LEOSTREAM™ ~ | Release Notes

Connection Broker

Managing User Connections to Workstations, Blades, VDI, and More

Version 8.1 July 25, 2016

Contacting Leostream

Leostream Corporation
465 Waverley Oaks Rd.
Suite 200
Waltham, MA 02452
USA

http://www.leostream.com
Telephone: +1 781 890 2019
Fax: +1 781 688 9338

To submit an enhancement request, email features@leostream.com.
To request product information or inquire about our future direction, email sales@leostream.com.

Copyright

Trademarks

Patents

Contents

Connection Broker 8.1.90 – Release Notes

Connection Broker 8.1.90 is a maintenance release for previous versions of Connection Broker 8.1. Connection Broker 8.1.90 resolves the following issues, with respect to version 8.1.88.

- The Connection Broker can now connect to external PostgreSQL databases with any user name, instead of only with the default postgres user

- The Connection Broker no longer throttles calls to the Leostream API

- Leostream now monitors the status checks for instances powered on in AWS, to ensure that the power state displayed in the Connection Broker does not switch to Running before the status checks are complete

- The **Instance type** drop-down menu in pools contains additional options when provisioning instances in AWS

- The **Connected to Client** and **Connected** columns on the **> Resources > Desktops** page are now accurately kept up to date for roaming sessions

- Improvements to monitoring the reachability of the 5.6 version of the Leostream Agent

Connection Broker 8.1.88 – Release Notes

Connection Broker 8.1.88 is a maintenance release for previous versions of Connection Broker 8.1. Connection Broker 8.1.88 resolves the following issues, with respect to version 8.1.84.

- The Java version of the Leostream Agent has been upgraded to version 4.0.82, which contains a fix that ensure that PostLogin functions are run when using the Leostream single sign-on feature.

- The Connection Broker 8.1.88 update file resolves issues related to upgrading Connection Broker 7.8

- Desktops that are hard-assigned to clients no longer follow their assigned users to different client devices

- External PostgreSQL databases version 8.x are now supported

- Desktops running Windows 10 and Windows Server 2016 are now correctly categorized and can be used to create pools and locations

- Refresh scans of the PCoIP Host Devices center now always retain the information about any connection PCoIP zero clients

Connection Broker 8.1.84 – Release Notes

Connection Broker 8.1.84 is a maintenance release for previous versions of Connection Broker 8.1. Connection Broker 8.1.84 resolves the following issues, with respect to version 8.1.70.

- OpenSSL has been upgraded to version 1.0.1t – note that upgrading the OpenSSL library requires the Connection Broker to recompile, resulting in upgrade times of up to an hour

- The Java version of the Leostream Agent now reports non-root users who use SSH to log into workstation with a PCoIP Remote Workstation Card, if no other display protocols are installed on the workstation

- The Connection Broker remaps the **Logged in User** field back to the initial user, if another user logged in and then out using SSH while the initial user remained logged in

- The **Connected to Client** field on the **> Resources > Desktops** page is no longer cleared out when hard-assigned PCoIP connections are released, but not disconnected

- Users are now released when they log out of a desktop that is hard assigned to a client

- Intermediate SSL certificates are now supported when using the **Download SSL credentials for installation on another Connection Broker** and **Install SSL credentials from another Connection Broker** options to share SSL certificates between Connection Brokers

- Users are now correctly identified as rogue, if they log into a desktop that was previously released by the **Release if user does not log in** option in Release Plans

- Users can now be loaded from Microsoft Active Directory authentication servers containing groups with names that begin with special characters

- Desktop attributes for desktops that do not have the **Allow changes to these desktop attributes** option selected no longer update based on Leostream Agent notifications

- Local users can now be used to log into desktops running the VMware Horizon View Direct Connection Plug-in

- Disconnect notifications from PCoIP host card are no longer ignored when disconnecting from PCoIP zero client that use the PCoIP Connection Manager session connection type

- The started machine threshold is now correctly calculated when using the **Number of available, running desktops in the pool** option in pools

- AWS EC2 API calls are now throttled to ensure that no calls are rejected by AWS

Connection Broker 8.1.70 – Release Notes

Connection Broker 8.1.70 is a maintenance release for previous versions of Connection Broker 8.1. Connection Broker 8.1.70 resolves the following issues, with respect to version 8.1.67.

- The Leostream Agent for Windows operating system has been updated to version 6.0.100, to address an issue redirecting printers for roaming RDP sessions

- The **> Resources > PCoIP Host Devices** page now includes the full firmware version (requires a refresh of the PCoIP Devices center)

- The **Reset** option is no longer displayed for PCoIP zero clients running firmware version 5.x, which does not provide Leostream with a method for resetting the client

- Downloaded Leostream Technical Support logs are now limited to 25MB

- Desktops offered from a backup pool now use the correct backup pool protocol plan

- The Connection Broker now traps cases where two users attempt to connect to the same desktop at nearly the same time , and ensures only one user connection is established

Connection Broker 8.1.67 – Release Notes

Connection Broker 8.1.67 is a maintenance release for previous versions of Connection Broker 8.1. Connection Broker 8.1.67 adds the following functionality and resolves the following issues, with respect to version 8.1.57.

Important Note

This version of the Connection Broker no longer supports the following functionality.

- Protocol plans using the **Sun Global Desktop** option

- Countdown timers for VMware vSphere centers

Features

- **Leostream Components:** The **> Status > Downloads** page on this version of the Connection Broker includes the following component versions:
    - Leostream Agent for Windows operating systems – 6.0.99
    - Leostream Connect for Windows operating systems – 3.5.55
    - Leostream Agent for Linux operating systems – 4.0.81
    - Leostream Connect for Linux operating systems – 3.1.57

o   New versions of Leostream Connect and the Leostream Agents can be uploaded into the Connection Broker using options on the **> System > Maintenance** page

- **OpenSSL:** OpenSSL has been upgraded to version 1.0.1s – note that upgrading the OpenSSL library requires the Connection Broker to recompile, resulting in longer upgrade times

- **Mechdyne teleGraphix:** Protocol plans provide a new option to use the high-performance Mechdyne teleGraphix (TGX) protocol to connect to Linux machines, including allowing users to configure certain protocol plan configuration parameters

  Requires Leostream Agent 4.1.151 for Linux operating systems. Connections can be launched from the Leostream Web client, or using Leostream Connect 3.6.62 for Windows. New Leostream Agents and Leostream Connect versions can be found on the **Leostream Product Downloads** page.

  Your Connection Broker must run on a 64-bit operating system to use the TGX protocol. If your Connection Broker was built using a Connection Broker 8.0 or older appliance, you must install new Connection Broker 8.1 appliances.

- **NICE DCV:** Protocol plans provide a new option to use the high-performance NICE Desktop Cloud Visualization (DCV) protocol

  Requires Leostream Agent 4.1.151 for Linux operating systems. Connections can be launched from the Leostream Web client, or using Leostream Connect 3.6.62 for Windows. New Leostream Agents and Leostream Connect versions can be found on the **Leostream Product Downloads** page.

- **Amazon Web Services:** Added support for Asia Pacific (Seoul) region

Resolved Issues

- Pools provisioning into an OpenStack center now correctly save flavors that are referenced by UUIDs, instead of by integers

- Backup pools now indicate when they reference a pool that has been deleted, and the backup pool logic is no longer followed for deleted pools

- Leostream Agent disconnect and connect notices now accurately track the client ID when open sessions are moved between clients

- The deletable setting for desktops inventoried from an Amazon Web Services center can now be modified in the **Edit Desktop** page.

- If the Connection Broker cannot reboot a physical machine using the Leostream Agent,

Leostream no longer powers down the physical machine, placing the machine into a stopped state

- Resolved issues with managing duplicate desktop records when users are assigned and logged into the desktops

- When editing a desktop, the name and PCoIP host devices are now read-only fields when the Role is set to **View only**

- The Connection Broker now cancels CPU threshold monitoring after receiving a notice from the Leostream Agent that the session is no longer idle

- The Connection Broker no longer clears out the user's role after they subsequently log in as a rogue user, to avoid errors for users with Role permissions that provide access to the Administrator Web interface

- Resolved PowerShell issues related to adding and removing users from a Shared Citrix XenDesktop 7 Deliver Group

Connection Broker 8.1.57 – Release Notes

Connection Broker 8.1.57 is a maintenance release for previous versions of Connection Broker 8.1. Connection Broker 8.1.57 adds the following functionality and resolves the following issues, with respect to version 8.1.44.

Connection Broker Appliance Notes

The new Connection Broker 8.1 appliances use a 64-bit CentOS 6.7 operating system.

- Connection Broker 8.1.57 is available as a new virtual appliance for VMware vSphere and Workstation. You must install the new virtual appliance if you plan to use NIS authentication Servers with Leostream.

- Connection Broker 8.1.57 is available as an RPM file that can be installed on a 64-bit CentOS 6.7 minimal operating system. Use the RPM-file to install Leostream into any virtualization platform or onto a physical workstation.

- Connection Broker virtual appliances are no longer created especially for installation on Citrix XenServer, Microsoft Hyper-V, or Red Hat Enterprise Virtualization platforms. Use either the OVA-file or RPM-file to install Leostream onto any of these platforms.

Important Note

The new Connection Broker appliances resolve the issue where Connection Brokers installed on a CentOS 6.x operating system failed to connect to NIS authentication servers. If you installed the Connection Broker 8.0 virtual appliance, you must install a new Connection Broker 8.1 appliance to connect to a NIS authentication server.

After you install Connection Broker and connect it to your NIS authentication server, edit and save the authentication server to start the `ypbind` process needed to connect to the NIS server.

Features

- Leostream Connect for Windows operating systems has been updated to version 3.5.55, and includes the following:

    o Do not close existing desktop connections when additional users log into Leostream Connect and multi-user mode is enabled

    o When upgrading previous versions of Leostream Connect, the installer now properly renames registry keys that point to the Connection Broker address

- Leostream Agent for Windows operating systems has been updated to version 6.0.91, and includes the following:

  - Improvements to feature for joining desktops to a domain

  - When upgrading older Leostream Agents, version 6.0.92 now ensure that the Leostream Desktops service is always installed, enabling idle-time monitoring and other end-user experience features

- The **Logged in User** column on the **> Resources > Desktops** page now shows the username and, if applicable, domain of any user that is currently logged into the desktop (requires the Leostream Agent be running on the desktop)

- The **> System > Maintenance** page now the version and architecture of the underlying appliance operating system.

- Added option to wait for five, six, or seven day before executing idle-time monitoring actions in Release Plans.

- The TLSv1.2 SSL protocol is now always enabled on the **> System > Maintenance** page.

Resolved Issues

- Addressed issues where hard-assignments could be lost after a desktop registered as a duplicate of the hard-assigned desktops

- Addressed issue where the **Release if user does not log in** action in Release plans was not executing correctly

- Ensure that deleted work queue jobs are removed from the database

- Log off and release actions now break both PCoIP connections when multiple host cards are present on the workstation

- Addressed timing issues that could cause Leostream Agents to be marked Unreachable

Connection Broker 8.1.44 – Release Notes

Connection Broker 8.1.44 is a maintenance release for previous versions of Connection Broker 8.1. Older versions of the Connection Broker should be updated to version 8.1. Bug fix updates for the Connection Broker 8.0 branch can be requested until version 8.0 reaches its end-of-life on August 31, 2016.

For a list of major features in Connection Broker 8.1, please see **Connection Broker 8.1.15 – Release Notes**.

Connection Broker 8.1.44 adds the following functionality and resolves the following issues, with respect to version 8.1.35.

- The Leostream components have been upgrade to the following versions. As of Connection Broker 8.1.43, older versions of the clients and agents begin their end-of-life cycle. For a description of which clients and agents can be used with different Connection Broker versions, please see **Appendix A: Version Compatibility**.

  - o   Leostream Connect for Windows operating systems - version 3.5.50
  - o   Leostream Agent for Windows operating systems – version 6.0.88
  - o   Leostream Connect for Linux operating systems – version 3.1.48
  - o   Leostream Agent for Linux operating systems – version 4.0.81

  For information about how these Leostream Agent and Leostream Connect versions work with older Connection Broker versions, see **Appendix A: Version Compatibility**.

- When powering on a desktop with an installed PCoIP Agent, the Connection Broker now waits for the PCoIP Agent port (60443) to open before trying to establish the connection

- Various improvements to the Citrix XenDesktop 7.6 integration, including no longer keeping desktops in Maintenance Mode in a Machine Catalog after the desktop is released from a Leostream user

- Desktops from OpenStack and AWS centers now register both their internal (private) and external (floating/public) IP addresses

- When provisioning new instances in OpenStack, you can now instruct the Connection Broker to allocate and associate a floating IP address with the instance

- Provisioning in vSphere now succeeds even if the customization file contains illegal characters

- The **When User Logs Out** section of release plans no longer executes for users who disconnect from their desktop without ever logging in

Connection Broker 8.1.35 – Release Notes

Connection Broker 8.1.23 is a maintenance release for Connection Broker 8.1. This release contains all features an issue resolutions in Connection Broker 8.0, plus the following items when compared to Connection Broker version 8.1.23.

Features

- The Leostream components have been upgrade to the following versions.
  - Leostream Connect for Windows operating systems - version 3.5.45
  - Leostream Agent for Windows operating systems – version 6.0.81
  - Leostream Connect for Linux operating systems – version 3.1.48 – Supports the new Connection Broker option to refresh the user's offer list automatically, when the user opens their offer list.
  - Leostream Agent for Linux operating systems – version 4.0.72

- Connection Broker 8.1.43 can be used to manage connections to virtual workspace using the Teradici Pervasive Computing Platform.

- The **Edit Pool** page contains new options to join desktops in that pool to an Active Directory domain (see "Joining Pooled Desktops to a Domain" in Chapter 7 of the Connection Broker Administrator's Guide)

- The drop-down menus shown as column headers for tag groups on the **> Resources > Desktops** page now allows you to filter the list based on tags defined in that group

- Prompt users to re-enroll their HID proximity card if the Active Directory password associated with that card is invalid

- You can now use a `host:port` syntax to specify the SNMP port to use for all SNMP servers used by the Connection Broker

- Pools can now be created using the operating system version

- The **> Resources > Desktops** page can now be filtered using the **OS Version** column

- The columns associated with tags on the **> Resources > Desktops** page can now be filtered using the tag name, instead of using an alphanumeric character

- The new **Refresh offer list before display to user** option in the **Leostream Connect Configuration** section of the **> System > Settings** page instructs the client to perform an automatic refresh when the user opens their offer list, ensuring that any desktops that are no longer available are removed from the list

- The Connection Broker virtual appliance console provides a new option in the **Power** menu

to check the Connection Broker status (see the Connection Broker Virtual Appliance Guide)

- OpenSSL has been upgrade to version 1.0.1p – note that upgrading the OpenSSL library requires the Connection Broker to recompile, resulting in longer upgrade times

Resolved Issues

- The Connection Broker now tries to connect to an Active Directory center twice, with a two minute delay in between tries, before marking the center as offline

- Desktops inventoried from an AWS center now always prefer the hostname reported by the Leostream Agent over the hostname set in the AWS console

- Desktops inventoried from an AWS center now report their MAC address, enabling the Connection Broker to associate desktops in AWS with any Leostream Agent that registers from that desktop

- Desktops inventoried from an AWS or Moonshot center now take precedence over desktops inventoried from an Active Directory center when determining duplicate desktop records

- The **User name** column on the **> Resources > Desktops** page has been renamed to **Assigned user**

- Resolved issues causing new desktops to be inventoried with Unreachable Leostream Agents

- The **Clients** page now removes desktops from the **Connected Desktops** column if that desktop is removed from the Connection Broker.

- The Connection Broker now logs a diagnostic entry when pool counts do not total correctly, instead of reporting an internal error

Connection Broker 8.1.23 – Release Notes

Connection Broker 8.1.23 is a maintenance release for Connection Broker 8.1. This release resolves the following issues when compared to Connection Broker version 8.1.22.

- Added support for alphanumeric tokens when using RADIUS authentication.

- Resolved issue where a Leostream Agent logout notification may not correctly disconnect a PCoIP Remote Workstation Card from the PCoIP zero client.

- Updated the Leostream Agent for Microsoft Windows operating systems to version 6.0.47, to resolve an issue with single sign-on for PCoIP sessions.

Connection Broker 8.1.22 – Release Notes

Connection Broker 8.1.22 is a maintenance release for Connection Broker 8.1. This release resolves the following issues when compared to Connection Broker version 8.1.19.

- Updated OpenSSL to version 1.0.1o.

- The 8.1.22 update file correctly updates external Microsoft SQL Server databases attached to a Connection Broker.

- Implemented performance enhancements related to the feature to assign policies based on nested Active Directory groups. The introduction of that feature significantly slowed down user logins in certain environments.

- Resolved issues refreshing centers for Citrix XenServer 6.5.

- Improved reporting for the **Last Connect Time** and other columns related to tracking the users session on the **> Resources > Desktops** page for sessions offered from a multi-user center.

- Resolved issue when trying to customize the contents of the **> Resources > Desktops** page when a second PCoIP Host Device was included on the page.

- Resolved an issue where requesting a reboot of a physical desktop could allow simultaneous reboots.

- Added 6 months as an option for filtering the **Signed in** column on the **> Users > Users** page.

Leostream Connect for Microsoft® Windows® Operating Systems – Version 3.5.30

Important Note: Leostream Connect version 3.5 for Windows operating systems no longer supports installation on Microsoft Windows XP operating systems.

- The Connection Broker address can now be configured during Leostream Connect installation

- Multiple users can now log into the same Leostream Connect session

- Added support for logins using RADIUS tokens and RSA SecurID

- Added support for ThinLinc TigerVNC client

- Added support for latest SPICE client

- Double clicking on LeostreamConnect.exe without specifying username and password, while an instance of LSC is already running, now invokes the default System tray menu option.

- Upgraded OpenSSL to version 1.0.2a

- Removed dependency on Microsoft Visual C run-time library

Leostream Connect for Linux® Operating Systems – Version 3.1.44

- Added support for logins using RADIUS tokens and RSA SecurID

- Renamed the `lc.conf` parameter `TraceLevel` to `trace_level`

- Subsequent Leostream Connect versions can be upgraded using the Connection Broker option to push Leostream Connect updates out to client devices.

- The **Resources** dialog now contains a **Refresh** button that can be used to refresh the user's list of offered desktops

Leostream Agent for Microsoft® Windows® Operating Systems – Version 6.0.43

Important Notes Leostream Agent version 6.0 for Windows operating systems no longer supports installation on Microsoft Windows XP operating systems.

- The Connection Broker address can now be configured during Leostream Agent installation

- A new trust mechanism has been implemented between the Leostream Agent and Connection Broker, to ensure that the Leostream Agent ignores calls that do not originate from a Leostream Connection Broker.

  Leostream Agent 6.0 can only be used with Connection Broker 8.1, or later.

- The **Desktop Experience** installation option is no longer listed during installation. This component is now always installed.

- Upgraded OpenSSL to version 1.0.2a

Leostream Agent for Linux® Operating Systems – Version 4.0.38

- A new trust mechanism has been implemented between the Leostream Agent and Connection Broker, to ensure that the Leostream Agent ignores calls that do not originate from a Leostream Connection Broker

  Leostream Agent 4.0 can only be used with Connection Broker 8.1, or later.

- Monitoring of NoMachine NX4 sessions has been improved.

- The following `leostreamagent.conf` parameters have changed or been added.

  o `registered_brokers` contains a list of all Leostream Connection Brokers that have registered for notifications from this Leostream Agent.

  o `ssl_ciphers` contains a comma separated list of SSL ciphers that the Leostream Agent will use for Connection Broker communications

  o `TraceLevel` has been renamed to `trace_level`

  o `AgentServerPort` has been renamed to `agent_port`

Connection Broker 8.1.19 – Release Notes

Connection Broker 8.1.19 is a maintenance release for Connection Broker 8.1. This release resolves the following issues when compared to Connection Broker version 8.1.15.

- All issue resolutions in **Connection Broker 8.0.77** are included in version 8.1.19.

- Policies can now be assigned to users in an Active Directory with nested groups.

- The Test Login results for a local user now display appropriate policy information.

- The **View** drop-down menu in the end-user Web client now correctly toggles between an icon and list view.

- The time zone now correctly resets when a standalone Connection Broker is rebooted using the vCenter Server console.

- Switching a Connection Broker back to its internal database removes it from the **> System > Cluster Management** page for the remaining Connection Brokers in the cluster. You can join the Connection Broker back to the cluster using its previously used Site ID, if desired.

- Leostream Connect 3.5.26 now supports a multi-user mode when the new Connection

Broker general setting **Allow multiple logins using different credentials** is enabled.

- Connection Brokers 8.1.19 no longer requires a restart before performing an upgrade.

Important Note

If you are running a Connection Broker that was created from the Connection Broker 8.0 virtual appliance running on CentOS 6.6, you may experience difficulties upgrading to version 8.1.19. If the update file loads into the Connection Broker, but fails to update, please do the following steps.

1. Log into the Connection Broker virtual appliance console as the **leo** user (default password is **leo**.)

2. Select the **Power** menu from the main administrator menu.

3. Select **Restart** from the Power menu and confirm the restart.

After the Connection Broker restarts, reapply the Connection Broker update.

Connection Broker 8.1.15 – Release Notes

Connection Broker 8.1.15 is a minor release. This release introduces the following features and issue resolutions, when compared to Connection Broker 8.0.64.

Important Notes

- You can no longer use the **> System > Network** page to set the Connection Broker IP address or DNS settings. You must use the Connection Broker virtual appliance console to configure the Connection Broker network. See the "Network Options" section in Chapter 2 of the Connection Broker Virtual Appliance Guide.

- The **Leostream Connect Configuration** section of the **> System > Settings** page no longer includes the **Allow user to modify user name** and **Allow user to modify domain name** options. Leostream Connect now always allows the user to modify those fields if they are displayed on the **Login** dialog.

- The Connection Broker no longer supports centers created for Citrix XenDesktop 4.x.

Features

- **Teradici PCoIP**: The Connection Broker can now manage connections to the Teradici Workstation Access Software using the PCoIP Connection Manager and PCoIP Broker Protocol. For more information, see the Quick Start Guide using Leostream with Teradici Workstation Access Software.

- **RADIUS authentication**: You can now require that users enter a RADIUS token for the Connection Broker login (see "Enabling RADIUS Authentication" in Chapter 3 of the Connection Broker Administrator's Guide).

- **XenDesktop 7**: You can now create centers for XenDesktop 7, and connect users to desktops in these centers using HDX (see the Leostream Quick Start Guide with Citrix XenDesktop 7).

- **Backup Pools**: Desktops that are hard-assigned to a user or client can now have a backup pool, which is used in cases where the hard-assigned desktop becomes unreachable (see "Specifying Backup Pools" in Chapter 11 of the Connection Broker Administrator's Guide).

- **HPE Moonshot Systems**: The Connection Broker now uses the Chassis Manager RESTful API, instead of the command line interface, to manage HPE Moonshot System Centers.

- **Amazon Web Services:** You can now create a center that manages the instances in your Amazon Web Services account (see "Amazon Web Services Centers" in Chapter 5 of the Connection Broker Administrator's Guide).

- **Pools:** You can now set a lower threshold on the number of available, running desktops in a pool, so the Connection Broker automatically starts new desktops as existing running desktops are assigned to users (see "Specifying Number of Running Desktops in a Pool" in Chapter 7 of the Connection Broker Administrator's Guide).

- **SSL:** You can now upload an intermediate certification or CA bundle file when installing a signed SSL certificate (see "Installing a Signed SSL Certificate or Intermediate Certificate" in Chapter 20 of the Connection Broker Administrator's Guide).

- **PostgreSQL support:** The Connection Broker now supports PostgreSQL as an external database to use when building a Connection Broker cluster (see "Connecting to a PostgreSQL Database" in Chapter 20 of the Connection Broker Administrator's Guide).

- **Roles:** Dedicated permissions were created in roles for the following pages. Previously, these pages were controlled by permissions associated with other Connection Broker pages (see "Chapter 9: Configuring User Roles and Permissions" in the Connection Broker Administrator's Guide).

  - PCoIP Host Devices
  - Protocol Plans
  - Power Control Plans
  - Release Plans
  - Failover Plans
  - Registry Plans

Resolved Issues

- The **Name** field on the **> Users > Users** page is now updated for logins that occur after the attribute in the **Field that defines user display name** option in the user's authentication server is changed.

- The **Edit Desktop** page and **> Resources > Desktops** page now load faster when the pages contain information about PCoIP Remote Workstation Cards.

Connection Broker 8.0.84 – Release Notes

Connection Broker 8.0.84 is a maintenance release for Connection Broker 8.0. This release resolves the following issues when compared to Connection Broker version 8.0.80.

- The Leostream components have been upgrade, as follows

  - Leostream Connect for Windows operating systems - version 3.0.187
  - Leostream Agent for Windows operating systems – version 5.6.159
  - Leostream Connect for Linux operating systems – version 3.1.45
  - Leostream Agent for Linux operating systems – version 3.1.108

- Resolved issues scanning centers created for VMware vSphere 6

- No longer change a desktops power status to stopped when the Leostream Agent on the desktop stops

- Resolved issues launching desktops from an HP SAM client when the Connection Broker uses the Leostream pool name to display the desktop to the user

- Improvements when releasing PCoIP sessions

  - Disconnect PCoIP sessions when the associated desktop is released
  - Disconnect PCoIP sessions when calling `VM.Release` on a hard-assigned desktop
  - Log failed attempts to disconnect a PCoIP session

- Added a **Status** option to the **Power** menu of the Connection Broker virtual appliance Administration Menu (see the **Connection Broker Virtual Appliance Guide**).

Connection Broker 8.0.80 – Release Notes

Connection Broker 8.0.80 is a maintenance release for Connection Broker 8.0. This release resolves the following issues when compared to Connection Broker version 8.0.77.

- Leostream Connect for Windows Operating systems has been updated to version 3.0.186. This version resolves issues launching NX player version 4.3.

- Implemented performance enhancements related to the feature to assign policies based on nested Active Directory groups. The introduction of that feature significantly slowed down user logins in certain environments.

- Added 6 months as an option for filtering the **Signed in** column on the **> Users > Users** page.

- Updated OpenSSL to version 1.0.1o.

- Improved reporting for the **Last Connect Time** and other columns related to tracking the users session on the **> Resources > Desktops** page for sessions offered from a multi-user center.

- Resolved an issue where requesting a reboot of a physical desktop could allow simultaneous reboots.

Connection Broker 8.0.77 – Release Notes

Connection Broker 8.0.77 is a maintenance release for Connection Broker 8.0. This release resolves the following issues when compared to Connection Broker version 8.0.64.

- Power control options for virtual machines in a VMware vCenter Server center now function properly.

- You can now export SSL credentials from Connection Brokers built using the version 8.0 appliance for VMware.

- You can now assign policies to users who have nested Active Directory groups.

- When uninstalling an SSL certificate, the private key is now also deleted.

- Restarting the Connection Broker no longer overrides changes made to the `/etc/resolv.conf` file.

- The Connection Broker now executes release plans for assigned desktops that are shut down using vCenter Server, if the desktop has a running Leostream Agent.

- Connection Broker `Pool_Power_State` jobs now queries the Leostream Agent to ensure that the correct power state is displayed for the desktop.

- The **> Resources > Desktops** page loads faster when containing information about PCoIP Remote Workstation Cards.

- The **Edit Desktop** page opens faster for desktops that contain PCoIP Remote Workstation Card information.

- Updated OpenSSL to version 1.0.1m

- The Connection Broker now uses cookies, in addition to session IDs, to determine if a URL may be accessed.

Connection Broker 8.0.64 – Release Notes

Connection Broker 8.0.64 is a maintenance release for Connection Broker 8.0. This update contains minor usability enhancements and is being made available along with a new Connection Broker 8.0.64 ISO. For more information or access to the ISO, please contact supportsite@leostream.com.

Connection Broker 8.0.61 – Release Notes

Connection Broker 8.0.61 is a maintenance release for Connection Broker 8.0.

Important Note

Connection Broker 8.0.61 addresses failures that occur when updating Connection Broker 7.7 or older to version 8.0. Ensure that you download the Connection Broker 8.0.61 update file if you are using one of these older Connection Broker versions.

Connection Broker 8.0.56 – Release Notes

Connection Broker 8.0.56 is a maintenance release for Connection Broker 8.0. In addition, Connection Broker 8.0.56 is available as a virtual appliance for VMware vSphere 5.x

Other virtualization platforms may be updated to version 8.0.56 by installing older Connection Broker versions and performing a Connection Broker update. Check the Leostream **Product Downloads** page for appliances for all supported virtualization platforms.

Important Notes

- RGS Sender version 7.0.2 for Linux operating systems has a known issue when used with Leostream. For a Linux operating system, use RGS Sender version 7.0.1, only. For a Windows operating system, use any RGS Sender version 7.0.1, or higher.

- SLP discovery of PCoIP devices has been deprecated. Use DNS SRV records or manual entry to inventory PCoIP devices in your Connection Broker.

Features

- The following minor Leostream components have been upgraded.
  - Leostream Connect for Windows – version 3.0.184
  - Leostream Connect for Linux – version 3.1.24
  - Leostream Agent for Linux – Version 3.1.74

- **Virtual Appliance:** The new Connection Broker virtual appliance for vSphere 5.x is built on CentOS 6.6. Older virtual appliance that are upgraded to version 8.0.56 retain their existing CentOS version.

- **SSL:** The OpenSSL library has been updated to version 1.0.1l.

- **VMware View:** Protocol plans now specify the remote viewer port to check when connecting to desktops running the VMware View Direct-Connection Plugin, enabling backup pools and protocol failover.

- **Filters:** Active filters for any Connection Broker list are now highlighted, making it easier to interpret the content of each list.

Resolved Issues

- The Connection Broker now supports non-ASCII characters in a VMware virtual machine Annotation field.

- Password authentication is supported for NIS authentication servers.

- Applying the 8.0.56 Connection Broker update correctly handles PCoIP zero clients with a TERA1 card that are hard-assigned and connected to a remote workstation.

- If a desktop, application, client, or log filter is created and shared by a user that is subsequently deleted from the Connection Broker, that filter is now assigned to the main Connection Broker Administrator, who may then edit or delete the filter.

- All log messages are now sent to all specified syslog servers, instead of only messages related to user actions.

- Logoff notifications received for NoMachine NX sessions are no longer marked as disconnection.

- The Connection Broker provides better error handling for users logging in using a HP Session Allocation Manager (SAM) client

Database Changes

Version 8.0.56 adds the new field to the `plan_protocol` table to the Connection Broker database, when compared to Connection Broker version 8.0.47.

Connection Broker 8.0.47 – Release Notes

Connection Broker 8.0.47 is a maintenance release for Connection Broker 8.0. This new Connection Broker version resolves the issue where the login of multiple of unknown rogue domain users caused multiple local users to be created in the Connection Broker.

Connection Broker 8.0.46 – Release Notes

Connection Broker 8.0.46 is a major update to Connection Broker 7.8. You can update any existing 7.x Connection Broker to version 8.0.46. However, to obtain the updates to the underlying CentOS operating system, you must install a new Connection Broker virtual appliance.

See the Connection Broker Virtual Appliance Administrator's Guide for instructions on updating your Connection Broker. Follow the instructions in "Updating Connection Broker Clusters" when updating a cluster of Connection Brokers.

Important Notes

1. Connection Broker 8.0 clusters officially support Microsoft SQL Server 2012 and 2014 databases.
2. The Connection Broker no longer allows secure communication using SSLv3. Use the new security options on the **> System > Settings** page to configure the protocols the Connection Broker can use for secure communications.

3. The Connection Broker no longer provides Protocol Plan options for the iTAP RDP and VNC iOS clients. The iTAP mobile RDP and VNC apps for iOS were discontinued effective October 8, 2013. For users connecting from an iOS device, use the Leostream Web client with a third-party RDP app.

4. The **Configuration file** in the **NoMachine NX** section of new Protocol Plans supports connections from the NoMachine Player to NoMachine server version 4, by default.

5. The Connection Broker no longer supports NTLM logins to the Leostream web interface. The **Enable NTLM feature** option is no longer available on the **> System > Settings** page.

Features

- The following Leostream components have been upgraded.
    o Leostream Connect for Windows – version 3.0.182
    o Leostream Agent for Windows – version 5.6.151
    o Leostream Connect for Linux – version 3.1.16
    o Leostream Agent for Linux – Version 3.1.71

- **HPE Moonshot Systems**

    o A center can now be created for HPE Moonshot Systems, providing inventory and management of desktops hosted on the m700 and m710 Server cartridge (requires Chassis Manager firmware version 1.2 or 1.3) (see "HPE Moonshot System Centers" in the Connection Broker Administrator's Guide)

    o Windows Deployment Services integration automates scheduling operating system deployment to HPE Moonshot nodes (see "Microsoft Windows Deployment Services" in the Connection Broker Administrator's Guide)

    o A new Getting Started Guide on using Leostream to manage HPE Moonshot Systems is available on the Leostream downloads page

- **OpenStack:**

    o Centers can now be created to inventory virtual machines in OpenStack® clouds, including HPE Helion OpenStack (see "OpenStack Centers" in the Connection Broker Administrator's Guide)

    o Provisioning parameters in pools can be configured to provision new virtual machines into OpenStack using the existing images in an OpenStack center (see "Provisioning in OpenStack" in Chapter 8 of the Connection Broker Administrator's Guide)

- **PCoIP**

    o Leostream Connect can now launch software-based PCoIP Connections to a Windows virtual machine running the VMware Horizon View Direct Connection Plug-In (see "PCoIP Connections to VMware Virtual Machines" in the Leostream guide for Choosing and Using Display Protocols)

    o The Connection Broker now supports connecting to virtual machines running the VMware Horizon View Direct Connection Plug-In from a PCoIP zero client (see "PCoIP Connections to VMware Virtual Machines" in the Leostream guide for Choosing and Using Display Protocols)

- PCoIP client scan now be reset from the **> Clients** page (see "Resetting PCoIP Zero Clients" in Chapter 17 of the Connection Broker Administrator's Guide)

- PCoIP Host Devices can now be deleted in bulk (see "Deleting PCoIP Remote Workstation Cards" in Chapter 17 of the Connection Broker Administrator's Guide)

- The Java version of the Leostream Agent now supports single sign-on for PCoIP connections to desktops running a Red Hat operating system

- **Rogue User Control:** Users connecting to desktops from non-Leostream clients can now be assigned to the connected desktops, ensuring that the Connection Broker does not offer these desktops to other Leostream users (see "Assigning Desktops to Rogue Users" In Chapter 6 of the Connection Broker Administrator's Guide)

- **User Configurable Protocol Plan Parameters:**

  - Users can now configure protocol plan parameters for HP RGS connections (see "Setting User-Configurable HP RGS Parameters" in the Leostream guide for Choosing and Using Display Protocols)

  - Users can now configure the value used for the `Disable backingstore` parameter for NoMachine NX connection (see "Setting User-Configurable NX Parameters" in the Leostream guide for Choosing and Using Display Protocols)

  - The Protocol Plan form can no longer be saved if the configuration file is missing the dynamic tags required for selected user-configurable parameters

  - Users can now save user-configured protocol plan parameters globally, as an alternative to storing the parameters per-desktop (see "User Configurable Protocol Plan Parameters" in the Leostream guide for Choosing and Using Display Protocols)

  - Users can now configure protocol plan parameters using the Java version of Leostream Connect

- **Locations:** Client locations can now be created using the client's chassis type (see "Creating Locations" in the Connection Broker Administrator's Guide)
- **Release Plans:** Release plan options can now be scheduled for up to 14 days (See "Creating Release Plans" in the Connection Broker Administrator's Guide)

- **Administrator Web Interface Options**: Two new options on the **> Users > My Options** page improve the usability and performance of the Connection Broker Administrator Web interface (see "Highlighting Active Filters" and "Restoring Connection Broker Default Views" in the Connection Broker Administrator's Guide)

- **Leostream Management API**:

- o `VM.Add` now supports separately setting the desktop hostname and IP address.
- o `User.Remove` can be used to remove a user from the Connection Broker
- o `VM.Find` can now return all desktops in a particular pool

- **Security**:

  - o Leostream session files are now stored in memory, instead of on disk

  - o Connection Broker administrators can now set the protocol used for secure communications with Leostream Connect clients and Leostream Agents, using the new options on the **> System > Settings** page (see "Configuring Secure Connection Broker Communication" in the Connection Broker Administrator's Guide)

  - o The Connection Broker now includes OpenSSL version 1.0.1j

- **Desktops**

  - o The new **Control** bulk action can be used to power control multiple desktops, simultaneously (see "Performing Actions on Multiple Desktops in the Connection Broker Administrator's Guide)

  - o The new **Upgrade** bulk action can be used to upgrade the Leostream Agent on multiple desktops, simultaneously (see "Updating the Leostream Agent on Multiple Desktops" in the Connection Broker Administrator's Guide)

Resolved Issues

- All polling and scan jobs in the Job Queue now report as being run by the Connection Broker instead of as by the user who created the associated center

- The **> System > Remote Backup** page no longer displays for Connection Brokers attached to a remote database

- The Connection Broker now uses the Active Directory GUID to determine if desktops from an Active Directory center are duplicates, and looks across all centers created from the same authentication server

- Center scan jobs, such as `hda_scan`, now limit their scan to only desktops in that center

- The Connection Broker now blocks the administrator from performing an update if a previous update is still in progress

- The **Test Login** form can now be used to test the login for local users when a single authentication server is defined in the Connection Broker

Database Changes

Version 8.0.46 adds the new `config_param_global_setting` table to the Connection Broker database, when compared to Connection Broker version 7.8.79. In addition, new fields are added to the following tables in the Connection Broker databases.

- `client`
- `configurable_parameter`
- `general_config`
- `log_settings`
- `plan_protocol`
- `policy`
- `server`
- `table`
- `vm`
- `work_queue`

Leostream Connect for Microsoft® Windows® Operating Systems – Version 3.0.182

- **Software-based PCoIP**: Connections to virtual machines running the VMware Horizon View Direct-Connection Plugin can now be made using the latest VMware Horizon View client. See "PCoIP Connections to VMware Virtual Machine" in the Leostream Guide for Choosing and Using Display Protocols for more information.

- **HP RGS**: Leostream Connect now supports the `{SESSION}` dynamic tag when allowing users to configure screen resolution for RGS sessions (see "Setting User-Configurable HP RGS Parameters" in the Leostream guide for Choosing and Using Display Protocols).

- **Windows 8:** Leostream Connect now supports touch-screen keyboards when installed as the Windows shell.

Leostream Connect for Linux® Operating Systems – Version 3.1.16

Important Note

Leostream Connect now requires a Java Runtime Environment version 1.7 or higher.

Features

- **User-configurable Parameters:** Users can now configure protocol plan parameters when using the Java version of Leostream Connect.

- **USB:** Leostream Connect provides updated USB drivers and resolves a number of issues related to USB device redirection. Leostream now supports Linux kernel versions up to 3.15.0.

Leostream Agent for Microsoft® Windows® Operating Systems – Version 5.6.151

- **Windows Deployment Services:** The Leostream Agent can now be installed on a Windows Deployment Services server to return information and perform preparation on install images to be used by the Connection Broker to deploy operating systems to HPE Moonshot Systems.

- **USB:** The Leostream Agent includes updated USB drivers. These USB drivers are backwards compatible with the previous release of all Leostream components.

- **Installation:** The `CBPORT` parameter can no longer be specified during command line installations. The Leostream Agent now always uses port 443 for secure communication with the Connection Broker.

- **PCoIP:** The Leostream Agent automatically unlocks a disconnected session when the user reconnects.

Leostream Agent for Linux® Operating Systems – Version 3.1.71

Important Note

The Leostream Agent now requires a Java Runtime Environment version 1.7 or higher.

Features

- **PCoIP:** The Leostream Agent now provides single sign-on to PCoIP sessions for Ubuntu and Red Hat operating systems.

- **Idle-time Actions:** The new Leostream Desktops process runs in the user's space, and allows the Leostream Agent to support user idle-time actions configured in Release Plans for users logged into Ubuntu or Red Hat Linux desktops.

- **USB:** The Leostream Agent provides updated USB drivers and resolves a number of issues related to USB device redirection. Leostream now supports Linux kernel versions up to 3.15.0.

- **HP RGS**: The Leostream Agent can now disconnect HP RGS sessions.

- **NoMachine NX**: The Leostream Agent now tracks sessions for NoMachine NX version 4.0.

Connection Broker 7.8.79 – Release Notes

Connection Broker 7.8.79 is a minor upgrade to Connection Broker 7.8.78. Version 7.8.79 includes an updated `bash` to address the Shellshock Bash Vulnerability.

Connection Broker 7.8.78 – Release Notes

Connection Broker 7.8.78 is a minor upgrade to Connection Broker 7.8.65. See the Connection Broker Virtual Appliance Administrator's Guide for instructions on updating your Connection Broker. Follow the instructions in "Updating Connection Broker Clusters" when updating a cluster of Connection Brokers.

Features

- The **> Users > My Options** page contains a new option to highlight the active filters used in Connection Broker pages that display lists

- The Job Queue ID can now be added as a column on the **> System > Log** page

Resolved Issues

- Improvements to logic that retains or releases assignments after a user's desktop connection fails to launch

- Improvements for users logging into the Connection Broker using an HP SAM client

- Improved performance when accessing the **Edit Desktop** in a Connection Broker that contains a large number of desktops and pools

- Issues related to sharing user session IDs between Connection Brokers in a cluster have been resolved.

- All polling and scan jobs in the Job Queue now report as being run by the Connection Broker instead of as by the user who created the associated center

Database Changes

Version 7.8.78 adds fields to the following tables in the Connection Broker databases, when compared to Connection Broker version 7.8.65.

- `log`

Connection Broker 7.8.65 – Release Notes

This minor update to the Connection Broker reverts the OpenSSL version back to 0.9.8y in order to resolve issues related to launching connections using the Java version of Leostream Connect. If you are using this version of Leostream Connect, and receive `Failed to read server's response: handshake alert: unrecognized_name` errors, please upgrade your Connection Broker to version 7.8.65.

Connection Broker 7.8.65 also now supports Release Plan settings in the **When User is Idle** section for users logging in using an HP Session Allocation Manager (SAM) client.

Connection Broker 7.8.63 – Release Notes

Important Notice on Supported Third-Party Product Versions

In keeping with the product lifecycle of our partners, Connection Broker 7.8.63 no longer installs into or supports Centers for the following virtualization platforms.

- Microsoft Hyper-V Server 2008
- Citrix XenServer 5.6 and earlier

If your existing Connection Broker deployment includes Centers for either of the previously listed product versions, do not upgrade your existing Connection Broker.

Connection Broker Appliance Notes

Connection Broker 7.8 is available as a virtual appliance for the following virtualization platforms.

- VMware vSphere 5.x
- Citrix XenServer 6.x
- Microsoft Hyper-V Server 2012

Other virtualization platforms may be supported by installing older Connection Broker versions and performing a Connection Broker update. Check the Leostream **Downloads & Documentation** page for a complete list of supported virtualization platforms.

Features

- The following Leostream components have been upgraded.
  - Leostream Connect for Windows – version 3.0.155
  - Leostream Agent for Windows – version 5.5.104

- o   Leostream Connect for Linux – version 3.0.49.0
- o   Leostream Agent for Linux – Version 2.5.146

- **SSL:** The OpenSSL library has been updated to version 0.9.8za

- **Release Plans:**

  - o   **The Timed Release After Initial Assignment** section has been renamed to **When Desktop is First Assigned**

  - o   The new **Release if user does not log in** option specifies the length of time the Connection Broker retains a user's assignment to their desktop even if the user does not log into the desktop after it is first assigned (see "Creating Release Plans" in Chapter 10 of the Connection Broker Administrator's Guide)

- **User Display Names:** The new **Field that defines user display names** edit field on the **Edit Authentication Server** page specifies the user's Active Directory attribute to place into the **Name** column on the **> Users > Users** page (see "Adding Microsoft Active Directory Authentication Servers" in chapter 13 of the Connection Broker Administrator's Guide)

- **Hyper-V Support**: Centers can now be created for Microsoft Hyper-V Server 2012 (See "Microsoft System Center Virtual Machine Manager (SCVMM) 2012 Centers" in Chapter 5 of the Connection Broker Administrator's Guide)

- **Citrix XenServer Support**: Centers can now be created for Citrix XenServer 6.x (See "Citrix XenServer™ 6.x Centers" in Chapter 5 of the Connection Broker Administrator's Guide)

- **Dynamic Tags:** The new `{SHORT_HOSTNAME}` dynamic tag can be used in protocol plans to reference the part of the hostname before the first dot (See "Using Dynamic Tags" in Chapter 10 of the Connection Broker Administrator's Guide)

- **Policies:** The **Confirm desktop power state** option has been split into two separate options (see "Defining Behaviors for Assigned Desktops" in Chapter 11 of the Connection Broker Administrator's Guide):

  - o   The **Confirm desktop's current power state** option instructs the Connection Broker to check the power state of the desktop prior to connecting the user

  - o   The **Power on stopped or suspended desktops** option indicates if the Connection Broker should send a power on command to a desktop it marked as stopped

- **Centers:** Active Director and Uncategorized Desktops centers contain a new option to resolve addresses for desktops in this center using short hostnames (see Chapter 5 in the Connection Broker Administrator's Guide)

- **Cloud Desktops**: Leostream Cloud Desktops center can now be created for both Amazon

Web Services and HPE Helion Public Cloud (see "Leostream Cloud Desktops" in Chapter 5 of the Connection Broker Administrator's Guide)

- **Clients**:

    o The **> Clients > Clients** page provides separate columns for the desktop that is hard-assigned to the client and the desktop that is currently connected to the client (see "Using the Clients Page" in Chapter 12 of the Connection Broker Administrator's Guide)

    o The **Edit Client** page for PCoIP zero clients provides access to higher screen resolutions

Resolved Issues

- Users with a Role that provides **Full** privileges to the **> System > Job Queue** page can now perform bulk actions on this page

- A desktop that is hard assigned to a client is now never offered via policy to a user

- Improvements to the **User Connected** column on the **> Clients > Clients** page for PCoIP clients that are directly connected to their hard-assigned desktop

- Added back 8- and 12-hour session timeouts in Policies

- The Connection broker now uses a port check instead of ping when confirming the power state of a desktop at assignment time

- The **Exit client after connection to resource is established** option on the **> System > Settings** page is again supported by Leostream Connect for Windows

Database Changes

Version 7.8.63 adds fields to the following tables in the Connection Broker databases, when compared to Connection Broker version 7.8.50

- `client`
- `vm`

Connection Broker 7.8.50 – Release Notes

Connection Broker7.8.50 is a minor upgrade to Connection Broker 7.8.47. See the <u>Connection Broker Virtual Appliance Administrator's Guide</u> for instructions on updating your Connection Broker. Follow the instructions in "Updating Connection Broker Clusters" when updating a cluster of Connection Brokers.

Connection Broker Appliance Notes

Connection Broker 7.8.52 is now available as a virtual appliance for Microsoft Hyper-V Server 2012. The Leostream Connection Broker virtual appliance no longer installs on Hyper-V Server 2008. If you require support for Hyper-V 2008, please contact supportsite@leostream.com.

Resolved Issues

- Desktops inventoried from an Active Directory center and that are hard-assigned longer lose their hard-assignments during an upgrade.

- The Connection Broker network can now be configured from the virtual appliance console.

- Fixed errors when filtering logs by the `yesterday` option.

Connection Broker 7.8.47 – Release Notes

Connection Broker 7.8.47 is packaged as a virtual appliance for VMware vSphere 5.0 and higher. Connection Broker 7.8.47 is also available as an update file for any 7.x Connection Broker previously installed on older VMware versions or other vendor hypervisor.

Connection Broker Appliance Notes

The 7.8.47 virtual appliance is built using the following updated components

- CentOS 5.10
- VMware virtual hardware version 8

Resolved Issues

- The Connection Broker now informs you that a reboot is required after resetting the SSLCipherSuite on the **> System > Settings** page

- Low-level network tools have been updated to resolve cases where Leostream Agents went Unreachable during a manual Center refresh

- Leostream Agent for Windows operating systems was updated to version 5.5.98 to resolve issues launching RDP connections using the ActiveX RDP client

- Leostream Connect for Windows operating systems was updated to version 3.0.118, which now deletes the Leostream Connect logs when the client is uninstalled

Connection Broker 7.8.45 – Release Notes

Connection Broker7.8.45 is a minor upgrade to Connection Broker 7.8.37.

Features

- The following Leostream components have been upgraded.
    - Leostream Connect for Windows – version 3.0.114: OpenSSL has been upgrade to version 1.0.1g
    - Leostream Agent for Windows – version 5.5.96: OpenSSL has been upgrade to version 1.0.1g
    - Leostream Connect for Linux – version 3.0.42.0: No longer supports JRE version 1.5

- **Exceed onDemand:** Users can now launch Exceed onDemand connections from the Leostream Web client (see "Exceed onDemand" in Chapter 15 of the Connection Broker Administrator's Guide)

- The **> Clients > Clients** page includes a new column to display if PCoIP clients are managed by the Connection Broker (see "Using the Clients Page" in Chapter 12 of the Connection Broker Administrator's Guide)

- The **Edit PCoIP Host Device** page now includes links to access the host device's Web portal

- When hard-assigning desktops to users, users can now be selected using either their login name or display name

- Session files are now stored encrypted in the Connection Broker

Resolved Issues

- The Connection Broker now identifies unique computers in an Active Directory center using the AD `objectGUID`, instead of the `DistinguishedName`, allowing computer names and OUs to be changed without creating a new record in the Connection Broker

- Clients hard assigned to an available desktop with a duplicate desktop switch over to the

duplicate desktop after the available desktop is removed from the Connection Broker

- PCoIP clients that contact the Connection Broker using the `_pcoip_broker` DNS SRV record are now reconfigured to be managed by the Connection Broker, if the client was previously set to connect to a particular host

- The Connection Broker now ignores internal IP addresses returned by VMware Tools, when processing a `wait_for_start` job

Database Changes

Version 7.8.37 adds fields to the following tables in the Connection Broker databases, when compared to Connection Broker version 7.8.27

- `plan_protocol`

Connection Broker 7.8.37 – Release Notes

Connection Broker7.8.37 is a minor upgrade to Connection Broker 7.8.27.

Features

- The following Leostream components have been upgraded.
  - Leostream Connect for Windows – version 3.0.107
  - Leostream Connect for Linux – version 3.0.41.0
  - Leostream Agent for Windows – version 5.5.95
  - Leostream Agent for Linux – version 2.5.145

- **PCoIP**:
  - PCoIP Devices centers no longer contain the **Configure clients with this Connection Broker address** option

  - When selecting the **Configure this client for use with this Connection Broker** option for a PCoIP client, the Connection Broker now uses the following sequence to determine which Connection Broker address to set in the client: 1) the Connection Broker VIP address, 2) the address set in the Connection Broker SRV record, or 3) the local Connection Broker address

  - Policies contain a new **Retain console connection** option for hard assignments, allowing you to retain the PCoIP connection to a desktop after the user logs out of the operating system

  - The Connection Broker now logs a warning if the Leostream Agent registers a desktop with information about an unknown PCoIP host card

- The **> Resources > Desktops** page provides an optional **PCoIP Host Device 2** column to display PCoIP information for desktops that contain two PCoIP host cards

- Italian Carta Sanitaria and Carta Operatore smart card logins are now supported

- The **Display name** edit field on the **Edit User** form has been renamed to **Name**, and now defaults to the user's Active Director **displayName** value

- The **> Resources > Desktops** page provides an optional **vCenter Server "Notes"** column

- Pools can now be defined using the **Display Name** and **Notes** desktop attributes

- The **>System >Network** now displays all Connection Broker SRV records

- API requests from 3rd-party monitoring tools are now throttled to reduce load on the Connection Broker

- Clicking **Status** for a desktop now displays the domain name of any logged-in users

Resolved Issues

- Display plans now honor the setting to allow users to save and restore application window positions

- Mac OS and Mac OS X clients now correctly register their operating system

- Leostream Agent communication has been improved to address the following issues:

    - Failure to contact the Leostream Agent could be considered a logout

    - Disconnect notification could override logout notification

    - Logout notification could be ignored

- Addressed issue where Printer, Registry, and Display Plans were occasionally determined based on the user's previous, instead of current, client

- The Connection Broker no longer attempts to pair PCoIP host card when the feature to pair PCoIP clients is enabled

- If two users are offered the same PCoIP desktop, the Connection Broker no longer allows the second user to launch the connection after the first user connects and is assigned to the desktop

- The Connection Broker now issues a warning if the **Bulk Edit** feature is selected for a larger number of objects than supported by Internet Explorer URLs

Database Changes

Version 7.8.37 adds fields to the following tables in the Connection Broker databases, when compared to Connection Broker version 7.8.27

- `policy`

Connection Broker 7.8.27.0 – Release Notes

Connection Broker7.8.27 is a minor upgrade to Connection Broker 7.8.22. See the Connection Broker Virtual Appliance Administrator's Guide for instructions on updating your Connection Broker. Follow the instructions in "Updating Connection Broker Clusters" when updating a cluster of Connection Brokers.

Features

- The following Leostream components have been upgraded.
    - Leostream Connect for Windows – version 3.0.95
    - Leostream Connect for Linux – version 3.0.40.0
    - Leostream Agent for Windows – version 5.5.87
    - Leostream Agent for Linux – version 2.5.109

- **Bulk Upload:** The desktop's **Display Name** can now be modified when uploading desktops using the bulk upload feature on the **> System > Maintenance** page (see "Uploading Desktop Assignments" in Chapter 20 of the Connection Broker Administrator's Guide).

- **PCoIP:**

    - The Connection Broker now performs the automatic PCoIP host card matching when the Leostream Agent registers a new desktop. Previously, a second Leostream Agent restart was required (see "Associated PCoIP Host Cards and Desktops" in Chapter 17 of the Connection Broker Administrator's Guide).

    - The **Edit Desktop** page now contains a link to the **Edit PCoIP Host Device** page for the PCoIP host devices associated with that desktop.

- **Desktops:** The **Bulk Edit** form for desktops includes a new option to forget the previously assigned user. This option is useful when the user's policy is set to favor previously assigned desktops, but you want to offer a new desktop to the user (see "Removing Desktop Affinities" in Chapter 6 of the Connection Broker Administrator's Guide).

- **Usability:** Tables can now be filtered using numeric information, such as in the **IP** and **MAC address** columns on the **> Resources > Desktops** page (see "Sorting and Filtering Lists" in Chapter 2 of the Connection Broker Administrator's Guide).

- **Policies:** Policies contain a new option to inform users when they missing an offered resources because a pool in their policy has no available resources (see "Adding a New Policy and Configuring General Policy Options" in Chapter 11 of the <u>Connection Broker Administrator's Guide</u>).

- **NX Session Shadowing:** The Connection Broker no longer sends policy settings related to NoMachine collaboration to the Leostream Agent on the NX server if the user's role does not enable collaboration. Therefore, the Leostream Agent no longer modifies the `server.cfg` file if the user's role does not enable collaboration.

- **Security enhancements**:

    o The Connection Broker now blocks HTTP requests for OPTIONS, in addition to TRACE.

    o Web login request method must now be POST, not GET.

Resolved Issues

- Issues with the new option to direct-connect PCoIP zero clients to their hard-assigned desktops have been resolved (see "Direct Connections to Hard-Assigned Desktops" in Chapter 17 of the <u>Connection Broker Administrator's Guide</u>).

- When testing a vCenter Server center, the `VirtualMachine.Interact.Reset` permission is now included in the list of VMware privileges required to reboot virtual machines from a vCenter Server center.

- The Connection Broker now correctly identifies two users that have the same first and last name, but different login names. Previously, the Connection Broker offered the user the correct resource, but used a single user record on the **> Users > Users** page for both users. Each user now has a unique user record.

Connection Broker 7.8.22 – Release Notes

Connection Broker 7.8.22 is an upgrade to Connection Broker version 7.7.29. See the Connection Broker Virtual Appliance Administrator's Guide for instructions on updating your Connection Broker. Follow the instructions in "Updating Connection Broker Clusters" when updating a cluster of Connection Brokers.

Connection Broker 7.8.22

Important Notes

⚠️ Connection Broker 7.8.22 no longer provides non-SSL failover for Leostream Connect and Leostream Agent communications. Also:

- Connection Broker 7.8 no longer supports the creation of centers for ESX 3.5. Existing VMware ESX centers are still supported.

- Connection Broker 7.8 does not support versions of the Leostream Agent in Java older than 2.0. If you are using the 1.5.56 version of the Leostream Agent in Java, you must manually upgrade to the latest version of the Leostream Agent in order to manage the Linux desktops in Connection Broker 7.8.

- Connection Broker 7.8 does not support versions of the Leostream Agent for Windows operating systems older than 5.0.

- When allowing unauthenticated logins, Connection Broker 7.8 now validates the user's password, if one is provided. In previous versions, the Connection Broker logged in the user without validating any provided password.

- If a user requests a connection to a desktop with a running Leostream Agent, the Connection Broker now places a `check_logon` job into the work queue when the user is first assigned to the desktop. The `check_logon` job monitors the desktop for an actual login. If the user does not log in to the assigned desktop in four minutes, the `check_logon` job releases the assignment.

Features

- The following Leostream components have been upgraded. These versions contain new USB drivers and eliminate the non-SSL failover.

  ⚠️ The new versions of the Leostream Agents and Leostream Connect clients no longer support non-SSL communications with the Connection Broker. If you are running a Connection

Broker older than version 7.8, you must switch that Connection Broker into SSL by installing an SSL certificate on the **> System > Maintenance** page.

- o   Leostream Connect for Windows – version 3.0.94
- o   Leostream Connect for Linux – version 3.0.18.0
- o   Leostream Agent for Windows – version 5.5.84
- o   Leostream Agent for Linux – version 2.5.73

- **Security features:**

    - o   The Connection Broker ships with a default Leostream SSL certification, enabling port 443, by default. The Connection Broker only communicates with the Leostream Agents and Leostream Connect clients using SSLv3 or TLS v1.0.

    - o   The **> System > Settings** page contains a new option for specifying the SSLCipherSuite directive (see "Configuring Secure Connection Broker Communications" in the Connection Broker Administrator's Guide).

    - o   The **> System > Settings** page contains a new option to block all Connection Broker traffic on port 80 (see "Configuring Secure Connection Broker Communications" in the Connection Broker Administrator's Guide).

    - o   The Connection Broker virtual appliance Apache Web Server has been upgraded to version 2.2.26.

    - o   Self-signed certificates can now be generated from only a site name (CN) (see "Generating and Installing Self-Signed SSL Certificates" in the Connection Broker Administrator's Guide).

    - o   Uninstalling an SSL certificate now deletes the certificate's private key from the Connection Broker database (see "Uninstalling an SSL Certificate" in the Connection Broker Administrator's Guide).

- **PCoIP support:**

    - o   PCoIP zero clients that are hard-assigned to a desktop can now be automatically connected to that desktop without requiring the user to log into the Connection Broker (see "Direct Connections to Hard-Assigned Desktops" in Chapter 17 of the Connection Broker Administrator's Guide).

    - o   The **> System > Maintenance** page now contains an option for uploading PCoIP Host Cards (see "Uploading PCoIP Host Devices" in Chapter 20 of the Connection Broker Administrator's Guide).

    - o   PCoIP center scans no longer automatically configure PCoIP clients to be managed by the Connection Broker performing the scan

    - o   The Connection Broker now verifies the connection to the FTP server specified in the

PCoIP Host Devices center before allowing the form to be saved

- **Clients:**

  o The **> Clients > Clients** page now provides a bulk edit action that can be used to set plans or configure PCoIP parameters for multiple clients (see "Bulk Editing Clients" in Chapter 12 of the Connection Broker Administrator's Guide).

  o The **> System > Maintenance** page option to upload clients now allows additional client parameters to be specified, such as client type (see "Uploading Clients" in Chapter 20 of the Connection Broker Administrator's Guide).

- **Pools:**

  o Pools can now store historical usage data (see "Tracking Desktop Usage from Pools" in Chapter 7 of the Connection Broker Administrator's Guide).

  o The **> Resources > Pools** page now contains a top-level **Refresh** link to refresh the pool counts for all pools displayed on the page (see "Refreshing Pool Statistics" in Chapter 7 of the Connection Broker Administrator's Guide).

- **Roles**:

  o The separate **Resume** and **Start** permissions have been combined into a single **Start/Resume** role permission (see "Permissions for Power Control" in Chapter 9 of the Connection Broker Administrator's Guide).

  o PCoIP Host cards shown on the **> Resources > PCoIP Host Devices** page and in the list of available PCoIP host cards on the **Edit Desktop** page are now filtered based on the user's role permission for **Desktops in Pool**

  o The desktops available for hard-assignment to clients are filtered based on the user's role permission for **Desktops in Pool**

- **Multi-User systems:**

  o The Remote Desktop Services center has been renamed to Remote Desktop Services/Multi-User (see "Remote Desktop Services / Multi-User Centers" in Chapter 5 of the Connection Broker Administrator's Guide).

  o Desktops on the **> Resources > Desktops** page can be converted to a **Remote Desktop Services/Multi-User** center using the bulk edit action for desktops (see "Converting Desktops to Remote Desktop Services / Multi-User Centers" in Chapter 6 of the Connection Broker Administrator's Guide).

  o The Remote Desktop Services/Multi-User center now contains the **Offer desktops from this center** option (see "Remote Desktop Services / Multi-User Centers" in Chapter 5 of the Connection Broker Administrator's Guide).

- Linux support:

  - The Connection Broker now distinguishes different Linux operating systems, instead of categorizing all Linux desktops into a single, generic Linux OS

  - Pools and Locations can now be created for specific Linux distributions

- The **External viewer** section of the protocol plan can be used to connect to desktops from a Web browser using URLs that begin with ftp, ssh, and vmware-view (see "Launching SSH, VMware View, and FTP as External Viewers" in Chapter 15 of the Connection Broker Administrator's Guide).

Resolved Issues

The following list contains a sample of the issues resolved in this Connection Broker update. For information regarding these, or other, issues, please contact supportsite@leostream.com.

- Users invited to shadow another user's NoMachine NX session no longer receive a "Resource is no longer available" error when attempting to connect to the shadowed session

- Cancel work queue jobs associated with idle time actions when the Leostream Agent sends an idle-time cancel notification, not when the user requests a connection to the desktop

- Users can no longer access the **Failover** section of the bulk edit dialog for desktops unless they have the required Role permission

- Users can no longer access the Connection Broker Administrator Web interface without entering a valid password, even if the Connection Broker is set to accept unauthenticated logins.

- No longer monitor the Citrix port in the `wait_for_start` job, when confirming that a virtual machine has finished powering on

- If a user with Nordic characters in their display name is hard-assigned to a desktop, that desktop is no longer excluded from reports exported from the **> Resources > Desktops** page.

- If the **Domain** field is set to **<Any>**, the Connection Broker now searches through all possible domains to identify the user. Previously, on subsequent logins, the Connection Broker only searched the last domain that contained the user.

- The Administrator web interface now retains custom settings for number of rows displayed, etc., when the user opens the Administrator interface from the Web client.

- Unassigned desktops in the process of rebooting that do not have running Leostream Agents are no longer offered to users via policies if the policy indicates that the desktop must be running and have a running Leostream Agent

- If a user's Web client session expires and their protocol plan selects the **Allow connections through NAT'd VPNs** option, the client now correctly displays the expiration dialog

- Dynamic tags used for the host parameter in the Wyse configuration file are now correctly replaced

- The **Resume** power control option is no longer provided for desktops inventoried from an Active Directory center

- Authentication server assignment rules on the **> Users > Assignments** page are now case-insensitive

- If the Connection Broker receives a Leostream Agent stop notification from a Linux desktop, the Connection Broker now assumes that the desktop is powered off; when the Leostream Agent restarts, the Connection Broker switches the desktop's power status back to running.

Database Changes

Version 7.8.22 adds fields to the following tables in the Connection Broker databases, when compared to Connection Broker version 7.7.29

- `general_config`
- `vm`

Leostream Connect for Microsoft® Windows® Operating Systems – Version 3.0.94

Important Note

The 3.0 version of Leostream Connect no longer support non-SSL communications with the Connection Broker. Leostream Connect uses TLS v1.0 for SSL communications. If you are running Connection Broker 7.7 or older, you must switch that Connection Broker into SSL by installing an SSL certificate on the **> System > Maintenance** page.

Features

- Leostream Connect 3.0 includes a new version of the USB drivers used for USB device redirection. These new drivers are compatible with the USB drivers in version 2.5 of the Leostream Agent for Linux desktops and version 5.5 of the Leostream Agent for Windows desktops.

- The new registry values allow you to control where the Leostream Connect menu opens when running Leostream Connect in shell mode (see "Using the Shell Mode Hover Menu" in the Leostream Connect Administrator's Guide and End User's Manual.

- Leostream Connect now supports user logins through a Microsoft DirectAccess tunnel.

- Leostream Connect now prompts users to confirm a requested desktop restart.

Resolved Issues

- The Leostream Connect logo on the **Login User** dialog now correctly renders on client devices with a higher DPI.

- Leostream Connect now uses `KEY_READ` access to get the TCPIP `SearchList` key, addressing the issue where non-administrators were unable to discover the Connection Broker address during auto-discovery.

- Leostream Connect dialogs now always open in the forefront.

- Multiple improvements for managing user logins using a XyLoc proximity solution.

Leostream Connect for Linux® Operating Systems – Version 3.0.18

Important Notes

- The 3.0 version of Leostream Connect no longer support non-SSL communications with the Connection Broker. Leostream Connect uses TLS v1.0 for SSL communications. If you are running Connection Broker 7.7 or older, you must switch that Connection Broker into SSL by installing an SSL certificate on the **> System > Maintenance** page.

- The `lc.conf` parameter `connection_broker_port` has been renamed to `connection_broker_secure_port`.

- The `lc.conf` parameters `dialog_background` now controls the background color of the entire dialog. The new parameter `control_background` controls the color used inside edit fields.

Features

- Leostream Connect 3.0 includes a new version of the USB drivers used for USB device redirection. These new drivers are compatible with the USB drivers in version 2.5 of the Leostream Agent for Linux desktops and version 5.5 of the Leostream Agent for Windows desktops.

- Leostream USB redirection now supports Linux kernels up to version 3.8.0.
- Leostream Connect now returns the client device's Linux distribution to Connection Broker, for use when creating client locations.

- The new `EXCEPT` option for the `TraceLevel` parameter in the `lc.conf` file instructs Leostream Connect on when to include exceptions in the logs.

- The **Login** dialog now accepts blank passwords for unauthenticated logins.

- Leostream Connect now prompts users to confirm a requested desktop restart.

Leostream Agent for Microsoft® Windows® Operating Systems – Version 5.5.84

Important Notes

- The 5.5 version of the Leostream Agent no longer support non-SSL communications with the Connection Broker. The Leostream Agent uses TLS v1.0 for SSL communications. If you are running Connection Broker 7.7 or older, you must switch that Connection Broker into SSL by installing an SSL certificate on the **> System > Maintenance** page.

- The Leostream Agent no longer relies on the PCoIP Agent to return the information required by the Connection Broker to associate the PCoIP host card with the operating system. The Leostream Agent relies entirely on settings in the registry. Requires PCoIP firmware version 4.1.2.14565 or later.

Features

- Leostream Agent 5.5 includes a new version of the USB drivers used for USB device redirection. These new drivers are compatible with the USB drivers in version 3.0 of Leostream Connect for Linux desktops and version 3.0 of Leostream Connect for Windows desktops.

- For PCoIP connections, if either of the registry keys `legalnotice` or `legalcaption` is present and not empty in the registry, the Leostream Agent no longer waits for a logon event before returning a logon notification to the Connection Broker.

Resolved Issues

- The Leostream Agent now uses `KEY_READ` access to get the TCPIP `SearchList` key, addressing the issue where non-administrators were unable to discover the Connection Broker address during auto-discovery.

- Use a case-insensitive comparison when looking for a username in the terminal services session list, to handle instances where the user enters their username in mixed case.
- In PCoIP environments, the Leostream Agent no longer attempts to control the state of the Ctrl-Alt-Delete requirement. Instead, if either the local or policy `DisableCAD` parameters are set to 0, the Leostream Agent assume that Ctrl-Alt-Delete is enabled and does not wait for a logon event before returning a logon notification to the Connection Broker.

Leostream Agent for Linux® Operating Systems – Version 2.5.73

Important Notes

- The 2.5 version of the Leostream Agent no longer support non-SSL communications with the Connection Broker. The Leostream Agent uses TLS v1.0 for SSL communications. If you are running Connection Broker 7.7 or older, you must switch that Connection Broker into SSL by installing an SSL certificate on the **> System > Maintenance** page.

- The Leostream Agent no longer relies on the PCoIP Agent to return the information required by the Connection Broker to associate the PCoIP host card with the operating system. Requires PCoIP firmware version 4.1.2.14565 or later.

Features

- Leostream Agent 2.5 includes a new version of the USB drivers used for USB device redirection. These new drivers are compatible with the USB drivers in version 3.0 of Leostream Connect for Linux desktops and version 3.0 of Leostream Connect for Windows desktops.

- Leostream USB redirection now supports Linux kernels up to version 3.8.0.

- The Leostream Agent port can now be set during installation. The new `AGENT_PORT` parameter in the unattended installation file can be used to initialize the `AgentServerPort` parameter in the `leostreamagent.conf` file.

- The Leostream Agent now returns the desktop's Linux distribution to Connection Broker, for use when creating desktop pools.

- The new `EXCEPT` option for the `TraceLevel` parameter in the `leostreamagent.conf` file instructs the Leostream Agent on when to include exceptions in the logs.

Resolved Issues

- The Leostream Agent now registers with all Connection Broker listed in the `.notifications` file.

- The Leostream Agent now uses the following order to search for the Java Runtime path: 1) $JAVA_HOME, 2) `which java`, and 3) the Java path specified when the Leostream Agent was installed.

- The Leostream Agent now correctly detects active HP RGS sessions if the agent is restarted while a session is active.

- NoMachine NX session shadowing parameters in the `server.cfg` file are now set only once.

Updating Connection Broker Clusters

If you have multiple Connection Brokers clustered around a common Microsoft SQL Server 2012 or 2014 database, you must individually update all Connection Brokers in the cluster.

Before updating your production environment, test the new Connection Broker version in a proof-of-concept environment.

Use the following procedure to update a cluster of Connection Brokers. See the Connection Broker Administrator's Guide for detailed instructions on switching databases and updating Connection Brokers.

1. Determine a maintenance window when user activity will be low to update your Connection Brokers.

2. Use the tools provided in your virtualization platform to snap shot all Connection Brokers in the cluster.

3. Use your standard database backup mechanisms to back up the SQL Server database used by your Connection Broker cluster.

4. Go to the **Edit Cente**r page for each of the centers defined on the **> Resources > Centers** page. Change the **Refresh interval** to **Manual**.

5. After setting all the refresh intervals to manual, go to the **> System > Job Queue** page and ensure that there are no running center scan jobs. Possible center scan jobs include `poll`, `poll_power_state`, `scan`, and `hda_status`. If any of these jobs are running, wait for these jobs to finish before proceeding with step 6.

6. If replication is turned on for the SQL Server database, turn database replication off.

    ⚠ Do not proceed with the upgrade if replication is turned on for the Connection Broker database.

7. Update one of the Connection Brokers in your cluster. See the "Connection Broker Virtual Appliance Administrator's Guide" for complete instructions.

    The update process modifies the database schema in the SQL Server database to support the new Connection Broker version.

8. After the update of the first Connection Broker completes, log into that Connection Broker's Administrator Web interface and perform a spot check to ensure that the updated broker is functioning properly.

9. Follow the update procedure for the remaining Connection Brokers in your cluster.

10. After all Connection Brokers are updated, go to the > System > Job Queue page. Ensure that all Pending jobs are associated with Site IDs assigned to one of the Connection Brokers currently in the cluster. If any Pending job is associated with a Site ID that is not associated with a Connection Broker currently in the cluster, use the Settings link on the > System > Job Queue page to delete all work queue jobs associated with that Site ID. The Connection Broker reassigns all Pending jobs to new site IDs.

Appendix A: Version Compatibility

Leostream Agent Compatibility Matrix

The following table indicates the Leostream Agent versions that are compatible with the currently supported Connection Broker versions. Connection Brokers cannot communication with incompatible Leostream Agents, resulting in a loss in Leostream functionality.

Connection Broker	Version	7.8	8.0	8.1
Leostream Agent for Windows	5.5	Y	Y	Y
	5.6	Y	Y	Y
	6.x			Y
Leostream Agent for Linux	2.5	Y	Y	Y
	3.1	Y	Y	Y
	4.x			Y

- Leostream Agent versions older than 5.0 for Windows and 2.0 for Linux are not compatible with any supported Connection Broker.

- Connection Broker 7.7 and older must have an installed SSL certificate to communicate with the Leostream Agent versions shown in this table.

Leostream Connect Compatibility Matrix

The following table indicates the Leostream Connect versions that are compatible with the currently supported Connection Broker versions.

Connection Broker	Version	7.8	8.0	8.1
Leostream Connect for Windows	3.0	Y*	Y	Y
	3.5	Y	Y*	Y*
Leostream Connect for Linux	3.0	Y*	Y	Y
	3.1	Y	Y*	Y*

- Asterisks indicate the minimum Leostream Connect version required to use all of the features in the associated Connection Broker release.

- Connection Broker 7.7 and older must have an installed SSL certificate to communicate with all of the Leostream Connect versions shown in this table.