



# **BlackBerry AtHoc**

## **Public Address System Installation and Configuration Guide**

Last Published: March 2019



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# Getting started

The BlackBerry AtHoc management system uses the IIM add-on module interface with Giant Voice (GV) outdoor warning devices to enable wide-area Mass Notification System (MNS) broadcasts. Giant Voice features can broadcast critical information using voice messages, wave files, musical tones, or text-to-speech (TTS) conversion. Public Address (PA) systems have large amplified speakers. Typically, speakers are set on poles in an array that covers a specified area with enough acoustic sound to override the ambient noise with emergency notification.

After the BlackBerry AtHoc management system is integrated with a Public Address (PA) system, operators can disseminate emergency alerts to the siren system from the BlackBerry AtHoc management console. Alert messages can be delivered using text-to-speech or pre-recorded audio files to up to three pre-defined target zones by using the external call key inputs. A fourth external call key input is reserved for sending a "Cancel" command to all poles.

# Configure the Public Address System delivery gateway



Configure the Public Address System gateway in the Settings section of the BlackBerry AtHoc management system to enable the BlackBerry AtHoc alerts system to publish alerts through the Public Address System.

## Enable the Public Address System gateway on the BlackBerry AtHoc application server


Log in to the BlackBerry AtHoc management system and check the Delivery Gateways section to verify that the Public Address System and XML Feed device gateways have been installed. If they are installed, skip this section.

1. Log in to the BlackBerry AtHoc application server as an administrator.
2. Navigate to the following folder <IWSAlerts Install Path>\ServerObjects\Tools and run the AtHoc.Applications.Tools.InstallPackage.exe file.
3. On the **Configure Device Support** screen, select **Public Address System** and **Xml Feed**.
4. Click **Enable**.
5. On the **Installation Complete** window, click **OK**.
6. Click **Close**.

## Configure the delivery gateway

1. Log in to the BlackBerry AtHoc management system as an administrator.
2. In the navigation bar, click .
3. In the **Devices** section, click **Public Address System**.
4. On the **Public Address System** page, click **Copy default settings**.
5. Click **Save**.
6. In the navigation bar, click .
7. In the **Devices** section, click **Xml Feed**.
8. On the **Xml Feed** page, click **Copy default settings**.
9. In the **Feed Source** section, select **Delivery Gateway ID**.
10. Click **Save**.

## Configure the Public Address System device

1. Log in to the BlackBerry AtHoc management system as an administrator.
2. In the navigation bar, click .
3. In the **Devices** section, click **Devices**.
4. On the **Device Manager** page, click **Public Address System**.
5. On the **Public Address System** page, click **Edit**.
6. In the **Delivery Gateway** section, from the **Add a Delivery Gateway** list, select **Public Address System**.
7. Click **Configure** to open the text-entry field for the Public Address system gateway.
8. By default, the configuration value appears in the text-entry field. If the text-entry field is empty, complete the following steps:
  - a. Click **Remove**.


- b. Select **Public Address system**.
- c. Click **Configure**.
- d. Copy the following text into the field:

```
<Configuration>
  <CapParams>
    <GVSystemType>PA</GVSystemType>
    <AllMode>0</AllMode>
    <ZoneMode>0</ZoneMode>
    <KeyMode>4</KeyMode>
    <UnusedMode>0</UnusedMode>
    <DefaultAllCall>0</DefaultAllCall>
    <DefaultKeyActivationCode>0</DefaultKeyActivationCode>

    <NoPARequired>0</NoPARequired>
    <PARequired>1</PARequired>
    <PAWav>1</PAWav>
    <IsCancelable>>false</IsCancelable>
    <ContentSource>GiantVoice</ContentSource>
  </CapParams>
</Configuration>
```

- 9. Click **Save**.
- 10. Click **Enable**.

## Configure the XML Feed device

- 1. Log in to the BlackBerry AtHoc management system as an administrator.
- 2. In the navigation bar, click .
- 3. In the **Devices** section, click **Devices**.
- 4. On the **Device Manager** page, click **Xml Feed**.
- 5. On the **Xml Feed** page, click **Edit**.
- 6. In the **Delivery Gateways** section, click **Add a Delivery Gateway** and select **Xml Feed**.
- 7. Click **Configure** to open the text-entry field for XML Feed gateway.
- 8. By default, the configuration value appears in the text-entry field. If the text-entry field is empty, complete the following steps:
  - a. Click **Remove**.
  - b. Select **XML Feed**.
  - c. Click **Configure**.
  - d. Copy and paste the following text into the field:


```
<Configuration>
  <DeviceType>FEED</DeviceType>
</Configuration>
```

- e. Click **Save**.

## Set up mass device endpoints (targets)

To create a speaker pole, zone, or a poles endpoint (target), an operator should perform the normal Mass Device Endpoint creation flow. You should give the endpoint a functionally descriptive name, so that it is recognizable in Notification Templates and Report windows as a mass-communication device target entity.

### Create mass device endpoints


1. Log in to BlackBerry AtHoc management system as an administrator.
2. In the navigation bar, click .
3. In the **Devices** section, click **Mass Device Endpoints**.
4. On the **Mass Device Endpoints** screen, click **New > Public Address System**.
5. On the **New Mass Device Endpoint** screen, in the **General** section, enter a name in the **Endpoint Name** field.
6. In the **Configuration** section, in the **Address** field, enter call key **N,0**. Ensure that there are no spaces anywhere in the character string.
7. Click **Save**.

## Create and publish a Public Address System alert template

### Prerequisites

- Before you start sending test alerts through Public Address System, consider the impact it has on everyone within hearing distance of the poles you are using during the test.
- This process assumes that the IIM is not configured to download data from the BlackBerry AtHoc management server and is not connected to the Giant Voice equipment.
- Consult with your POC about the acceptable content of the test alert. For example, the word "test" should appear at, or very near to, the start of the broadcast message.
- Although the initial use of this template is to test the data creation process, this template can be used during the audio tuning phase after the IIM and Giant Voice hardware are connected.

To confirm that the Public Address System device is installed correctly on the BlackBerry AtHoc management system, create a template.

1. Log in to the BlackBerry AtHoc management system as an administrator.
2. Click **Alerts > Alert Templates**.
3. Click **New**.
4. On the **New Template** screen, in the **Alert Template** section, enter a template name and description.
5. Select a folder from the **Folder** list.
6. Select **Available for quick publish** and **Available for mobile publishing**.
7. In the **Content** section, enter the title and content of the alert.
8. In the **Mass Devices** section, select **Public Address System** and then from the list select one or more Mass Alert Endpoints.
9. In the **Mass Device** section, click **Options**.
10. On the **Mass Devices Options** screen, select **Text to Speech** and **Alert Body** or **Custom Text**.
11. Click **Apply**.
12. In the **Schedule** section, change the **Alert Duration** to 15 minutes.
13. Click **Save**.
14. Click .
15. On the **Home** page, in the **Quick Publish** section, find the alert template you just created.

16. Click **Review and Publish**.

17. Click **Publish**.

## Verify the published alert

Verify that the alert was published successfully to the syndication feed.

1. Open a browser and navigate to the following URL: `https://<url>/syndication/gatewayid/<organization-id>/capindex`.

Where `<url>` is the base URL of the BlackBerry AtHoc management system (for example, `https://integration7.athoc.com`) and `<organization-id>` is the 7 or 8-digit organization ID.

2. Copy the content in the `<url>` field into another browser. The "capIndex" XML format must be similar to the content in the following image:

```
<?xml version="1.0"?>
- <capIndex xmlns="http://www.incident.com/cap_index/1.0">
  <title>Current CAP Messages</title>
  <updated>2018-08-29T01:26:47.2516109-07:00</updated>
  - <item xmlns="http://www.incident.com/cap_index/1.0">
    <id>293C2867-64E2-4B0D-BBD5-FEC10C74CF0C</id>
    <identifier>293C2867-64E2-4B0D-BBD5-FEC10C74CF0C</identifier>
    <sender>AtHoc Admin</sender>
    <status>System</status>
    <msgType>Alert</msgType>
    <firstEffective>2018-08-29T01:26:02.913</firstEffective>
    <lastExpires>2018-08-29T01:41:02.913</lastExpires>
    <url>https://integration7.athoc.com/Syndication/CAP_PA_2050363/CapIim/1147460</url>
    <bounds/>
    <format>http://www.incident.com/cap/1.1</format>
  </item>
</capIndex>
```

3. Verify the `<addresses>` and `<code>` and match with the following format. The "alert" XML format must be similar to the content in the following image:



```

<?xml version="1.0"?>
- <alert xmlns="urn:oasis:names:tc:emergency:cap:1.1">
  <identifier>CAP_PA|581336|293C2867-64E2-4B0D-BBD5-FEC10C74CF0C|1147460|PUBLISH</identifier>
  <sender>BlackBerry AtHoc Alerts</sender>
  <sent>2018-08-29T01:26:02-07:00</sent>
  <status>Actual</status>
  <msgType>Alert</msgType>
  <source>System Default</source>
  <scope>Public</scope>
  <addresses>PA,0,0</addresses>
  <code>0,1</code>
  - <info>
    <category>Other</category>
    <event/>
    <urgency>Unknown</urgency>
    <severity>Unknown</severity>
    <certainty>Unknown</certainty>
    - <eventCode>
      <valueName>ATHOC</valueName>
      <value>IWSA</value>
    </eventCode>
    <effective>2018-08-29T01:26:02-07:00</effective>
    <expires>2018-08-29T01:41:02-07:00</expires>
    <senderName>MassDev</senderName>
    <headline>this is test only, TTS test please ignore.</headline>
    <description>this is test only, TTS test please ignore. Please ignore, no action required.</description>
    <instruction/>
    <contact>support@athoc.com</contact>
    - <parameter>
      <valueName>AUDIO-REPEAT-MODE</valueName>
      <value>2</value>
    </parameter>
    - <parameter>
      <valueName>AUDIO-REPEAT</valueName>
      <value>1</value>
    </parameter>
  </info>
</alert>

```

4. If any of the formatting does not match, review the Public Address System gateway XML content and mass communication users' Public Address System device addressing.

# Configure IIM IP connectivity

This section describes how to configure the IP Integration Module (IIM) to communicate with the BlackBerry AtHoc Public Address System device.

## Prerequisite

Ensure that the following packages are installed and configured before performing any tasks:

- Latest Public Address System BlackBerry AtHoc device package
- Latest Public Address System IIM Capnode package
- Latest IIM Agent

To work as part of the BlackBerry AtHoc system, IIM must be able to communicate with the BlackBerry AtHoc server to download CAP packets.

The initial configuration data you need to collect are:

- The BlackBerry AtHoc Alerts system base URL
- The BlackBerry AtHoc Alerts Organization ID
- Customer's proxy server and port information

To find this information, use a local PC to log in to your local instance of the BlackBerry AtHoc management console. The URL can be a base "https" address used to access a specific system. You can obtain the URL of the system from the local system administrator or from the BlackBerry Customer support team. Launch the management console. The URL from the "https" to the last character before the third forward slash (/) is the "base URL" of the system. For example, in the following URL address bar, the full URL for the sign-on page is: "https://integration7.athoc.com/client/auth/login?ReturnUrl=%2fclient%2fathoc-iws". The "base-URL" of the system is "https://integration7.athoc.com".

The organization ID is a 7 or 8-digit numerical identifier of the specific system of that customer. To obtain this Organization ID, log in to the BlackBerry AtHoc management system for the customer. Once logged in, you can find the system's organization ID at the top right of the Home Page of the system.

Navigate to the settings page of the browser and determine if you are using any type of Proxy server for routing of internet traffic. For example, if the browser you are using is Microsoft Internet Explorer (IE), go to the LAN settings, in IE, select **Tools > Internet Options**. On the **Internet Options** screen, click **Connections**. At the bottom of the window, click **LAN settings**.

In the **Proxy Server** section, click **Advanced**. The **Proxy Settings** screen displays the Proxy Server Address.

Record the proxy server address and the port number. You can now close these settings windows and exit IE.

**Note:** If your IE instance does not use proxy servers, when you click **LAN settings**, no proxy server is used for internet traffic on this network.

## Configure the system\_private.config file

1. Open **Microsoft Notepad** as an administrator.
2. Click **File > Open**.
3. Navigate to C:\Program Files\capnode and change the file selection from **Text Documents (\*.txt)** to **All Files (\*.\*)**.
4. Select the `system_private.config` file.
5. Click **Open**.
6. Verify the following items in the `system_private.config` file:

- a. The `indexURL` variable should be formatted similar to the following image. The base URL should be followed by `"/syndication/"`, then the device gateway protocol ID (for example, `CAP_PA`), the organization ID number, followed by `"/capindex"`.
  - b. The `"#"` at the beginning of a line in the `system_private.config` file is used to comment out an unused line. The `"#"` should be removed from a line to use the variable.
7. Enter the proxy server and proxy port information you collected earlier in the `proxyServer` and `proxyPort` parameters.
- If the settings on the machine that you tested with is set for "Automatic" in the proxy settings, the settings for those two lines displays as follows:
- `proxyServer=none`
  - `proxyPort=8080`
8. Update the `CapPostingTarget` variables to reflect the correct URL using the same base URL as in the `indexURL` variable.

```

system_private - Notepad
File Edit Format View Help
#Private System Properties For CapCon
#Configured 20150918 Athoc

#Site Specific
encoders=com.ha.capnode.drivers.sirencentral.SirenCentralEncoder
indexURL=https://integration4.athoc.com/Syndication/CAP_WHELEN_V2/2060520/capindex?ast=00E06F2669DF
proxyServer=none
proxyPort=8080
delayBetweenRxPolls=/

#TTS
encoder.SirenCentralEncoder.TTS_SynthesizerIndex=0
encoder.SirenCentralEncoder.TTS_VoiceIndex=1
encoder.SirenCentralEncoder.TTS_Volume=91
encoder.SirenCentralEncoder.TTS_Speed=65
encoder.SirenCentralEncoder.TTS_Pitch=120
encoder.SirenCentralEncoder.TTS_Range=15

#Relay
encoder.SirenCentralEncoder.SirenCentralDriverWhelen.shortdelay=500
encoder.SirenCentralEncoder.SirenCentralDriverWhelen.Delay_for_PACode_TX=5000
encoder.SirenCentralEncoder.relay=1;3;4
encoder.SirenCentralEncoder.ptt_before=100;100;1000
encoder.SirenCentralEncoder.ptt_after=100;100;1000

#PostCap
CapPostingTarget=True
CapPostingTarget.capurl=https://integration4.athoc.com/syndication/PostCap
CapPostingTarget.user=
CapPostingTarget.password=

```

9. Click **File > Save**. Close the `system_private.config` file.
10. Restart the CapCon service.

## Restart the CapCon service

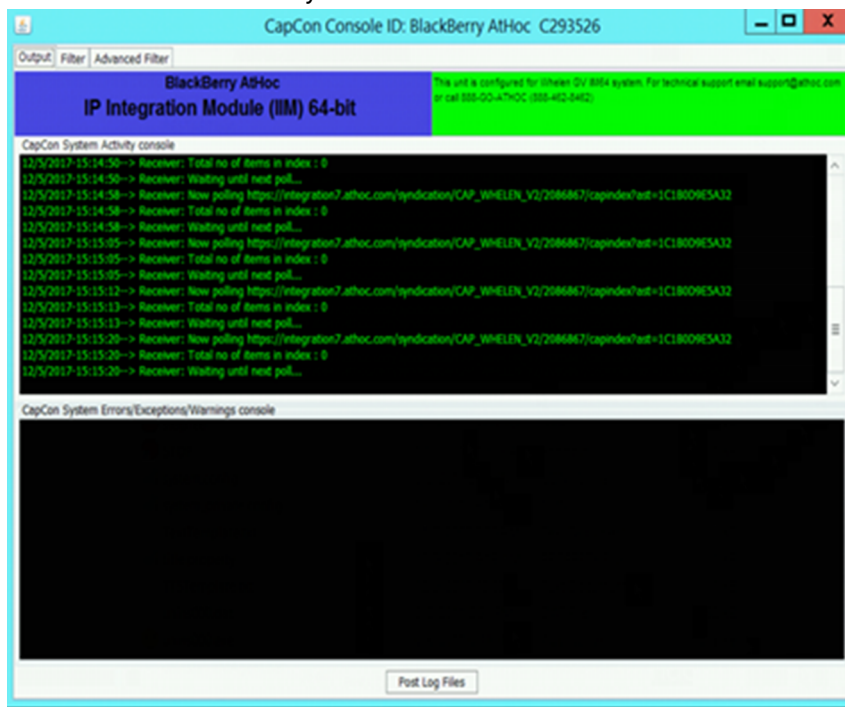
1. Navigate to your IIM system.
2. Go to **Start > Run > Services**.
3. Launch an instance of the **Services Manager** application. There should be a quick-launch icon in the taskbar of the desktop.
4. Scroll down to the **IIM CapCon Service**.
5. Right-click on the **CapCon Services** row and select either **restart** or **stop** and then start the CapCon Service.

## Verify the CapCon system activity console (GUI)

1. Log in to the IIM console as an administrator. The CapCon Console loads automatically.

The data in the CapCon System Activity console polls at the rate set by the `delayBetweenRXpolls` variable in the `system_private.config` file. The default is set to 7 seconds. A message indicates the total number of items in the index. The index number is the number of active alerts on the BlackBerry AtHoc system at that time.

2. Verify that the IIM console does not show any new errors.



3. Verify that the console icon in the task tray appears green, indicating that the connectivity between the IIM and the BlackBerry AtHoc Alerts system is good.



## Troubleshooting

If the CapCon System Activity console indicates anything other than a total number of items in the index and a number, or if the CapCon System Errors/Exceptions/Warnings console has content in red, this indicates that the configuration has not been executed correctly.

1. If the BlackBerry AtHoc management system, for example, <https://integration4.athoc.com/client/default.asp> is available on IE on a local workstation, then the `indexURL` should also be available. Enter the `indexURL` in the browser. For example, [https://integration7.athoc.com/syndication/cap\\_ace3600/2050336/capindex](https://integration7.athoc.com/syndication/cap_ace3600/2050336/capindex).

If there are no items in the syndication feed, an XML similar to the following image should be displayed:

```

<?xml version="1.0"?>
- <capIndex xmlns="http://www.incident.com/cap_index/1.0">
  <title>Current CAP Messages</title>
  <updated>2018-08-21T04:24:40.6406671-07:00</updated>
</capIndex>

```

If there are items in the feed, an XML similar to the following image should be displayed:

```

<?xml version="1.0"?>
- <capIndex xmlns="http://www.incident.com/cap_index/1.0">
  <title>Current CAP Messages</title>
  <updated>2018-08-29T01:26:47.2516109-07:00</updated>
  - <item xmlns="http://www.incident.com/cap_index/1.0">
    <id>293C2867-64E2-4B0D-BBD5-FEC10C74CF0C</id>
    <identifier>293C2867-64E2-4B0D-BBD5-FEC10C74CF0C</identifier>
    <sender>AtHoc Admin</sender>
    <status>System</status>
    <msgType>Alert</msgType>
    <firstEffective>2018-08-29T01:26:02.913</firstEffective>
    <lastExpires>2018-08-29T01:41:02.913</lastExpires>
    <url>https://integration7.athoc.com/Syndication/CAP_PA_2050363/CapIim/1147460</url>
    <bounds/>
    <format>http://www.incident.com/cap/1.1</format>
  </item>
</capIndex>


```

2. If connectivity is still not good, try commenting out the `proxyServer` and `proxyPort` variables.
3. If an HTTP or HTTPS error is displayed instead of XML, this may indicate a firewall or certificate issue or a configuration problem with the BlackBerry AtHoc server syndication folder or subfolders.
4. Check the `indexURL` and proxy settings in the `system_private.config` file for any misspellings. If any line have been misspelled, repeat the configuration steps.
5. Check the `capnode.log` file for errors. Open Windows Explorer by right-clicking on the IIM Start button and navigate to `C:/Program Files/capnode/capnode/logs` and open the `capnode.log` file with Notepad. Browse the file to find the time that the `indexURL` was changed and the CapCon service restarted.
6. Contact BlackBerry AtHoc technical support. Be prepared to provide the `system_private.config` and `capnode.log` files and screen shots of the console screen and the BlackBerry AtHoc management console pages.

# Publish and verify a pre-test alert template

Create a template that targets end users using Desktop Popup, email, and messages to other devices to inform them of a Giant Voice System test.

## Prerequisites

- Before you start sending test alerts through Public Address System, consider the impact on everyone within hearing distance of the poles you are using during the test.
  - Consult with your POC about the acceptable content, user targeting, and device selection of the pre-test notification.
1. Log in to the BlackBerry AtHoc management system as an administrator.
  2. Click **Alerts > Alert Templates**.
  3. Click **New**.
  4. On the **New Template** screen, in the **Alert Template** section, enter a template name and description.
  5. Select a folder from the **Folder** list. Select **Test**, if available.
  6. Select **Available for quick publish** and **Available for mobile publishing**.
  7. Select **Informational** from the **Severity** list.
  8. Select **Other** from the **Type** list.
  9. In the **Content** section, enter an alert title. The alert title can be the same as the template name.
  10. In the **Alert Body** field, enter the text to be read by the text-to-speech. The Body should contain the details of the testing with information such as the time testing will start and finish and any actions that should be taken as a result.
  11. In the **Target Users** section, select the appropriate targeting group, individual users, or query to send the pre-test notification to.
  12. Click **Select Personal Devices** and then select **Desktop App** and **Email-Personal**.
  13. In the **Personal Devices** section, click **Options**.
  14. In the **Personal Device Options** screen, select **App Template** and **App Audio**.
  15. Click **Apply**.
  16. In the **Schedule** section, change the **Alert Duration** to the expected duration of the testing.
  17. Click **Save**.
  18. Click .
  19. On the **Home** page, in the **Quick Publish** section, find the Giant Voice System Test Notification template.
  20. Click **Review and Publish**.
  21. Review the settings and selections.
  22. Click **Publish**.
  23. To verify that the alert was published correctly, observe the receipt of desktop pop-up or email messages on the POC workstation.

# BlackBerry AtHoc Customer Support Portal

BlackBerry AtHoc customers can obtain more information about BlackBerry AtHoc products or get answers to questions about their BlackBerry AtHoc systems through the Customer Support Portal:

<https://support.athoc.com/customer-support-portal.html>

The BlackBerry AtHoc Customer Support Portal also provides support via computer-based training, operator checklists, best practice resources, reference manuals, and user guides.

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Published in Canada