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Stratusphere™ Release Notes

Version 6.1.4, released October 31st, 2019

What's New?

- Liquidware now officially supports its Connector ID Key agent on Microsoft WVD and 10Zig Linux Thin Clients.
- Liquidware officially extends support to Amazon Marketplace Hourly Licensing allowing AWS users to subscribe to Stratusphere directly through the Marketplace while continuing to support Bring-Your-Own-License (BYOL). Liquidware also brings the Database appliance to AWS using high speed network communication as provided by AWS Placement Groups. Availability on Amazon Marketplace will lag due to the onboarding process.
- Liquidware now officially supports Stratusphere appliances on Microsoft Azure. Availability on Microsoft Azure Marketplace will lag due to the onboarding process.

Enhancements

- **ADVANCED > INSPECTORS:**
 - Enhanced **ADVANCED > INSPECTORS > REMOTE DISPLAY** tab by adding all remaining RFX metrics to the **PROTOCOL | RFX Inspector View**. It provides details such as **ENCODING TIME, FPS, IMAGE QUALITY, COMPRESSION, LOSS RATE, RETRANSMIT RATE, TCP/UDP BANDWIDTH & ROUNDTRIP TIME (RTT)**. It also displays the **PERCENTAGE OF FRAMES LOST** due to **SERVER, CLIENT** or **NETWORK** issues. It also displays the data sent via **P0-P3** channels.
- **ADVANCED > SPOTCHECKS:**
 - Enhanced coverage of metrics within the **ADVANCED > SPOTCHECKS** tabs by adding Inventory metrics such as **LAST BOOT DAYS, LAST CONTACT MINUTES, LAST CONTACT LATE, LAST CID PENDING REPORTS, DISPLAY COUNT, and DISK COUNT**.
 - Enhanced visibility by adding **Virtual Host (VHOST)** metrics such as **CPU READY %, SWAP USED MB, MEMORY BALLOONING, and DATASTORE LATENCY**.
 - Enhanced visibility by adding **Virtual Machine (VMACHINE)** metrics such as **CPU READ SEC, CPU CoSTOP SEC, CPU LATENCY %, CPU USED % & MHZ, MEMORY USED % & MB, etc.**
 - Enhanced visibility by changing **DISPLAY** to **REMOTE DISPLAY** group name for consistency and by adding metrics for **IMAGE QUALITY & FPS**.
- **ADVANCED > DASHBOARDS:**
 - Enhanced usability by providing easily viewable **IMPORT DASHBOARD** at the top right of the **Dashboard Management** tab and **EXPORT DASHBOARD** icon buttons for each row of dashboards under the **Dashboard Management** tab.
 - Added **PREFERENCES > UTILITIES** tab to also include **IMPORT DASHBOARD** button. This tab will include some additional options to **RESET DEFAULT DASHBOARDS, EXPORT ALL DASHBOARDS, EXPORT ALL WIDGETS, EXPORT ALL DATA SOURCES, etc.**
 - Enhanced usability with horizontally scrolling dashboard tabs instead of wrapping to the next line.
 - Enhanced usability by loading dashboards in the defined sort order.

- CONNECTOR ID KEY:
 - Enhanced support for AWS AppStream 2.0 by supporting non-domain joined AppStream instances and properly identifying the user name associated.
 - Enhanced usability where the CID Key can now be configured to enable or disable PROCESS OPTIMIZER LOGGING from the Web UI in the PROCESS OPTIMIZER section under the HUB ADMINISTRATION > CONNECTOR ID KEYS > CONNECTOR ID KEY PROPERTIES tab.
 - Enhanced visibility of Ping stats by keeping the originally requested DNS name of the ping target in addition to its IP address.
 - Enhanced operation of the CID Key by preventing sending WMI related errors to the Windows Event Log.
 - Enhanced user licensing to ignore counting `lenovo_tmp_*` users from using a Stratusphere user license.
 - Enhanced CID Key operation by including a registry key to disable loading of a DLL that could interfere with MSRA.exe. The option to disable loading the DLL is available by setting `DisableDllPlugin (DWORD) to 1` under `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Liquidware Labs\ConnectorID`. The loading of the DLL is enabled by default and could cause MSRA.exe to complain. This reg key allows organizations to disable loading the DLL. The CID Key will not be able to collect APPLICATION LOAD TIME if this DLL is disabled from loading using this key.
- WEB UI:
 - The CID Key could always perform pings to obtain latency information based on FQDN or IP address. The Web UI page's helper text is now updated to convey this to the end user within the CONFIGURE METRICS section under HUB ADMINISTRATION > CONNECTOR ID KEYS > CONNECTOR ID KEY PROPERTIES tab.
 - The PROCESS OPTIMIZATION section of the HUB ADMINISTRATION > CONNECTOR ID KEYS > CONNECTOR ID KEY PROPERTIES tab has been moved to the more visible section under CONFIGURE METRICS.
 - The UI now provides direct links to Liquidware's Stratusphere DOCUMENTATION, SUPPORT and new COMMUNITY sites under the HELP menu at the top right of the Web UI.
 - Enhanced the INVENTORY > MACHINES and INVENTORY > USERS tabs where some columns were not supporting sorting.
- HUB & DATABASE:
 - In order to support Cloud platforms such as AWS and Azure, Stratusphere now supports joining a Hub and Database using SSH Keys across all platforms.

Bug Fixes

- ADVANCED > INSPECTORS:
 - Fixed an issue where the host for a VM was incorrectly displayed as UNKNOWN.
 - Fixed an issue where the MARKED FOR VIRTUALIZATION column would always be empty under the ADVANCED > INSPECTORS > APPLICATIONS / PROCESS NAMES tab.

- **ADVANCED > DASHBOARDS:**
 - Fixed an issue where the “LOADING...” text does not show on widgets all the time.
 - Fixed an issue where the datasource API string was not being checked for required values.
 - Fixed an issue where the datasource was not displaying the right missing value from within the required API parameters.
 - Fixed an issue where the DUPLICATE button was not working as expected.
 - Fixed an issue where Bar chart widgets could not be created.
- **CONNECTOR ID KEY:**
 - Fixed an issue where the CID Key on macOS would re-register when network changes occurred.
 - Fixed an issue where the CID Key would not handle Sleep, hibernation, or suspend properly causing large time differences between the callback interval which in turn would affect the rollup values for that callback.
 - Fixed an issue where the CID Key would crash due to WMI issues on Windows 10.
 - Fixed an issue with the CID Key would constantly try to restart its lwldatasvc.exe on a user session that was stuck or ending.
 - Fixed an issue with the CID Key where it was not consistent in implementing whether it was collecting browser metrics based on enabling and disabling the master Browser metrics checkbox.
- **WEB UI:**
 - Fixed an issue where changing the CONNECTOR ID PROPERTIES from the default ALL MACHINES group to a specific machine group would trigger a UI error under HUB ADMINISTRATION > CONNECTOR ID KEYS > CONNECTOR ID KEY PROPERTIES tab.
 - Fixed an issue where searching for a machine under INVENTORY > MACHINES tab would reduce the number of items shows on the pages to less than the per page settings.
 - Fixed an issue where Web UI would display an error when any changes were made to a HUB ADMINISTRATION > DIRECTORIES configuration the first time but succeeded on another try.
 - Fixed an issue where renaming the Hub appliance’s DNS name under COLLECTOR ADMINISTRATION > COLLECTORS would cause issues. Now, the Hub’s DNS cannot be renamed.
 - Fixed an issue where the IP address, network mask, and default gateway on the HUB ADMINISTRATION > CONFIGURATION tab’s NETWORK CONFIGURATION section could be updated on Cloud platforms where these changes cannot be saved leading to issues. These fields are now disabled on AWS and Azure instances.
- **HUB & DATABASE:**
 - Fixed an issue where the roll-up numbers for Application Not Responding (ANR) were not accurate.
 - Fixed an issue where upgrading to 6.1.3 would remove NIC for the M5 AWS instances.
 - Fixed an issue where the Collector AMI on AWS was not ENA supported.

- Fixed an issue where the auto-delete option under HUB ADMINISTRATION > DATA RETENTION > SETTINGS tab would purge EVENT LOG data.
- Fixed an issue with the Nutanix Prism metric import was not working as expected.
- Fixed an issue seeing with rollups timing out in some cases.
- Fixed an issue where the IMPORT MEMBERS button under INVENTORY > MACHINES tab was not working as expected.
- Fixed an issue where the error from importing a VM Directory was not easy to troubleshoot.
- Fixed an issue where the backend was not honoring the LAST 60 MIN setting for scheduled reports under DIAGNOSTICS > REPORTS tab.
- Fixed an issue where the MACHINE GROUP SEARCH FILTER would not work for importing directories under HUB ADMINISTRATION > DIRECTORIES tab.
- Fixed an issue where registering a Collector from the Web UI would use its IP address instead of its DNS name.
- Fixed an issue where the Hub or Collector would run out of memory while performing a VM Directory import in very large environments.
- Fixed an issue where changes to a Machine Group were undone while it was automatically rebuilding the group's membership.
- Fixed an issue where AD import under HUB ADMINISTRATION > DIRECTORIES tab would not work for non-paging servers.
- DIAGNOSTICS > REPORTS: Added, enhanced, fixed or made minor formatting updates to the following reports:
 - ADMINISTRATION
 - ALERT ON DATABASE DISK PURGE PRIOR TO THRESHOLD
 - STRATUSPHERE COLLECTORS STATUS
 - STRATUSPHERE COLLECTORS WITH ERRORS
 - STRATUSPHERE EVENT LOGS
 - MANAGEMENT REPORTS
 - MACHINE GROUP POOLS USAGE PERCENTAGES BY DAY OF WEEK
 - MACHINE GROUP POOLS USAGE PERCENTAGE BY HOUR
 - UX DIAGNOSTIC REPORTS – APPS
 - APPLICATIONS LOAD TIMES SUMMARY
 - APPLICATIONS LOAD TIMES SUMMARY BY DATE
- Security Updates for CentOS appliances: The updates address Common Vulnerability and Exposure (CVE) CVE-2017-17805, CVE-2018-9568, CVE-2018-17972, CVE-2019-1125, CVE-2019-1559, CVE-2019-2745, CVE-2019-2762, CVE-2019-2769, CVE-2019-2786, CVE-2019-2816, CVE-2019-2842, CVE-2019-3855, CVE-2019-3856, CVE-2019-3857, CVE-2019-3863, CVE-2019-5489, CVE-2019-9517, CVE-2019-10081, CVE-2019-10082, CVE-2019-10092, CVE-2019-10097, CVE-2019-10098, CVE-2019-10208, CVE-2019-11810, CVE-2019-12735, CVE-2019-12749, and CVE-2019-14835. For additional information please refer to <http://cve.mitre.org/index.html>.

Known Issues

- Within **ADVANCED > DASHBOARDS**, when trying to add a new Datasource, users could use the API Builder to formulate the API String and then import it by clicking on the **USE CURRENT APISTRING** button link. This button link was not working as expected. Due to internal workings, this link has been removed from the product for now and will be reintroduced in the next version. Users are advised to have the API Builder open in another browser tab, and manually copy and paste it within the field for specifying the API.
- **ADVANCED > INSPECTORS** may appear within very small window after an upgrade. Hit the F5 key to restore the regular size.
- While importing Stratusphere OVF's on some ESX versions, the VMware Virtual Infrastructure Client will show a warning. These warnings can be safely ignored.
- While using Internet Explorer 9, the UI may not format & display some pages, such as SAN Diagnostic Summary, as expected due to compatibility issues. Liquidware recommends using the latest version of Internet Explorer, Mozilla Firefox, or Google Chrome as a temporary workaround. Also, while using Mozilla Firefox, some of the **ASSESSMENT > SUMMARY** tab's graphs and charts may not display call out lines and text as expected until the user clicks in each widget.
- If **ENHANCED SECURITY** is enabled in the console, it requires using strong passwords including special characters. Using a backslash '\' character in the password causes issues while migrating data from 5.8.5 appliances to 6.0. The password match fails and since the migration asks user to retry, it may result in account lockout if forced to enter multiple times.
- The Windows CID Key on Amazon WorkSpaces depends on the Teradici PCoIP agent to populate the remote client name and remote client IP Address within the registry. If the PCoIP agent does not populate the registry, the CID Key will not be able to collect this information.
- The development of the Windows Advanced CID Key has been paused and will not be available in newer versions of Stratusphere.
- The **DIAGNOSTICS > INSPECTORS > DESKTOP APPLICATION SUMMARY** page times out after 15 minutes and may result in an error. This is due to the Chart on the page, waiting for a query to finish. If the user uses the browser's Back button, the table data will be updated but the chart may be empty or displaying existing results.
- Depending on the number of days queried for some **DIAGNOSTICS > REPORTS** tab-based **DETAIL** reports that involve returning many hundreds of thousands of rows (more than 200K records) could potentially cause the reporting engine to run out of memory while outputting the report for Excel format. Liquidware is working to address the issue in the next version. Please use the Hub's virtual appliance command line console-based menu option 'W' to restart web services if this occurs.
- **FIT REPORTS – APPLICATIONS:**
 - **APPLICATIONS WITH KNOWN POOR VDI FIT INSTALLED BY USER AND MACHINE (CSV)** fails if no applications are set as Poor VDI FIT under **ASSESSMENT > VDI FIT PROFILE** tab.
 - **APPLICATION COMPARISON BY MACHINE GROUP** Report has performance issues.

Announcements

- **End-of-Life for Stratusphere version 5.8.0 and earlier:** Liquidware will be discontinuing all sales and technical support of Stratusphere version 5.8.0 and earlier effective 10/31/2018. We encourage all customers who may still be utilizing these versions to upgrade to a more recent version to take advantage of the numerous technologies & feature enhancements as well as resolved support issues.

Release Available As

- Virtual Appliance Downloads: Full virtual appliances are available for AWS and Azure only. Liquidware has started the onboarding process on these cloud platforms and they will be available in their respective Marketplaces as soon as the onboarding process is complete. For AWS AMIs please visit www.Liquidware.com/Download/ to download the latest versions of Stratusphere appliances in AMI format. Please visit www.Liquidware.com/Download/ to download the Azure appliances.
- Software Update: This release is available as a Software Update across all supported platforms if you are on 6.0.x version of Stratusphere. However, if you are 5.8.5 or higher, we do offer a migration option whereby you can download a new Stratusphere 6.x Hub and Database Appliance and use the migrate option in the consoles of these new appliances to migrate network configuration, certificates, and data from the old 5.8.5 or higher appliances to the newer 6.x appliances.

NOTE: Please see the Upgrading section below for instructions.

Release Applies to

- Stratusphere Hub Appliance.
- Stratusphere Database Appliance.
- Stratusphere Collector Appliance.
- Stratusphere Connector ID Key.

Upgrading

If your current installed version of Stratusphere is 6.0.x, please use the instructions in [Upgrading from Stratusphere 6.0](#) to upgrade to the latest version.

If your current installed version of Stratusphere is at 5.8.5 or higher, please use the instructions in [Migrating from 5.8.5 or Higher to 6.0 Appliances](#), to migrate network settings, certificates, and data from 5.8.5 and higher appliances to the 6.0 appliances. If you are on a version earlier than 5.8.5, please upgrade to 5.8.5 and then perform a migration using the instructions mentioned above.

If your current installed version of Stratusphere is 5.8.x, please upgrade to 5.8.5 and then migrate to Stratusphere 6.0. Alternatively, contact Support@Liquidware.com for further assistance.

Stratusphere™ Release Notes

Version 6.1.3, released July 8th, 2019

What's New?

- Liquidware now officially supports its Connector ID Key agent on Windows Server 2019.
- Liquidware now officially supports its Connector ID Key agent on StratoDesk Thin Clients.
- Liquidware officially extends support to Amazon Marketplace Hourly Licensing allowing AWS users to subscribe to Stratusphere directly through the Marketplace while continuing to support Bring-Your-Own-License (BYOL). Availability on Amazon Marketplace will lag due to the onboarding process.
- Liquidware now officially supports Stratusphere appliances on Microsoft Azure. Availability on Microsoft Azure Marketplace will lag due to the onboarding process.

Enhancements

- **ADVANCED > INSPECTORS:**
 - Enhanced usability in the **ADVANCED > INSPECTORS** tabs by adding context like menus while clicking on a table cell to provide clarity on whether to drill down deeper into the metric or open a new tab with a different inspector such as Applications Inspector or User 360. This enhancement can be disabled by enabling the **DO NOT POPUP MENU WHEN CLICKING ON CELLS** option in **ADVANCED > PREFERENCES**.
 - Enhanced **ADVANCED > INSPECTORS > APPLICATIONS & PROCESS NAME** tabs by adding **THREAD** metric to each process. This information is available within the default **CUSTOM** Inspector View and within Stratusphere API as well. The performance for retrieving process path and arguments has also been optimized.
 - Enhanced **ADVANCED > INSPECTORS > MACHINES & USERS** tabs by adding **PING** stats under the **SUMMARY | NETWORK | MACHINES IP LATENCY & LOSS & SUMMARY | NETWORK | USERS IP LATENCY & LOSS** Inspector Views. Also, additional **LOOKUP BY** columns called **PING IP** and **PING NAME** are also available. New metrics are min/average/max ping latency along with the packets sent and lost as well.
 - Enhanced **ADVANCED > INSPECTORS > REMOTE DISPLAY** tab by adding a new **SUMMARY | USER SESSION DURATION** Inspector View. It provides details of a user's session duration, connected, disconnected, and idle times in minutes.
 - Enhanced **ADVANCED > INSPECTORS > USERS** and **ADVANCED > INSPECTORS > MACHINES** tab by adding **SUMMARY | MAC | MACHINES, USERS, OS** views and **SUMMARY | LINUX | MACHINES, USERS, OS** views to directly filter by macOS and Linux machines.
 - Enhanced **ADVANCED > INSPECTORS > INVENTORY** tab by adding **LAST CONTACT LATE** and **LAST CONTACT SECONDS** columns to the default **CUSTOM** Inspector View for Machines that are past overdue to callback to Stratusphere. These columns are also available within Stratusphere API.

- **ADVANCED > DASHBOARDS:**
 - Enhanced end user experience by showing progress of loading components within the dashboards and allowing users to click away on other tabs as well.
 - Each entity within DASHBOARD, WIDGETS, and DATASOURCES tab can now be easily customized using the SAVE AS or DUPLICATE functionality. This functionality preserves the original out-of-the-box dashboards, widgets, and datasources owned by LIQUIDWARE and prevents them from being edited or deleted. They are kept up to date by Liquidware on upgrades.
 - Underlying code has been further optimized and libraries have been upgraded to the latest versions.
 - Enhanced the ease of adding high level API OVERRIDE filters like machine group, user group, etc. to existing dashboards with minimal effort while using the SAVE AS functionality.
 - Enhanced usability of controlling access to dashboards by adding helper text, sorting the user group lists, and providing the ability control access using pseudo group like EVERYONE or specific user group names.
 - DASHBOARD HOME menu bar is now optimized. Clicking on the LAST UPDATED widget will force a refresh. The AUTO-REFRESH now shows its refresh frequency as well.
 - SEARCH: The Dashboard SEARCH functionality has also been enhanced to automatically display color coded icons and details on what was applied on each widget to better understand what is being displayed.
 - PREFERENCES: The Dashboard PREFERENCES now has two tabs with SEARCH being the new one. On the first GENERAL tab, it provides options on whether to USE LOCAL CACHE for faster performance and to protect SYSTEM DEFAULTS. On the SEARCH tab, changing the DEFAULT DATE automatically triggers a refresh of the dashboards while in SEARCH mode to reflect the new timeframe. It also provides options to SORT SEARCH FIELDS and to HIDE ADVANCED SEARCH ID based fields that are not commonly used.
- **CONNECTOR ID KEY:**
 - The PROCESS OPTIMIZER has been further enhanced to provide smoother user experience on machines.
 - Process Optimization now supports the ability to raise and/or lower priorities of a process based on process name. It also supports termination of a process.
 - Added a registry option to disable collection of network process metrics. This option is available by setting `DisableProcessNetworkStats (DWORD)` to 1 under `HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432NODE\LIQUIDWARE LABS\CONNECTORID`.

- WEB UI:
 - The Login page on the Web UI now shows a closed lock icon for DOMAINS using the secure connection and an open, unlocked icon if using the standard connection. Liquidware recommends using the secure connection when configuring HUB ADMINISTRATION > DIRECTORIES tab for Active Directory or LDAP name store directories.
 - Network Collector default policies were updated to include VMware View Blast to now monitor all supported remote display protocols.
 - Enhanced the audit capability of Stratusphere within EVENT LOG:
 - Each access through API or Web UI is now logged to the EVENT LOG with additional user information.
 - Any HUB ADMINISTRATION > CONFIGURATION changes are also logged to the EVENT LOG.
 - Any upgrades of COLLECTORS are logged to the EVENT LOG.
- HUB & DATABASE:
 - Reduced CPU, IOPs and disk space requirements on the Hub and Database appliances by switching the DIAGNOSTICS > INSPECTORS and DIAGNOSTICS > REPORTS tabs to use the optimized application process roll-up tables already in use by ADVANCED > INSPECTORS since 6.0.2. Users already on the newest version of Stratusphere like 6.1.1 going back to 6.0.2 and particularly those used to ADVANCED > INSPECTORS, may not notice any differences. **However, users upgrading from 6.0.0 and using DIAGNOSTICS > INSPECTORS and DIAGNOSTICS > REPORTS may find longer term, summarized roll-up data for application process stats missing.** This is part of migrating to the newer version of the roll-up tables first introduced in 6.0.2. *Liquidware sincerely regrets the deprecation of this earlier version of application process stats rollup information.*
 - Enhanced efficiency of the Hub by migrating to Apache 2.4 has inbuilt support for handling of Certificate Revocation List (CRL) checks using the Online Certificate Status Protocol (OCSP).
 - Enhanced the internal Stratusphere log collection ability where logs are now collected across Hub, Database and Collector appliances.
 - Enhanced usability by providing the ability to quickly and easily reset a Collector across all platforms by running `/opt/lwl/bin/ResetCollector.sh` script.

Bug Fixes

- ADVANCED > INSPECTORS:
 - Fixed an issue where the process path and process name were being displayed correctly for macOS and Linux machines.
 - Fixed an issue with ADVANCED > INSPECTORS > REMOTE DISPLAY tab incorrectly displaying none as the Citrix ICA Graphics Mode.
 - Fixed an issue where some Inspector Views for Peaks values were not allowing the Details checkbox to be displayed and enabled.
 - Fixed an issue where drill down on Graphs were not working as expected.

- **ADVANCED > DASHBOARDS:**
 - Fixed an issue where the Citrix dashboard was not showing data due to a filter issue.
 - Fixed an issue where applying search terms across multiple dashboards would not work as expected.
 - Fixed an issue where mandatory fields required for creating and editing datasources were not marked as required.
 - Fixed an issue where a blank screen was displayed after deleting a datasource.
- **CONNECTOR ID KEY:**
 - Fixed an issue where the chrome process would be registered as chrome and Google Chrome due to case sensitivity inconsistencies of process paths based on operating system.
 - Fixed an issue where the IO numbers for the audio channel on Citrix ICA Remote Display metrics were too high.
 - Fixed an issue with the CID Key performing trace route on IPv6 addresses.
 - Fixed an issue with the CID Key where it would not clean out some debug file when running `idcontrol.exe clean` command.
 - Fixed an issue where a machine sleeping or hibernating or being suspended could cause a large time gap between the CID Key's start and end dates.
 - Fixed an issue where the Session ID was a very large or uninitialized number within login and process stats.
 - Fixed an issue with the CID Key on Windows missing login stats and login breakdown data if the user logged in and out within 1 minute.
 - Fixed a slow memory leak in macOS.
 - Fixed an issue with the CID Key on macOS where the memory used was always as high as 98% due to inclusion of cached memory. The cached memory is now separated from the memory used metric. We are still collecting the cached memory metric.
 - Fixed an issue with the CID Key on macOS where the disk utilization percentage was higher than 100%.
 - Fixed an issue with the CID Key on macOS where it was limited to 20 disks and could not handle fiber channel disks.
 - Fixed an issue with the CID Key not starting on CentOS 7.
- **WEB UI:**
 - Fixed an issue with refreshing data on the HUB ADMINISTRATION > OVERVIEW tab.
 - Fixed an issue with updating a license on a Hub with an invalid license error.
 - Fixed an issue where the user was unable to log into the Web UI after an upgrade.
 - Fixed an issue where the user could not remove a machine from a group while unchecking a check box within the EDIT > MACHINE GROUP MEMBERSHIP page under INVENTORY > MACHINES tab.
 - Fixed an issue where initiating an upgrade of Collector(s) from the UI would not provide any error messages back to the user in case it could not initiate the upgrade process.

- Fixed an issue with HUB ADMINISTRATION > VM DIRECTORY import where the depth limit was increased from 200 to 300 element depth.
- Fixed an issue with HUB ADMINISTRATION > DATA RETENTION > SETTINGS tab where the space for detail data + roll-up data + free space was not adding up to the disk space allocated.
- Fixed an issue with HUB ADMINISTRATION > DIRECTORIES where importing an Active Directory was failing.
- Fixed an issue where the sampling frequency in minutes was not a divisor of callback frequency in the EDIT > CID KEY PROPERTIES page under the INVENTORY > MACHINES tab.
- Fixed an issue with COLLECTOR ADMINISTRATION > COLLECTORS tab, where it would error out when an end user selected multiple collectors for deletion.
- HUB & DATABASE:
 - Fixed an issue where the roll-up queries were being terminated due to lower time out settings. The time out has now been increased to allow for roll-ups to complete rather than being terminated.
 - Fixed an issue related to recording deleted items while importing from VM Directory.
 - Fixed an issue related to server role constraint issue.
 - Fixed an issue where the onboard Clam Anti-Virus could not update its definitions due to a permissions issue.
 - Fixed an issue where migrating an appliance with DHCP from one subnet to a different subnet failed to work as expected due to migration of the original subnet mask and default gateway IP address.
- DIAGNOSTICS > REPORTS: Added, enhanced, fixed or made minor formatting updates to the following reports:
 - ADMINISTRATION
 - ALERT ON DATABASE DISK PURGE PRIOR TO THRESHOLD
 - APPLICATION INVENTORY
 - DATABASE SCHEMA TABLE SIZE BREAKDOWN
 - MACHINE CID KEY SETTINGS
 - MACHINE INVENTORY WITH AGE & USER COUNT
 - MACHINES WITH WMI ERRORS
 - **SPECTRE MELTDOWN PATCH REMEDIATION STATUS FOR WINDOWS 7 MACHINES** ^{NEW}
 - STRATUSPHERE EVENT LOG
 - STRATUSPHERE EVENT LOG ERRORS
 - APPLICATION STRATEGY
 - APPLICATIONS INSTALLED VS USED SUMMARY
 - APPLICATIONS WITH HIGH CPU
 - APPLICATIONS WITH HIGH MEMORY USAGE
 - FIT ASSESSMENT REPORTS (PACK 1)
 - 101. VDI FIT BY USER GROUP
 - 102. VDI FIT BY USER
 - 103. APPLICATION ASSESSMENT SUMMARY

- 104. APPLICATIONS INSTALLED VS USED SUMMARY
 - 105. APPLICATION VIRTUALIZATION CANDIDATES USING THINAPP
 - 112. ASSESSMENT FINDINGS
- FIT ASSESSMENT REPORTS (PACK 2)
 - 204. APPLICATION VIRTUALIZATION TARGETS
 - 213. NETWORK CONNECTION DETAILS FOR CID KEY COMMUNICATIONS
- FIT REPORTS – APPLICATIONS
 - APPLICATION COMPARISON BY MACHINE GROUP
 - APPLICATION ASSESSMENT SUMMARY
 - APPLICATION LAYERING CANDIDATES USING FLEXAPP
 - APPLICATION VIRTUALIZATION CANDIDATES USING THINAPP
 - APPLICATION VIRTUALIZATION TARGETS
 - APPLICATION VIRTUALIZATION DETAILS
 - APPLICATIONS BY USAGE TIME
 - APPLICATIONS INSTALLED AND LAST USED BY MACHINE WITH PRIMARY USER
 - APPLICATIONS INSTALLED BY USER AND MACHINE
 - APPLICATIONS INSTALLED VS USED SUMMARY
 - APPLICATIONS WITH KNOWN POOR VDI FIT INSTALLED BY USER AND MACHINE
 - APPLICATIONS WITH HIGH CPU
 - APPLICATIONS WITH HIGH GRAPHICS INTENSITY
 - APPLICATIONS WITH HIGH IOPS
 - APPLICATIONS WITH HIGH IO RATE
 - APPLICATIONS WITH HIGH LAUNCH DELAYS
 - APPLICATIONS WITH HIGH MEMORY USAGE
 - APPLICATIONS WITH HIGH MEMORY PAGE FAULTS
- FIT REPORTS – MACHINES
 - MACHINE CONFIGURATION SUMMARY
 - MACHINE DISPLAY DETAILS
 - MACHINE PRINTER DETAILS
 - MACHINES BY AGE DETAILS
- FIT REPORTS - USERS
 - USER GROUP CPU UTILIZATION OVERVIEW
 - USER GROUP DISK UTILIZATION OVERVIEW
 - USER GROUP MEMORY UTILIZATION OVERVIEW
 - VDI FIT BY USER
 - VDI FIT BY USER GROUP
- MANAGEMENT REPORTS
 - MACHINE AND USER COUNTS BY HOUR
 - MACHINE AND USER COUNTS BY HOUR (M-F)
 - MACHINE GROUP POOLS USAGE PERCENTAGES BY DAY OF WEEK
 - MACHINE GROUP POOLS USAGE PERCENTAGE BY HOUR

- MACHINE GROUP POOLS COUNTS BY HOUR
 - USER ACTIVITY SUMMARY REPORT
 - USER LOGIN COUNTS & LOGIN DELAYS BY HOUR (M-F)
- UX DIAGNOSTIC REPORTS
 - DIAGNOSTIC FINDINGS
 - PERFORMANCE COMPARISON BY DAY OF WEEK
 - PERFORMANCE COMPARISON BY HOUR OF DAY
 - PERFORMANCE TIME CHART
 - VDI UX BY USER
- UX DIAGNOSTIC REPORTS – APPS
 - APPLICATION LOAD TIMES DETAILS
 - APPLICATION LOAD TIMES DETAILS WITH USER & MACHINE
 - APPLICATIONS LOAD TIMES SUMMARY
 - APPLICATIONS LOAD TIMES SUMMARY BY DATE
 - APPLICATION PROCESS SESSION DURATION DETAILS BY MACHINE & USER
 - APPLICATION PROCESS SESSION DURATION SUMMARY BY MACHINE & USER
 - APPLICATIONS BY USAGE TIME
 - APPLICATIONS NOT RESPONDING
 - APPLICATIONS WITH HIGH PAGE FAULTS
 - TOP 25 APPLICATIONS WITH HIGH CPU
 - TOP 25 I/O CONSUMING APPLICATIONS
 - TOP 25 MEMORY CONSUMING APPLICATIONS
- UX DIAGNOSTIC REPORTS – HOST
 - VIRTUAL MACHINE PERFORMANCE SUMMARY BY HOST
- UX DIAGNOSTIC REPORTS – LOGIN & SESSION
 - USER LOGIN DETAILS
 - **USER SESSION DURATION DETAILS**^{NEW}
 - USER SESSION LOGIN DETAILS
 - USER SESSION LOGIN SUMMARY BY MACHINE
 - USER SESSION LOGIN SUMMARY BY MACHINE GROUP
 - USER SESSION LOGIN SUMMARY BY USER
 - USER SESSION LOGIN SUMMARY BY GROUP
- UX DIAGNOSTIC REPORTS – NETWORK
 - NETWORK APPLICATION SUMMARY
- UX DIAGNOSTIC REPORTS - REMOTE DISPLAY PROTOCOL
 - CITRIX ICA/HDX CONNECTION DETAILS BY USER AND MACHINE
 - REMOTE DISPLAY PROTOCOL SUMMARY BY USER, MACHINE, AND PROTOCOL
 - REMOTE DISPLAY PROTOCOL SUMMARY BY USER, MACHINE, PROTOCOL AND REMOTE CLIENT
- UX HEALTH CHECK REPORTS
 - 301. PERFORMANCE TIME CHART
 - 302. APPLICATIONS NOT RESPONDING

- 303. NETWORK APPLICATION SUMMARY
 - 306. LEAST UTILIZED DESKTOPS - NO LOGINS
 - 310. DIAGNOSTIC FINDINGS
- UX MACHINE SPRAWL CONTROL
 - SPRAWL CONTROL - LEAST UTILIZED DESKTOPS - NO LOGINS
- UX REGULATORY COMPLIANCE REPORTS
 - SENSITIVE SYSTEM ACCESS DETAIL
 - SENSITIVE SYSTEM ACCESS SUMMARY
- UX VALIDATION REPORTS
 - DIAGNOSTIC FINDINGS
 - PERFORMANCE COMPARISON BY DAY OF WEEK
 - PERFORMANCE COMPARISON BY HOUR OF DAY
- WINDOWS MIGRATION
 - APPLICATIONS INSTALLED VS. USED SUMMARY
 - VDI UX BY USER
 - WINDOWS 7 APPLICATION COMPATIBILITY
- WINDOWS SERVER REPORTS
 - WINDOWS SERVERS - APPLICATION USAGE SUMMARY BY SERVER USER COUNTS
 - WINDOWS SERVERS - APPLICATION USAGE SUMMARY BY USER COUNTS
 - **WINDOWS SERVERS - SESSION SUMMARY BY MACHINE, USER & SESSION^{NEW}**
 - **WINDOWS SERVERS - SESSION SUMMARY BY MACHINE, USER, SESSION & APPLICATION^{NEW}**
 - **WINDOWS SERVERS - SESSION SUMMARY BY MACHINE, USER, SESSION, APPLICATION & PROCESS^{NEW}**
- Security Updates for CentOS appliances: The updates address Common Vulnerability and Exposure (CVE) CVE-2018-5743, CVE-2018-10902, CVE-2018-12126, CVE-2018-12127, CVE-2018-12130, CVE-2018-13405, CVE-2018-15473, CVE-2019-1559, CVE-2019-2422, CVE-2019-2602, CVE-2019-2684, CVE-2019-2698, CVE-2019-3896, CVE-2019-9636, CVE-2019-10127, CVE-2019-10128, CVE-2019-10129, CVE-2019-10130, CVE-2019-11091, CVE-2019-11477, CVE-2019-11478, and CVE-2019-11479. For additional information please refer to <http://cve.mitre.org/index.html>.

Known Issues

- Within **ADVANCED > DASHBOARDS**, when trying to add a new Datasource, users could use the API Builder to formulate the API String and then import it by clicking on the **USE CURRENT APISTRING** button link. This button link was not working as expected. Due to internal workings, this link has been removed from the product for now and will be reintroduced in the next version. Users are advised to have the API Builder open in another browser tab, and manually copy and paste it within the field for specifying the API.
- Within **DIAGNOSTICS > REPORTS**, when scheduling a report to run on an hourly frequency, it is not honoring the Last 60 minutes report parameter.
- **ADVANCED > INSPECTORS** may appear within very small window after an upgrade. Hit the F5 key to restore the regular size.

- While importing Stratusphere OVF's on some ESX versions, the VMware Virtual Infrastructure Client will show a warning. These warnings can be safely ignored.
- While using Internet Explorer 9, the UI may not format & display some pages, such as SAN Diagnostic Summary, as expected due to compatibility issues. Liquidware recommends using the latest version of Internet Explorer, Mozilla Firefox, or Google Chrome as a temporary workaround. Also, while using Mozilla Firefox, some of the ASSESSMENT > SUMMARY tab's graphs and charts may not display call out lines and text as expected until the user clicks in each widget.
- If ENHANCED SECURITY is enabled in the console, it requires using strong passwords including special characters. Using a backslash '\ ' character in the password causes issues while migrating data from 5.8.5 appliances to 6.0. The password match fails and since the migration asks user to retry, it may result in account lockout if forced to enter multiple times.
- The Windows CID Key on Amazon WorkSpaces depends on the Teradici PCoIP agent to populate the remote client name and remote client IP Address within the registry. If the PCoIP agent does not populate the registry, the CID Key will not be able to collect this information.
- The development of the Windows Advanced CID Key has been paused and will not be available in newer versions of Stratusphere.
- The DIAGNOSTICS > INSPECTORS > DESKTOP APPLICATION SUMMARY page times out after 15 minutes and may result in an error. This is due to the Chart on the page, waiting for a query to finish. If the user uses the browser's Back button, the table data will be updated but the chart may be empty or displaying existing results.
- Depending on the number of days queried for some DIAGNOSTICS > REPORTS tab-based DETAIL reports that involve returning many hundreds of thousands of rows (more than 200K records) could potentially cause the reporting engine to run out of memory while outputting the report for Excel format. Liquidware is working to address the issue in the next version. Please use the Hub's virtual appliance command line console-based menu option 'W' to restart web services if this occurs.
- FIT REPORTS – APPLICATIONS:
 - APPLICATIONS WITH KNOWN POOR VDI FIT INSTALLED BY USER AND MACHINE (CSV) fails if no applications are set as Poor VDI FIT under ASSESSMENT > VDI FIT PROFILE tab.
 - APPLICATION COMPARISON BY MACHINE GROUP Report has performance issues.

Announcements

- **End-of-Life for Stratusphere version 5.7.1 and earlier:** Liquidware will be discontinuing all sales and technical support of Stratusphere version 5.7.1 and earlier effective 12/31/2018. We encourage all customers who may still be utilizing these versions to upgrade to a more recent version to take advantage of the numerous technologies & feature enhancements as well as resolved support issues.

Release Available As

- Software Update: This release is available as a Software Update if you are on 6.0.x version of Stratusphere. However, if you are 5.8.5 or higher, we do offer a migration option whereby you

can download a new Stratusphere 6.x Hub and Database Appliance and use the migrate option in the consoles of these new appliances to migrate network configuration, certificates, and data from the old 5.8.5 or higher appliances to the newer 6.x appliances.

NOTE: Please see the Upgrading section below for instructions.

Release Applies to

- Stratusphere Hub Appliance.
- Stratusphere Database Appliance.
- Stratusphere Collector Appliance.
- Stratusphere Connector ID Key.

Upgrading

If your current installed version of Stratusphere is 6.0.x, please use the instructions in [Upgrading from Stratusphere 6.0](#) to upgrade to the latest version.

If your current installed version of Stratusphere is at 5.8.5 or higher, please use the instructions in [Migrating from 5.8.5 or Higher to 6.0 Appliances](#), to migrate network settings, certificates, and data from 5.8.5 and higher appliances to the 6.0 appliances. If you are on a version earlier than 5.8.5, please upgrade to 5.8.5 and then perform a migration using the instructions mentioned above.

If your current installed version of Stratusphere is 5.7.x or earlier, please upgrade to 5.8.5 and then migrate to Stratusphere 6.0. Please get in touch with Liquidware Labs Customer Support at Support@Liquidware.com or search for a KB article titled “Migrating to Stratusphere 5.7.0” on our Support Site. Additionally, you can reference [Migrating from 5.6.x to 5.7.0 Stratusphere Appliances](#).

If your current installed version of Stratusphere is 4.8.x, please visit our [Support documentation site](#) and read 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@Liquidware.com for further assistance.

Stratusphere™ Release Notes

Version 6.1.1, released December 13th, 2018

What's New?

- This is mainly a security update and bug fix release.

Enhancements

- Enhanced the ADVANCED > SPOTCHECK tab's SET THRESHOLD functionality. This enhancement enables the ability to pick and choose the specific metrics you are interested in, the ability to enter your own threshold values, and the user and or machine group to filter on. It also provides the ability to keep these thresholds private or be able to publish them to the rest of the Stratusphere users and whether it is read only or allows them to update it as well. In addition to that, these thresholds sets can be exported out and imported into Stratusphere in case you want to use them across multiple instances of Stratusphere Hubs or import them from Liquidware's community site.
- Enhanced the ADVANCED > DASHBOARDS tab with the ability to:
 - DASHBOARDS > BROWSE: Manage and browse Dashboards, just as we do for Widgets and Datasources.
 - SEARCH: The Dashboard Search functionality has also been enhanced to accept the Enter button and a Go button has been added to the top and bottom of the Search pane. Additionally, search status icons are added to widgets with color codes to show how well the search criteria were applied – if all search elements match, then the search icon is green, if some match, then yellow, and red if no search elements matched.
 - CACHE: Enable usage of local cache within PREFERENCES for higher performance.
- Enhanced CID Key to support Amazon AppStream 2.0.
- Enhanced the Linux CID Key to include a switch to perform a full application inventory to include documents, libraries, fonts, etc. These are still filtered out by default, but creating a `/opt/vdesktools/grd/.full_inventory` file and restarting services forces the CID Key to perform a full inventory that matches `rpm -qa` output.

Bug Fixes

- Fixed an issue with the ADVANCED > DASHBOARDS where deleting a dashboard would not delete it immediately.
- Fixed an issue with the ADVANCED > DASHBOARDS where the Auto Refresh check box option would not be saved properly.
- Fixed an issue with ADVANCED > DASHBOARDS regarding redraws of widgets and thus enhanced performance.
- Fixed an issue with ADVANCED > DASHBOARDS where the previous dashboard name was displayed when creating a new dashboard.
- Fixed an issue with ADVANCED > DASHBOARDS where some mandatory fields were not labelled correctly and were not marked with an asterisk '*'.

- Fixed an issue with ADVANCED tab related to caching and filters.
- Fixed an issue with the ADVANCED > INSPECTORS tab was not passing the correct custom date to the pop out window.
- Fixed an issue with ADVANCED > INSPECTORS > EVENT LOG tab where the EVENT LOG TIME was not displayed relative to the Hub's time zone but based on local desktop time zone.
- Enhanced and fixed an issue to properly display the correct Make, Model, and Type of machine running on Amazon Web Services (AWS).
- Fixed an issue with the Windows CID Key where it was reporting Event Log Time in the local desktop time zone instead of default UTC time.
- Fixed an issue with the Windows CID Key missing a start time for remote display protocol stats. This would cause all data regarding remote display to be discarded.
- Fixed an issue with the Windows CID Key where it was not reporting Disk IOPs number correctly on a machine level as compared to an application process level.
- Fixed an issue with the Windows CID Key where it was incorrectly identifying RDP session as RFX.
- Fixed an issue with the Windows CID Key tagging EXEs to incorrect application names.
- Fixed an issue with the CID Key on Hyper V regarding Spectre V2.
- Fixed an issue where newly registered Collectors would not receive the initial policy update.
- Fixed an issue where a Collector's DNS name could not be updated within COLLECTOR ADMINISTRATION > COLLECTORS > EDIT PROPERTIES page.
- Fixed an issue where some type of disks on AWS (NVMe, xv) and Nutanix would not stretch to the size recommended by the Stratusphere Sizing Guide.
- Validated use of correct ports where the import from Nutanix Prism would work on a standard, secure and custom port.
- Fixed an issue with the Stratusphere Hub failing to import data from Active Directories using custom certificates.
- Fixed an issue with the Stratusphere database console option to reboot the database appliance.
- Fixed an issue with the Concurrent Licensing where it would look at the named user count instead of the concurrent user count to lock the user out from using the UI.
- Fixed an issue with Licensing on the Hub running on Nutanix where the Hub complained about its license being invalid after upgrading to 6.1.0.
- Fixed an issue with Web UI's LICENSING > RECOVER LICENSES tab's Release Now button displaying an error "Failed to recognize input as days(number)".
- Fixed an issue with the Web UI's Page # drop down selector widget not resetting on a new category selection.
- Fixed an issue with upgrades on Stratusphere appliances running on Microsoft Azure. This fix will work for future upgrades from this version onwards, but existing installations will still need to contact Support@Liquidware.com for help upgrading to the latest version of Stratusphere.

- Fixed an issue with the DIAGNOSTICS > INSPECTORS > TOP CONSUMERS CHARTS view which would log the user out when clicking on any charts to drill down. Please hard refresh the browser to update the web page by clicking CTRL+F5 or SHIFT+F5 depending on your browser.
- Fixed an issue with the Web UI while editing the CID KEY PROPERTIES for an individual machine where it would not store the PERFORM TRACE ROUTE options properly.
- Fixed an issue with the Web UI's HUB ADMINISTRATION > CONNECTOR ID KEYS > CONNECTOR ID KEY PROPERTIES tab where it would still default to using 5,000 CID Key callbacks per hour and not consider Collectors installed to properly suggest recommended callback frequencies based on the 20K callbacks per hour supported in 6.x.
- Fixed an issue in the Web UI's DIAGNOSTICS > REPORTS tab's RUN CRITERIA window where it would not remember the default report criteria.
- Fixed an issue in the Web UI's DIAGNOSTICS tab's name when logging in with a 'User' role.
- Fixed an issue with some scheduled custom reports failing to run when they required a threshold value that is not set by default. These reports would complete successfully when run manually but would fail when scheduled.
- Fixed issues within custom reports which would incorrectly filter some user, machine, and process data out when selecting data from roll-up tables.
- Reports: Added, enhanced, fixed or made minor formatting updates to the following reports:
 - ADMINISTRATION
 - ALERT ON DATABASE DISK PURGE PRIOR TO THRESHOLD
 - MACHINE CALLBACK COUNTS BY DATE
 - MACHINE INVENTORY
 - FIT ASSESSMENT REPORTS (PACK 1)
 - 111. VDI UX BY USER
 - 112. ASSESSMENT FINDINGS
 - FIT DISCOVERY & FINDINGS
 - MACHINE MEMORY SIZE AND USAGE SUMMARY
 - FIT REPORTS – MACHINES
 - MACHINE MEMORY SIZE AND USAGE SUMMARY
 - MACHINE PRINTER SUMMARY
 - UX DIAGNOSTIC REPORTS
 - PEAK RESOURCE CONSUMERS
 - PERFORMANCE COMPARISON BY DAY OF WEEK
 - PERFORMANCE COMPARISON BY HOUR OF DAY
 - PERFORMANCE TIME CHART
 - UX DIAGNOSTIC REPORTS – APPS
 - ~~PROCESS NETWORK DETAILS BY MACHINE, APP, PROCESS, PID, AND REMOTE DOMAIN IP PROTOCOL & PORT~~
 - UX DIAGNOSTIC REPORTS - EVENT LOGS
 - ALL EVENT LOG DETAILS BY MACHINE, USER, & LOG TIME
 - ALL EVENT LOG DETAILS OF CRITICAL SEVERITY BY MACHINE, USER, & LOG TIME

- ALL EVENT LOG DETAILS OF ERROR SEVERITY BY MACHINE, USER, & LOG TIME
- ALL EVENT LOG DETAILS OF WARNING SEVERITY BY MACHINE, USER, & LOG TIME
- APPLICATION EVENT LOG DETAILS BY MACHINE, USER, & LOG TIME
- SECURITY EVENT LOG DETAILS BY MACHINE, USER, & LOG TIME
- SYSTEM EVENT LOG DETAILS BY MACHINE, USER, & LOG TIME
- UX DIAGNOSTIC REPORTS – LOGIN & SESSION
 - LOGIN PROCESS BREAKDOWN DETAILS BY USER, MACHINE, & LOGIN TIME
 - LOGIN PROCESS BREAKDOWN SUMMARY BY USER
 - LOGIN PROCESS BREAKDOWN SUMMARY BY MACHINE
 - LOGIN PROCESS BREAKDOWN SUMMARY BY HOUR
- UX DIAGNOSTIC REPORTS – MACHINES
 - MACHINES WITH HIGH CPU CONTEXT SWITCH RATES
 - MACHINES WITH HIGH CPU USAGE
 - MACHINES WITH HIGH DISK IOPS
 - MACHINES WITH HIGH MEMORY PAGE FAULTS
 - MACHINES WITH HIGH MEMORY USAGE
 - MACHINES WITH HIGH NETWORK IO
 - MACHINES WITH HIGH NETWORK LATENCY
- UX HEALTH CHECK REPORTS
 - 301. PERFORMANCE TIME CHART
 - 305. PEAK RESOURCE CONSUMERS
- UX VALIDATION REPORTS
 - PERFORMANCE COMPARISON BY HOUR OF DAY
 - PERFORMANCE COMPARISON BY DAY OF WEEK
- Security Updates for CentOS appliances: This release has no specific CVEs that address Common Vulnerability and Exposure (CVE). For additional information please refer to <http://cve.mitre.org/index.html>.

Known Issues

- Within ADVANCED > DASHBOARDS when in Edit mode, there are issues editing and saving Dashboards if you use the new DASHBOARDS dropdown option to BROWSE all existing dashboards. As a work around, use the EDIT DASHBOARD button within the bar at the bottom of each dashboard to edit and save changes to the dashboard. Liquidware is investigating this issue and will provide a hot fix patch for it soon and include a fix for it the next patch release.
- If you want to retain your dashboard modifications (widgets & data-sources) through upgrades, please duplicate widgets & data-sources and do not edit the default built-in versions.
- Advanced Inspectors may appear within very small window after an upgrade. Hit the F5 key to restore the regular size.
- While importing Stratusphere OVF's on some ESX versions, the VMware Virtual Infrastructure Client will show a warning. These warnings can be safely ignored.

- While using Internet Explorer 9, the UI may not format & display some pages, such as SAN Diagnostic Summary, as expected due to compatibility issues. Liquidware recommends using the latest version of Internet Explorer, Mozilla Firefox, or Google Chrome as a temporary workaround. Also, while using Mozilla Firefox, some of the ASSESSMENT > SUMMARY tab's graphs and charts may not display call out lines and text as expected until the user clicks in each widget.
- If ENHANCED SECURITY is enabled in the console, it requires using strong passwords including special characters. Using a backslash '\' character in the password causes issues while migrating data from 5.8.5 appliances to 6.0. The password match fails and since the migration asks user to retry, it may result in account lockout if forced to enter multiple times.
- The Windows CID Key on Amazon WorkSpaces depends on the Teradici PCoIP agent to populate the remote client name and remote client IP Address within the registry. If the PCoIP agent does not populate the registry, the CID Key will not be able to collect this information.
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- FIT REPORTS – APPLICATIONS:
 - APPLICATIONS WITH KNOWN POOR VDI FIT INSTALLED BY USER AND MACHINE (CSV) fails if no applications are set as Poor VDI FIT under ASSESSMENT > VDI FIT PROFILE tab.
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Release Available As

- Software Update: This release is available as a Software Update if you are on 6.0.x version of Stratusphere. However, if you are 5.8.5 or higher, we do offer a migration option whereby you can download a new Stratusphere 6.x Hub and Database Appliance and use the migrate option

in the consoles of these new appliances to migrate network configuration, certificates, and data from the old 5.8.5 or higher appliances to the newer 6.x appliances.

NOTE: Please see the [Upgrading](#) section below for instructions.

Release Applies to

- Stratusphere Hub Appliance.
- Stratusphere Database Appliance.
- Stratusphere Collector Appliance.
- Stratusphere Connector ID Key.

Upgrading

If your current installed version of Stratusphere is 6.0.x, please use the instructions in [Upgrading from Stratusphere 6.0](#) to upgrade to the latest version.

If your current installed version of Stratusphere is at 5.8.5 or higher, please use the instructions in [Migrating from 5.8.5 or Higher to 6.0 Appliances](#), to migrate network settings, certificates, and data from 5.8.5 and higher appliances to the 6.0 appliances. If you are on a version earlier than 5.8.5, please upgrade to 5.8.5 and then perform a migration using the instructions mentioned above.

If your current installed version of Stratusphere is 5.7.x or earlier, please upgrade to 5.8.5 and then migrate to Stratusphere 6.0. Please get in touch with Liquidware Labs Customer Support at Support@Liquidware.com or search for a KB article titled “Migrating to Stratusphere 5.7.0” on our Support Site. Additionally, you can reference [Migrating from 5.6.x to 5.7.0 Stratusphere Appliances](#).

If your current installed version of Stratusphere is 4.8.x, please visit our [Support documentation site](#) and read 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@Liquidware.com for further assistance.

Stratusphere™ Release Notes

Version 6.1.0, released October 30th, 2018

What's New?

- **Custom Dashboards:** Liquidware releases our fastest, most beautiful, and most customizable interactive Stratusphere dashboards ever! They are now available under the **ADVANCED > DASHBOARDS** tab. There are 11 built-in dashboards with the ability to add and customize more based on your own criteria using customizable data sources and widgets. Users can also use Search to specifically look for something and constrain criteria on what they are interested in.
- **Process Optimization:** Liquidware releases a new feature to optimize user experience on sub-optimally sized machines to enhance productivity and increase desktop density while maintaining great end user experience. Simply put, this feature boosts performance of the actively used, in-focus application while slightly deprioritizing resources for other applications and background tasks. The feature can be enabled within the Web UI under **HUB ADMINISTRATION > CONNECTOR ID KEYS > CONNECTOR ID KEY PROPERTIES** tab, with built-in performance profiles on Microsoft Windows single-user and multi-user platforms. All optimizations made by the CID Key on process are available for reporting under the **PROCESS OPTIMIZATION REPORTS** category.
- **Process Network Metrics:** Liquidware expands per process level metrics by providing greater visibility on network connectivity, data usage, and latencies associated with each process that communicates over the network. For each Windows process active on the network, this feature identifies domains, IP Addresses, ports, protocols, data transferred, and associated latencies while communicating with remote entities on the network. This feature is available under **ADVANCED > INSPECTORS > APPLICATIONS** and the new **ADVANCED > INSPECTORS > PROCESS NAMES** tab under the **IO | PROCESS NETWORK KB** and **IO | PROCESS NETWORK LATENCY INSPECTOR VIEWS**. Reports are also available under the **UX DIAGNOSTIC REPORTS – APPS** category.
- **Advanced SpotChecks:** Liquidware announces implementation of its SpotCheck methodology available under the **ADVANCED > SPOTCHECKS** tab. This feature employs over 100 spot-checks and applies smart threshold filters to easily identify problems in the environment. Each spot-check suggests answers or provides guidance in form of tooltips on how to fix associated issues.
- **Windows Event Logs:** Liquidware releases the ability to harvest Microsoft Windows Event Logs from machines with a CID Key installed. This feature can be configured within the Web UI under **HUB ADMINISTRATION > CONNECTOR ID KEYS > CONNECTOR ID KEY PROPERTIES** tab, where users can specify collecting logs from Application, System, Security Logs, the Log or Severity Level (Critical, Error, Warning, Information) and/or specifying specific Event IDs to include or exclude. All Event Logs collected from CID Keys are displayed under **ADVANCED > INSPECTORS > EVENT LOG** tab and within the **UX DIAGNOSTIC REPORTS - EVENT LOGS REPORTS** category.
- **VMware Blast Metrics:** Liquidware extends visibility into remote display session protocols by adding VMware Blast metrics (on Horizon Agent 7.3 and higher), to its industry leading stack of display protocol metrics that include PCoIP, RDP/RFX, and ICA/HDX. VMware Blast metrics are

available under the ADVANCED > INSPECTORS > REMOTE DISPLAY tab that shows metrics for other protocols as well under the UX DIAGNOSTIC REPORTS – REMOTE DISPLAY PROTOCOL reports category.

- **CID Keys:** CID Keys now support Apple macOS Sierra, High Sierra, and Mojave. CID Keys now also properly identify and support Amazon’s versions of Linux distribution.
- **Microsoft Azure:** Liquidware announces official support for Stratusphere on Microsoft Azure.

Enhancements

- Enhanced and refreshed the product look by switching to a blue color scheme consistent with the Liquidware logo. Within ADVANCED > INSPECTORS tab, if the option KEEP GRAPHS CLOSED BY DEFAULT is enabled under ADVANCED > PREFERENCES, the table takes up the entire page enhancing usability tremendously. An option to render table first and graphs below is also new in this version. Full screen mode is also highly recommended.
- Enhanced the User 360 pop out page by adding link to Top or Lowest 25 type queries to identify additional areas that could affect end user experience.
- Enhanced visibility to consistently show when a remote session ended for Citrix ICA/HDX, Microsoft RDP/RFX, and VMware Blast protocols beyond just Teradici PCoIP.
- Enhanced visibility of usage by providing the amount of time a user was idle within each session. This information is available on any machine session – local, remote, physical, virtual, single or multi-user sessions. This data is displayed under ADVANCED > INSPECTORS > REMOTE DISPLAY with total session duration, percentage of connected and disconnected time, as well as percentage of active and idle times. Reports under the new UX DIAGNOSTICS REPORTS – LOGIN & SESSION category starting with USER SESSION LOGIN... have also been updated with idle session time information.
- Enhanced visibility and usability by adding Machine Group basis to the ADVANCED > INSPECTORS > INVENTORY tab.
- Enhanced overall Stratusphere API speed and performance in this release by optimizing SQL API calls. Enhanced Stratusphere API by adding the UX and FIT rating scores. Also, Liquidware enhanced security around Stratusphere API by disallowing usage of the default `ssadmin` user or any password that contains ‘password’ in it. Liquidware recommends creating a different set of users that are allowed API access using best practices around password security.
- Reduced resource and bandwidth utilization by the CID Key by using LZ4 compression and straight SSL based encryption while communicating with the Stratusphere Hub and Collectors. The CID Key could also be configured to communicate back to the Hub instead of 443 as long it still uses HTTP over SSL/TLS (HTTPS). Also, the CID Key will no longer allow straight HTTP based connections anymore.
- Enhanced visibility of remote client versions by adding client version for PCoIP and VMware Blast Clients in addition to the Citrix ICA/HDX clients.
- Enhanced performance of the CID Key on print servers where it would inevitably hang on enumerating printers on the print server.
- Enhanced visibility within the HUB ADMINISTRATION > DATA RETENTION > SETTINGS tab by displaying the range of dates between which data is available, number of days of data, and amount of storage space used by the Stratusphere Detail Retention and Roll-up data.

- Enhanced visibility by enabling some major Login Breakdown metrics to be rolled-up for longer term reporting. Additionally, two new reports to provide details and summaries by Domain Controllers have also been added to the new UX DIAGNOSTICS REPORTS – LOGIN & SESSION category of reports.
- Enhanced visibility into Microsoft RFX by adding 22 new metrics including Base & Current Roundtrip Latency for TCP & UDP, FEC Rate, Loss Rate, Retransmit Rate, FPS by Sent, Received, Source, Server Loss, Client Lost, and Network Loss to name a few. These metrics are available in the Microsoft RDP/RFX report under the UX DIAGNOSTIC REPORTS – REMOTE DISPLAY PROTOCOL reports category and will be available within the UI soon.
- Enhanced the FIT ASSESSMENT REPORTS – (PACK 1) > 112. ASSESSMENT FINDINGS report by included application processes from all operating systems instead of just Windows based machines.
- Enhanced visibility by collecting PCoIP metrics on multi-user systems such as RDS based VMware View Pools.
- Enhanced ease of identifying the Hub that sent a report by adding a FROM: field under HUB ADMINISTRATION > CONFIGURATION tab that can be customized with a name that easily identifies the Hub that sends a report via email.

Bug Fixes

- Fixed an issue with the CID Key where a version was not picking up logout times on single user, desktop-based Windows platforms.
- Fixed an issue with the CID Key where it could not auto-upgrade to the new version of itself on Red Hat 7.
- Fixed an issue with ADVANCED > INSPECTORS exports running out of space by moving the exports to a much larger location within the Hub appliance.
- Fixed an issue with ADVANCED > INSPECTORS exports now displaying whether Roll-ups were used for the data retrieval within the Information sheet of the export.
- Fixed an issue where the Hub was out of sync with the CID Key Inspection report retention policy in terms of duration.
- Fixed an issue where the menu options to change default passwords for the friend, root, and sconsole users were unavailable on the Hub and Collector appliances.
- Fixed an issue where the database could not accept data for the current day due to missing partition table for the current day.
- Fixed an issue within the DIAGNOSTICS > INSPECTORS > NETWORK CONNECTION HISTORY where the Interval based Network Audit data page would display a 404 error while view further network connection details.
- Fixed an issue within the DIAGNOSTICS > INSPECTORS > NETWORK APPLICATION SUMMARY and COLLECTOR ADMINISTRATION > NETWORK COLLECTOR POLICIES tabs where the name of the network application was incorrect.
- Fixed an issue within HUB ADMINISTRATION > CONNECTOR ID KEYS > CONNECTOR ID KEY SOFTWARE tab where it would display the Properties page while trying to download the Example Group Policy template.

- Fixed an issue within the LICENSING > RECOVER LICENSES tab under the ADMINISTRATION section where the user had to SAVE the number of days since last observed to recover user or machine licenses before using the RELEASE NOW button.
- Fixed an issue within the LICENSING > RECOVER LICENSES tab under the ADMINISTRATION section where the User Licenses settings for recovery were not being saved.
- Fixed an issue where there was a minor difference between the amount displayed in the CONSUMED DATABASE SPACE widget in the HUB ADMINISTRATION > OVERVIEW page and the HUB ADMINISTRATION > DATA RETENTION > STATUS page's CURRENT AUDIT SIZE fields.
- Fixed an issue where the roll-up partitions failed to be created if the time zone did not have a simple 3 or 4 letter short name.
- Fixed an issue where the DIAGNOSTICS > INSPECTORS and REPORTS tabs missing data while using daily roll-ups as it would not use the seconds and milliseconds for the end date which within roll-ups was always set for the end of the day down to the second and milliseconds.
- Fixed an issue within the DIAGNOSTICS > REPORTS tab where the RUN CRITERIA window would have the dropdowns for Report Date and Compare Date enabled for all reports regardless of whether the report supported dates or not.
- Fixed an issue within DIAGNOSTICS > VDI UX PROFILE where some metric thresholds for FAIR and POOR were being improperly set to 0. It must be noted that in the current implementation, the algorithm looks for a minimum of 25 samples to properly evaluate thresholds and standard deviations. In some cases, if there is no data captured for a metric, it could be reset to 0.
- Fixed an issue within INVENTORY > MACHINES tab where the SHOW MEMBERS page would require two mouse clicks to sort table columns.
- Fixed an issue within the INVENTORY > MACHINES tab where editing a single machine's properties to customize Connector ID Key Properties would not save updated callback and sampling frequencies.
- Fixed an issue within the ADVANCED > INSPECTORS > REMOTE DISPLAY tab where no PCoIP data was being displayed due to unexpected data type issues for some metrics.
- Fixed an issue where the Hub & Collectors were observed to be processing CID Key uploads at a slow rate due to deadlocks observed while updating applications.
- Fixed an issue within ADVANCED > SEARCH where it would display an error message if roll-ups were disabled.
- Fixed an issue with the CID Key and Hub where it would not properly collect and display Unicode characters for Japanese VMs for some areas such as disk labels, login breakdown event descriptions, details, etc.
- Fixed an issue with the Hub where the version of the Windows OS and the changes in RAM allocated were not being updated within the database.
- Fixed an issue with the CID Key on some older version of macOS where the CPU % used would be high especially after the machine was awoken from sleep.
- Fixed an issue within the Hub associated with storing server roles associated with multiple server machines.

- Fixed an issue where the ADVANCED > INSPECTORS > REMOTE DISPLAY tab would show no user logged in while the Local Administrator was logged in.
- Fixed an issue where the EVENT LOGS within the Administration now display the host name of the machine in addition to the IP Address.
- Fixed an issue within the Hub where the detail data roll-up flag was not being reset if the rollups were enabled and are then disabled.
- Fixed an issue within the HUB ADMINISTRATION > CONNECTOR ID KEYS > CONNECTOR ID KEY PROPERTIES page where the popup warning regarding whether to accept or reject recommended callback frequency values was always assuming minutes, even though hours was selected.
- Fixed an issue with some parts of the Web UI not populating or getting hung, like Login page where the drop down for the domain would not be populated, etc.
- Fixed an issue where the CID Key on Ubuntu was registering with the short host name and the long host name.
- Fixed an issue with the HUB ADMINISTRATION > CONFIGURATION page where one could save invalid IP Addresses for the time servers by adding validation to the IP Addresses.
- Fixed an issue with the DIAGNOSTICS > ALERTS page where the secure RSS feed was broken on Google Chrome.
- Fixed an issue while importing Stratusphere appliances on Nutanix.
- Fixed an issue in the CID Key with duplicate IPv6 ping replies causing issues with IPv4 ping replies.
- Fixed an issue within the Event Log where large number of messages relating to updating machine information were being generated when no information was changed.
- Fixed an issue where a warning was being generated while importing the Stratusphere appliances on VMware vSphere 6.5.
- Reports: Added, enhanced, fixed or made minor formatting updates to the following reports:
 - ADMINISTRATION
 - ALERT ON MISSING DB INSERTIONS
 - MACHINES OVERDUE FOR CALLBACK
 - MACHINES IN MACHINE GROUPS
 - SPECTRE MELTDOWN PATCH REMEDIATION REPORT
 - FIT ASSESSMENT REPORTS (PACK 1)
 - 111. VDI UX BY USER
 - 112. ASSESSMENT FINDINGS
 - FIT ASSESSMENT REPORTS (PACK 2)
 - 207. USER RESOURCE BASELINES
 - 208. MACHINE RESOURCE BASELINES
 - 209. MACHINE IO BASELINES
 - FIT REPORTS – MACHINES
 - MACHINE RESOURCE BASELINES
 - MACHINE IO BASELINES
 - FIT REPORTS – USERS

- USER RESOURCE BASELINES
 - VDI UX BY USER
- MANAGEMENT REPORTS
 - **USER COUNTS BY DAY HOUR (NEW)**
- **PROCESS OPTIMIZATION REPORTS (6 NEW REPORTS)**
- **PROFILEUNITY REPORTS (6 NEW REPORTS)**
- UX DIAGNOSTIC REPORTS
 - PERFORMANCE TIME CHART
 - DIAGNOSTIC FINDINGS
 - ~~DEPRECATED PERFORMANCE COMPARISON~~
 - PERFORMANCE COMPARISON BY HOUR OF DAY
 - PERFORMANCE COMPARISON BY DAY OF WEEK
- UX DIAGNOSTIC REPORTS – APPS
 - **PROCESS NETWORK DETAILS BY MACHINE, APP, PROCESS, PID, AND REMOTE DOMAIN IP PROTOCOL & PORT (NEW)**
 - **PROCESS NETWORK SUMMARY BY APP, PROCESS, AND REMOTE DOMAIN IP & PORT (NEW)**
 - **PROCESS NETWORK SUMMARY BY APP, PROCESS, AND REMOTE DOMAIN (NEW)**
 - **PROCESS NETWORK SUMMARY BY APPLICATION AND PROCESS (NEW)**
 - **PROCESS NETWORK SUMMARY BY APPLICATION (NEW)**
 - **PROCESS NETWORK SUMMARY BY PROCESS (NEW)**
 - **PROCESS NETWORK SUMMARY BY REMOTE DOMAIN (NEW)**
- **UX DIAGNOSTIC REPORTS - EVENT LOGS (12 NEW REPORTS)**
- **UX DIAGNOSTIC REPORTS – LOGIN & SESSION (NEW CATEGORY FOR LOGIN & SESSION REPORTS)**
 - **LOGIN METRICS DETAILS BY DOMAIN CONTROLLER, USER, MACHINE, & LOGIN TIME (NEW)**
 - **LOGIN METRICS SUMMARY BY DOMAIN CONTROLLER (NEW)**
 - USER SESSION LOGIN DETAILS
 - USER SESSION LOGIN SUMMARY BY USER
 - USER SESSION LOGIN SUMMARY BY USER GROUP
 - USER SESSION LOGIN SUMMARY BY MACHINE
 - USER SESSION LOGIN SUMMARY BY MACHINE GROUP
- UX DIAGNOSTIC REPORTS – MACHINES
 - **MACHINES BY DISK SPACE USED (NEW)**
 - REMOTE CLIENT SESSION SUMMARY
- UX DIAGNOSTIC REPORTS - REMOTE DISPLAY PROTOCOL
 - MICROSOFT RDP/RFX CONNECTION SUMMARY BY USER AND MACHINE
 - **VMWARE BLAST CONNECTION SUMMARY BY USER AND MACHINE (NEW)**
- UX HEALTH CHECK REPORTS
 - PERFORMANCE TIME CHART
 - DIAGNOSTIC FINDINGS
- UX VALIDATION REPORTS
 - DIAGNOSTIC FINDINGS

- DEPRECATED PERFORMANCE COMPARISON
 - PERFORMANCE COMPARISON BY HOUR OF DAY
 - PERFORMANCE COMPARISON BY DAY OF WEEK
- Security Updates for CentOS appliances. The updates address Common Vulnerability and Exposure (CVE) CVE-2017-0861, CVE-2017-15265, CVE-2018-2952, CVE-2018-3136, CVE-2018-3139, CVE-2018-3149, CVE-2018-3169, CVE-2018-3180, CVE-2018-3183, CVE-2018-3214, CVE-2018-3620, CVE-2018-3639, CVE-2018-3646, CVE-2018-3665, CVE-2018-3693, CVE-2018-5391, CVE-2018-5740, CVE-2018-5740, CVE-2018-7566, CVE-2018-10675, CVE-2018-10872, CVE-2018-10897, CVE-2018-10901, CVE-2018-10915, CVE-2018-10925, CVE-2018-12020, CVE-2018-12384, CVE-2018-14634, CVE-2018-1000004. For additional information please refer to <http://cve.mitre.org/index.html>.

Known Issues

- Advanced Inspectors may appear within very small window after an upgrade. Hit the F5 key to restore the regular size.
- While importing Stratusphere OVF's on some ESX versions, the VMware Virtual Infrastructure Client will show a warning. These warnings can be safely ignored.
- While using Internet Explorer 9, the UI may not format & display some pages, such as SAN Diagnostic Summary, as expected due to compatibility issues. Liquidware recommends using the latest version of Internet Explorer, Mozilla Firefox, or Google Chrome as a temporary workaround. Also, while using Mozilla Firefox, some of the ASSESSMENT > SUMMARY tab's graphs and charts may not display call out lines and text as expected until the user clicks in each widget.
- If ENHANCED SECURITY is enabled in the console, it requires using strong passwords including special characters. Using a backslash '\ character in the password causes issues while migrating data from 5.8.5 appliances to 6.0. The password match fails and since the migration asks user to retry, it may result in account lockout if forced to enter multiple times.
- The Windows CID Key on Amazon WorkSpaces depends on the Teradici PCoIP agent to populate the remote client name and remote client IP Address within the registry. If the PCoIP agent does not populate the registry, the CID Key will not be able to collect this information.
- The development of the Windows Advanced CID Key has been paused and will not be available in newer versions of Stratusphere.
- The DIAGNOSTICS > INSPECTORS > DESKTOP APPLICATION SUMMARY page times out after 15 minutes and may result in an error. This is due to the Chart on the page, waiting for a query to finish. If the user uses the browser's Back button, the table data will be updated but the chart may be empty or displaying existing results.
- Any reports that are going to be scheduled and accept a threshold value parameter, should be saved with the threshold value within its details when edited. If the threshold value is not saved, the report may fail to run. The same report is known to fall back to a default threshold value when run manually but unfortunately fails to run when scheduled without a threshold value.
- Depending on the number of days queried for some DIAGNOSTICS > REPORTS tab-based DETAIL reports that involve returning many hundreds of thousands of rows (more than 200K records)

could potentially cause the reporting engine to run out of memory while outputting the report for Excel format. Liquidware is working to address the issue in the next version. Please use the Hub's virtual appliance command line console-based menu option 'W' to restart web services if this occurs.

- FIT REPORTS – APPLICATIONS:
 - APPLICATIONS WITH KNOWN POOR VDI FIT INSTALLED BY USER AND MACHINE (CSV) fails if no applications are set as Poor VDI FIT under ASSESSMENT > VDI FIT PROFILE tab.
 - APPLICATION COMPARISON BY MACHINE GROUP Report has performance issues.

Announcements

- **End-of-Life for Stratusphere version 5.7.1 and earlier:** Liquidware will be discontinuing all sales and technical support of Stratusphere version 5.7.1 and earlier effective 12/31/2018. We encourage all customers who may still be utilizing these versions to upgrade to a more recent version to take advantage of the numerous technologies & feature enhancements as well as resolved support issues.

Release Available As

- Virtual Appliance Downloads: Please visit www.Liquidware.com/Download/ to download the latest versions of Stratusphere appliances in OVF format. Liquidware will start by release VMware ESXi appliances first and then release the remaining formats of Hyper V, Nutanix, KVM, AMI, Azure, XVA, and ZIP formats in a phased manner.
- Software Update: This release is available as a Software Update if you are on 6.0.x version of Stratusphere. However, if you are 5.8.5 or higher, we do offer a migration option whereby you can download a new Stratusphere 6.x Hub and Database Appliance and use the migrate option in the consoles of these new appliances to migrate network configuration, certificates, and data from the old 5.8.5 or higher appliances to the newer 6.x appliances.

NOTE: Please see the Upgrading section below for instructions.

Release Applies to

- Stratusphere Hub Appliance.
- Stratusphere Database Appliance.
- Stratusphere Collector Appliance.
- Stratusphere Connector ID Key.

Upgrading

If your current installed version of Stratusphere is 6.0.x, please use the instructions in [Upgrading from Stratusphere 6.0](#) to upgrade to the latest version.

If your current installed version of Stratusphere is at 5.8.5 or higher, please use the instructions in [Migrating from 5.8.5 or Higher to 6.0 Appliances](#), to migrate network settings, certificates, and data from 5.8.5 and higher appliances to the 6.0 appliances. If you are on a version earlier than 5.8.5, please upgrade to 5.8.5 and then perform a migration using the instructions mentioned above.

If your current installed version of Stratusphere is 5.7.x or earlier, please upgrade to 5.8.5 and then migrate to Stratusphere 6.0. Please get in touch with Liquidware Labs Customer Support at Support@Liquidware.com or search for a KB article titled “Migrating to Stratusphere 5.7.0” on our Support Site. Additionally, you can reference [Migrating from 5.6.x to 5.7.0 Stratusphere Appliances](#).

If your current installed version of Stratusphere is 4.8.x, please visit our [Support documentation site](#) and read 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@Liquidware.com for further assistance.

Stratusphere™ Release Notes

Version 6.0.3, released June 13th, 2018

What's New?

- This is mainly a security update and bug fix release.

Enhancements & Bug Fixes

- Fixed an issue in the ADVANCED > INSPECTORS > LOGIN tab where it would display a SQL error while looking up data by Machine Groups.
- Security Updates for CentOS appliances. The updates address Common Vulnerability and Exposure (CVE) CVE-2017-7645, CVE-2017-8824, CVE-2017-13166, CVE-2017-18017, CVE-2017-1000410, CVE-2018-1111, CVE-2018-1115, CVE-2018-1124, CVE-2018-1126, CVE-2018-2790, CVE-2018-2794, CVE-2018-2795, CVE-2018-2796, CVE-2018-2797, CVE-2018-2798, CVE-2018-2799, CVE-2018-2800, CVE-2018-2814, CVE-2018-2815, CVE-2018-3639, CVE-2018-8897, & CVE-2018-1000156. For additional information please refer to <http://cve.mitre.org/index.html>.

Known Issues

- Advanced Inspectors may appear within very small window after an upgrade. Hit the F5 key to restore the regular size.
- While importing Stratusphere OVF's on some ESX versions, the VMware Virtual Infrastructure Client will show a warning. These warnings can be safely ignored.
- While using Internet Explorer 9, the UI may not format & display some pages, such as SAN Diagnostic Summary, as expected due to compatibility issues. Liquidware recommends using the latest version of Internet Explorer, Mozilla Firefox, or Google Chrome as a temporary workaround. Also, while using Mozilla Firefox, some of the ASSESSMENT > SUMMARY tab's graphs and charts may not display call out lines and text as expected until the user clicks in each widget.
- If ENHANCED SECURITY is enabled in the console, it requires using strong passwords including special characters. Using a backslash '\ character in the password causes issues while migrating data from 5.8.5 appliances to 6.0. The password match fails and since the migration asks user to retry, it may result in account lockout if forced to enter multiple times.
- The Windows CID Key on Amazon WorkSpaces depends on the Teradici PCoIP agent to populate the remote client name and remote client IP Address within the registry. If the PCoIP agent does not populate the registry, the CID Key will not be able to collect this information.
- Editing and customizing a machine's CID Key Properties may not save properly in the INVENTORY > MACHINES tab's EDIT MACHINE: > CONNECTOR ID KEY PROPERTIES page.
- The ADVANCED > INSPECTORS > EXTENSIONS tab may display incorrect count and size of file extensions under certain conditions such multiple boots, logins or restarting of the CID Key.
- The DIAGNOSTICS > INSPECTORS > DESKTOP APPLICATION SUMMARY page times out after 15 minutes and may result in an error. This is due to the Chart on the page, waiting for a query to finish. If the user uses the browser's Back button, the table data will be updated but the chart may be empty or displaying existing results.

- The DIAGNOSTIC > INSPECTORS > NETWORK APPLICATION SUMMARY tab's network APPLICATION name may not match the name used to specify the application in the COLLECTOR ADMINISTRATION > NETWORK COLLECTOR POLICIES tab.
- Reports:
 - FIT REPORTS – APPLICATIONS:
 - APPLICATIONS WITH KNOWN POOR VDI FIT INSTALLED BY USER AND MACHINE (CSV) fails if no applications are set as Poor VDI FIT under ASSESSMENT > VDI FIT PROFILE tab.
 - APPLICATION COMPARISON BY MACHINE GROUP Report has performance issues.

Release Available As

- Software Update: This release is only available as a Software Update if you are on 6.0.x version of Stratusphere. However, if you are 5.8.5 or higher, we do offer a migration option whereby you can download a new Stratusphere 6.0.x Hub and Database Appliance and use the migrate option in the consoles of these new appliances to migrate network configuration, certificates, and data from the old 5.8.5 or higher appliances to the newer 6.0 appliances.

NOTE: Please see the Upgrading section below for instructions.

Release Applies to

- Stratusphere Hub Appliance.
- Stratusphere Database Appliance.
- Stratusphere Collector Appliance.

Upgrading

If your current installed version of Stratusphere is 6.0.0, please use the instructions in [Upgrading from Stratusphere 6.0](#) to upgrade to the latest version.

If your current installed version of Stratusphere is at 5.8.5 or higher, please use the instructions in [Migrating from 5.8.5 or Higher to 6.0 Appliances](#), to migrate network settings, certificates, and data from 5.8.5 and higher appliances to the 6.0 appliances. If you are on a version earlier than 5.8.5, please upgrade to 5.8.5 and then perform a migration using the instructions mentioned above.

If your current installed version of Stratusphere is 5.7.x or earlier, please upgrade to 5.8.5 and then migrate to Stratusphere 6.0. Please get in touch with Liquidware Labs Customer Support at Support@Liquidware.com or search for a KB article titled "Migrating to Stratusphere 5.7.0" on our Support Site. Additionally, you can reference [Migrating from 5.6.x to 5.7.0 Stratusphere Appliances](#).

If your current installed version of Stratusphere is 4.8.x, please visit our [Support documentation site](#) and read 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@Liquidware.com for further assistance.

Stratusphere™ Release Notes

Version 6.0.2, released April 24th, 2018

What's New?

- This is mainly a security update and bug fix release with limited enhancements.

Enhancements & Bug Fixes

- Added many security updates and vulnerability patches.
- Enhanced the ADVANCED > INSPECTORS to use updated Application Process summarized daily roll-up tables in APPLICATIONS tabs for faster performance. DIAGNOSTICS > INSPECTORS and DIAGNOSTICS > REPORTS will be updated in the 6.1 version to use updated roll-up tables.
- Enhanced the PREVIEW > CUSTOM DASHBOARDS with previews for data sources, ability to highlight rows, auto-refresh functionality, column sorting and sorting order, enhanced search functionality, and addition of preferences to customize behavior.
- Enhanced CID Key fallback logic whereupon if the CID Key fails to upload data 5 times in a row to Collectors, it will fallback to the Hub and only request an updated cert.txt to see if Collectors have been added, updated, or removed and not upload any current or pending reports to the Hub.
- Enhanced AWS AMIs to include Elastic Network Adaptor (ENA) to add compatibility with m5 tier on AWS.
- Fixed an issue where the versions of the Collectors were not changing after upgrading to 6.0.1.
- Fixed an issue where the migration wizard would not pause to show an error if it failed before the data transfer process began.
- Fixed an issue where CID Key services on VMware Instant Clones would fail to start by adding a VMWARE INSTANT CLONES POST SYNC SCRIPT. This script uses absolute paths because VMware would move the post sync scripts to the temporary folder where usage of relative paths would fail.
- Fixed an issue where some reports with hourly breakdown of data were displaying inaccurate values while using daily roll-up tables instead of the hourly or detail level tables.
- Fixed an issue where the CID Key will now perform trace routes from source to destination of a connection instead of performing bidirectional trace routes i.e. from source to destination as well as destination to source.
- Fixed an issue with CID Key on MAC OS High Sierra would not register with the Hub.
- Fixed an issue where the Web UI would show a negative number in bytes of storage space utilized for summarized, daily roll-up tables.
- Fixed an issue where the Web UI would not show the HUB ADMINISTRATION > UPGRADES > ONLINE tab automatically when an online upgrade was available.
- Fixed an issue while editing an existing subnet under the INVENTORY > SUBNETS tab.
- Fixed an issue with Smart Groups associated with machine name pattern matching failing to associate similar named machines within a Smart Group as configured.

- Fixed an issue where the swap partition on the disk2 of the Database appliance would not stretch as expected.
- Fixed an issue where the database would spike to 100% CPU if no network connection partitions were observed for the automatic partition management.
- Fixed an issue with the CID Key where it would not associate process end times with ones that have been uploaded to Stratusphere but have since exited.
- Added, enhanced, fixed or made minor formatting updates to the following reports:
 - ADMINISTRATION > DATABASE SCHEMA TABLE SIZE BREAKDOWN
 - ADMINISTRATION > MACHINES OBSERVED BY MACHINE GROUPS
 - ADMINISTRATION > MACHINES WITH UPTIMES ABOVE THRESHOLD
 - ADMINISTRATION > SPECTRE MELTDOWN PATCH REMEDIATION STATUS FOR WINDOWS 10 MACHINES
 - FIT ASSESSMENT REPORTS (PACK 1) > 112. ASSESSMENT FINDINGS
 - FIT ASSESSMENT REPORTS (PACK 1) > 106. PEAK IOPS AGGREGATED BY HOUR
 - FIT ASSESSMENT REPORTS (PACK 2) > 202. KEY METRICS AVERAGED BY HOUR
 - FIT ASSESSMENT REPORTS (PACK 2) > 203. KEY METRICS AGGREGATED BY HOUR (MONDAY-FRIDAY)
 - FIT ASSESSMENT REPORTS (PACK 2) > 213. NETWORK CONNECTION DETAILS FOR CID KEY COMMUNICATIONS
 - UX DIAGNOSTIC REPORTS > PERFORMANCE TIME CHART
- Security Updates for CentOS appliances. The updates address Common Vulnerability and Exposure (CVE) CVE-2017-5753, CVE-2017-5715, CVE-2017-5754, CVE-2018-1058, CVE-2018-5732, and CVE-2018-5733. For additional information please refer to <http://cve.mitre.org/index.html>.

Known Issues

- Advanced Inspectors may appear within very small window after an upgrade. Hit the F5 key to restore the regular size.
- While importing Stratusphere OVF's on some ESX versions, the VMware Virtual Infrastructure Client will show a warning. These warnings can be safely ignored.
- While using Internet Explorer 9, the UI may not format & display some pages, such as SAN Diagnostic Summary, as expected due to compatibility issues. Liquidware recommends using the latest version of Internet Explorer, Mozilla Firefox, or Google Chrome as a temporary workaround. Also, while using Mozilla Firefox, some of the ASSESSMENT > SUMMARY tab's graphs and charts may not display call out lines and text as expected until the user clicks in each widget.
- If ENHANCED SECURITY is enabled in the console, it requires using strong passwords including special characters. Using a backslash '\ character in the password causes issues while migrating data from 5.8.5 appliances to 6.0. The password match fails and since the migration asks user to retry, it may result in account lockout if forced to enter multiple times.
- The Windows CID Key on Amazon WorkSpaces depends on the Teradici PCoIP agent to populate the remote client name and remote client IP Address within the registry. If the PCoIP agent does not populate the registry, the CID Key will not be able to collect this information.

- Editing and customizing a machine's CID Key Properties may not save properly in the INVENTORY > MACHINES tab's EDIT MACHINE: > CONNECTOR ID KEY PROPERTIES page.
- The ADVANCED > INSPECTORS > EXTENSIONS tab may display incorrect count and size of file extensions under certain conditions such multiple boots, logins or restarting of the CID Key.
- The DIAGNOSTICS > INSPECTORS > DESKTOP APPLICATION SUMMARY page times out after 15 minutes and may result in an error. This is due to the Chart on the page, waiting for a query to finish. If the user uses the browser's Back button, the table data will be updated but the chart may be empty or displaying existing results.
- The DIAGNOSTIC > INSPECTORS > NETWORK APPLICATION SUMMARY tab's network APPLICATION name may not match the name used to specify the application in the COLLECTOR ADMINISTRATION > NETWORK COLLECTOR POLICIES tab.
- Reports:
 - FIT REPORTS – APPLICATIONS:
 - APPLICATIONS WITH KNOWN POOR VDI FIT INSTALLED BY USER AND MACHINE (CSV) fails if no applications are set as Poor VDI FIT under ASSESSMENT > VDI FIT PROFILE tab.
 - APPLICATION COMPARISON BY MACHINE GROUP Report has performance issues.

Release Available As

- Software Update: This release is only available as a Software Update if you are on 6.0.x version of Stratusphere. However, if you are 5.8.5 or higher, we do offer a migration option whereby you can download a new Stratusphere 6.0.x Hub and Database Appliance and use the migrate option in the consoles of these new appliances to migrate network configuration, certificates, and data from the old 5.8.5 or higher appliances to the newer 6.0 appliances.

NOTE: Please see the Upgrading section below for instructions.

Release Applies to

- Stratusphere Hub Appliance.
- Stratusphere Database Appliance.
- Stratusphere Collector Appliance.
- Stratusphere Connector ID Key.

Upgrading

If your current installed version of Stratusphere is 6.0.0, please use the instructions in [Upgrading from Stratusphere 6.0](#) to upgrade to the latest version.

If your current installed version of Stratusphere is at 5.8.5 or higher, please use the instructions in [Migrating from 5.8.5 or Higher to 6.0 Appliances](#), to migrate network settings, certificates, and data from 5.8.5 and higher appliances to the 6.0 appliances. If you are on a version earlier than 5.8.5, please upgrade to 5.8.5 and then perform a migration using the instructions mentioned above.

If your current installed version of Stratusphere is 5.7.x or earlier, please upgrade to 5.8.5 and then migrate to Stratusphere 6.0. Please get in touch with Liquidware Labs Customer Support at

Support@Liquidware.com or search for a KB article titled "Migrating to Stratusphere 5.7.0" on our Support Site. Additionally, you can reference [Migrating from 5.6.x to 5.7.0 Stratusphere Appliances](#).

If your current installed version of Stratusphere is 4.8.x, please visit our [Support documentation site](#) and read 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@Liquidware.com for further assistance.

Stratusphere™ Release Notes

Version 6.0.1, released February 27st, 2018

What's New?

- This is a security update and bug fix release only.

Enhancements & Bug Fixes

- Added many security updates and vulnerability patches, including Java updates, Meltdown & Spectre security updates specifically.
- Enhanced the ADVANCED > INSPECTORS to use summarized daily roll-up tables in the USERS, MACHINES, and APPLICATIONS tabs for faster performance.
- Enhanced the Preview Custom Dashboards with auto-refresh functionality, column sorting and sorting order, and enhanced search functionality.
- Enhanced the database copy & migration wizard to provide the amount of time estimated for the data copy/migration to finish. This is just an approximate estimation.
- Enhanced CID Key to collect security updates installed on Windows machines to detect specific patches installed on each machine. This will be used to report on which machines have been patched for Spectre and Meltdown soon.
- Enhanced appliance flexibility and uptime by adding the ability to hot add CPU and RAM resources to the Stratusphere virtual appliances.
- Enhanced CID Key to support Apple macOS High Sierra 10.13 and support determining an appropriate host name for the machine as well.
- Reduced disk space requirements by eliminating the Summarized Hourly, Weekly, Monthly, and Yearly roll-ups.
- Enhanced summary roll-up processing functionality where processing data and creation of summarized data will temporarily pause if the disk space used was close to the auto-delete threshold.
- Enhanced and revised how some roll-up values for certain metrics were being calculated. Affected metrics include Application Load Time, RAM Usage, Network Latency, Session Latency, etc.
- Fixed an issue with the CID Key where in some instances it would erroneously associate a process to a different application than the one expected.
- Fixed an issue with the CID Key where it would not send ping metrics related to remote display sessions.
- Fixed an issue with the Hub where it erroneously reports a successful sync with VMware vSphere but gets no data during the sync.
- Fixed an issue with the Hub's VMware vSphere sync operation where it was unable to associate a virtual machine with the host it was running on.
- Fixed an issue where some Summarized Roll-up tables were not being auto-deleted on being disabled until that period was over.

- Fixed an issue with the APPLICATION pop-out inspector under the ADVANCED > SEARCH 360 MACHINE GROUP > SYSTEM PROCESS & SERVICES CONSUMPTION FOR MACHINE GROUPS table.
- Fixed an issue in the Web UI where the ASSESSMENT > SUMMARY tab widgets would show no callout lines and text in the pie charts.
- Fixed an issue in the Web UI where the DOWNLOAD UPDATE button was erroneously appearing on the Web UI's HUB ADMINISTRATION > UPGRADES > OFFLINE tab.
- Added, enhanced, fixed or made minor formatting updates to the following reports:
 - ADMINISTRATION > ALERT ON DATABASE DISK PURGE PRIOR TO THRESHOLD
 - ADMINISTRATION > ALERT ON MISSING DATABASE INSERTS
 - ADMINISTRATION > MACHINE CALLBACK COUNTS BY DAY
 - ADMINISTRATION > MACHINE CALLBACK COUNTS BY HOUR
 - ADMINISTRATION > DATABASE SCHEMA TABLE SIZE BREAKDOWN
 - ADMINISTRATION > MACHINE CID KEY SETTINGS
 - APPLICATION STRATEGY > APPLICATIONS INSTALLED VS USED SUMMARY
 - FIT ASSESSMENT REPORTS (PACK 2) > 203. KEY METRICS AGGREGATED BY HOUR (MONDAY-FRIDAY)
 - FIT ASSESSMENT REPORTS (PACK 2) > 211. MACHINE GROUPS BY HIGH USER VDI FIT RATINGS
 - FIT REPORTS - APPLICATIONS > APPLICATIONS INSTALLED VS USED SUMMARY
 - FIT DISCOVERY & FINDINGS > MACHINE CPUs & UTILIZATION SUMMARY
 - FIT DISCOVERY & FINDINGS > MACHINE DISKS & USAGE SUMMARY
 - FIT DISCOVERY & FINDINGS > MACHINE EXTERNAL DEVICE SUMMARY
 - FIT DISCOVERY & FINDINGS > MACHINE MEMORY SIZE AND USAGE SUMMARY
 - FIT DISCOVERY & FINDINGS > MACHINE OPERATING SYSTEMS
 - FIT REPORTS - MACHINES > MACHINE AGES
 - FIT REPORTS - MACHINES > MACHINE BIOS AND TPM DETAILS
 - FIT REPORTS - MACHINES > MACHINE CPUs & UTILIZATION SUMMARY
 - FIT REPORTS - MACHINES > MACHINE DISKS & USAGE SUMMARY
 - FIT REPORTS - MACHINES > MACHINE EXTERNAL DEVICE SUMMARY
 - FIT REPORTS - MACHINES > MACHINE MEMORY SIZE AND USAGE SUMMARY
 - FIT REPORTS - MACHINES > MACHINE OPERATING SYSTEMS
 - FIT REPORTS - MACHINES > MACHINE PRINTER SUMMARY
 - FIT REPORTS - MACHINES > MACHINE PRINTER DETAILS
 - MANAGEMENT REPORTS > MACHINE GROUP POOLS COUNTS BY HOUR
 - UX DIAGNOSTIC REPORTS > USER EXPERIENCE KEY METRICS AGGREGATED BY HOUR
 - UX HEALTH CHECK REPORTS > 307. KEY METRICS TIME CHART AVERAGED BY HOUR
 - UX HEALTH CHECK REPORTS > 308. KEY METRICS AVERAGED BY HOUR
 - UX HEALTH CHECK REPORTS > 309. KEY METRICS AGGREGATED BY HOUR (BUSINESS HOURS)
 - UX HEALTH CHECK REPORTS > 311. USER EXPERIENCE KEY METRICS TIME CHART
 - WINDOWS MIGRATIONS > APPLICATIONS INSTALLED VS USED SUMMARY
- Security Updates for CentOS appliances. The updates address Common Vulnerability and Exposure (CVE) CVE-2017-3145, CVE-2017-5715, CVE-2017-5753, CVE-2017-5754, CVE-2017-7542, CVE-2017-9074, CVE-2017-11176, CVE-2018-1052, CVE-2018-1053, CVE-2018-2579, CVE-

2018-2582, CVE-2018-2588, CVE-2018-2599, CVE-2018-2602, CVE-2018-2603, CVE-2018-2618, CVE-2018-2629, CVE-2018-2633, CVE-2018-2634, CVE-2018-2637, CVE-2018-2641, CVE-2018-2663, CVE-2018-2677, and CVE-2018-2678. For additional information please refer to <http://cve.mitre.org/index.html>.

Known Issues

- Advanced Inspectors may appear within very small window after an upgrade. Hit the F5 key to restore the regular size.
- While importing Stratusphere OVF's on some ESX versions, the VMware Virtual Infrastructure Client will show a warning. These warnings can be safely ignored.
- While using Internet Explorer 9, the UI may not format & display some pages, such as SAN Diagnostic Summary, as expected due to compatibility issues. Liquidware recommends using the latest version of Internet Explorer, Mozilla Firefox, or Google Chrome as a temporary workaround. Also, while using Mozilla Firefox, some of the ASSESSMENT > SUMMARY tab's graphs and charts may not display call out lines and text as expected until the user clicks in each widget.
- If ENHANCED SECURITY is enabled in the console, it requires using strong passwords including special characters. Using a backslash '\ character in the password causes issues while migrating data from 5.8.5 appliances to 6.0. The password match fails and since the migration asks user to retry, it may result in account lockout if forced to enter multiple times.
- The Windows CID Key on Amazon WorkSpaces depends on the Teradici PCoIP agent to populate the remote client name and remote client IP Address within the registry. If the PCoIP agent does not populate the registry, the CID Key will not be able to collect this information.
- Editing and customizing a machine's CID Key Properties may not save properly in the INVENTORY > MACHINES tab's EDIT MACHINE: > CONNECTOR ID KEY PROPERTIES page.
- The ADVANCED > INSPECTORS > EXTENSIONS tab may display incorrect count and size of file extensions under certain conditions such multiple boots, logins or restarting of the CID Key.
- The DIAGNOSTICS > INSPECTORS > DESKTOP APPLICATION SUMMARY page times out after 15 minutes and may result in an error. This is due to the Chart on the page, waiting for a query to finish. If the user uses the browser's Back button, the table data will be updated but the chart may be empty or displaying existing results.
- The DIAGNOSTIC > INSPECTORS > NETWORK APPLICATION SUMMARY tab's network APPLICATION name may not match the name used to specify the application in the COLLECTOR ADMINISTRATION > NETWORK COLLECTOR POLICIES tab.
- The summarized, roll-up tables for Applications does not roll-up the count of the ANR events observed for the application process but only whether it had an ANR event or not.
- Reports:
 - FIT REPORTS – APPLICATIONS:
 - APPLICATIONS WITH KNOWN POOR VDI FIT INSTALLED BY USER AND MACHINE (CSV) fails if no applications are set as Poor VDI FIT under ASSESSMENT > VDI FIT PROFILE tab.
 - APPLICATION COMPARISON BY MACHINE GROUP Report has performance issues.

Release Available As

- Virtual Appliance Downloads: Please visit www.liquidware.com/download/ to download the latest versions of Stratusphere appliances in OVF format. Remaining formats of AMI, XVA and ZIP formats will be added soon.
- Software Update: This release is also available as a Software Update if you are on 6.0.0 version of Stratusphere. However, if you are 5.8.5 or higher, we do offer a migration option whereby you can download a new Stratusphere 6.0.x Hub and Database Appliance and use the migrate option in the consoles of these new appliances to migrate network configuration, certificates, and data from the old 5.8.5 or higher appliances to the newer 6.0 appliances.

NOTE: Please see the Upgrading section below for instructions.

Release Applies to

- Stratusphere Hub Appliance.
- Stratusphere Database Appliance.
- Stratusphere Collector Appliance.
- Stratusphere Connector ID Key.

Upgrading

If your current installed version of Stratusphere is 6.0.0, please use the instructions in [Upgrading from Stratusphere 6.0](#) to upgrade to the latest version.

If your current installed version of Stratusphere is at 5.8.5 or higher, please use the instructions in [Migrating from 5.8.5 or Higher to 6.0 Appliances](#), to migrate network settings, certificates, and data from 5.8.5 and higher appliances to the 6.0 appliances. If you are on a version earlier than 5.8.5, please upgrade to 5.8.5 and then perform a migration using the instructions mentioned above.

If your current installed version of Stratusphere is 5.7.x or earlier, please upgrade to 5.8.5 and then migrate to Stratusphere 6.0. Please get in touch with Liquidware Labs Customer Support at Support@Liquidware.com or search for a KB article titled “Migrating to Stratusphere 5.7.0” on our Support Site. Additionally, you can reference [Migrating from 5.6.x to 5.7.0 Stratusphere Appliances](#).

If your current installed version of Stratusphere is 4.8.x, please visit our [Support documentation site](#) and read 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@Liquidware.com for further assistance.

Stratusphere™ Release Notes

Version 6.0.0, released December 14th, 2017

What's New?

- Stratusphere 6.0 appliances now use the Linux CentOS 6 Operating System. See the [Upgrading](#) section below on how to install it or migrate to it depending on your current version installed.
- **Preview Custom Dashboards:** Liquidware introduces a preview to our brand new customizable, interactive dashboards available under the Preview tab after logging into Stratusphere FIT/UX. There are some prebuilt dashboards plus the ability to search by numerous criteria and filters.
- **Collector Architecture:** Liquidware has enhanced and rebranded Stratusphere Network Station appliances into Stratusphere Collector appliances.
 - They are hardened, Linux based, lightweight (2 vCPU, 4 GB) software appliances that serve to collect data from CID Keys and/or sniff network connections.
 - The functionality that existed within the Stratusphere Hub has now been migrated into Collector appliances for high-availability and higher-scale CID Key data collection.
 - Each Collector communicates with the Stratusphere Hub using SSL Port (TCP/443) and can collect data from 5-10K CID Keys calling back every 60 minutes.
 - The Collector appliance also inserts CID Key data directly into the Stratusphere Database appliance bypassing the Stratusphere Hub appliance.
 - A single Stratusphere installation can now support up to 20K CID Keys calling back every 60 minutes, up from 5K in 5.8.x i.e. 400% increase in capacity.
- **CID Keys:**
 - CID Keys now use Standard Secure Communication Ports (TCP/443).
 - Apple MAC OS X (El Capitan) and macOS Sierra; macOS High Sierra (coming soon).
 - Microsoft Server 2016
 - SUSE Linux 11 SP4 and higher
 - Support for IGEL thin clients
 - Signed Windows Installer for manual installation, in addition to auto-registering one
- **Process Optimization (beta):** Liquidware introduces a new feature to highly optimize user experience on sub-optimally sized machines to enhance productivity and increase desktop density while maintaining great end user experience. Please refer to this [article/white paper](#) to test drive this new feature.
- **Advanced Inspectors:**
 - Added a new ADVANCED > INSPECTORS > TRACE ROUTE tab for viewing hop latencies, pings, and jitters from the CID Key to remote session end points.
 - In the ADVANCED > INSPECTORS > APPLICATIONS tab, under the OVERVIEW > OVERVIEW TYPE table, we now show applications running with elevated privileges under the PROCESS PRIVILEGE ELEVATED column. We also added the ability to see ALL process owners within the ADVANCED > INSPECTORS > APPLICATIONS tab under the PROCESSES drop down filter in addition to USERS, SYSTEM, and BOTH. This would be useful to see all other users on a

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- multi-session machine such as a Terminal Server or XenApp server. This inspector also added WINDOW TITLE of a process that is in a NOT RESPONDING state.
 - In the ADVANCED > INSPECTORS > MACHINES tab, under the DEFAULT view as well as DISK > DISK DETAILS view, we now show the DISK ACTIVE TIME PERCENT & DISK RESPONSE TIMES. We also added DISK LABEL as a new BASIS option.
 - NVIDIA GPU: Liquidware introduces the capability to monitor GPU stats such as GPU Core %, GPU Memory % Frame Buffer, Encode %, and Decode % on a per process basis.
 - Security: Liquidware added a few features to enhance security compliance in FED/DoD:
 - Added a new ENHANCED SECURITY mode to each Stratusphere appliance to easily switch to a higher security compliance mode based on U.S. Department of Defense's Security Technical Implementation Guides (STIGs).
 - Added support for CAC Authentication for the Stratusphere Web UI.
 - Added initial support for multi-homed appliances where the SSH Console & Web UI Management Communications, CID Key Communications, Network Collector Communications, and Database Communications can all be on isolated network connections.
 - Application Strategy Reports
 - Liquidware would like to provide guidance to its end users on how to approach their application strategy while transforming their desktops between the physical, virtual and cloud infrastructure. Stratusphere 6.0 adds a new category of reports called APPLICATION STRATEGY REPORTS that include 5 reports to help solve the application distribution problem.

Enhancements & Bug Fixes

- Enhanced the CID Key to detect and handle log off and shut down events on a machine to quickly upload collected stats up to the Hub/Collector and prevent data loss before the operating system shuts down the network card or the machine, especially on a non-persistent virtual machine environment.
- Enhanced CID Key to support enabling Amazon WorkSpaces based Teradici PCoIP Counters using a script under \ADMIN SCRIPTS\AMAZONWORKSPACES\TERADICIPCOIPCOUNTERS\INSTALLPREP.BAT.
- Enhanced CID Key to monitor logins on VMware Horizon RDSH Published Applications by monitoring when VMWARE-VIEW-UNITY-SHELL.EXE starts to determine when login processing is finished.
- Enhanced the CID Key Control Panel applet to show settings such as, the Hub the CID Key is registered to, a list of Collectors it is uploading stats to, along with Callback Frequency, Sampling Frequency, etc.
- Enhanced CID Key handling of logs, specifically for servers, where it now monitors the size of the log files every sampling period, and rotates them when they reach 200 MB.
- Extended support to VMware vSphere 6.5 by adding import and sync functionality.
- Enhanced performance for DIAGNOSTICS > INSPECTORS, DIAGNOSTICS > REPORTS, and ADVANCED > INSPECTORS > APPLICATIONS by 40% to 100% when using longer time frames like over 2 days, or

weeks, or even months. These performance enhancements were due to using summarized roll-up data tables configured for DAILY, WEEKLY, MONTHLY, and YEARLY summarization within the HUB ADMINISTRATION > DATA RETENTION > SETTINGS tab. It must be noted, that these summarized, roll-up tables have been implemented within the database for most types of metrics but are utilized only in limited areas within the Web UI & API in the product. Their usage will be universal across all remaining parts of the Web UI & API very shortly.

- Enhanced performance due to better database indexing and vacuuming.
- Enhanced the SQL performance and Export functionality for the DIAGNOSTICS > INSPECTORS > MACHINE DIAGNOSTIC SUMMARY, DIAGNOSTICS > INSPECTORS > USER DIAGNOSTIC SUMMARY, and DIAGNOSTICS > INSPECTORS > DESKTOP APPLICATION SUMMARY Inspectors.
- Enhanced all charts on the ASSESSMENT and DIAGNOSTICS tabs switching them to use Java Script based graphs and charts, and dropping any requirements for Flash plugins.
- Enhanced usability of the Stratusphere Login page to remember last used product and domain. The Login page will also poll the Stratusphere Hub for a heartbeat to detect when the Hub is available especially after installing new upgrades using the Web UI. The fields and buttons on the page will be disabled until the Hub is ready to receive UI requests.
- Enhanced the usability of the INVENTORY > MACHINES & INVENTORY > USERS tabs by adding action menu options to the MORE ACTIONS... drop down list to operate on individual machines/users as well as groups. More actions include ability to SET ADMINISTRATOR, SET USER, ENABLE/DISABLE API ACCESS, LOCK/UNLOCK ACCOUNTS, etc. Also, the User Groups page, provides most of the same operations as an individual User page, thus allowing a User Group imported from AD to be set as an Administrator role, with a single click.
- Enhanced the HUB ADMINISTRATION > CONFIGURATION tab, to include a default FROM: and TO: email address fields to receive scheduled Stratusphere Administration reports that provide status and warnings, critical to an administrator.
- Enhanced and tweaked HUB ADMINISTRATION > OVERVIEW, CONFIGURATION, and DATA RETENTION tabs with minor updates and fixes.
- Updated the default FIT & UX Profile thresholds to contemporary values.
- Fixed an issue with the Stratusphere Hub and Database appliances either not performing the automatic disk and file system expansion or hanging right after performing the expansion.
- Fixed an issue with the ADVANCED > SEARCH > 360 VIEWS where the sort order for the 14 days and 24-hour table was not set.
- Fixed an issue with the ADVANCED > INSPECTORS > INVENTORY tab, where the BIOS & TPM view would not display whether TPM information correctly.
- Fixed an issue with the CD Key where one of its services, LWLDATASVC.EXE, would suffer a crash.
- Fixed an issue with the CID Key where it was leaking file and registry handles over time.
- Fixed an issue with the CID Key where it was not handling an old stats.txt file properly.
- Fixed an issue with the CID Key where it would collect duplicate ping replies from remote destinations and then fail to upload stats to the Hub.
- Fixed an issue with the CID Key where it would incorrectly associate a process with an application.

- Fixed an issue where the DIAGNOSTICS > INSPECTOR > NETWORK CONNECTION HISTORY drilling down into the Interval details would not display bytes and packet trends over time.
- Fixed an issue while selecting and running multiple reports where the user would not get a notification of reports completing. Now, the user is redirected to the REPORTS ARCHIVE when all reports have completed.
- Fixed an issue in the ADMINISTRATION section of the Web UI under HUB ADMINISTRATION > CONNECTOR ID KEYS > CONNECTOR ID PROPERTIES tab where it would not save updated properties under some circumstances.
- Fixed an issue in the ADMINISTRATION section of the Web UI under HUB ADMINISTRATION > UPGRADES tab where it would not show the ONLINE and OFFLINE tabs.
- Fixed an issue in the ADMINISTRATION section of the Web UI under STATION ADMINISTRATION > NETWORK STATION POLICIES where the user could not edit and save existing policy rules.
- Fixed an issue under ADVANCED > SEARCH > 360 USER pop-out Inspector where the sorting by hour would not work as expected.
- Fixed an issue in the ADMINISTRATION section of the Web UI under HUB ADMINISTRATION > VM DIRECTORIES tab where it would only sync virtual machine stats if ALL VIRTUAL MACHINES were selected and ignore if any other setting was selected.
- Fixed an issue with the CID Key where it would only show display session of a single type to a single destination instead of multiple types of display sessions to the same remote destination.
- Added, enhanced, fixed or made minor formatting updates to the following reports:
 - ADMINISTRATION > DAYS SINCE LAST LOGIN
 - ADMINISTRATION > USER INVENTORY
 - FIT ASSESSMENT REPORTS (PACK 1) > 112. ASSESSMENT FINDINGS
 - FIT ASSESSMENT REPORTS (PACK 1) > VMWARE HORIZON VIEW CAPACITY REPORT
 - FIT ASSESSMENT REPORTS (PACK 1) & (PACK 2) updated so it reports for all machines regardless of users logged in or not.
 - FIT ASSESSMENT REPORTS (PACK 2) > 213. NETWORK CONNECTION DETAILS FOR CID KEY COMMUNICATIONS
 - FIT REPORTS - APPLICATIONS > APPLICATIONS INSTALLED & LAST USED BY MACHINE AND PRIMARY USER (CSV)
 - MANAGEMENT REPORTS > MACHINE AND USER COUNTS BY HOUR
 - UX DIAGNOSTIC REPORTS > USER LOGIN DELAY SUMMARY
 - UX DIAGNOSTIC REPORTS > USER SESSION EVENT DETAILS (new)
 - UX DIAGNOSTIC REPORTS > USER SESSION EVENT SUMMARY BY LOGIN SESSION (new)
 - UX DIAGNOSTIC REPORTS > USER SESSION EVENT SUMMARY BY USER & MACHINE (new)
 - UX DIAGNOSTIC REPORTS - REMOTE DISPLAY PROTOCOL > TRACE ROUTE DETAILS BY MACHINE CALLBACK WITH HOP DETAILS (new)
 - UX DIAGNOSTIC REPORTS - REMOTE DISPLAY PROTOCOL > TRACE ROUTE HOPS & PING SUMMARY BY MACHINE (new)
 - UX DIAGNOSTIC REPORTS - REMOTE DISPLAY PROTOCOL > TRACE ROUTE HOPS & PING SUMMARY BY MACHINE & USER (new)

- UX HEALTH CHECK REPORTS > 311. USER EXPERIENCE KEY METRICS TIME CHART
- UX DIAGNOSTIC REPORTS – STORAGE

Known Issues

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- While importing Stratusphere OVF's on some ESX versions, the VMware Virtual Infrastructure Client will show a warning. These warnings can be safely ignored.
- While using Internet Explorer 9, the UI may not format & display some pages, such as SAN Diagnostic Summary, as expected due to compatibility issues. Liquidware recommends using the latest version of Internet Explorer, Mozilla Firefox, or Google Chrome as a temporary workaround. Also, while using Mozilla Firefox, some of the ASSESSMENT > SUMMARY tab's graphs and charts may not display call out lines and text as expected until the user clicks in each widget.
- If ENHANCED SECURITY is enabled in the console, it requires using strong passwords including special characters. Using a backslash '\ ' character in the password causes issues while migrating data from 5.8.5 appliances to 6.0. The password match fails and since the migration asks user to retry, it may result in account lockout if forced to enter multiple times.
- The Windows CID Key on Amazon WorkSpaces depends on the Teradici PCoIP agent to populate the remote client name and remote client IP Address within the registry. If the PCoIP agent does not populate the registry, the CID Key will not be able to collect this information.
- Editing and customizing a machine's CID Key Properties may not save properly in the INVENTORY > MACHINES tab's EDIT MACHINE: > CONNECTOR ID KEY PROPERTIES page.
- The ADVANCED > INSPECTORS > EXTENSIONS tab may display incorrect count and size of file extensions under certain conditions such multiple boots, logins or restarting of the CID Key.
- The DIAGNOSTICS > INSPECTORS > DESKTOP APPLICATION SUMMARY page times out after 15 minutes and may result in an error. This is due to the Chart on the page, waiting for a query to finish. If the user uses the browser's Back button, the table data will be updated but the chart may be empty or displaying existing results.
- The DIAGNOSTIC > INSPECTORS > NETWORK APPLICATION SUMMARY tab's network APPLICATION name may not match the name used to specify the application in the COLLECTOR ADMINISTRATION > NETWORK COLLECTOR POLICIES tab.
- The ADVANCED > INSPECTORS > VHOST tab may not display any virtual hosts if the Stratusphere Hub did not find any hosts when it synced with vCenter. Also, the sync process has been observed to stop syncing.
- The HUB ADMINISTRATION > DATA RETENTION > STATUS tab's LAST AUTO DELETE: time may be off.
- The summarized, roll-up tables for Applications does not roll-up the count of the ANR events observed for the application process but only whether it had an ANR event or not.
- Reports:
 - FIT REPORTS – APPLICATIONS:
 - APPLICATIONS WITH KNOWN POOR VDI FIT INSTALLED BY USER AND MACHINE (CSV) fails if no applications are set as Poor VDI FIT under ASSESSMENT > VDI FIT PROFILE tab.

-
- APPLICATION COMPARISON BY MACHINE GROUP Report has performance issues.

Release Available As

- Virtual Appliance Downloads: Please visit www.Liquidware.com/Download/ to download the latest versions of Stratusphere appliances in OVF format. Remaining formats of AMI, XVA and ZIP formats will be added soon.
- Software Update: This release is NOT available as a Software Update as the underlying operating system is updated from CentOS 5 to CentOS 6. However, we do offer a migration option whereby you can download a new Stratusphere 6.0 Hub and Database Appliance and use the migrate option in the consoles of these new appliances to migrate network configuration, certificates, and data from the old 5.8.5 or higher appliances to the newer 6.0 appliances.

NOTE: Please see the Upgrading section below for instructions.

Release Applies to

- Stratusphere Hub Appliance.
- Stratusphere Database Appliance.
- Stratusphere Collector Appliance.
- Stratusphere Connector ID Key.

Upgrading

If your current installed version of Stratusphere is 6.0.0, please use the instructions in [Upgrading from Stratusphere 6.0 \(P1\) to \(P2\)](#) to upgrade to the latest version.

If your current installed version of Stratusphere is at 5.8.5 or higher, please use the instructions in [Migrating from 5.8.5 or Higher to 6.0 Appliances](#), to migrate network settings, certificates, and data from 5.8.5 and higher appliances to the 6.0 appliances. If you are on a version earlier than 5.8.5, please upgrade to 5.8.5 and then perform a migration using the instructions mentioned above.

If your current installed version of Stratusphere is 5.7.x or earlier, please upgrade to 5.8.5 and then migrate to Stratusphere 6.0. Please get in touch with Liquidware Labs Customer Support at Support@Liquidware.com or search for a KB article titled “Migrating to Stratusphere 5.7.0” on our Support Site. Additionally, you can reference [Migrating from 5.6.x to 5.7.0 Stratusphere Appliances](#).

If your current installed version of Stratusphere is 4.8.x, please visit our [Support documentation site](#) and read 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@Liquidware.com for further assistance.