

BOGEN NYQUIST INTEGRATION GUIDE





IPVIDEO CORPORATION | 1490 NORTH CLINTON AVENUE BAY SHORE NY 11706

Contents

| INTRODUCTION | 2 |
|--|----|
| BOGEN NYQUIST – SYSTEM PARAMETERS | .3 |
| HALO SMART SENSOR - INTEGRATION | Л |
| | - |
| HALO SMART SENSOR – ACTIONS | .5 |
| BOGEN NYQUIST – ROUTINES MANAGEMENT | 6 |
| HALO SMART SENSOR – EVENTS | 8 |
| HALO SMART SENSOR – TESTING THE CONNECTION | 9 |

INTRODUCTION

The HALO Smart Sensor can be integrated into the BOGEN Nyquist E7000 & C4000 solutions using HTTPS Messaging. This allows administrators to program HALO Smart Sensor to send notifications to NYQUIST to trigger the execution of Routines, which in turn, will trigger visual and audible notifications to be played in selected zones/areas.

Note : This integration was tested using Bogen Nyquist E7000 version 8.0 and HALO Smart Sensor Device Firmware 2.7.X This integration requires that the Nyquist system to have the Routines API License installed.

BOGEN NYQUIST – SYSTEM PARAMETERS

| BOGEN 7000 | NYQUIST | | User: Ken Venuti Extension: 030 |
|---|---|--|---|
| & Dashboard | System Parameters | | |
| j≡ System Parameters | Product License | Sort Menu Strestart Server Astation Supervision DEmail | Configuration 📥 System Update 🙂 Shut Down |
| M Zones and Quedes M Schedules | ✓ Check Internet Site Access ✓ Check Server State | us ODHCP Server 🗲 Custom Configuration | |
| og CoS Configuration | | | |
| 🖀 Admin Groups | Name | Main Facility | |
| Stations | Day Start | 8:00am | |
| X Bridge Devices | Night Start | 5:00pm | |
| Amplifier and Gateway Devices | Emergency-All-Call Multicast RTP IP Address | 239.1.1.1 | |
| and Periphines and Galeway Devices | Emergency-All-Call Multicast RTP Port | 6001 | |
| ▶ ◀ Audio | Emergency All-Call Cut Level (dB) | 0 | |
| Lusers | All-Call Multicast RTP IP Address | 239.1.1.2 | |
| G. Poles | All-Call Multicast RTP Port | 6002 | |
| | All-Call Cut Level (dB) | -3 | |
| & Facilities | Audio Distribution Multicast IP Address | 239.1.1.3 | |
| P Outside Lines | Audio Distribution Multicast Port | 6003 | |
| → SID Trunks | Audio Distribution Cut Level (dB) | -24 | |
| | Default Cut Level (dB) | -6 | |
| III Call Details | Ambient Noise Sensor Multicast IP Address | None | |
| System Backup/Restore | Ambient Noise Sensor Multicast Port | None | |
| D Curtom Long | Network Time Server | time1.google.com | |
| E System Logs | Appliances Network Time Server Source | nyquist | |
| Ø Paging Exclusions | Time Zone | America/New York | |
| Firmware | Disable Preannounce Tone | No | |
| of Deutiese | Disable Privacy Beep | No | |
| - routilles | Use Network Time Server defined by DHCP | No | |
| Alert Filters | Emergency Tone | 1-Second | - |

Click on System Parameters in the left navigation tree, and click the EDIT button as pictured above.

| BOGEN E7000 MQUM | | User: Ken Venuti Extension: 030 📃 📍 |
|-----------------------------------|--|---|
| 2 Dashboard | j≡ Edit System Parameters 💿 | |
| j≣ System Parameters | | |
| ▶ ¶? Zones and Queues | X Cancel B Save | System Tools 🚯 |
| ▶ 🗂 Schedules | Name: () | Server IP Address: () |
| of CoS Configuration | Main Facility | 172 31 11 134 |
| 📽 Admin Groups | Day Start: 1 Minute: | Change Server IP Address |
| C Stations | 8 * 0 * | Han Natural Time Penner defined by NICh. |
| X Bridge Devices | Night Start: | No |
| III Amplifier and Gateway Devices | 17 v 0 v | |
| ▶ ◀ Audio | Emergency-All-Call Multicast RTP IP Address: (1) | Network Time Server: () |
| Lusers | 239 1 1 1 | Current NTP Server Name: LAX.CALTICK NET |
| a, Roles | Emergency-All-Call Multicast RTP Port: 6 | time1.google.com |
| & Facilities | 6001 | Change Network Time Server |
| Y Outside Lines | Emergency-All-Call Cut Level (dB): 0 () | |
| = SIP Trunks | All Call Multimed DTD ID Address | Appliances Network time server source: |
| Call Details | | in yopenin - |
| System Backup/Restore | All-Call Multicast RTP Port: 0 | Change Appliances Network Time Server |
| System Logs | 6002 | Server Date/Time: () 1:44:53 PM EDT |
| Paging Exclusions | All-Call Cut Level (dB): -3 (| 2022-10-06 13:44:53 |
| E Firmware | | 🛍 Change Server Date/Time |
| ⊐⊄ Routines | Audio Distribution Multicast IP Address: 1 | |
| A Alert Filters | 239 1 1 3 | Time Zone: |
| ▶ ● Messages | Audio Distribution Multicast Port: () | |
| C Automatic Failover | Andle Placification Cost and MDI: 24 | O Criange rime zone |
| | | Dialing Length: 0 |
| « | Default Cut Level (dB): -6 () | 3- |
| | Ambient Nation France Mediate ID Address - A | III Change Diating Length |
| | Automini music sensui munucasti IP Address: 😝 | Routine API Key: 1 |
| | Ambient Noise Sensor Multicast Part: | 2ca5b1e0c0a0951573588e00efe846b/ Recet |
| | | Additional IP Addresses to include in the Root SSL certificate: |
| | | 97.68.97.117 192.168.1.14 |

Copy the Routines API Key to the clipboard.

HALO SMART SENSOR – INTEGRATION

Navigate to the HALO Smart Sensor device user interface and click on Integrations.

| | | Integration Partner | Apply Settings |
|---|--|----------------------------|----------------|
| Protocol OTCP HTTP | Repeat Holdoff 5 sec | | |
| https:// /rou ent-Type:application/jso | itine/api/%UID%/0/0/abc/xyz[HEADER]Accept:ap n[HEADER]Authorization:Bearer %PSWD% | plication/json[HEADER]Cont | ● On ○ Off 🛛 🔘 |
| eset String | | | ○ On ම Off 🕑 |
| Above you can use: | %THR% - event threshold | %FWVER% - firmware | e version |
| %NAME% - device name | %VAL% - sensor value | \\ - 1 back slash | |
| %IP% - ip address | %DATE% - local date of event | \n - new line | |
| %MAC% - mac address | %TIME% - local time of event | \r - carriage return | 1. mar. 1. |
| %EID% - event id | %PSWD% - password | \u#### - hex char co | ode |
| %SOURCE% - data source | %USER% - User | More | |
| | | | |

- 1. Set Protocol to HTTP.
- 2. Paste the contents of the COPY of the Routines API Key into the Password field.
- 3. Copy the text below, edit the IP Address to match the Nyquist Server and paste into the Set String field.

https://192.168.1.100/routine/api/%UID%/0/0/abc/xyz[HEADER]Accept:application/json[HEAD ER]Content-Type:application/json[HEADER]Authorization:Bearer %PSWD%

- 4. Click the On radio button for the Set String.
- 5. Click the Save button.

HALO SMART SENSOR – ACTIONS

Click on the Actions page and ensure that the "Set" checkbox is checked for each of the integrated events.

| Event | E | mail | Prin | nary Integration |
|--------------|-----|-------|------|------------------|
| Identifier | Set | Reset | Set | Reset |
| Aggression | | | | |
| AQI | | | | |
| CO2cal | | | | |
| Gunshot | | | | |
| Health_Index | | | | |
| Help | | | | |

BOGEN NYQUIST – ROUTINES MANAGEMENT

| BOGEN E700 | | | | | | | | | User: | Ken Venuti Extens | ion: 030 📃 |
|---|----------|------------|---|-------------|------------|--------------|------------|-----------|-----------|-------------------|-------------|
| ֎ Dashboard i≡ System Parameters ▶ τ^Q Zones and Queues | Carl Rol | utines 🔸 🔞 | outines API 🚯 Yes | | | | | | | | |
| Cos Configuration | | | Name 🗢 | Extension # | Enabled \$ | Use Caller's | Allow DTMF | DTMF Code | Allow API | Filter | Description |
| Stations | | | Earthquake Warning Routine HALO Vape Detection | 020 025 | Yes | No | Yes | 1000 | Yes | No | Show |
| Amplifier and Gateway Devices Audio | | | | | | | | | | | |
| a Users a, Roles a) Facilities | | | | | | | | | | | |
| P Outside Lines | | | | | | | | | | | |
| Call Details System Backup/Restore | | | | | | | | | | | |
| System Logs Paging Exclusions Firmware | - A - 64 | | | | | | | | | | |
| X Routines | | | | | | | | | | | |

- 1. Click on Routines in the left navigation bar.
- 2. Enable the Routines API.
- 3. Click the Add button to add a Routine for each HALO Smart Sensor Event type. Be sure to use a unique DTMF code (i.e., Routine ID) for each Routine.

| BOGEN E7000 | D NYGUIST | User: Ken Venuti | Extension: 030 | = |
|-------------------------------|---|------------------|----------------|-----|
| A Dashboard | X Edit Routine | | | |
| i≣ System Parameters | | | | - 1 |
| ▶ ♥ Zones and Queues | Name: () | | | - 1 |
| E Chedules | HALO Vape Detection | | | - 1 |
| os CoS Configuration | Extension: () | | | - 1 |
| 🔮 Admin Groups | 025 * | | | - 1 |
| C Stations | Enabled: | | | - 1 |
| X Bridge Devices | Use Caller's Extension: | | | - 1 |
| Amplifier and Gateway Devices | No | | | |
| ▶ ◀ Audio | Allow DTMF: () | | | - 1 |
| Lusers | Yes | | | |
| a, Roles | DTMF Code: () | | | - 1 |
| & Facilities | 4444 | | | - 1 |
| P Outside Lines | Allow API: () | | | - 1 |
| | | | | |
| III Call Details | No No | | | - 1 |
| System Backup/Restore | Description: () | | | - 1 |
| System Logs | IPVideo's HALO vape detection system testing. | | | |
| Ø Paging Exclusions | | | | - 1 |
| Firmware | | | | |
| ≭ Routines | | | | |
| A Alert Filters | | | | + |

Edit the Actions of the Routine to add/create the desired actions associated with the HALO Smart Sensor Event type.

| BOGEN E700 | 0 | iyqui | st | | | | | | User: Ken Venuti Extension: 030 |
|-----------------------------------|------------|-------|---------|-----------------------------------|-----------|------------------------|-----------|---------------------|---|
| ▶ ≰ ¹ Zones and Queues | F A | Actio | ne | | | | | | |
| E Schedules | 77 | | 115-1 | | | | | | |
| ¢ CoS Configuration | Dor | he | Trigger | 5 | | | | | |
| 🐏 Admin Groups | | | | | | | | | Filter |
| Stations | | | | Name | Enabled 0 | Туре 🔅 | Condition | Parameter 1 | |
| X Bridge Devices | + | | 6 | Display Dashboard Alert Message | Yes | Dash-Text | Show | Style: Warning | |
| Amplifier and Gateway Devices | + | 2 | 6 | Vape Detect Alert with parameters | Yes | New-Announcement | Show | Emergency | |
| Audio | + | | 6 | TTS Announcement | Yes | Add-Announcement-Audio | Show | TTS | This is an IPVideo HALO test. Vaping has been detected of |
| Lusers | + | 2 | 6 | Play TTS Announcement | Yes | Play-Announcement | Show | None | |
| 4 Roles | + | | 0 | Vape Detection Alert Display Msg | Yes | Display-Msg | Show | Zones: All Displays | |
| & Facilities | + | 2 | 6 | HALO Email Alert | Yes | Email | Show | Emails | |
| P Outside Lines | | | | | | | | | |
| ≓ SIP Trunks | | | | | | | | | |
| I≣ Call Details | | | | | | | | | |
| System Backup/Restore | | | | | | | | | |
| System Logs | | | | | | | | | |
| Ø Paging Exclusions | | | | | | | | | |
| Firmware | | | | | | | | | |
| 🗙 Routines | | | | | | | | | |
| Alert Filters | 4 | | | | | | | | • |

HALO SMART SENSOR – EVENTS

- 1. Click on the Events page on the HALO Smart Sensor device interface.
- 2. For each event type, enter the DTMF value from each of the Routines created in E7000 in the UID field. Make sure that UID/Event Type matches the desired Routine.
- 3. Click Save to save the UID values.

| PM2.5 | PM2.5 (2.5 μm particulates) μg/m³ 🗸 | 51 | 15 | | Advanced | Test 🗂 | j |
|--------|-------------------------------------|------|----|------|----------|--------|-----|
| Tamper | Move (mm/100) | 1400 | 0 | 1111 | Advanced | Test 💼 | ſ |
| Temp_F | Temperature (F) | 80 | 15 | | Advanced | Test | Ō |
| THC | PM10 (10 µm particulates) µg/m³ 🗸 | 35 | 0 | 5555 | Advanced | Test 💼 | i |
| TVOC | TVOC ppb 🗸 | 1000 | 15 | | Advanced | Test | Ō |
| Vape | PM10 (10 µm particulates) µg/m³ 🗸 | 35 | 0 | 4444 | Advanced | Test 💼 | í I |



HALO SMART SENSOR – TESTING THE CONNECTION

- 1. Click on the Actions button in the HALO Smart Sensor User Interface.
- 2. Click on the Test button of an Event Type that has been associated to a Routine to generate a test event.
- 3. In addition to the Email that all included users in the template receive, the HALO Event should be displayed in the primary dashboard of the Bogen Nyquist interface.

| | | | | | | | bicady | riigit | | | | | | |
|--|--|---------|------------------------|--|---|--|--|---|---|---|--|---|-----|--------|
| Tamper | | | | 0 | | Red ~ | Steady | ← High | • | | | | v | Test |
| Temp_F | | 0 | | 0 | • | • | Steady | ← High | • | | | | * | Test |
| THC | 2 | | | 0 | | Green 🗸 | Steady | ✓ High | • | | | | v | Test |
| туос | | 0 | | | V | • | Steady | ← High | ¥ | | | | v | Test |
| Vape | 8 | | | | v | Green 🗸 | Steady | ✓ High | • | | | | ÷ | Test |
| aakar Vali | um a: 96 | 50/ | | | | Upload soun | d file | and a N | | Delete soun | d file | | | |
| Jeaker voit | unie. od | J76 | | | • | Choose Sound | File | | Browse Upload | File To Delet | e | | • | Delete |
| | | | | | | | | | | | | | | |
| System Parame 2 Zones and Q 3 Schedules | eters iueues | | Inco | ming Calls | | | | | | | | | | |
| System Paramo 2 Zones and Q 1 Schedules CoS Configurat Admin Groups stations stridge Devices Amplifier and G Audio | eters iueues tion | ievices | Mes | ming Calls 2022-10-01 1 2022-10-01 1 2022-10-01 1 2022-10-01 1 2022-10-04 1 2022-10-04 0 2022-10-04 0 2022-10-06 0 | 0:52:57 AM - This i 0:55:20 AM - This i 0:57:53 AM - This i 8:12:34 PM - This i 1:37:11 AM - This i 8:08:21 PM - This i 2:06:12 PM - This i | s an IPVideo HALG s an IPVideo HALG | D test. Vaping detecte D test. Vaping detecte | ed on-premises in 1 ad on-premises in 1 | sullding abc, near roor sullding abc, near roor sullding abc, near roor uilding abc, near roor uilding abc, near roor sullding abc, near roor sullding abc, near roor | xyz. Please alert sc xyz. Please alert sc | hool security acco hool security acco hool security acco hool security acco hool security acco hool security acco hool security acco | rdingiy. 8 rdingiy. 8 rdingiy. 9 rdingiy. 9 rdingiy. 9 rdingiy. 9 rdingiy. 9 | | |
| System Paramo 4 Zones and Q 5 Schedules CoS Configurat Admin Groups Stations 3ridge Devices Amplifier and G Audio Isers Roles | eters iueues tion | evices | Mes: | ming Calls agges 2022-10-01 1 2022-10-02 0 2022-10-04 1 2022-10-04 0 2022-10-04 0 Site | 0:52:57 AM - This i 0:55:20 AM - This i 0:57:53 AM - This i 8:12:34 PM - This i 3:27:11 AM - This i 8:08:21 PM - This i | s an IPVideo HALI s an IPVideo HALI | D test. Vaping detecte D test. Vaping detecte | ed on-premises in 1 ed on-premises in 1 ed on-premises in t ed on-premises in t ed on-premises in t ed on-premises in t | suilding abc, near roor suilding abc, near roor | xyz. Please alert sc xyz. Please alert sc | hool security acco hool security acco hool security acco hool security acco hool security acco hool security acco | rdingiy. 8 rdingiy. 9 rdingiy. 9 rdingiy. 9 rdingiy. 9 rdingiy. 9 rdingiy. 9 | | |
| System Paramo System Paramo Cos Configurat Cos Configurat Admin Groups Stations Bridge Devices Stations Bridge Devices Audio Jsers Roles Facilities Nutside Lines SIP Trunks | eters | evices | Inco Mess Califi | ming Calls 2022-10-01 1 2022-10-01 1 2022-10-01 1 2022-10-01 1 2022-10-04 1 2022-10-04 0 2022-10-05 0 Site | 0:52:57 AM - This i 0:57:53 AM - This i 0:57:53 AM - This i 1:37:11 AM - This i 8:08:21 PM - This i 2:06:12 PM - This i | a an IPVideo HALL as ni IPVideo HALL | D lest. Vaping detects 0 test. Vaping detects 0 test | ed on-premises in 1 ed on-premises in 1 | suliding abc, near roor suliding abc, near roor | xyz. Please alert sc xyz. Please alert sc yz. Please alert sc xyz. Pleas | hool security acco hool security acco hool security acco hool security acco hool security acco hool security acco | rdingly: rdingly: rdingly: rdingly: rdingly: rdingly: rdingly: rdingly: rdingly: rdingly: rdingly: | nts | |
| System Parama 4 Zones and Q 2 Schedules CoS Configurat Admin Groups Stations Bridge Devices Amplifier and G Audio Jsers Roles Facilities Dutside Lines SIP Trunks Call Details System Backup System Logs | eters ueues tion viateway Di viRestore | evices | Inco Mesi Calif | ming Calls 2022-10-01 1 2022-10-01 1 2022-10-01 1 2022-10-01 1 2022-10-01 1 2022-10-04 0 2022-10-04 0 2022-10-04 0 2022-10-04 0 Site Complements Compl | 0:52:57 AM - This i 0:05:20 AM - This i 0:57:53 AM - This i 1:37:11 AM - This i 8:08:21 PM - This i 2:06:12 PM - This i 2:06:12 PM - This i Dial Pad P | a an IPVideo HALI an IPVideo HALI | D test. Vaping detects D test. Vaping detects | ed on-premises in 1 ed on-premises in 1 con-premises in 1 con-premises in 1 con-premises in 1 | suliding abc, near roor suliding abc, near roor sulidi | xyz. Please alert sc xyz. Please alert sc mg/Paging multi-Site AII Cr | hool security acco hool security acco hool security acco hool security acco hool security acco hool security acco | rdingly. rdingly. rdingly. rdingly. rdingly. rdingly. Tones/Announcemer Tone A | nts | |