



# **BlackBerry AtHoc**

## **Digital Signage Installation and Configuration Guide**



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# Overview

The Digital Signage plug-in provides support for sending alerts to digital signs. Using the Notification Delivery Service (NDS) console, you configure the plug-in and set up accounts.

Operators send alerts through the BlackBerry® AtHoc® management system. The operators can customize the message for the digital sign devices.

## Hardware and firmware requirements

- A minimum of Dual-Core Dual CPUs (2 Dual-Core CPUs such as Xeon 51xx family, Xeon E53xx family or X53xx family) 2 GHz or higher
- One database server core for each two application server cores
- 4 GB for each server
- **Recommended:** Dual, redundant Intel NICs and power supplies

If using BroadCOM NICs, be sure that the latest drivers are installed and disable the TCP Chimney feature as per the guidelines in the following Microsoft article: <http://support.microsoft.com/kb/951037>.

- Disk space for storage on a RAID 5, RAID 0+1 or RAID 10 configured disk system.

The exact allocation of disks depends on the hardware configuration.

**Note:** Limit SQL RAM usage to 60% of the total system RAM.

The installation procedure requires at least 20 GB free for data.

## Software requirements

- BlackBerry AtHoc NDS version 2.9.21 installed on the NDS server
- BlackBerry AtHoc version 7.9 or later release installed on the BlackBerry AtHoc server
- 64-bit Windows Server 2016
- SQL Server Express 2016
- Internet Information Services (IIS) 7.0 or higher
- Microsoft .NET Framework 4.7.2 and 6.0.x

# Install and configure the plug-in on NDS

The following sections describe how to install and configure the Digital Signage plug-in for NDS on the NDS server.

## Install the Digital Signage plug-in

The Digital Signage plug-in provides the ability to display alerts on digital signs using the BlackBerry AtHoc cloud service.

1. Log in to the NDS server.
2. Stop the BlackBerry AtHoc services:
  - a. From IIS, select the application server.
  - b. On the **Actions** screen, click **Stop**.
  - c. Navigate to **Windows Services** and stop **AtHocDeliveryServices**.
3. Close the NDS console, if open.
4. Navigate to <NDS>\Program Files (x86)\AtHocENS\DeliveryServer\Plugins\ and open the **Plugins** folder.
5. If a **DigitalSignage** folder exists, open it and delete any contents. If no **DigitalSignage** folder exists, create one.
6. Copy the Digital Signage plug-in .zip file, AtHoc.Plugin\_DigitalSignage\_build.zip, that you received from BlackBerry AtHoc support, to a temporary folder.
7. On the **Properties** screen, click the **General** tab.
8. Click **Unblock**.
9. Extract the contents of the Digital Signage plug-in .zip file to the **DigitalSignage** folder.

## Configure the NDS database

Contact BlackBerry AtHoc support for the files required to configure the NDS database.

**Before you begin:** You will need the following information before you configure the NDS database:

- The database server name.
  - The SA user password.
  - The name of the ngdelivery database.
1. Place the **Database Configuration** folder that you obtained from AtHoc customer support in a folder on your local computer. This folder contains the `DigitalSignageConfiguration.bat` and `DigitalSignageConfiguration.sql` files.
  2. Right-click the `DigitalSignageConfiguration.bat` file. Click **Edit** and open the file in Notepad.
  3. Add the database server instance name, ngdelivery database server name, and the SA user password to the `DigitalSignageConfiguration.bat` file as shown in the following example:

```
@echo off
@echo Configuring the Digital Signage Plugin
rem update the database information in the below statement. Remove the <> from
<value> and add the respective values.
for %%G in (*.sql) dosqlcmd -S <DatabaseServerInstanceName> -d
<NGDeliveryDBName> -U sa -P "<SAUserPassword>" -i "&&G"
PAUSED
```

4. Save and close the `DigitalSignageConfiguration.bat` file.
5. Open the `DigitalSignageConfiguration.sql` file.
6. Verify that the `@deviceType` value is **DigitalSignage**.

```

DECLARE @deviceType NVARCHAR(50)
SELECT @deviceType='DigitalSignage'
IF NOT EXISTS (SELECT * FROM NGDeliveryAccount.dbo.DatacenterSiteDetail
.
.
.

```

When you log in to the database server, there is a **Digital Signage** entry in the **DeviceType** column in the `ngdeliveryaccount > DatacenterSiteDetail` table and the `ResourceType` is **RATE**.

## Configure the Digital Signage plug-in settings

1. Open the **NDS console** on the NDS server.
2. Navigate to **Management > Configure**.
3. Click **New Configuration**. The fields for a new key appear.
4. Enter the following value in the **New Key** field: `nds.plugins.digitalsignage`.
5. Paste the following contents in the **Value** field:

```

<nds.plugins.digitalsignage>
<supportedDevices>
<supportedDevices>
<device type="DigitalSignage" enabled="true" secondsTimeout="600"
  requiredInilizations="None" maxTasksPerInit="50" maxTasksPerExecution="50"
  maxTasksCanProcess="50" />
</supportedDevices>
<mediaCenters>
<center default="true" name="server1" server="<mediaCenter_IP_Address>"
  port="<Port_Number>" site="athoc" enabled="true" secondsTimeout="10"
  minRefreshIntervalSec="600" />
</mediaCenters>
</nds.plugins.digitalsignage>

```

6. Update the following attribute values in the `<center>` node:
  - `default`: Specifies which server is the default server. Values: `true` | `false`. Designate only one server as the default server.
  - `name`: The common name of the server.
  - `server`: The IP address of the server.
  - `port`: The port number for the server.
  - To add an additional server, add a `<center>` node and update the attribute values. Set the `default` attribute value to `false`.
7. Click **Save**.

**Note:** After configuring or modifying the plug-in settings, you must restart the NDS processes.

## Enable the plug-in for the NDS account

1. In the NDS console, click **Management > Account**.

2. On the **Account Management** screen, select the NDS account for your organization.
3. Click **Account Resource**.
4. On the **Account Resource** tab, select the **Support** check box for the Digital Signage Device Type.
5. Ensure that the value for **ResourceType** is **Rate** and the **deviceType** is **DigitalSignage**.
6. Click **Save**.

## Restart the NDS processes

After you have configured or modified the plug-in settings and set up media center, restart the NDS processes.

1. From the NDS server, open a command window and run as administrator.
2. Go to **Start > Run > Services**.
3. On the **Services** window, select **AtHocDeliveryService**.
4. Click **Restart**.

## Verify the installation

This section describes how to open the NDS console to verify that the plug-in has been deployed.

### Open the NDS console

Use the BlackBerry AtHoc NDS console to manage the NDS.

**Prerequisite:** The NDS host services must be set up and you must have NDS administration privileges. As a BlackBerry AtHoc NDS administrator, open the BlackBerry AtHoc NDS console using the following server address:

```
\\AtHocENS\DeliveryServer\Tools\AtHocNDSConsole
```

See the [BlackBerry AtHoc Notification Delivery Service Installation and Configuration Guide](#) to learn how to install and configure the NDS console.

### Verify that the plug-in has been deployed

1. In the NDS console, click **Console > Testing**.
2. Verify that the Digital Signage device appears in the list of Supported Devices. If the device is in the list, it has been successfully deployed.

## Verify that the digital signage plug-in process is running

### Prerequisites:

- The Digital Signage plug-in is installed and configured.
  - MediaCenter is set up and configured.
1. Start IIS and AtHocDeliveryServices.
  2. Verify in the BlackBerry AtHoc management system that the NDS server and details about the NDS server for Digital Signage are correct.
  3. Publish an alert to a digital sign.
  4. Verify the details of the alert in the mediaCenter.

The format of the alert message sent to media center is: **Alert|Alert ID| Alert Title | Alert Text | Target URL | Status | Color | Site | Zone | Building | Floor |Duration** where:

- **Alert ID:** The NDS task ID.
- **Alert Title:** Title or custom title of the alert.
- **Alert Text:** Body or custom body of the alert.
- **Target URL:** This value is empty during alert creation and termination.
- **Status:** During alert creation, the status is 1. During alert termination, the status is 0.
- **Color:** The color is based on the alert severity. See [Display text color to alert severity mapping](#).
- **Site:** AtHoc.
- **Zone:** The address specified as the mass device end point in the BlackBerry AtHoc management system. For example, if the address is **default:0**, then the value is **0**.
- **Building:** This value is empty during alert creation and termination.
- **Duration:** The alert display time in seconds. This value is empty during alert termination.




# Configure digital signage devices

Configure the digital signage gateway in the Settings section of the BlackBerry AtHoc management system to enable the BlackBerry AtHoc alerts system to publish alerts through digital signage devices.

## Configure the digital signage device on the BlackBerry AtHoc application server

1. Open a remote desktop session and log in to the BlackBerry AtHoc server.
2. Navigate to the following folder: `... \AtHocENS \ServerObjects \Tools`.
3. Run the following file: `AtHoc.Applications.Tools.InstallPackage.exe`.
4. On the **Configure Device Support** window, select **RMG Digital Signage**.
5. Click **Enable**.
6. Click **OK**.

## Configure the delivery gateway

1. Log in to the BlackBerry AtHoc management system.
2. In the navigation bar, click .
3. In the **Devices** section, click **RMG Digital Signage**.
4. On the **RMG Digital Signage** page, click **Copy default settings** to add the default values.
5. Enter the NDS address, the user name, and password values provided to you by BlackBerry AtHoc support or by your organization.



[Copy default settings](#)

RMG Digital Signage Settings

Notification Delivery Server address:	<input type="text" value="http://&lt;NDS-SERVER-ADDRESS&gt;"/>
Username:	<input type="text" value="username"/>
Password:	<input type="password" value="....."/>
Debug Trace:	<input type="radio"/> Yes <input checked="" type="radio"/> No Enable debug tracing for this delivery gateway. Select this option only while actively debugging to avoid performance degradation.


[<< Back](#)

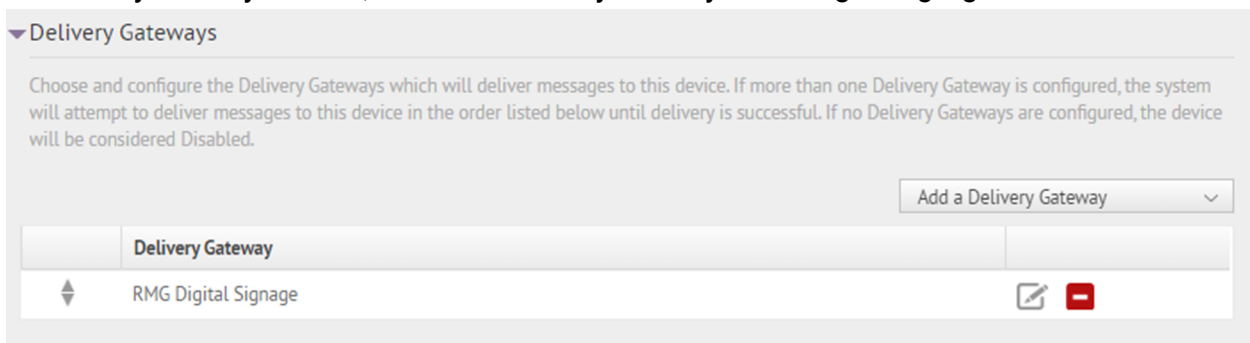
**Save**  [Reset](#)

6. Click **Save**.

You have completed the gateway setup. You can now configure the related devices on the Devices page.

## Enable the digital signage device

1. Log in to the BlackBerry AtHoc management system.
2. In the navigation bar, click .
3. In the **Devices** section, click **Devices**.
4. On the **Devices** page, click the **Mass Devices** tab.
5. Click **RMG Digital Signage**.
6. On the **RMG Digital Signage** page, click **Edit**.
7. Modify the values in the **Details** section with the name and information valid for your organization.
8. In the **Contact Info Edit** field, select **Operators**.
9. Optionally, in the **Help Text** section, update the **Targeting Help Text**, **Contact Info Help Text**, and **Contact Info Tool Tip** fields.
10. In the **Delivery Gateways** section, click **Add a Delivery Gateway > RMG Digital Signage**.



11. Click **Save**.
12. Click **More Actions > Enable**.

The device is now available for alert publishing.


## Configure a mass device for each digital sign

To distribute messages through mass communication devices like digital signs, you must create a BlackBerry AtHoc mass device. You can name the mass device something relevant like "Emergency Digital Signs".

**Note:** You must have operator or end user manager permissions to create the mass device.

Each digital sign is an endpoint of an alerting system. Each digital sign is considered a mass communication device because it alerts an unknown number of recipients; whoever is in the vicinity of the device. In the BlackBerry AtHoc management system, an object called a mass device is configured for each mass communication endpoint. You must create a mass device for each digital sign.


Before you begin, plan how many mass devices to create based on the number of digital signs. First, determine how many digital signs you have. You create a mass device for each digital sign. Next, map the mass device to the relay that closes for a particular digital sign.

1. Log in to the BlackBerry AtHoc management system as a system administrator.
2. In the navigation bar, click .
3. In the **Devices** section, click **Mass Device Endpoints**.
4. Click **New > RMG Digital Signage**.
5. On the **New Mass Device Endpoint** screen, in the **General** section, enter the endpoint name and display name. Enter a value between 4 and 80 characters long. The following special characters are not allowed: ( ' ^ = < > )

6. In the **Configuration** section, enter the address for the mass device.
7. Click **Save**.

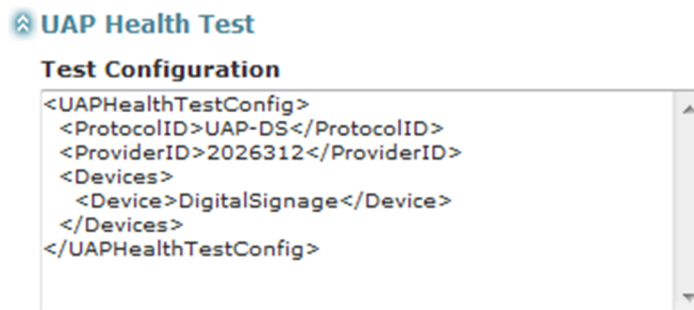
## Create a health monitor

You can create a health monitor that watches the connectivity between AtHoc Cloud Services (NDS) and the BlackBerry AtHoc management system to verify that digital signs are up and running.

1. Log in to the BlackBerry AtHoc management console as a System Administrator.
2. In the navigation bar, click .
3. In the **System Setup** section, click **Global System Health**.
4. On the **System Visibility Console** screen, click the **Create new monitor** link.
5. On the **New Health Monitor** screen, enter a meaningful name for the monitor. For example, *Digital Signage Health Monitor*.
6. Select the Health Monitors that you want the new health monitor to be associated with. For example, *General*.
7. Optionally, select **Show errors and warnings for this monitor on the Home Page**.
8. Optionally, select **Show this Health Monitor in the Organization Visibility Console**.
9. Specify how often the monitor runs using the frequency and time controls.
10. In the **How does this Monitor test the system?** section, select **UAP Health Test** from the **Choose a test** list.
11. Copy the **Sample Configuration XML** text into the **Test Configuration** field and update the following values:

```
<ProtocolID>UAP-DS</ProtocolID>
<ProviderID>yourVPSID</ProviderID>
<Devices>
  <Device>DigitalSignage</Device>
</Devices>
```

For example, the following image shows the updated values:



12. Configure the rest of the Health Monitor as appropriate.
13. Click **Save**.

# Send alerts to the device

You can create alerts to send to digital sign devices using the standard alert process.

1. Log in to the BlackBerry AtHoc management system.
2. In the navigation bar, click **Alerts > New Alert**.
3. On the **Select from Alert Templates** screen, select an alert template or click **Create a Blank Alert**.
4. If you selected an alert template, click **Edit** to modify the alert template.
5. On the alert page, select a severity and type for the alert. The selected severity impacts the color of text displayed on the digital sign device. For more information, see [Display text color to alert severity mapping](#).
6. Enter the title and content of the alert. The content of the alert might be longer than what is appropriate for a digital sign. You can customize the text for the digital sign device.
7. In the **Target Users** section, select the targeted users and personal devices.
8. In the **Mass Devices** section, click **RMG Digital Signage**.
9. Select a digital sign endpoint from the list.
10. Click **Options**.
11. On the **Mass Devices Options** window, choose to use the Title and Body of the alert template, or choose to display custom text.  
  
If your message is short, you can select the Alert Title and Body content that you previously defined. However, if you are sending an alert to multiple devices, select **Custom Text** to meet the following character number restrictions:
  - Title text should be between 3 and 14 characters long.
  - Body text should be no longer than 82 characters long.
12. In the **Duration to display content** field, enter the number of minutes.
13. Click **Apply**.
14. On the alert details page, click **Review and Publish**.
15. On the **Review and Publish** page, review the settings and selections.
16. Click **Publish**.
17. To verify the sent alert, click **Alerts > Sent Alerts** and select the Digital Signage alert. Verify that the Targeted Count is 1 and the Sent Count is 1.

## Display text color to alert severity mapping

The color of the text displayed by a digital sign device is determined by the capability to display color of the particular digital sign device, and by the selected alert severity.

The following table maps the digital sign text color to alert severity.

Alert severity	Display text color
High	Red
Moderate	Orange
Low	Green
Informational	Purple

Alert severity	Display text color
Unknown	Gray

# View the NDS delivery usage report

You can track alert delivery and usage statistics with the Delivery Usage report. There are detailed tracking statistics for your reporting needs.

To open and use the report, log in to the NDS Console and click **Console Monitoring**.

The following table describes the columns in the NDS report:

Column name	Explanation/values
Message ID	A unique identifier for the alert.
Message Group	A unique identifier for the alert.
Status	The state in which the alert is currently: <ul style="list-style-type: none"><li>• READY: The message is in the delivery queue.</li><li>• DONE: The message has been sent.</li><li>• ERROR: There was an error sending an alert.</li></ul>

# 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://www.blackberry.com/us/en/support/enterpriseapps/athoc>

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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