliances on all types of hypervisors i.e. one image for VMware ESX, Citrix XenServer, and Microsoft Hyper V. Depending on the download bandwidth available, please allow for adequate time for the download to finish.

Upgrading
If running Stratusphere 4.8.x version, please visit our Support documentation site and look for the “Stratusphere Upgrade Guide for 5.0” document created specifically to help customers upgrade from 4.8.x to the 5.0 version of Stratusphere. Alternatively, contact Support@LiquidwareLabs.com for further assistance.

If the current installation of Stratusphere 5.7.x or earlier has performance issues and has more than 1,000 CID Keys with a separate Hub and Database Appliances, Liquidware Labs recommends using the 5.8.x version of the appliance. The configuration changes made are available only within a newly downloaded 5.8.x version of the appliance. These performance enhancements are not available in 5.7.x or earlier version of the appliance upgraded in place to 5.7.x version. To get all the performance enhancements, Liquidware Labs recommends migration from a 5.6.x appliance to a 5.8.0 appliance. Please get in touch with Liquidware Labs Customer Support at Support@LiquidwareLabs.com or search for a KB article titled “Migrating to Stratusphere 5.7.0” on our Support Site.

Depending on whether your Stratusphere appliances have direct access to the Internet or not, Liquidware Labs provides 2 options:

1. **Online Upgrades:** If your appliances have direct access to the Internet use the instructions in the ‘Upgrading online Stratusphere appliances’ section.
2. **Offline Upgrades:** If your appliance is in a secure, air-gapped environment with no direct access to the Internet, use the instructions in the ‘Upgrading offline Stratusphere appliances’ section. You would need to download upgrades files first, copy them to the appliances, and then apply them to the appliances through the command line console.

Please refer to the order in which appliances need to be upgraded below as well.

Order of Upgrading Stratusphere appliances
1. Halt services on the Stratusphere Hub appliance.
2. Upgrade the Stratusphere Database Appliance to the latest version. Let the appliance reboot and let all services start up in the background.
3. Upgrade the Stratusphere Hub Appliance to the latest version. Let the appliance reboot and let all services start up in the background.
4. Use the Stratusphere 5.8.1 Web UI to upgrade the Stratusphere Network Station(s) to the latest version.

**Upgrading online Stratusphere appliances**

- The following section applies specifically to Stratusphere appliances running **5.8.0 ONLY**. If your appliances are on an earlier version, please refer to that specific release version’s ‘Upgrading’ section in the Release Notes for specific instructions as they have changed. Apply the following instructions on each 5.8.0 appliance in order.
- Hub Appliance:
  - Take a snapshot of the appliance.
  - Log into the command line console of the appliance using User ID: friend and Password: sspassword as credentials first and then switch to the root super user using command: ‘su -’ and Password: sspassword.
  - In order to stop the Stratusphere Hub from receiving any CID Key Inspection Reports or Network Station Audit reports and trying to insert them into the database during updates, we need to stop services on the Stratusphere Hub in preparation before upgrading. Execute the following command:
    - `sv stop servicemix tnt-backend tnt-backend-priv`
  - Enter the command ‘lwl’ on the command line prompt.
  - Enter option U for the ‘U) Update Software Menu’ option.
  - Enter option S for the ‘S) Software Update Site’ option.
  - The update site should be set to the Stratusphere Hub IP or DNS such as `http://localhost/upgrades/latest`. On the Hub appliance the localhost could also be `127.0.0.1`. If it does NOT match and is still pointing to `http://download.liquidwarelabs.com/upgrades/yum/` then press Y and edit it to match as stated. If it matches, press N and ENTER to proceed.
  - Use the Q option twice to quit out of the ‘lwl’ console menu.
  - We now need to download the new single master upgrade image for all appliances across all hypervisor platforms. Since it is a master image, it is large i.e. 1.2GB. It will take some time to download based on your specific connection speed. Execute the following command to download the update image:
    - `/opt/lwl/bin/lwl-upgrade-image -il`
      The command will show a message ‘Installing image: ...stratusphere-5.8.1.img’.
      When finished it will state ‘Installing image for version 5.8.1’ before returning to the command prompt.
  - Now that we have downloaded the update locally within the Stratusphere Hub, we need to first update the Database appliance prior to updating the Hub appliance. Once the Database appliance is updated we will resume updating the Hub. If there is no Database appliance, please skip the Database appliance section below and jump to the Hub Appliance below.
- **Database Appliance:**
  - Take a snapshot of the appliance.
  - Log into the command line console of the appliance using User ID: ssconsole and Password: sspassword as credentials.
  - Enter option U for the ‘U) Update Software Menu’ option.
  - Enter option S for the ‘S) Software Update Site’ option.
  - The update site should be set to the Stratusphere Hub IP or DNS such as https://<HubIPorDNS>/upgrades/latest. <HubIPorDNS> needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it to match https://<HubIPorDNS>/upgrades/latest and hit ENTER. It will update the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.
  - Enter option C for the ‘C) Check for Updates’ option.
  - If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance.
  - Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
  - Once the appliance reboots, give it a few minutes to start all required services.

- **Hub Appliance:**
  - Log into the command line console of the appliance using User ID: ssconsole and Password: sspassword as credentials.
  - Enter option U for the ‘U) Update Software Menu’ option.
  - Enter option C for the ‘C) Check for Updates’ option.
  - If there are updates available, enter option U for the ‘U) Update’ option to apply the update on the appliance. It will show a message ‘Running yum upgrade, update URL: http://download.liquidwarelabs.com/upgrades/yum/5.8.0’ while installing this upgrade. Please wait until this command finishes. It should schedule a reboot in 1 minute.
  - Use the Q option to return to the previous menu and select R for the ‘R) Reboot Server’ option if it is not scheduled automatically.
  - Once the appliance reboots, give it a few minutes to start all required services.
  - Log into the Web UI and check the version number on the bottom of the login page and verify if it states 5.8.1 in the bottom blue ribbon. Check the Web UI for standard functionality and if all looks well, delete the snapshot taken prior to starting the upgrade.

- **Network Station appliances**
  - After updating the Hub to 5.8.1, log into the Web UI’s ADMINISTRATION product. Navigate to the STATION ADMINISTRATION > NETWORK STATIONS tab.
  - Select the check box for the Network Station you want to upgrade and click the RE-REGISTER button.
o Then select the check box for that Network Station again, and click on the UPGRADE button.

o Repeat these steps for each Network Station that needs to be updated to 5.8.1.

Upgrading offline or firewall isolated Stratusphere appliances

• Until 5.8.0, offline upgrades only support incremental updates. So if you are on 5.7.0, you will need to download offline upgrade packs that will take you from 5.7.0 to 5.7.1, 5.7.1 to 5.7.2 and then from 5.7.2 to 5.8.0. Please use the links provided with each release for incremental upgrades. Liquidware Labs has now implemented one step cumulative upgrades and will work from 5.8.1 onwards from within the Web UI Administration product.

• If your appliances are on a version earlier than 5.7.x then please refer to the specific release version’s ‘Upgrading’ section in the Release Notes for additional instructions. Once upgraded to 5.8.0, please come back to this section and use these instructions below.

• The following section applies specifically to Stratusphere appliances running 5.8.0 ONLY.

• Please note these instructions have changed since the last version. There is only one version of the image file across VMware, XenServer, and Hyper V environments.

• On a local desktop with access to the Internet:
  o Download the single offline upgrade image from the link below to your local desktop:
    ▪ http://download.liquidwarelabs.com/rhel/581/stratusphere-5.8.1.img
  o Download an RPM update from the link below to your local desktop:
    ▪ http://download.liquidwarelabs.com/stratusphere/releases/lwl-config-utils-1.0.0-62906.noarch.rpm

• Database Appliance (if in use)
  o Liquidware Labs recommends using PuTTY because it allows for commands to be copied (CTRL+C) from this document and pasted into PuTTY (RIGHT-CLICK) for easier execution whereas the local consoles offered by the hypervisor may not always support the paste feature.
  o Log into the command line console of the appliance using User ID: friend and Password: sspassword as credentials first and then switch to the root super user using command: ‘su -’ and Password: sspassword.
  o Enter the command ‘lwl’ on the command line prompt.
  o Enter option U for the ‘U) Update Software Menu’ option.
  o Enter option S for the ‘S) Software Update Site’ option.
  o The update site should be set to the Stratusphere Hub IP or DNS such as https://<HubIPorDNS>/upgrades/latest.<HubIPorDNS> needs to be the actual IP or DNS of the Stratusphere Hub. If it does NOT match and is still pointing to http://download.liquidwarelabs.com/upgrades/yum/ then press Y and edit it to match https://<HubIPorDNS>/upgrades/latest and hit ENTER. It will update the site and ask again if you want to make a change – press N and ENTER to finish. If it matches, press N and ENTER to proceed.
  o Use the Q option twice to quit out of the ‘lwl’ command menus.
Copy and paste the commands below into PuTTY:

- `sed -i -e s/^enabled.*$/enabled\ =\ 1/g /etc/yum.repos.d/lwl.repo`

Enter CTRL+D twice to log out of the console and close the PuTTY session.

Hub Appliance

- Take a snapshot of the Hub appliance and Database appliance if in use.
- Download and install a SCP tool such as WinSCP or FileZilla to upload the two files above to the Stratusphere Hub. Use User ID: friend & Password: sspassword as credentials for transferring file into the /home/friend folder.
- Using the SCP tool, copy the downloaded lwlcfg-1.0.0-62906.noarch.rpm file to the Hub’s /home/friend folder.
- Using the SCP tool, copy the downloaded stratusphere-5.8.1.img file to the Hub’s /home/friend folder.

**NOTE:** If your Hub appliance is an older virtual appliance version, you may observe an out of disk space error while uploading to the /home/friend folder. Please refer to the troubleshooting section at the bottom.

- Liquidware Labs recommends using PuTTY because it allows for commands to be copied (CTRL+C) from this document and pasted into PuTTY (RIGHT-CLICK) for easier execution whereas the local consoles offered by the hypervisor may not always support the paste feature.
- Log into the command line console of the appliance using User ID: friend and Password: sspassword as credentials first and then switch to the root super user using command: `su -` and Password: sspassword.
- Copy (CTRL+C) and paste (RIGHT-CLICK) this command in PuTTY on RHEL appliances only:
  - `sed -i -e s/^enabled.*$/enabled\ =\ 1/g /etc/yum.repos.d/lwl.repo`
- Copy (CTRL+C) and paste (RIGHT-CLICK) this command in PuTTY to install a small update:
  - `rpm -Uvh /home/friend/lwlcfg-1.0.0-62906.noarch.rpm`
- Copy (CTRL+C) and paste (RIGHT-CLICK) this command in PuTTY to prepare the upgrade image for deployment on the Stratusphere Hub appliance:
  - `/opt/lwl/bin/lwl-upgrade-image -i -f /home/friend/stratusphere-5.8.1.img`
- Copy (CTRL+C) and paste (RIGHT-CLICK) this command in PuTTY to upgrade the Stratusphere Hub and Database appliance (if in use) with a single command:
  - `/opt/lwl/bin/lwl-update.sh -update -force -offline`

- If there is a Database appliance in use, it will be upgraded first and rebooted. The command will display ‘Upgrading appliance at <DBIPorDNS>… Running remote upgrade’. Then the Hub will be upgraded and rebooted. The command will display ‘Running yum upgrade, update URL: http://download.liquidwarelabs.com/upgrades/yum/5.8.0’.
- Once the appliances reboot, give it a few minutes to start all required services. Log into the Web UI and check the version number on the bottom of the login page and verify if it states 5.8.1 in the bottom blue ribbon. Check the Web UI for standard functionality.
After waiting for some period of time if all looks well using the new version, delete the snapshot taken prior to starting the upgrade.

Delete the upgrade files using the following command:
- `rm /home/friend/lwl-config-utils-1.0.0-62906.noarch.rpm`
- `rm /home/friend/stratusphere-5.8.1.img`

Upgrade is now complete.

**Troubleshooting**

**SCP fails to log into the appliance**
- The RHEL is a security hardened appliance. It has policies enabled where passwords expire after a certain amount of time. An expired password may be preventing the user from logging into the appliance.
- Log into the local command line console and it will prompt you to change and update your password immediately. Once updated, you should be able to use the SCP tool again to upload files to the appliance.

**SCP Copy Error due to Disk Space while performing Offline Upgrades**
- The older virtual appliance hardware version of the Stratusphere Hub may not have enough space to accommodate the 5.8.1 upgrade image. In this case, the upgrade image will need to be copied directly to the final image path.
- Prior to doing so, we need to adjust the permissions on folders to allow the ‘friend’ user to upload directly to the final image path.
- Liquidware Labs recommends using PuTTY because it allows for commands to be copied (CTRL+C) from this document and pasted into PuTTY (RIGHT-CLICK) for easier execution whereas the local consoles offered by the hypervisor may not always support the paste feature.
- Log into the command line console of the appliance using User ID: `friend` and Password: `sspassword` as credentials first and then switch to the root super user using command: `su -` and Password: `sspassword`.
- Copy (CTRL+C) and paste (RIGHT-CLICK) this command in PuTTY to modify permissions:
  - `chmod 777 /var/lib/pgsql /var/lib/pgsql/upgrades /var/lib/pgsql/upgrades/images`
- Now use the SCP tool to upload the `stratusphere-5.8.1.img` file from the local desktop to the `/var/lib/pgsql/upgrades/images` folder.
- Once uploaded, we need to reset the permissions. Copy (CTRL+C) and paste (RIGHT-CLICK) these commands in PuTTY:
  - `chown root:root /var/lib/pgsql/upgrades/images/*.img`
  - `chmod 755 /var/lib/pgsql /var/lib/pgsql/upgrades/images`
  - `chmod 700 /var/lib/pgsql/upgrades`
On Red Hat Stratusphere Hub appliance, a setting needs to be enabled. Copy (CTRL+C) and paste (RIGHT-CLICK) this command in PuTTY:

- `sed -i -e s/^enabled.*/enabled\ =\ 1/g /etc/yum.repos.d/lwl.repo`

Copy (CTRL+C) and paste (RIGHT-CLICK) this command in PuTTY to install a small update:

- `rpm -Uvh /home/friend/lwl-config-utils-1.0.0-62906.noarch.rpm`

Copy (CTRL+C) and paste (RIGHT-CLICK) this command in PuTTY to prepare the upgrade image for deployment on the Stratusphere Hub appliance:

- `/opt/lwl/bin/lwl-upgrade-image -ma`

Copy (CTRL+C) and paste (RIGHT-CLICK) this command in PuTTY to upgrade the Stratusphere Hub and Database appliance (if in use) with a single command:

- `/opt/lwl/bin/lwl-update.sh -update -force -offline`

If there is a Database appliance in use, it will be upgraded first and rebooted. The command will display ‘Upgrading appliance at <DBIPorDNS>… Running remote upgrade’. Then the Hub will be upgraded and rebooted. The command will display ‘Running yum upgrade, update URL: http://download.liquidwarelabs.com/upgrades/yum/5.8.0’.

Once the appliances reboot, give it a few minutes to start all required services. Log into the Web UI and check the version number on the bottom of the login page and verify if it states 5.8.1 in the bottom blue ribbon. Check the Web UI for standard functionality.

After waiting for some period of time if all looks well using the new version, delete the snapshot taken prior to starting the upgrade.

Delete the upgrade files using the following command:

- `rm /home/friend/lwl-config-utils-1.0.0-62906.noarch.rpm`

Upgrade is now complete.