

Nyquist C4000 Server Software 3.0.0.555 and Firmware 1.2.1647 Release Notes

If you are updating an existing Nyquist system installed on a Nyquist System Controller (NQ-SYSCTRL), follow the instruction in the section entitled “Updating Nyquist System Controller”.

If you are updating an existing Nyquist system installed on a custom server (not a Nyquist System Controller), follow the instructions in the section entitled “Updating a Custom Server”.

If you are adding appliance types that were not available with an earlier software release, you must perform a System Update before adding the new appliances.

!!! WARNING !!! Regarding Nyquist Appliance Firmware Update (PLEASE READ)

During the final stage of the update process, Nyquist appliance firmware will be updated to a new version that is compatible with this release. Once Nyquist appliances have been updated to the new firmware attached to this release, the Nyquist appliance firmware should not be manually downgraded to a previous version of firmware because previous versions of Nyquist firmware are not compatible with this Nyquist server release.

Updating Nyquist System Controller

For Nyquist System Controllers, the update process will take approximately 3 hours to complete; please allocate at least 3 hours to perform the update. During the update process, a simple text display will be presented that describes the steps being taken to update the system. The System Controller will reboot several times during the update process.

To upgrade a Nyquist System Controller to this release, follow these steps:

1. Log into the Nyquist server using the Nyquist Web Interface. Use an account that has access to System Parameters, System Backup/Restore, Product License, and System Update pages.
2. Create a System Backup via the System Backup/Restore page.
3. Export the System Backup and save it.
4. Using the Product License page, export License Activation Keys to a file and save it.
5. On the Systems Parameters page, select System Update.
6. Upload the new Nyquist server software using the Upload button found on the System Update page.
Note: If you have Automatic Software Download enabled, the new release may already be listed and available on the System Update page.
7. Press the “Run Update” button associated with this release.
8. When the update dialog indicates that the update is complete. Press “OK” and then refresh the page until the “Update Status” page displays.
9. Periodically press the reload page button to keep the status page up to date.
10. After the status page displays “Continuing upgrade to Debian 10”, a few minutes later the status page might not display and instead you will see a “connection refused” page. This will last just over 10 minutes; the status page will then resume displaying normally.
11. After the status update displays “Restoring System backup and upgrading data to C4000 3.0.0”, press the reload page button until the Web interface dashboard is displayed, ignoring any error messages that may display before the dashboard displays. Note: The web interface may display without first displaying the “Restoring System backup and upgrading data to C4000 3.0.0” message.

12. Once the system backup has been restored and updated, the update to Debian 10 and new Nyquist release is finished.
13. Verify that your Nyquist License Activation Key is still activated by viewing the Product License page.

Tasks to perform after successful Nyquist system update

If you are updating an existing Nyquist C4000 system, you must update the permissions for each appropriate user role for each of this release's new features. In addition, to allow stations to execute Routines via the Dashboard or Admin phone using DTMF, you must update the related CoS Configuration(s) to enable Routines.

To set permissions for new features:

1. On the Admin Web UI, select Roles.
2. Select the Permissions icon for the role that you want to assign permissions.
3. Make the desired changes.
4. Select Save.

This release requires proper installation of a Trusted Root Certificate supplied by Nyquist. If the Root Certificate is not installed, you will not be able to use dashboard features (e.g., All-Call Page, Intercom calling).

To install the Trusted Root Certificate, follow these instructions:

1. Select "System Parameters" on the Nyquist web interface.
2. Press the "Edit" button.
3. Scroll down the page until you see the "Generate Root SSL Certificate" button.
4. Press the "Generate Root SSL Certificate" button.
5. Press the "Download BogenCA Certificate" button.
The required root certificate will be saved to your PC, most likely in the Downloads folder.
6. Find the download certificate and install it by following the instructions provided in the Nyquist System Administrator Guide section labeled "Installing Certificate Authority on Windows System" or "Installing Certificate Authority on Mac System".
7. Close the web browser that you are using to access the Nyquist web interface.
8. Start the browser and access the Nyquist web interface.

Updating a Custom Server

To upgrade a Custom Nyquist Server (not a Nyquist System Controller) to this release, follow these steps:

1. Log into the Nyquist server using the Nyquist Web Interface. Use an account that has access to System Parameters, System Backup/Restore, Product License, and System Update pages
2. Create a System Backup via the System Backup/Restore page.
3. Export the System Backup and save it for later use.
4. Using the Product License page, export the License Activation Keys to a file and save it for later use.
5. Using the Product License page, release the License Activation Keys from the server by pressing the "Release License" button.

6. Install Debian 10.7 on the existing server (which will wipe out the existing Nyquist system and configuration).
7. Ensure that the NetworkManager software is installed on your server, using the following commands:
which nmcli
if the above command does not return '/usr/bin/nmcli', then as user root, execute the following command to install the NetworkManager package:
apt-get install network-manager
8. Properly configure the network interfaces using NetworkManager (via nmcli commands).
Verify network connectivity to the Internet.
9. Copy the License Activation Keys export file to the server, recommend copying it into /tmp folder.
10. Copy the Nyquist release tar file to the server's /tmp folder.
11. While logged into the Linux server as user root, extract the Nyquist C4000 3.0.0 release by using the following commands:
cd /
tar xvPf /tmp/Nyquist-c4000-3.0.0.555.tar.gz
12. While logged into the Linux server as user root, install Nyquist C4000 3.0.0 by using the following commands:
cd /
/opt/bogen/install_nyquist
13. During installation, when prompted to enter a License Activation Key, press the <enter> key, and then when prompted to enter a filename that contains the license activation keys, enter the export filename that you copied to the server in step 9.
14. After installation is complete, via the Nyquist Web Interface, restore the System backup that was created in step 2 and 3.

New Features and Enhancements

- Added "Check Internet Site Access" Button to the Firmware Screen
- Multiple Stations can now be selected for Paging Exclusion
- Allow ASB Station Management positions to be Locked during editing
- Added Option to Allow Users to Test Email During Setup
- Added Option to Automatically Stop Audio Distributions When Check-In Starts
- Added Normal and Emergency Announcement Type Indicators
- Display the Actual Font Styles on the Display Message Dashboard Module
- DTMF Codes Assigned to Audio Distributions can now be edited
- Support for Debian 10 Operating System (includes the latest Linux kernel, software, and security patches)
- Added ability to Create a Self-Signed Bogen Root SSL Certificate
- Embedded Nyquist DHCP Server Support
- Added Multi-Facility (Multi-Site) Paging Capability
- Added Multi-Facility (Multi-Site) Announcements Capability

- Nyquist Server Automatic Failover (requires an optional License Activation Key to enable)
- Added Support for Cisco ATA 191-3PW-K9 SIP ATA Device
- Added Grandstream HT813 ATA FXO Device Support
- Off-Hook Ring Down (Auto Dial) Configuration for FXS Gateways
- Added Support for NQ-E7020-G2 Digital Call Switch Gen2
- Stations can now be configured to Call Admin Group instead of Admin Phone
- Ability to Activate a Routine in Conjunction with a Scheduled Event
- Ability to Execute any Routine Action when a selected Schedule is Activated
- Ability to Trigger Routines Based on a Scheduled Tone
- Ability to Stop a Routine by Dialing a DTMF code
- Expanded Routine API Parameters for 3rd Party Integrations
- Enhanced Routine API Authentication
- New Routine Actions: Routine-Enable / Routine-Disable
- New Routine Actions: Create and Play Temporary Announcements
- District-Wide Calendar Schedule Control from Single Admin Web Interface (Remote Calendar Control)
- Tones can now be manually played to a selected Zone
- Added Password protection for Multi-Facility Announcements
- Added support for outbound calls to PBX extensions via SIP Trunk
- Tablet Based Zone Volume and Audio Distribution Control
- Gen2 Amplifier Support (NQ-A2xxx-G2/NQ-A4xxx-G2)
- Enhanced DSP Controls for NQ-A2xxx-G2/NQ-A4xxx-G2/PAMAs
- Expanded DSP Router Controls (NQ-A2xxx-G2/NQ-A4xxx-G2)
- Added DSP Delay Control (NQ-A2xxx-G2/NQ-A4xxx-G2)
- Added DSP Phase Invert Control (NQ-A2xxx-G2/NQ-A4xxx-G2)
- Changed how the Menu button behaves on DSP GUI
- Added RMS Limiter and Peak Limiter DSP Controls (NQ-A2xxx-G2/NQ-A4xxx-G2)
- Added Visual Indicator to the VU Meter in DSP Controls to Differentiate Between Network vs. Analog Signal Levels (NQ-A2xxx-Gx/NQ-A4xxx-Gx)
- Allow DSP Preset Selection (NQ-A2xxx-G2/NQ-A4xxx-G2)
- Added User Uploadable DSP Preset Support (NQ-A2xxx-G2/NQ-A4xxx-G2)
- Standalone Networked Operation (NQ-A2xxx-G2/NQ-A4xxx-G2/PAMAs/MMPA)

- Standalone SIP Endpoint Support (NQ-A2xxx-G2/NQ-A4xxx-G2/PAMAs/MMPA)
- Added Pink Noise Generator (NQ-A2xxx-G2/NQ-A4xxx-G2)
- Matched NQ-A2xxx/NQ-A4xxx "G1" DSP Interface to that of the new NQ-A2xxx-G2/A4xxx-G2 Amplifiers
- Added Power Saving Standby Mode for NQ-A2xxx-G2/NQ-A4xxx-G2 Amplifiers
- Modified the PAMA and MMPA Router Defaults to be consistent with the new Gen2 amplifiers
- Added support for "Multi-Site Facility All-Call" and "Multi-Site Emergency All-Call" via PTT on MMPA and NQ-GA10P/PV
- Added Graphic Image display support on NQ-GA10PV
- Allow NQ-GA10PV Display Messages to be Saved/Recalled by Name
- Added Message Name and Image Section for "Remove Message"
- Added new Permissions in Roles for the "Display Message" and "Remove Message" Buttons
- Added a "View" Permission in Roles for the Disable Audio Feature
- Enhanced Message Display to Only List Zones Equipped with GA10PVs
- Added Automatic Display Mode Selection for NQ-GA10PV
- Added 720P Resolution Support for NQ-GA10PV
- Allow Access to Video Link from Map Room Object (Non-Check-In Mode)
- Added System Parameter to Disable ALL Audio when "Disable Audio" Enabled
- Added Station-Based Intercom Volume support for ASBs
- Added Call Detail Records for I/O Controller Input Open/Close Events
- Updated the RGB settings for Yellow colored objects on map canvas
- Added ability to restore an old system backup onto the latest Nyquist release
- Display Release Notes Before Starting Upgrade
- Added Map Feature license indicator to Product Licensing page
- Added several new Role Permissions for various new features

Resolved the following issues found in previous Nyquist Releases:

[C4000-1350] - PAMA: Audio distribution targeted to Line Out plays back on Speaker Out. When performing audio distribution only to Speaker Out channel the DSP GUI shows signal on both network channels.

[C4000-1408] - VoIP Speakers G2/GA20P2/MMPA: Audio distribution volume spikes up during appliance restart after the appliance receives configuration update.

[C4000-1426] - There is a brief period of playback from analog input source on AMPs/MMPA/PAMA when device switches playback of page to audio distribution.

[C4000-1447] - Amps: After a tone ends there is audible pop noise.

[C4000-1480] - Popping sound after Scheduled Audio resumes after being interrupted with Zone Page.

[C4000-1481] - Popping sound when All Call ends and Audio Distribution Starts

[C4000-1497] - "Intercom Cut Level" should be "Station Paging Cut Level" for Amplifier station configuration.

[C4000-1528] - Maps - #94{ID} is being called instead of #94{DTMF code} when executing Routines on Maps.

[C4000-1669] - Maps - Map objects with a menu are unusable if they are too close to the bottom edge of the map because the drop-down menu gets cut off.

[C4000-1731] - MMPA: Attempting to stream audio from two different MMPA devices with both using Channel 1 will fail with "Line-Input busy" message.

[C4000-1735] - Unable to Import an Exported Routine that has "Allow DTMF" disabled (while attempting to make a copy of the Routine).

[C4000-1810] - Role Permission - Disable/Enable Audio button still shows when Dashboard permission is set to "View Only".

[C4000-1842] - Email Configuration: Added email format validation to FROM: and TO: fields.

[C4000-790] - Using System Update to apply a patch fails if patch filename has special characters like parenthesis.

[C4000-1081] - When audio distribution(s) are played through a four-channel amplifier setup with amplifier channels in overlapping zones (having different priorities), an All-Call-Page after termination may not resume the interrupted audio playback of right priority zone through the amplifier channel.

[C4000-1086] - Paging an amplifier that is playing audio distribution to its own Line-In could result in the audio distribution failing to resume when the page ends. Note that this issue does not occur if there is just one zone for each channel.

C4000-1667] - Internet Radio Services back button goes back multiple pages instead of just one page.

[C4000-1734] - New Routine/Action/Trigger created even when user presses "Cancel".

[C4000-1757] - Not able to zone page a 4-channel amplifier that is configured as a bridge.

[NYQ-5063] - After initial Nyquist server software installation, DTMF codes for pre-installed announcements are not set.

[NYQ-3679] - Audio Distribution to All Speakers did not resume after a pre-pend or zone page.

[NYQ-3680] – LED functions on MMPA are reversed after updating firmware from 0.9.20 to 1.1.7

[NYQ-3693] - Speaker Extension under Station Add/Edit view does not include all available stations; missing VoIP and extensions.

[NYQ-3694] - Lost connection to the Nyquist server after a few hours of operation.

[NYQ-3799] - Export of backup file always fails the first time.

[NYQ-3860] - When opening and closing the Maps modal on the teacher dashboard the background stays dark. Need to refresh the screen to reset.

[NYQ-4122] - Bug with pulling metadata from uploaded music due to leading zeros in track number.

[NYQ-4165] - Exporting the backup file timed out, causing the export to fail.

- [NYQ-4215] - Scheduled Announcements will not play if system database is restored to a new server.
- [NYQ-4725] - Audio Distribution started/stopped by a Routine Action is not being logged in Call Detail Records
- [NYQ-4794] - Scheduled tones play over Emergency Announcements.
- [NYQ-4851] - Routines - Saving edited Actions without filling out fields does not remember the Type.
- [NYQ-4987] - PA240 has random static on Speaker and Line Out
- [NYQ-5018] - A4300 intermittently gets interrupted with Audio Distribution while Multi-Site All-Call is occurring.
- [NYQ-5109] - MMPA PTT configuration on the MMPA shows extra fields when analog is selected for the PTT Stream Source for Mixer Output.
- [NYQ-5125] - Some voice prompts are garbled when played to SPA112 stations.
- [NYQ-5129] - System Backup/Restore View is refreshing and causing import window to disappear when no backups are in the list view. This prevented importing system backups when no backups are present.
- [NYQ-5197] - Importing a database backup and receiving a failure message even though import was succeeded.
- [NYQ-5253] - Sometimes "Add Source" under "Internet Radio Services" just spins and never returns anything.
- [NYQ-5316] - SIP Trunk contact is not removed when the SIP Trunk is disabled.
- [NYQ-5326] - The Managing Alerts Help web link (URL) to find county codes is not working.
- [NYQ-5370] - Audio from an Emergency Announcement that interrupts Alarm is missing the first couple of seconds of audio.
- [NYQ-5472] - Check-in: VoIP Stations configured to use Urgent Call-in level will make urgent calls during check-in instead of checking in.
- [NYQ-5477] - Nyquist amplifiers do not update their configuration after System Parameter volume cut level changes.
- [NYQ-5485] - Prepend Page does not trigger paging related routines, notify controllers, or notify zone queue manager.
- [NYQ-5503] - Audio distribution using SOUNDMACHINE still plays when SOUNDMACHINE is disabled.
- [NYQ-5509] - After performing a Nyquist system update the license information displayed is not correct after updating the license from web interface Product License page.
- [NYQ-5575] - Web interface does not remember the last map displayed.
- [NYQ-5635] - Web interface indicates completion of System backup before the backup has been fully created, which could cause problems if an immediate export is performed afterward.

Known Issues

[C4000-1071] Importing an unreleased License Activation Key will clear the current License Activation Key and result in an "Activation failed" message. To resolve this issue, release the License Activation Key that you are trying to import and then try the import operation again. If you want to re-activate the License Activation Key that was activated before the import, you must enter the key manually.

[C4000-1085] Distortion occurs when sending Line-In audio back to a 4-channel amplifier that is receiving four separate multicast streams.

[C4000-1094] Can't log out of user account when user account does not have an extension assigned to it.

[C4000-1255] On the DSP Graphical Parametric EQ, clicking the Enable button multiple times may cause the EQ graph to show two lines.

[C4000-1450] When a four-channel amp is in Bridged Mode, a popping sound will occur after a software upgrade.

[NYQ-4499] After a system update, items listed in the web interface navigation bar are sorted in default order, users must resort the menu to match desired order.

[NYQ-5030] When editing a button/rectangle in the Maps view, sometimes the Maps view will go back to live mode after saving the button/rectangle configuration.

[NYQ-4595] - Station's DCS displays incorrect LED color when urgent or emergency call is initiated by an I/O controller, the LED displays green instead of amber or red.

[NYQ-4685] - On the web interface dashboard, when an Alarm or Tone is initiated, some web interface clients do not display the popup modal that indicates an Alarm or Tone is in progress. The messages section does indicate that an Alarm or Tone is in progress.

[NYQ-5546] [NYQ-5636] - Some help topics for newly added features are not displaying the related help information. Workaround: All new features are documented in the PDF version of the Nyquist System Administrator Guide.

[NYQ-5601] - Disabling Paging on a Station, via station configuration or paging exclusion, causes the station to not receive zone-based audio distribution.

Workaround: If audio distribution to the station is desired, leave paging enabled but do not add the station to any paging zones (the station will still receive All-Call pages).

[NYQ-5612] If you Disable Audio via the web interface "Disable Audio" button, a popup modal window displays. If you leave the popup modal there and then attempt to edit a URL field of a Map object, you will not be able to enter text into the URL field.

Workaround and best practice: Before editing Map objects, ensure that no popup modal windows are displayed on the web interface.

[NYQ-5616] If you use the web interface dashboard Dial Pad to initiate a call to a station that does not have a microphone, the message "The station called does not have a microphone, paging only mode initiated (one-way-call)" is correctly displayed on the Dial Pad window, but when you later attempt to use the Dial Pad to place another call, the message is still displayed on the Dial Pad. You can still place calls using the Dial Pad.

[NYQ-5623] - Using System Parameters "Download BogenCA certificate" on Android tablet or mobile devices fails to download the certificate.

Workaround: Contact Bogen Technical Support for a certificate to use on Android devices. The certificate may also be available on the Bogen Nyquist support website.

[C4000-1451] - A very brief audio distortion can be heard on MMPA zone-based audio distribution after a PTT interrupts the audio distribution (e.g., with All-Call page). When the PTT call is finished, the brief audio distortion can be heard when the audio distribution resumes.

[NYQ-1657] - When a Nyquist 2-channel amplifier is operating in standalone mode, with 2 SIP clients configured and registered, changing configuration from 2-channel mode to bridge mode will properly only display a single SIP client configuration, but both SIP clients will still be registered.

Workaround: Disable the channel B SIP client before changing to bridge mode.

[NYQ-3527] - When Audio Distribution is playing to a Zone, if a Scheduled Event to the same zone interrupts the Audio Distribution and the scheduled event includes scheduled audio, you will hear about 1 second of the originally playing audio distribution between the scheduled tone and the scheduled audio.

[C4000-1229] - If a Zone is deleted while audio distribution is playing to specific stations, the stations will stop playing the current audio distribution after the Zone is deleted, even if the stations were not part of the Zone.

Workaround: After deleting a Zone, stop the audio distribution and then restart it. Best practice: Do not add or delete Zones while audio distribution is in-use.

[C4000-1474] - A very short audio blip can be heard when a Recorded Page is interrupted by an Emergency Announcement. The audio blip does not impact the Emergency Announcement audio playback.

[C4000-1674] - Sometimes the back button on the Map Dashboard feature takes you back more than one level.

[C4000-1852] - When a 4-channel Amplifier is in standalone mode, line-input audio is intermittently mixed with network audio when Prioritize Line Input is enabled.