BlackBerry AtHoc

Integrated Weather Alerts User Guide

7.8

Contents

What is Integrated Weather Alerting?

Organizations that require the latest information on severe weather events can enhance their BlackBerry AtHoc system by using AtHoc Integrated Weather Alerts (IWA). To stay informed about potential weather incidents such as tornadoes, floods, and dust storms, IWA subscribers receive critical warnings and forecasts from the National Weather Service (NWS). All weather-related information can be incorporated into targeted alerts using a variety of delivery devices available in the BlackBerry AtHoc system.

The following are the key features of IWA:

- **Instant alerts of critical weather conditions to targeted personnel**

  IWA can be configured to automatically send alerts to the appropriate personnel. IWA distributes emergency weather alerts to targeted personnel using network-connected devices including computers, SMS, and mobile phones. Emergency operators can decide if they want the system to alert their center first so they can qualify the situation before sending out an alert, or have the system automatically send alerts to predefined groups once threats are identified.

- **Flexible weather information sources**

  IWA includes out-of-the-box integration with the NWS. It can also be configured to work with other standard GeoJSON-based weather data feeds.

- **Automatic monitoring of specific weather conditions**

  Operators set criteria for the types of weather situations that qualify as emergencies. The system automatically monitors events and alerts personnel when the criteria are met. For example, the system can be programmed to alert emergency operators only when hurricanes in the region reach a specific severity level. The qualifications of a threat differ for each installation and each site can customize the alerting preferences to meet its requirements.

  The benefit of automatic monitoring is in increased accuracy, quick delivery of alerts, and the ability to receive events during off-duty hours.

- **Pre-programmed actions for specific weather conditions**

  Operators can pre-program specific alert templates that are activated automatically when a specific weather situation is identified.

- **Target users with geo-targeting**

  Refine your alert targeting using geo-targeting. Select a location on a map to alert users in a specific location about weather events that are the most relevant to them.

- **Assured alert delivery and acknowledgment**

  The BlackBerry AtHoc system tracks who has received the alert, and if relevant, acknowledges its receipt. This assures that the appropriate personnel received the notification.

How Integrated Weather Alerts works

BlackBerry AtHoc Integrated Weather Alerts polls weather feeds from the NWS and records them in the BlackBerry AtHoc database. IWA processes incoming feeds based on event location, type, and severity. When a feed matches the configured conditions, an alert is triggered and sent to end users.

Plan your AtHoc IWA system

All use cases for AtHoc IWA require some planning and use of different BlackBerry AtHoc features such as creating weather alert rules and alert templates.

Begin planning by answering the following questions and gathering the information required for configuration. Take into consideration that you will need to create weather alert templates and rules for each of the organizations in your BlackBerry AtHoc system.

Define alert conditions

* **Locations to monitor**

  What US states/territories and counties do you want to monitor weather events for? Enable geo-targeting to further refine the weather alerts received by targeted users.

  IWA supports all territories covered by the NWS.
* **Weather events to monitor**

  What types of weather events do you want to monitor? Examples include floods, thunderstorms, and hurricanes.
* **Event severity**

  What is the severity of weather events that you want to monitor? You can select to monitor minor, moderate, severe, extreme, and unknown weather events. You can also select to monitor weather events of any severity, or any combination of levels of severity.

  IWA supports all severity levels provided by the NWS.
* **Message type**

  What type of messages do you want to monitor? You can select to monitor for advisory, alert, danger, outlook, statement, warning, and watch message types. You can monitor all message types, which is the default. You can select any combination of message types to monitor.

Select alert rule actions

What alert templates do you want to trigger when specific weather conditions are met? You can create weather alert rules that trigger sending predefined alert templates. The operator can then select the alert template, and then decide if they want the map in the alert template to be overridden by the map in the weather feed. For more information, see Enable geo-targeting.

Incoming weather events that affect the selected counties are delivered to targeted recipients using selected delivery devices such as PCs, mobile phones, and sirens. You can create multiple rules. Each rule can be for a specific location or type of event. For example, you can create one rule for San Mateo county that monitors for tsunamis, and a separate rule for San Francisco county that monitors for earthquakes.

Configure AtHoc IWA

The general procedure to configure IWA is:

1. Enable IWA for each organization in your BlackBerry AtHoc system.
2. Create alert templates for each organization that has enabled weather alert rules.
3. Create alert rules for each organization that specify the weather event severity, type, message type, and location.
4. Enable the feed poller and feed processor jobs on your BlackBerry AtHoc system.

How to use geo-targeting with IWA

Weather feeds from the NWS contain geo-location information that can provide a more precise area for targeting weather related alerts than by county alone. When a weather alert feed contains a geo-location, depending on how you configure your weather alert template and alert rules, you can use the geo-location from the feed to define the targeting of users based on their location. You can enable geo-location targeting by selecting a location on the map in a weather alert template and selecting to target users in those locations.

Geo-targeting settings

The following matrix shows how the geo targeting settings in alert templates and alert rules impact the use of maps from the alert template and feed in triggered alerts. In the matrix, a bold **Yes** means that the map from the weather feed is used in the triggered alert. An italicized *Yes* means that the map from the alert template is used.

If	**Alert template**	Has Map	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Has Geo Targeting – Users	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
		Has Geo Targeting – Organizations	No	No	No	No	No	No	Yes	No	Yes	Yes	Yes
	Feed	Has Polygon	No	No	Yes	Yes	No	No	No	No	No	Yes	Yes
	Alert rule	Uses Geo Information from feed	No	Yes	No	Yes	No	Yes	Yes	No	No	No	Yes
			⬇	⬇	⬇	⬇	⬇	⬇	⬇	⬇	⬇	⬇	⬇
Then	Triggered alert	Has Map	No	No	No	**Yes**	*Yes*	No	No	*Yes*	*Yes*	*Yes*	**Yes**
		Geo Targeting – Users	No	No	No	No	No	No	No	*Yes*	*Yes*	*Yes*	**Yes**
		Geo Targeting – Organizations	No	No	No	No	No	No	No	No	*Yes*	*Yes*	**Yes**

Configure the Integrated Weather Alerts Module

This section explains how to configure BlackBerry AtHoc IWA and contains the following topics:

- Enable AtHoc IWA
- Create weather alert templates
- Create weather alert rules
- Enable geo-targeting
- Enable the feed poller and processor jobs

The BlackBerry AtHoc system must be installed and configured at your site before configuring AtHoc IWA.

Enable AtHoc IWA

AtHoc IWA is included in the BlackBerry AtHoc system, but is disabled by default.

You must enable IWA for each organization in your system.

1. Log in to the database server.
2. From the NGADDATA database, run the following script:

```
INSERT INTO PRV_CONFIG_TAB VALUES (providerId,'Features
Matrix','IsWAMSupported','true','key to enable disable wam weather feed')
```

Create weather alert templates

Note: You must create weather alert templates on each organization in your system that you want to send integrated weather alerts from.

1. Log in to the BlackBerry AtHoc management console.
2. In the navigation bar, click the **Alerts** button.
3. Click **Alert Templates**.
4. On the **Alert Templates** screen, click **New**.
5. On the **New Alert Template** window, complete the required template sections as described in the following sections.

For complete instructions on how to create a new alert template, see the *BlackBerry AtHoc Manage Alert Templates User Guide*.

Use placeholders for weather alerts

You can use weather alert placeholders to update the content in your weather alert template with the information from an incoming weather feed. When an alert is triggered by a weather feed, the alert is sent out with the title and body from the alert template, unless a weather alert placeholder is used. If the weather alert template includes placeholders and text in the title and body, the triggered alert contains the text from both the alert template and from the weather feed.

 The following placeholders are available for weather alerts:

- $FeedHeadline$
- $FeedEvent$
- $FeedDescription$
- $FeedInstruction$

- $FeedSenderName$
- $FeedEffective$
- $FeedExpires$

For a sample weather feed that resolves these placeholders, see Sample weather feed.

Your alert templates can include only placeholders, only text, or a combination of placeholders and text. The following is a sample alert template that includes both text and placeholders:

You can also use the predefined Weather Feed Alert template, which includes all of the available weather alert placeholders.

Define alert template content

The Content section is used to define the key parts of an alert template in the system: the severity, title, body, type, response options, website links, attachments, and location details that are relevant.

1. In the **Severity** field, select the severity level from the list.

   Important: High severity is reserved for extreme emergencies. On the Mobile application, it overrides the device sound settings to emit any sounds associated with the alert template.

2. In the **Title** field, enter a one-line summary that communicates the purpose of the alert template. There is a 100 character maximum in this field. The title is required. However, this title is over-written by the Headline field of an incoming NWS feed. For more information, see Use placeholders for weather alerts.
3. In the **Body** field, enter up to 4000 characters of text that communicate why the alert has been sent and provide instructions to the target audience. Note that the content in the Body field is over-written by the Description field of an incoming NWS feed. For more information, see Use placeholders for weather alerts.
4. In the **Type** field, select the type that fits with the alert template you are creating.
5. In the **Response Options** field, do one of the following:

   - Click **Custom Response Options** to view a list of pre-set responses you can add to the alert template.

   - Click **Add Response Option** to define one or more responses that alert recipients can send to let you know that they have received the message. If the response involves a call bridge, select the Call Bridge checkbox, then, in the two fields that appear below the checkbox, enter the call bridge number and passcode users need in order to respond.
6. Optionally, in the **More Info Link** field, enter a URL that opens a web page where users can go to get more details about the alert when it is sent out.

7. Optionally, if you entered a URL in the previous step, click **Test URL** to verify that the link works correctly.
8. Optionally, in the **Location** field, click **Add** to access a map on which you can designate a geographic area for the alert or alert template. When you select Email or Desktop Popup in the Select Personal Devices section of an alert, the map image is included in the alert if this capability has been enabled for your organization.

Target users

The Target Users section allows you to identify the users you want to send an alert to or block from receiving the alert. As you create a weather alert template, users can be identified based on their names, attributes, roles, group memberships, distribution list memberships, or physical locations.

Target users by groups

Using the By Groups tab, publishers can target groups of users based on their memberships in organizational hierarchical nodes and in distribution lists. The alert is sent to users within the selected groups.

The publisher can also block recipient groups (exclude them from alert delivery).

The Group target categories displayed are:

- **Organizational Hierarchy**: If your system is set up for them
- **Distribution Lists**: Static and dynamic
- **Targetable Attributes**: Any attributes that have been selected as targeting criteria

Note: The Administrator can restrict the contents of these categories for each publisher. For example, a publisher might have permission to view only one of four organizational hierarchies.

1. In the **Target Users** section, click the **By Groups** tab if it is not already selected.
2. In the **Groups** field, select the checkbox next each group or distribution list that you want to target.

    If you select a group or distribution list that contains sub-groups or sub-distribution lists, those are also automatically selected. However, they can be manually deselected by clicking the checkbox next to its name. If you select all of the sub-groups or sub-distribution lists manually, the parent group or distribution list are not selected automatically.

    Note: The presence of a black square (or a black hyphen if you are using Google Chrome) in a check box indicates that some of its subgroups or sub distribution lists have been selected and some have not.

Target users by location

To target users by location, define a location in the Content section of the alert template, and then select those locations in the Target Users section of the alert template.

You can also target users in a specific US county or counties by selecting those counties in a weather alert rule.

1. In the **Target Users** section, click the **By Location** tab.
2. Select the check box next to the phrase **Users in the defined location**.

    The Targeting Summary field at the bottom of the Target Users section then updates to display the total number of locations on the map to be used to target recipients when alerts are generated from the alert template.
3. Click the number in the **By Location** field to open a new screen that displays a map showing each of the locations that have been targeted. This is the same map that can be seen in the **Location** field within the Content section of the alert template.

Select personal devices

After selecting the users or groups you want to include in the alert template, you must select the personal and mass devices to use to contact the target group.

1. In the **Target Users** section, click the **Select Personal Devices** tab.

   A list of all available personal devices appears, accompanied by statistics that reveal the total number of selected users who can be reached by each device type.
2. Select the check box next to each personal device you want to include.

   As you select devices, the pie chart on the side of the screen updates to show the number of reachable and unreachable users based on your current selections.
3. Optionally, click the number beside the **Total Users** field to view a User Listing screen that displays the username and organizational hierarchy for each of the users in the target group.
4. Optionally, click the numbers in the **Reachable Users** and **Unreachable Users** fields to view separate pop-up screens that provide user details for those subgroups.

Note: If no users are reachable based on the targeted users and devices you select, the alert is not publishable.

Create weather alert rules

To begin processing Integrated Weather Alerts, you must create alert rules that are designed to trigger alert templates. Each weather alert rule must contain a selected county and alert template before it can be enabled.

You must create weather alert rules for each organization from which you want to send integrated weather alerts.

1. Log in to the BlackBerry AtHoc management console.
2. In the navigation bar, click **Alerts**.
3. Click **Alert Rules**.
4. On the **Alert Rule** page, click the **Weather** tab.
5. Click **New Rule**.
6. In the **General** section, enter a name for the rule and select the option to enable the rule.
7. In the **Condition** section, click **Select** beside **Counties**.
8. On the **Select Counties** window, on the **All Counties** tab, select one or more counties. You can use the arrow next to "All States" to filter counties by state. You can also search for a specific zip code.
9. Optionally, click the **Selected Counties** tab to verify the counties you selected.
10. Optionally, click **Modify** to change your county selection.
11. Click **Apply**. You are returned to the Alert Rule page. The counties you selected appear in the Counties area.
12. Optionally, select a **Weather Severity**. You can select multiple levels of severity.
13. Optionally, select a **Weather Type**. You can select multiple weather types.
14. Optionally, select a **Message Type**. You can select multiple message types.
15. In the **Action** section, select an alert template.
16. Optionally, select the **Override Geo Information** check box. When selected, the map from the incoming weather feed overrides any map in the alert template. If the alert template has geo-targeting enabled, the alert is triggered for the location from the feed. If not selected, the map and geo-targeting from the original alert template is used in the triggered alert.
17. Click **Save**. The new weather alert rule is created and is enabled by default.

One alert is generated per rule when an incoming feed matches the rule criteria. All conditions you specify must be met by a weather feed before an alert is triggered. For example, if you select a Severity of High, and Event Type of Flood for San Mateo county, only weather feeds that are high severity flood events that target San Mateo county trigger the selected alert template.

Enable geo-targeting

Use the Location section of the weather alert template Content section to select a location on a map to target weather alerts and to enable geo-targeting.

1. Open the weather alert template you want to enable geo-targeting for.
2. In the **Location** field, click **Add**. The interactive map opens.
3. Optionally, if the location you want to target is not displayed on the current map, enter the address, point of interest, or longitude/latitude value pair in the search field. Press **Enter** to refresh the map location.
4. Click **Create Custom Locations** to display the drawing tools for creating shapes.
5. Click one of the shape buttons in the **Map Tools** bar and click and drag on the screen to cover the location you want to use in the weather alert.
6. Optionally, to view the size of a location, click the shape on the map. A black box appears beside the Create Custom Locations button, listing the total area of the custom location.
7. To edit a location, click the shape and then click and drag on any of the circles that appear around the edge of the shape.

   As you create shapes on the map, the **Location Summary** field in the bottom-right corner provides an overview of the total number of locations that are displayed on the map and the locations that will be included in the weather alert.
8. Optionally, to delete a location, do one of the following:

   • In the **Location Summary** field, click **X** beside each location you want to remove. Note that if you have created more than one custom location, they are combined in the list and cannot be deleted individually. To delete individual custom locations, use the method described below.

   • Click the border of the location shape on the map to select it, then click 🗑 or press **Delete** on your keyboard to remove it.
9. To see the total number of users and organizations that are located within the selected map locations, click **Calculate** beside the **Target By Location** field.
10. Select the checkbox beside **Target Users** in the **Select By Location** drop-down to enable geo-targeting of users.
11. Click **Apply**.
12. In the **Target Users** section of the weather alert template, select the **By Location** tab.
13. In the **Location** panel, select the check box beside the phrase **Users in the defined location**.

Enable the feed poller and processor jobs

After configuring your weather alert templates and rules, you must enable the feed poller and feed processor jobs on your BlackBerry AtHoc system to start receiving weather feeds from the NWS.

1. Log in to the BlackBerry AtHoc management console.
2. Click the down arrow beside your log in name and select **Change Organization**.
3. Change to the **System Setup (3)** organization.
4. In the navigation bar, click ⚙.
5. In the **System Setup** region, click **System Jobs**.
6. Click the **Feed Poller** system task.
7. On the **Feed Poller details** window, in the **Task Details** section, click **Click to Enable**.
8. Click **Back** to return to the System Tasks screen.
9. Select the **Feed Processor** system task.
10. On the **Feed Processor details** window, in the **Task Details** section, click **Click to Enable**.

Export weather feed information

Weather feed information is retained in the BlackBerry AtHoc system for 15 days. If you want to view weather feeds that were recorded in the last 15 days, you can export them to a .csv file. You can export weather feed information even if the Integrated Weather Alerts feature is not yet enabled for your specific organization.

You can also export all weather alert rules defined for your organization.

To export weather feed information, complete the following steps:

1. Log in to the BlackBerry AtHoc management console.
2. In the navigation bar, click ⚙.
3. In the **Basic** section, click **Alert Rules**.
4. On the **Alert Rules** page, select the **Weather** tab.
5. Select the check boxes beside the weather alert rules you want to export.
6. Select **Rules** from the **Export CSV** list.
7. In the Windows pop-up, choose to Open or Save the .csv file to your local system.
8. Select **Feeds** from the **Export CSV** list.
9. On the **Export Feeds** window, select the check boxes next to the counties you want to export weather feed information for. You can narrow the list by selecting a state from the All States list, or by searching by zip code.
10. Click **Export**.
11. On the Windows pop-up, choose to Open or Save the .csv file to your local system.

Sample weather feed

The following is a sample weather feed. The bolded fields are resolved by the weather placeholders listed in Use placeholders for weather alerts.

```
    {
  "@context": [
   "https://raw.githubusercontent.com/geojson/geojson-ld/master/contexts/geojson-
base.jsonld",
   {
    "wx": "https://api.weather.gov/ontology#",
    "@vocab": "https://api.weather.gov/ontology#"
   }
  ],
  "type": "FeatureCollection",
  "features": [
   {
    "id": "https://api.weather.gov/alerts/NWS-IDP-PROD-2358285-6219777",
    "type": "Feature",
    "geometry": {
     "type": "Polygon",
     "coordinates": [
      [
       [
        -156.29,
        20.68
       ],
       [
        -156.45,
        20.70
       ],
       [
        -156.47,
        20.79
       ],
       [
        -156.47,
        20.88
       ],
       [
        -156.27,
        20.92
       ],
       [
        -156.29,
        20.68
       ]
      ]
     ]
    },
    "properties": {
     "@id": "https://api.weather.gov/alerts/NWS-IDP-PROD-2358285-6219777",
     "@type": "wx:Alert",
     "id": "NWS-IDP-PROD-2358285-6219777",
     "areaDesc": "Maui",
     "geocode": {
      "UGC": [
       "HIZ018",
       "HIZ017"
```

```json
    ],
    "SAME": [
     "015009",
     "015009"
    ]
   },
   "references": [
    "https://api.weather.gov/alerts/NWS-IDP-PROD-2358285-6219776"
   ],
   "sent": "2017-07-26T17:39:56+00:00",
   "effective": "2017-07-26T17:39:56+00:00",
   "onset": "2017-07-11T17:39:00+00:00",
   "expires": "2017-07-28T19:15:00+00:00",
   "ends": "2017-07-28T19:15:00+00:00",
   "status": "Actual",
   "messageType": "Update",
   "category": "Met",
   "severity": "Moderate",
   "certainty": "Likely",
   "urgency": "Expected",
   "event": "Flood Advisory""sender": "NWS Honolulu HI",    "headline":"Flood
advisory issued July 27 at 2:34AM HST expiring July 28 at 5:30PM HST by NWS
Honolulu HI"    "description""instruction": "Stay away from streams, drainage
ditches and low lying areas prone to flooding. Rainfall and runoff will also
cause hazardous driving conditions due to ponding, reduced visibility and poor
braking action.",
   "response": "Avoid",
   "parameters": {
    "VTEC": [
     "/O.EXT.KREV.FA.Y.0010.000000T0000Z-170516T1915Z/"
    ],
    "PIL": [
     "REVFLSREV"
    ],
    "BLOCKCHANNEL": [
     "CMAS",
     "EAS",
     "NWEM"
    ],
    "eventEndingTime": [
     "2017-07-16T19:15:00Z"
    ]
   }
  }
 }
],
  "title": "Current watches, warnings, and advisories"
}
```

BlackBerry AtHoc customer portal

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

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

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