



leostream[®]

Remote Desktop Access Platform

The Leostream[®] Platform Release Notes

Connecting People. Connecting Business.

Contacting Leostream

Leostream Corporation
77 Sleeper Street
PMB 02-123
Boston, MA 02210
USA

<http://www.leostream.com>
Telephone: +1 781 890 2019

To submit an enhancement request, email features@leostream.com.

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

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Leostream® Platform 2024 and Earlier

Connection Broker 2024 Updates and Deprecations

The Leostream Platform continually evolves along with the technologies it supports. As you plan your Leostream deployment, please keep in mind the following planned platform updates and feature deprecations.

- Leostream® Remote Desktop Access Platform 2024 is the final Leostream Platform release branch for Red Hat Enterprise Linux 8 and its derivative Linux distributions such as Rocky Linux. Leostream Platform 2024 will be under Maintenance for twelve (12) months after the initial Leostream Platform 2025 release.

Note that Leostream Platform 2024 deprecates the following features. These features will not be available in Leostream Platform 2025.

- a. Support for connecting to virtual machines running the Omnisia (VMware) Horizon View Direct Connection Plug-In. Customers should migrate to a different display protocol, such as HP Anyware or NICE DCV.

If you upgrade to Connection Broker 2024 and are using this feature, please contact sales@leostream.com to ensure that your Leostream Serial number enables the Horizon View Direct Connection Plug-in.

- b. Support for the older version of the Leostream Web client. If you are embedding your Leostream portal into a custom web site, please ensure that it supports the new Leostream Web client.
 - c. The ability to send SNMP traps using the Connection Broker. Customers should plan to migrate from SNMP traps to syslog messages as soon as possible. See “Integrating with Syslog Servers” in the [Connection Broker Administrator’s Guide](#) for more information.
 - d. Support for HPE Moonshot System centers.
 - e. Support for Red Hat Virtualization centers.
- The Leostream Platform 2025 components will install on Red Hat Enterprise Linux 9 and its derivatives.



If you are still running Leostream Platform 9.x on CentOS 7, please be aware that version 9.x reached its end-of-life as of December 31, 2023. For a list 9.x functionality that is not available in Leostream Platform 202x, please see [Obsoluted 9.x Features and Functionality](#).



Leostream Connection Broker 202x no longer supports Internet Explorer 11 for accessing the Administrator Web interface or end-user Web client.

Obsoleted 9.x Features and Functionality

The following items are no longer included in Leostream Platform 202x. Please continue using version 9.1 of the Connection Broker and contact sales@leostream.com if you are using any of these features.

- NIS authentication is no longer supported. The source code for the open-source C library that Leostream leverages to integrate with NIS authentication servers is no longer included in the Red Hat repositories for RHEL 8.

Remain on Connection Broker 9.1 if you are using NIS authentication.

- Windows Deployment Services operating system provisioning for HPE Moonshot nodes is no longer supported.
- Forwarding user logins between Connection Broker clusters is no longer allowed.
- Support for the Cisco VPN client has been removed.
- Central Authentication Service (CAS) authentication is no longer available for the Leostream Web client.
- Exceed OnDemand connections to remote desktops are no longer supported.

Obsoleted Platform 2024 Features and Functionality

The upcoming 2025.1 release of the Leostream Platform removes the following functionality. Please remain on platform version 2024.5 if you are using any of the following integrations. Reach out to sales@leostream.com for migration plans.

- You can no longer revert to the version 9 Web client
- Connections to external Microsoft Azure SQL databases
- Centers for HPE Moonshot Systems
- Centers for Red Hat Virtualization
- Protocol Plan options for Juniper SSL VPNs
- The ability to send SNMP traps

August 2025

Connection Broker 2024.5.19.1

Features

- Internal database has been upgraded to PostgreSQL version 14.19
- New Nutanix Prism center leverages v4 of the Nutanix Prism Central APIs
- PCoIP connections launched by the Leostream Web client using a URI can now send the PCoIP connection through the Leostream Gateway, removing the need for a PCoIP Security Gateway
- Users can now log into their remote Windows machine using their AzureAD logins, for PCoIP connections launched by the Leostream Web client via a URI

Resolved Issues

- Ignore Leostream Agent notifications related to the WSIAccount user, for machines that leverage Windows Hello
- PCoIP connections launched from an HP Anyware client can now be successfully sent through the Leostream Gateway without a PCoIP Security Gateway involved
- Resolves an issue handling Active Directory users that have AD attributes with Unicode codepoints

June 2025

Connection Broker 2024.5.15.1

Features

- Pool options for provisioning into Azure now include the newer GPU-enabled Azure instances sizes
- The policy option to confirm a desktop's power state now leverages a Center API call, when possible, to improve the accuracy of determining the current power state
- This release includes the following security enhancements:
 - Return "Page not found" for the following API endpoints:
 - /rest
 - /rest/v1

- /RPC2
- /rpc.pl
- Remove requirement for `rsync` package during Connection Broker RPM installation
- Prevent local users from accessing the internal `leostream` PostgreSQL database as the `leo` user

Resolved Issues


- Begin transitioning Nutanix AHV center from v3 Prism Element APIs to v3 Prism Central APIs to resolve issues provisioning and deleting virtual machines on newer versions of Nutanix AHV
- When provisioning in VMware, no longer select the "Power on virtual machine after creation" flag during the API call to provision a new virtual machine and, instead, make a separate API call to power on the machine after creation, to allow for provisioning from templates that use a vGPU
- Address issues generating DCV external authenticator tokens using Connection Brokers with defined tenants
- PCoIP session handling improvements
 - Increase the wait time when reconnecting to a disconnect PCoIP session, to handle cases when the PCoIP Agent is temporarily unreachable
 - Improve resource allocation and tracking for cases where the username of the Leostream user differs from the username that logs into the remote operating system, to resolve issues releasing desktops after disconnects
 - Improve ability to establish PCoIP connections when logging into the remote MacOS as a local user after logging into Leostream from a SAML-based IdP
 - No longer check that port 8730 is accessible in order to establish a PCoIP connection
- The Web client now displays the **Start** option for deallocated Azure instances
- Restored the ability for end users to set configurable parameters for Mechdyne TGX and HP Remote Boost display protocols

March 2025

Leostream Gateway 2025.1.1.2

Features

- Leostream Gateway 2025.1.1.2 installs on Red Hat Enterprise Linux 9 and its derivative Linux distributions such as Rocky Linux.

 You cannot upgrade an existing Leostream Gateway to this new version.

- When forwarding display protocol traffic filtered by the client source IP, the Leostream Gateway can now forward connections from multiple unique client IP addresses through the same port (see “Required Ports when Forwarding Client-Based Display Protocols or Third-Party HTML5 Viewers using Random Ports Filtered by Client IP” in the Leostream Gateway Guide)
- The Leostream Gateway now supports SSL certificate management using Let’s Encrypt (see “Integrating with Let’s Encrypt” in the Leostream Gateway Guide)

February 2025

Connection Broker 2024.5.5.1

Features

- The Leostream architecture to establish HP Anyware (PCoIP) connections without using the PCoIP Connection Manager and Security Gateway now supports Leostream Web client logins
- The Apache HTTP server has been upgraded to version 2.4.6

Resolved Issues

- **Web Client:**
 - When prompting for credentials for HTML5 RDP connections, the new web client now properly displays the information associated with the dynamic tags entered into the **RDP username** field
 - When inviting Leostream users to collaborate on remote sessions, the new web client now properly filters the list of available users based on the attribute filters set in the session owner’s policy
- **IPMI:** The **Reset** power control option for IPMI-enabled machines is now presented on the Web client regardless of the desktop’s power state

- **HP Anyware (PCoIP) environments:**
 - Users with a policy that enables the **Prompt user alternate credentials before connecting to selected desktop** option can now successfully connect and authenticate into the remote machine using their alternate credentials
 - The Connection Broker now adds users to the Remote Desktop Users group if their Leostream Role selects the **Add and remove user from Remote Desktop Users group** option

December 2024

Connection Broker 2024.4.4.1

Important Note: The > **System** > **Maintenance** page no longer provides an option to upload new Leostream Connect or Leostream Agent versions. Updating your Connection Broker automatically updates the agent and client versions available on the > **Dashboards** > **Downloads** page. If you need to upload new agent and client versions before updating your Connection Broker, use your corporate standard for securely copying files to the Connection Broker Linux machine.

Component Updates

- Leostream Connect for Linux and macOS version 2024.2.2
 - Includes new USB drivers for Linux that support up to kernel version 6.10
 - Adds support for the new **Hard Reset** power control option for IPMI-enabled physical workstations
 - Allows installing as a non-root user when not installing the USB drivers
- Leostream Agent for Linux and macOS version 2024.1.6
 - Includes new USB drivers for Linux to support up to kernel version 6.10
 - Improves DCV session handling
 - Allows installing as a non-root user when not installing the USB drivers
- Leostream Connect for Windows operating systems version 2024.2.0
 - Adds support for new **Hard Reset** power control option for IPMI-enabled physical workstations

Features

- The following features are no longer classified as Experimental
 - Red Hat OpenShift and KubeVirt.io support
 - Scheduled assignments, including new Policy options to manage scheduled desktops
- **Azure Support:**

- Integrates with additional Azure regions, including Italy, Poland, Spain, and others
 - Adds support for suspending Azure virtual machines, to place them in hibernation
 - Improves throttling of Azure API requests to avoid possible rate limit errors
 - Leverages latest Azure APIs for provisioning to improve performance when deleting virtual machines
 - Removes support for the classic storage accounts deprecated by Microsoft on August 31, 2024
- **AWS EC2 Support:** Display informational messages to the end-user if they attempt to power on an AWS instance when the availability zone does not have sufficient capacity for the selected instance type
- **Hard-Assignments:** You can now create placeholder users in order to hard-assign a desktop to a user who has not yet logged into your Leostream environment
- **Single Sign-on:** When leveraging the Leostream Agent for single sign-on to a Windows operating system, you can use new policy options to override the Leostream user's login credentials to support cases where the operating system user is different from the Leostream user
- **Power Control Policies:**
 - Users can now be presented with a **Hard Reset** option to force a reset for IPMI-enabled physical workstations
 - Policies now provide separate options to allow users to reboot their machines or to start and stop their machines
- **AD Integration:** When adding an Active Directory Authentication Server, you can now specify the domain for the DNS SRV lookup
- **HP Anyware (PCoIP) Support:** Add support for local user logins from an HP Anyware client regardless of the number of authentication servers defined in the Connection Broker
- **Mechdyne TGX:** Protocol plans now allow users to configure the `forceDisplays TGX` parameter
- **Dashboard:** The Dashboard contains a new widget for displaying license usage over time
- **Web Client:** Error messages displayed by the Web client now persist until the end-user closes the message area
- **Roles:** You can now limit access to the **Remove** and **Delete** actions for desktops on a per-

pool basis

- **SSL Certificate Handling:**
 - You can now specify a validity period when generating a self-signed certificate for the Connection Broker
 - The default Leostream Connection Broker SSL certificate now expires in one year and is automatically renewed upon expiration
- **Job Queue:** You can now see when a job was created by adding the new **Created** column to the > **System** > **Job Queue** page

Resolved Issues

- Properly handle DCV sessions for end users who log into the Leostream Platform using a variety of login name formats, for example both UPN and sAMAccountName logins
- No longer setup forwarding rules on the Leostream Gateway if the Connection Broker cannot determine the appropriate client source IP address
- Properly determine Connection Broker disk usage on machines that split the `/var` directory into its own filesystem
- Improve logging associated with collaboration invitations managed in the Leostream Platform
- Resolve issue where duplicate `pool_stats` or `pool_history_stats` could be submitted for a particular pool

September 2024

Connection Broker 2024.3.6.1

Features

- Component Update: Leostream Agent 2024.2.2 for Windows Operating Systems
 - Resolves an issue adding users to the Remote Desktop Users group
 - Adds functionality required to support password-less TGX connections with Connection Broker 2024.3.6.1
- Backup pools in policies can now be used to provide backup desktops when multiple machines are offered from the primary pool, but the primary pool is empty

- TLS 1.3 is now enabled, by default, and cannot be disabled
- TGX connections can now be established without passwords to machines running Leostream Agent 2024.2.2 for Windows operating systems
- Updates Apache to version 2.4.62 and Redis to version 7.2.5
- **Experimental:** Let's Encrypt integration (requires Connection Broker be accessible from the internet)

Resolved Issues

- Adds a retry to AWS calls in the event a failure occurs using the attached IAM role
- Adjusts the maximum number of allowed jobs based on the Connection Broker CPU, to better accommodate job queue work loads
- When disconnecting trunked PCoIP Zero clients, the secondary client is now reset to the Session Connection Type of the primary client
- Increases the amount of time the Connection Broker waits for desktops to report as stopped, to accommodate AWS instance types with long stop times

August 2024 (2024.2 Hotfix)

Connection Broker 2024.2.9.1

This Connection Broker update resolves two regressions found in the 2024.2.8.1 General Availability release.

- Gateway clusters set to use random ports for forwarding traffic now honor that setting, instead of reverting to the display protocol port
- The Web client now properly prompts the user for credentials when an HTML5 RDP Protocol Plan blanks out the fields for username and password
- Resolves an issue where Release Plans set to delete a virtual machine after it was released would occasionally fail to delete the machine
- The throttling limits applied to Azure API calls have been updated to adhere to the latest standards, to avoid unnecessary logging messages related to throttling errors

August 2024 (2024.2 General Availability)

Connection Broker 2024.2.8.1

Features

- **Component updates:**
 - Leostream Agent 2024.1.6 for Windows operating systems – resolves an issue where the Windows console login screen could become unusable if the Leostream Credential Provider was installed, as well as an issue related to sending queued notifications of events that occur before the agent finishes starting up
 - Leostream Connect 2024.1.5 for Windows operating systems – resolves an issue where the Windows console login screen could become unusable if the Leostream Credential Provider was installed
- **(Experimental) Scheduled desktop assignments** (see “Assigning Desktops Based on a Schedule” in the [Connection Broker Administrator’s Guide](#)):
 - Schedules can now be configured and applied to desktop to define user assignments, to support use cases where desktops are shared by a group of users in a classroom or project, for example
 - Schedules can be imported using an iCal-file
 - Please contact support@leostream.com to use this feature
- **HP Anyware support:**
 - New unified experience for users simultaneously connecting to desktops running the HP Anyware Agent and workstations with an installed PCoIP Remote Workstations card, including through the Leostream Gateway (see the [Leostream Quick Start Guide for PCoIP](#))
 - You can now specify which credentials for desktop operating system logins to use for PCoIP connections launched from an HP Anyware software or zero client
- **Desktop login credentials** (see “Using Fixed Desktop Credentials in the [Connection Broker Administrator’s Guide](#)):
 - You can now specify fixed desktop operating system credentials (Fixed Credentials) to use for logging users into hosted desktops using a display protocol that allows for credential override, to support use cases where multiple Leostream users share a desktop with a common login name

- New dynamic tags allow you to replace the user's Leostream login name, domain, and password in protocol plans with the fixed credentials
- **(Experimental) Red Hat OpenShift and KubeVirt.io support:** New KubeVirt centers can be used to integrate with any container platform that leverages KubeVirt.io, such as Red Hat OpenShift (see "KubeVirt (Red Hat OpenShift) Centers" in Chapter 6 of the [Connection Broker Administrator's Guide](#))
- **Windows 365:** The Connection Broker can now offer a user's entitled Windows 365 virtual machines alongside other Leostream managed desktops (See "Connecting to External Services" in Chapter 6 of the [Connection Broker Administrator's Guide](#))
- **Web client:**
 - Error and status messages are now delivered in a persistent message popup
 - Desktop offers are now automatically refreshed when users refocus on the Web client
- **Policies:**
 - The **Desktop selection preference** option includes a new option to **Favor running desktops**, offers all running desktops from a pool before offering a stopped desktop (see "Setting Rules for Selecting Desktops from Pools" in Chapter 12 of the [Connection Broker Administrator's Guide](#))
 - The **Pool Assignments** page highlights rows associated with Pools that have been deleted
- **Certificate-based logins:** Users can now use client-side certificates to log into the Leostream web interface (note this is a global setting for all users, including the Connection Broker Administrator) (see "Client Certificate (Smart Card) Logins for the Leostream Web Client" in Chapter 15 of the [Connection Broker Administrator's Guide](#))
- **Physical machine power control:** Power control actions are now supported for physical workstations and desktops that enable IPMI (see "Configuring IPMI for Physical Desktops" in Chapter 7 of the [Connection Broker Administrator's Guide](#))
- **Azure:** Azure centers include a new option to disable inventorying images and other objects used for provisioning, to improve Azure center scan performance in cases where Leostream provisioning is not used (see "Microsoft Azure Centers" in Chapter 6 of the [Connection Broker Administrator's Guide](#))
- **Leostream Gateway load balancing:** The Connection Broker can distribute user connections across a cluster of Leostream Gateways based on the gateway with the fewest connections (must be enabled in the Leostream Serial number)
- **NICE DCV:** The Connection Broker can now act as an External Authenticator for HTML5-

based NICE DCV connections

- **Apache:** Updates Apache Web server to version 2.4.59
- **Cluster management:** The Connection Broker no longer restricts the number of Connection Brokers allowed in the cluster, regardless of the setting in your Leostream Serial Number
- **Support logs:** The URL log is now included in the Leostream Technical Support Package

Resolved Issues

- Web client improvements
 - Honor the **Auto-launch remote viewer session if only one desktop is offered** policy option
 - Update icon colors so desktop icons are visible for desktops in the deallocated and shelved states
- Resolved an issue with rendering the horizontal scroll bars at the bottom of > **Resources** lists
- Newly provisioned desktops are marked as Unavailable until the final provisioning action defined in the Pool runs to make the desktop available for assignment
- The Connection Broker now ensures that a secondary PCoIP Zero client is disconnected if the user roams their remote session to a new location with only a single PCoIP Zero client
- The **Assignments** table no longer specifies a default **Attribute** and no longer overwrites any value entered by the administrator
- Improved logging when the default local Connection Broker Administrator tries to log into a tenant URL

Leostream Gateway 2024.2.1.2

- Upgrades Apache Guacamole to version 1.5.5
- Ensures that the firewall and redis services start before Apache

June 2024 (2024.1 Update 2)

Connection Broker 2024.1.7.1

Component Updates

The following Leostream Agents and Leostream Connect clients include updated USB drivers, which add support for Microsoft Windows 11.

- Leostream Connect 2024.1.3 for Windows Operating Systems
- Leostream Agent 2024.1.4 for Window Operating Systems

Resolved Issues

- Added support for launching G6 instance types when provisioning into AWS EC2 centers
- The Leostream Web client now honors the **Allow users to stop/start desktop** option Policy setting and uses shutdown or power off, as appropriate
- Refreshing the browser no longer expires the Leostream Web client session for users who logged in using Duo MFA
- Azure VMs no longer remain in a Stopping state when a shutdown command is sent after the desktop is released
- User logins and test logins now properly handle Japanese and other wide characters
- User logins now force an update of the Device and Serial Number information for records on the **> Resources > Clients** page, to support creating Locations that distinguish between multiple client types used to log into a Leostream environment from a common hardware device
- Resolves an issue downloading log packages using the Administration Menu in the Connection Broker machine console
- The Connection Broker now considers both the UPN and sAMAccountName when determining if a login reported by the Leostream Agent is associated with a rogue user
- The Connection Broker no longer validates the alternate credentials when launching a PCoIP connection using the URI, to support cases when the domain of the alternate credentials is not registered with the Connection Broker or when the alternate password is expired and will be reset using the PCoIP Agent
- The Connection Broker Apache server now ignores IPv6 NICs and listens only on IPv4 NICs
- The Connection Broker installation no longer requires running `setcap` and now uses a full

CONNECT instead of SYN for power state scans

- The `system_check` job removes an increased number of completed and deleted work queue jobs from the database, to prevent work queue table from over-expanding in extremely large environments and slowing down the Administrator Web interface

Leostream Gateway 2024.1.1.3

- The `leostream-gateway --info` option now indicates if the Leostream Gateway processes are running
- The `--info` option now also displays the number of current connections handled by the Leostream Gateway HTML5 viewer
- The new `leostream-gateway --status` option shows the status of the individual Leostream Gateway processes
- Resolves issues detecting OS version for Rocky and Alma Linux
- Resolves issues generating Leostream Gateway logs on Alma Linux 8.9

March 2024 (2024.1 Update 1)

Connection Broker 2024.1.2.1

- The **Redirect URI** field to Duo MFA Providers allows you to specify where Duo should redirect users after they successfully authenticate. End users must be redirected to the same URL that they used to access your Leostream environment's **Login** page.
- You can now create multiple Duo MFA Providers in your Connection Broker, each with a unique **Redirect URI**
- The Connection Broker now ignores Leostream Agent notifications originating from a virtual machine that is marked as a provisioning template in a Scale Computing center

March 2024 (2024.1 General Availability)

Important Note

Connection Broker 2023.2 introduced the new Leostream Web Client. You can revert to the legacy web client by deselecting the **Use New Client** option in the **Web Browser Configuration** section of the Connection Broker > **System** > **Settings** page.

Leostream will continue to support the legacy web client until December 31, 2024. While supported, Leostream will provide configuration support and issue resolutions for the legacy web client. However, new functionality and features will be implemented for the new Web client, only.

Connection Broker 2024.1.0.2

Features

- Includes a new RESTful API for creating, updating, and deleting AWS EC2, VMware vCenter, and Active Directory Centers
- Pools provide a new option to provision AWS EC2 instances using the default Launch Template, instead of selecting a specific version
- The inventory from AWS Centers can now be filtered based on AWS tags to provide granular control over your AWS resources in your Leostream environment
- Upgrades the Duo integration to use the Duo Universal Prompt
- Release Plans and Policies now allow you to send HTTP Get requests at additional points in the user's session, for example when the user is idle or when the desktop is first assigned

Resolved Issues

- Passwords containing double-quotes can now be used as passwords for domain joins
- The dialog to edit user -configurable display protocol parameters now properly loads
- The error message shown when users try to log into a PCoIP client using an expired password has been improved
- Selecting either the **Mark desktop as Unavailable on logout** or **Mark as Unavailable on release** no longer releases the desktop when the **Edit Desktop** form is saved.
- OpenStack center can now be created when SELinux is enabled on the Connection Broker
- Solves the issue where the Connection Broker could update the incorrect client record when users log in using an HP Anyware software client

January 2024

Leostream Gateway 2023.2.1.5

- Updates Apache Guacamole™ software to version 1.5.4

- Updates Apache Tomcat® software to v9.0.83

Connection Broker 2023.2.3.4

Component Updates

- Leostream Connect 2023.2.1 for Windows operating systems - Improves the usability of the Options dialog, desktop icon, and error messages
- Leostream Agent 2023.2.3 for Windows operating systems - Improves the usability of the Options dialog and Control Panel icon, as well as resolves issues establishing DCV collaboration sessions

Resolved Issues

- Updates Apache Web server to version 2.4.58 and internal PostgreSQL database server to version 14.9
- Resolves issues adding Centers for newer versions of OpenStack (requires SELinux be disabled on the Connection Broker)
- Includes optimizations to improve the performance during login time
- Properly identifies duplicate users loaded from an LDAP authentication server, to avoid creating duplicate user records on the > **Resources** > **Users** page
- Considers the user's client ID in order to determine the user's proper Role when logging in using the `Broker.Login` API
- Resolves an issue with the `Pools.Get` API when attempting to return information for a pool created as a selection of desktops from the parent pool
- Clients listed on the > **Resources** > **Clients** page are considered stale and marked for deletion if no user has logged in from that client over your log retention range

Note, upon upgrading to this version of the Connection Broker, a number of records may be removed from your > **Resources** > **Clients** page. These records remain in your Connection Broker database for an additional 30 days before being permanently purged.

November 2023

Connection Broker 2023.2.1.1

- The Connection Broker now runs on Security-Enhanced Linux (SELinux)

- Connection Broker databases can now contain any UTF-8 character
- The end-user facing Web client has been completely redesigned
- The new Web client and Administrator web interface now include a Dark Mode option (See “Entering and Exiting Dark Mode” in the [Connection Broker Administrator’s Guide](#))
- Protocol plans can now launch DCV connections via a Web URI instead of by downloading a file (see “Launching DCV Sessions using a URI” in the [Working with Display Protocols](#) guide)
- Pools that provisioning into AWS EC2 can now launch new instances from Launch Templates (see “Provisioning in Amazon Web Services (AWS) EC2” in the [Connection Broker Administrator’s Guide](#))
- The actions to join a desktop to a domain and, where applicable, take a snapshot of newly provisioned machines have moved into a new **Provisioning Actions** table, which also supports changing the power state of the provisioned VM and scheduling a wait time until the new machine is available for assignment (see “Scheduling Post-Provisioning Actions” in the [Connection Broker Administrator’s Guide](#))
- You can now specify a payload when provisioning into Verge.io infrastructures (see “Provisioning in Verge.io” in the [Connection Broker Administrator’s Guide](#))
- Alerts can now be sent as Webhooks to enable, for example, Slack integration
- In addition, the > **System > Alerts** page has been redesigned to facilitate expanding the number of available alerts in future releases (see “Sending Alerts to Email or Webhooks” in the [Connection Broker Administrator’s Guide](#))
- The new `system.health` RESTful API returns information about the reachability of external systems, such as authentication servers and databases, as well as the status of internal Connection Broker services, such as Redis and the work queue (documentation for the Leostream RESTful API can be found on the Connection Broker > **System > Leostream API** page)
- The Connection Broker CLI contains a new option to enable and disable JavaScript in the **Message Board**, on the **Sign In** page, and in the **Message Text** (see “Working with JavaScript Settings” in the [Leostream Connection Broker Application Guide](#))

Note that new installations of Connection Broker 2023.2 disable JavaScript, by default

- The Connection Broker installer now installs Postfix for use as an internal SMTP server for sending email alerts
- The Connection Broker defines the new “Third-Party Hard-Assigned” assignment type for Amazon WorkSpaces Core instances, so these virtual machines can be managed by

Leostream policies even through their assignment is controlled by a third-party, in this case Amazon WorkSpaces

- The Pool History graph on the Dashboard can now be set to display a custom date range or a specific number of days of data
- The Administrator web interface is now customizable via the CSS-file located in `/leo/app/css/custom/broker.css`
- This release resolves issues related to policy assignments for local Connection Broker administrators

Leostream Gateway 2023.2.1.1

- Updates Apache Guacamole to version 1.5.3
- Updates Apache Tomcat to version 9.0.78
- Files stored in the temporary file transfer directory located in `/tmp` are now deleted when the remote session closes

July 2023

Important Note

The Leostream Software Subscription Agreement was updated in June of 2023. Please visit <https://leostream.com/leostream-software-subscription-agreement/> for more information and contact info@leostream.com with questions or concerns.

Connection Broker 2023.1.4

- Resolves an issue where a Connection Broker connected to an external Microsoft SQL Server database could fail to startup due to large memory consumption
- Resolves an issue where tags were not being applied to AWS EC2 instances during provisioning

Leostream Connect 2023.1.4 for Windows Operating Systems

- Adds support for smart card authentication using the latest version of the ActivIdentity ActivClient middleware
- Resolves an issue with the credential provider that is installed by the **Enable client-side credential passthrough** task
- Resolves an issue where the client would not launch properly if the > **System** > **Settings** page on the Connection Broker was set to require smart card authentication

Leostream Agent 2023.1.3 for Windows Operating Systems

- Resolves an issue with the credential provider that is installed by the **Install Credential Provider** task

June 2023

Important Note

Connection Broker 2023.1.3 and all updated Leostream Agent and Leostream Connect components include the updated Leostream Software Subscription Agreement. Please visit <https://leostream.com/leostream-software-subscription-agreement/> for more information and contact info@leostream.com with questions or concerns.

Connection Broker 2023.1.3

Component Updates

- Leostream Agent 2023.1.2 for Windows operating systems – Resolve intermittent start-up errors and issues with saving changes to the log retention and backup settings
- Leostream Agent 5.3.14 for Linux and macOS operating systems – Return CPU and RAM information when installed on macOS; properly create certificates on DISA-STIG compliant Linux machines (please contact support@leostream.com for more information)
- Leostream Connect 2023.1.2 for Windows operating systems – Resolve issues with saving changes to the log retention and backup settings
- Leostream Connect 3.9.6 for Linux and macOS operating systems

Resolved Issues

- Amazon WorkSpaces centers now support the option to authenticate with the AWS APIs using an IAM Role attached to the Connection Broker instance in AWS EC2
- Amazon WorkSpaces and AWS EC2 centers now support IAM Role authentication for AWS EC2 Connection Broker instances that require IMDSv2 for the instance metadata
- Leostream Connect dialogs rendered in HTML by the Connection Broker, for example the dialog for configuring protocol plan parameters, no longer generate a script error
- The Pools page and Dashboard chart depicting desktop power states now counts Azure deallocated and OpenStack shelved desktops as Stopped machines
- Modified policy-assignment logic to ensure that desktops contained in multiple pools are consistently offered from the same pool over subsequent user logins
- Idle-time settings for hard-assigned desktops are now properly applied
- Calls to the `pools` RESTful API no longer require a defined center for vCenter Server

- Wait until Azure returns that a provisioning job is complete before attempting to perform a domain join on the provisioned VM
- Updated the procedure for generating Technical Support packages to gather local Connection Broker files before extracting database files in order to provide debugging information in cases where the database is unreachable
- Ensure that both PCoIP clients get disconnected after the user manually disconnects from one of a bonded pair of PCoIP clients
- The Connection Broker now installs on supported Linux distributions using a Japanese server without a GUI
- The protocol plan option to allow users to customize the resolution for HP ZCentral Remote Boost connections now contains additional ultra-wide settings and descriptions

April 2023

Connection Broker 2023.1.1

Features

- Upgrades: After upgrading to Connection Broker 2023.1.1, subsequent upgrades can be completed using the upgrade options on the > **System** > **Maintenance** page
- Amazon Web Services support:
 - New Amazon WorkSpaces Core integration supports creating WorkSpaces centers in order to launch, assign, and connect users to WorkSpaces Core instances
 - WorkSpaces Core and AWS EC2 centers can now authenticate with the AWS API using an IAM role attached to the Connection Broker EC2 instance
 - Pools can now provision T4g instance types
 - Any `VM::EC2 StartInstances` error messages are now logged in the > **System** > **Log** page
- Protocol plans can be configured to specify or allow users to enter alternative usernames and passwords to use when launching HTML5 RDP connections via the Leostream Gateway
- RESTful API enhancements
 - The RESTful API is now implemented using the OpenAPI Specification (OAS)
 - Documentation for the RESTful API methods can be found in the Connection Broker at <https://broker-address/download/rest-api.html>
 - The new `gateway` RESTful API supports adding, removing, and updating Leostream Gateway record in the Connection Broker
 - The `pools` API now supports configuring provisioning parameters for VMware centers
- Syslog enhancements
 - The **Log Settings** page now supports entering multiple syslog servers
 - Syslog servers specified on the **Log Settings** page can now include a port number, to support non-standard syslog ports
 - Syslog messages can now be sent using either TCP or UDP

- Enabling syslog for one Connection Broker in a cluster now automatically configures all Connection Brokers in the cluster
 - Pools can now be defined based on the properties of the GPU associated with the desktop
 - Desktops:
 - Manually releasing a desktop from the > **Resources** > **Desktops** page now provides an option to either invoke or ignore all Power Control and Release Plan actions associated with that desktop assignment
 - The **Bulk Edit** form for desktops includes a new option to indicate if new notes should be prepended or appended to the existing notes for each desktop record
 - Users are now assigned to stopped desktops as soon as they click an option to start the machine, instead of waiting for the machine to finishing powering on and attempting to establish a connection
- NOTE: A check of the display protocol port must pass in order for the desktop to be considered as successfully powered on, otherwise the Connection Broker unassigns the desktop with a “Failed to start” message and no Release or Power Control plans are invoked
- Protocol plans now support the Scale Logic Remote Access Portal (RAP) – VDI solution
 - The right side of the **Edit Location** page now displays additional information about the clients contained in that location
 - Command line interface:
 - A new `--force` option for the `switch_database` CLI allows the Connection Broker to switch to its internal database when its current external database is unreachable
 - The `switch_database` CLI now prompts for a password when one is not specified in the command line arguments

Resolved Issues

- Resolve issue generating DCV authentication tokens when a username is repeated in multiple registered authentication servers
- When logging into a tenant and launching a PCoIP connection using the HP Anyware software client, the **Domain** field now contains only information for the tenant’s domain
- The `is_alive` query now consistently returns a 503 status when the Connection Broker database is unavailable

- No longer require an interactive terminal session if the `--apply-license` option for the `leostream-broker` CLI includes the `--accept` flag
- Resolve issue related to parsing smart cards using the latest version of OpenSSL
- Resolve issue provisioning T3 instances (only effected customers with a beta version of Connection Broker 2023)
- Resolve issue related to Dashboard rendering when opening multiple Connection Broker sessions across different browser tabs
- When storing configurable parameters globally for all connections, display protocols that are used across multiple pools in the policy are now listed once as the union of all configurable parameters, instead of repeating display protocols in the **Configurable Parameters** dialog
- No longer create duplicate Enrolled Desktops when a Leostream Agent registers on a machine that has already been inventoried from an Active Directory center
- No longer log an error when attempting to delete an AWS instance inventoried in the Connection Broker, if that instance is already terminated in the AWS management console
- Improve logging messages when provisioning virtual machines in VMware that reuse a NIC that was used by a different virtual machine that was previously inventoried in the Connection Broker
- No longer create an empty user record when receiving a RESTful API login call to a Connection Broker with an expired license
- No longer purge the default local Administrator account when purging the Connection Broker database
- Resolve issue changing the query order of authentication servers on the **> Setup > Authentication Server** page.

Leostream Gateway 2023.1.0.11

- The Leostream Gateway now runs on Security-Enhanced Linux (SELinux)
- Upgraded to Apache Guacamole 1.5.0
- Remove all reboot requirements when installing the Leostream Gateway, detaching it from a Connection Broker, and leveraging the `leostream-gateway` CLI commands
- Do not serve the `/version` URL when Connection Broker forwarding is enabled
- Remove the `/api` URL

Leostream Agent for Windows – Version 2023.1.0

- Support monitoring connections to the Scale Logic Remote Access Portal (RAP) – VDI solution
- Resolve issue deleting user profiles when the user's Connection Broker Role is set to delete the user and profile on logout
- Improvements for DCV session handling
- Improve detection of installed Windows operating system version

Leostream Connect for Windows – Version 2023.1.1

- Support connections using the Scale Logic Remote Access Portal (RAP) – VDI solution
- Update dialogs for managing invitations using native Windows components
- Resolve issues opening and displaying dialogs in languages other than English

Leostream Agent for Linux and macOS – Version 5.3.6

- Support third-party signed certificates
- Support monitoring connections to the Scale Logic Remote Access Portal (RAP) – VDI solution
- Return desktop GPU information to the Connection Broker

Leostream Connect for Linux and macOS – Version 3.9.2

- Support connections using the Scale Logic Remote Access Portal (RAP) – VDI solution

January 2023

Leostream Agent 5.3.4 for macOS and Linux

- Support the policy option to log out rogue users for rogue users connected to a DCV session
- Suppress duplicate log messages when the Leostream Agent is unable to find the RGS session file
- Resolves issues monitoring logout events on Linux operating systems with XRDP and Xvnc installed

December 2022

Component Updates

- Leostream Agent 7.4.23 for Windows operating systems – Returns the public and local hostnames for AWS instances to the metadata returned to the Connection Broker
- Leostream Agent 5.2.23 for Linux and macOS operating systems – Returns the public and local hostnames for AWS instances to the metadata returned to the Connection Broker
- Leostream Connect 3.8.5 for Linux and macOS operating systems – Opens the Remote Boost authentication dialog when the Leostream protocol plan does not specify a username for the connection

Connection Broker 2022.1.3

Features

- The TGX encryption tool has been updated to version 2022.1.4
- Minor enhancements when defining multiple SAML-based authentication servers using tenants
- Store the public and local hostname for AWS instances when returned by the Leostream Agent
- New dynamic tags `{HOSTNAME_PRIVATE}` and `{HOSTNAME_PUBLIC}` for use in Leostream Protocol Plans
- Support Standard NVadsA10v5-series instance size in **Pools** when provisioning into an Azure Center

- Prepend the PCoIP device IP address to syslog messages received by the Connection Broker prior to relaying them to an external syslog server specified in the PCoIP Devices Center

Resolved Issues

- Properly handle cases where users enter incorrect passwords into a PCoIP Software client that is launched from the Leostream Web client
- For Leostream environments that have reached their license limit, users with an existing Leostream license are no longer blocked from logging in when their policy enables the **Prompt user for alternate credentials before connecting to selected desktop** option and they launch the PCoIP client from the Leostream Web client
- Properly release desktops that are forcefully shutdown before the Leostream Agent is able to register the shutdown with the Connection Broker, for example when using the **Power off** power control option
- Allow Printer Plans to be deleted when they are currently assigned to a Location or specific Client
- Removed support for the `if_assigned_only` parameter for the `cb_status` Web query
- Improve handling of center scans that run while there are active provisioning jobs, to avoid removing desktop records associated with virtual machines that are still being created
- Resolve cases where provisioning jobs for virtual machines on Scale Computing HC3 resulted in duplicate desktop records
- Paginate inventory of images from OpenStack centers to handle cases where the OpenStack project has more than 25 images
- Properly log out rogue users that are connected to desktops using HP ZCentral Remote Boost (RGS) based on the Policy option to log out rogue users
- Change desktop power statuses to Stopped for desktops marked as Stopping when a Center scan occurs and confirms that the desktop is powered off
- Improve disconnect logic for PCoIP Remote Workstation Cards to attempt to disconnect the PCoIP session from the Remote Workstation Card if the PCoIP client cannot be disconnected
- Pass the region to the AWS API when checking if an AWS center is online
- Properly fail over to the second value for dynamic tags that use the `or` syntax and reference hostnames or IP addresses, for example `IP_PUBLIC-or-IP`

- Resolved permission errors when trying to send Leostream log messages to a syslog server

October 2022

Connection Broker 2022.1.0.9

- Updates the internal PostgreSQL database to version 14.5
- Updates the internal jQuery UI components to version 1.13.2
- Restricts the upload of third-party content through the > **System** > **Maintenance** page to new logs and favicons

Leostream Gateway 2022.1.0.6

Include Apache tomcat in the Leostream Gateway packages, to improve the installation experience.



If you are upgrading an existing version 2022 Leostream Gateway to version 2022.1.0.6 you must uninstall the current version of Apache tomcat as part of the upgrade. Please see the [**Leostream Installation Guide**](#) for complete instructions.

Leostream Agent for Windows – Version 7.4.22

Resend idle-time notifications every thirty seconds if the agent is unable to contact the Connection Broker.

Leostream Agent for Linux and macOS – Version 5.2.22

- Improve management of Remote Boost sessions on Rocky Linux 8
- Resolve issue related to the use of NetworkInterface API that could cause the registration with the Connection Broker to fail

August 2022

Leostream Platform 2022 is an updated version of the Leostream Platform, and is comprised of the components described in the following sections. You cannot perform a direct update from version 9.x of the Leostream Platform to version 2022. Please consult the upgrade documents for instructions on how to move your Leostream 9.x configuration to a new Leostream 2022 Connection Broker.

Connection Broker 2022.1.0.8 and Components

The following updates and features are new in Connection Broker 2022. If you are running an older version of the Connection Broker, consult the Leostream 9 release notes for information on additional features and fixes that may be available, depending on your current Connection Broker version.

- The Connection Broker is now packaged for installation on any virtual or physical machine running the latest Red Hat® Enterprise Linux® 8.x operating system and its derivatives, such as Rocky Linux and AlmaLinux OS
- The Connection Broker now installs in `/var/lib/leo` instead of `/home/leo`
- The Connection Broker `leo` user is no longer added to the `sudoers` file and instead is allocated the specific permissions required to support Connection Broker functionality
- The internal Connection Broker PostgreSQL database has been upgraded to version 14.4
- The Connection Broker Sign In page has been redesigned
- Dashboard updates
 - You can now add and remove widgets on the dashboard
 - The dashboard has a new **Reset** button to return the dashboard to the factory default layout
 - The new Desktops Assigned widget displays the number of desktops currently assigned to a user
 - The new Pools widget displays a bar graph of the contents of all pools, so you can easily compare the number of desktops in pools
 - Widgets now display a message if no appropriate data has been collected for that widget
 - A new warning banner displays dashboard-related message, such as when a widget references a pool that has been deleted

- NICE DCV – The Leostream feature to invite users to collaborate on another user’s session is now available for users connecting using NICE DCV
- The `leostream-broker` CLI has new options to accept the Leostream EULA and automatically reboot the Connection Broker if the license enables a feature that requires a reboot
- When adding a Leostream Gateway, the default power-forwarding methodology uses a random port filtered by the client source IP address
- The **> System > Maintenance** options to shutdown and reboot the Connection Broker are now displayed only with the Connection Broker is in debug mode

Leostream Gateway 2022.1.0.5

The Leostream Gateway can now be installed on any virtual or physical machine running the latest Red Hat Enterprise Linux 8.x operating system and its derivatives, such as Rocky Linux and AlmaLinux OS

Leostream Agent for Windows – Version 7.4.21

- Compatible with Connection Broker 9.1 and 2022
- Adds support for reporting Windows Server 2019 and 2022 and supports DCV collaboration

Leostream Agent for Linux and macOS – Version 5.2.20

- Compatible with Connection Broker 9.1 and 2022
- Adds support for monitoring RGS sessions on Rocky Linux 8 and supports DCV collaboration

Leostream Connect for Windows – Version 4.4.4.6

- Compatible with Connection Broker 9.1 and 2022
- Resolves issues caused by deleting the NoMachine configuration file too soon when establishing the connection

Leostream Connect for Linux and macOS – Version 3.8.4

- Compatible with Connection Broker 9.1 and 2022
- This component is not being updated during this release

Appendix A: Version Compatibility

Leostream Agent Compatibility Matrix

The following table indicates the Leostream Agent versions that are compatible with Connection Broker versions 9 and 202x. Connection Brokers cannot communicate with incompatible Leostream Agents. Not all Connection Broker functionality may be supported by older Leostream Agents, so some loss of functionality may occur even though a particular Connection Broker version is able to communicate with the older agent versions. Contact Leostream Support for more information.

Connection Broker	Version	9.0.34.10	9.0.34.21 and later	9.1	202x
Leostream Agent for Windows	6.x	Y	N	N	N
	7.x	Y	Y	Y	Y
	2023	N	N	Y	Y
Leostream Agent for Linux and macOS	3.x	N	N	N	N
	4.x	Y	N	N	N
	5.x	Y	Y	Y	Y

- Leostream Agent versions older than 6.0 for Windows and 3.0 for Linux are not compatible with any supported Connection Broker.

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	9.x	202x
Leostream Connect for Windows	4.x	Y	Y
	2023	N	Y
Leostream Connect for Linux and macOS	3.5	Y	Y
	3.6	Y	Y
	3.7	Y	Y
	3.8	Y	Y

- Not all features supported by the latest Leostream Connect version are available when using an older Connection Broker version.