



AlarmPoint Mobile Gateway for BMC Remedy Change Management

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1. Introduction

This document defines software requirements, installation, configuration, and integration demonstrations for using BMC Remedy Change Management with the AlarmPoint Mobile Gateway. These integration notes are intended for administrators and other technical readers.

1.1 Summary

The integration assumes the following:

- BMC Remedy Change Management is installed and operational
- the ARS User Application is installed
- the ARS Administrator Application is installed
- BMC Remedy Mid-Tier is installed and operational (for Web Services)
- AlarmPoint is installed and operational
- the required users and groups are configured

This integration supports creating, viewing, and updating BMC Remedy Change Management change requests through the use of the AlarmPoint Mobile Gateway, AlarmPoint Integration Agent, and Web Service Calls.

You will need to modify this configuration to suit your particular business requirements and adjust it to suit your expected loads. The default integration features loading list values directly from Remedy; in a high-volume production system, this can significantly affect performance. Consider your expected volume of requests to the Mobile Gateway, and your server capacity when designing your own integration.

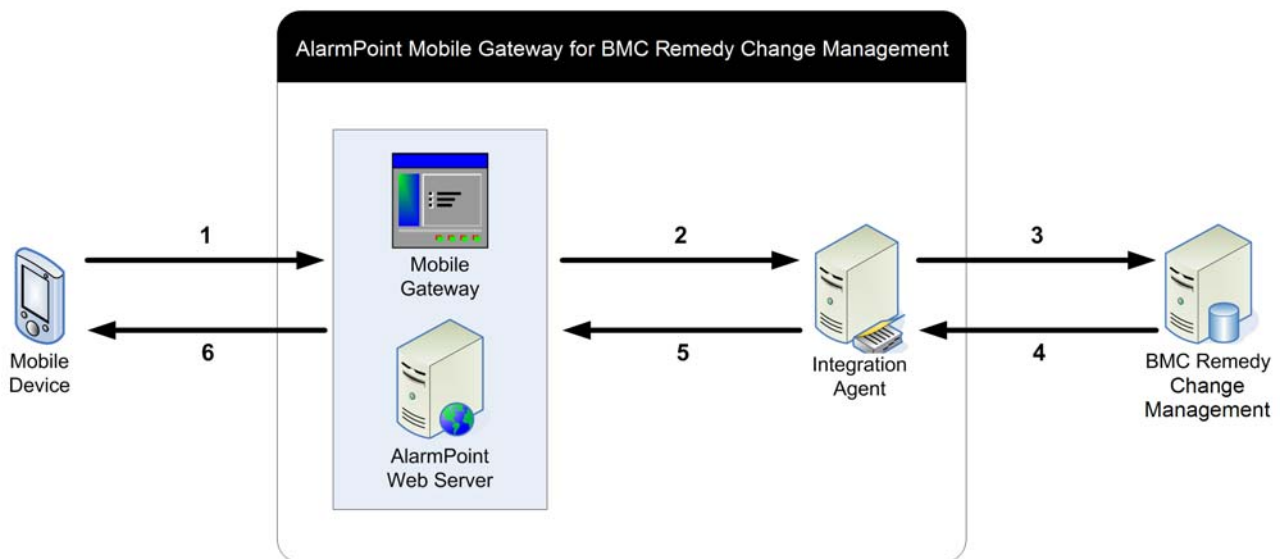
1.1.1 Benefits

With the AlarmPoint Mobile Gateway, the appropriate technician can create, view, and update Remedy change requests directly via a mobile device web browser. Information about Remedy change requests can be displayed on the mobile device and updated in real-time.

The benefit is that this process is immediate and may be done remotely – providing users with an efficient method of handling Remedy issues from any mobile device. In addition, the Remedy Change Management integration can be updated to notify AlarmPoint Users on their mobile device with a link to the mobile view of the request, allowing the user to update the change request remotely.

1.1.2 Architecture

This section provides a high-level overview of the major components for this integration.



The following steps occur for each action initiated by a mobile user:

1. A user sends a request from a mobile device to the AlarmPoint Mobile Gateway.
2. The Mobile Gateway processes the request and relays instructions to the AlarmPoint Integration Agent.
3. The Integration Agent communicates with BMC Remedy Change Management via Web Services.
4. The response is sent via Web Services to the Integration Agent.
5. The Integration Agent processes the response and sends it back to the Mobile Gateway.
6. Rendered results are sent back to the mobile device.

1.2 System Requirements

This integration requires the following products and components:

- AlarmPoint 3.2.1 patch 004 or later
- AlarmPoint Integration Agent 3.2.1 or later
- BMC Remedy Change Management 7.0.03
- BMC Remedy Action Request System 7.1.00

Consult the respective user manuals for a detailed list of hardware and supporting software requirements.

Note: All AlarmPoint browser pages have been designed to work with BlackBerry Handheld Software v4.2.x. The browser-accessible pages may not display properly on mobile devices with other software versions.

1.3 Conventions & Terminology

This section describes how styles are used in the document, and provides a list of definitions.

1.3.1 Conventions

Some instructions appear in the following format: **MENU > OPTION**; for example, **File > Open** means click the **File** menu, and then click the **Open** menu option.

Words in **bold** typically reference text that appears on the screen.

Words in monospace font represent the following:

- text that must be typed into the computer.
- directory and file names.

Note: *Except where explicitly stated, the directory paths in this document are listed in Windows format. Unix users must substitute the given paths with the Unix equivalents. For example, on Unix systems, the AlarmPoint Integration Agent is typically installed in /opt/alarmpointsystems/integrationagent. On Windows systems, it is typically installed in the default directory, C:\Program Files\AlarmPointSystems\IntegrationAgent.*

1.3.2 Terminology

With respect to BMC Remedy Change Management, the following definitions apply:

| Term | Meaning |
|----------------|--|
| Change request | Request for infrastructure change raised within Remedy |
| Event | Information about the change request that was sent to AlarmPoint |
| Change ID | Unique identifier associated with a change request (also referred to as change_id) |

With respect to the AlarmPoint System, the following definitions apply:

| Term | Meaning |
|-------------------------------------|--|
| AlarmPoint Integration Agent | A flexible JavaScript processing engine that allows third-party management systems to expose their functionality to mobile and web-based users, while leveraging the AlarmPoint infrastructure to provide high security and fault tolerance |
| AlarmPoint Application Server Node | The core AlarmPoint application, consisting of various components that process events and perform notifications. |
| AlarmPoint Web User Interface | Browser-accessible interface for controlling AlarmPoint components and information. |
| AlarmPoint Notification Server Node | Delivers notifications to a person in a variety of ways (pager, phone, email, etc.) |
| AlarmPoint System | Umbrella term for all AlarmPoint software components |
| Management System | A generic term for BMC Remedy Change Management |
| User Guides | The AlarmPoint documentation suite, which includes the <i>AlarmPoint Installation and Administration Guide</i> , the <i>AlarmPoint Developer's Guide & Scripting Reference</i> , the <i>AlarmPoint User Guide</i> , the <i>AlarmPoint Mobile Gateway Guide</i> , and the <i>AlarmPoint Integration Agent Guide</i> . |

2. Installation

This section describes how to install the following software components:

- AlarmPoint System
- AlarmPoint Mobile Gateway for BMC Remedy Change Management Integration

2.1 AlarmPoint System

This integration requires the following AlarmPoint applications to be installed:

- AlarmPoint
- AlarmPoint Integration Agent

2.1.1 AlarmPoint

For installation instructions, refer to the *AlarmPoint Installation and Administration Guide*.

Note: When installing AlarmPoint, you must select the option to install the AlarmPoint Webserver.

2.1.2 AlarmPoint Integration Agent

The AlarmPoint Integration Agent must be installed on the same computer as Remedy. For instructions on installing the Integration Agent, refer to the *AlarmPoint Integration Agent Guide*.

2.2 Installing BMC Remedy Change Management

Consult the Remedy documentation for instructions on how to install and configure BMC Remedy Change Management and BMC Remedy Action Request System.

2.3 Installing the Integration

After the BMC Remedy Change Management and AlarmPoint systems have been installed, integration components must be placed on each system. The integration archive contains updates for AlarmPoint and the AlarmPoint Integration Agent, and files for the Remedy server.

Note: Before installing the integration, shut down or stop all AlarmPoint processes.

Extract the AP-MG-BMC-Remedy-SD archive file.

The significant files and directories (in bold) of the archive are as follows:

```
.
|-- components
| |-- alarmpoint
| | |-- integration-agent
| | | '-- bmcRemedyChangeManagement
| | |   |-- libs
| | |   |-- changeManagement.js
| | |   '-- changeManagement.xml
| | |-- libs
| | | '-- com.invoqsystems.integrations.CM.jar
| | '-- mobilegateway
```



```

| | | -- bmcRemedyChangeManagement
| | | -- action.jsp
| | | -- configuration.jsp
| | | '-- includes
| '-- remedycm
| '-- AP-CM-Definitions.def
|-- documentation
| '-- AP-MG-BMC-Remedy-CM.pdf

```

2.3.1 Installing the Web Services Library

To enable Web Service calls between AlarmPoint and the Remedy server, you must copy the JAR file into the AlarmPoint Webserver library folders.

Source File:

```

AP-MG-BMC-Remedy-
SD\components\alarmpoint\libs\com.invoqsystems.integrations.CM.jar

```

Web Server Destination Directory:

- **Windows:**

```

C:\Program Files\AlarmPointSystems\AlarmPoint\webserver\webapps\mobilegateway\WEB-INF\lib

```

- **Solaris:**

```

/opt/alarmpointsystems/alarmpoint/webserver/webapps/mobilegateway/WEB-INF/lib

```

Note: *If you have installed more than one web server; install the JAR file into the library folder for each one.*

2.3.2 Installing the Mobile Gateway Integration files

To install the Mobile Gateway, you must copy the JSP files to the AlarmPoint installation folder. If you have more than one web server; repeat the following step for each one:

Copy the `bmcRemedyChangeManagement` directory from `components\alarmpoint\mobilegateway\` in the extracted archive into the `\webserver\webapps\mobilegateway\jsp` directory of the AlarmPoint installation.

2.3.3 Installing the Integration Service

To install the Remedy integration service, you must copy the `changeManagement.js` and `changeManagement.xml` Integration Agent files into the `integrationservices` directory, and then modify the Integration Agent's `IAConfig.xml` file to include them. Repeat the following steps for each Integration Agent providing the `bmcRemedyChangeManagement` service:

1. Copy the `bmcRemedyChangeManagement` directory from `components\alarmpoint\integration-agent\` in the extracted archive into the `\integrationservices` directory of the AlarmPoint Integration Agent installation
2. Open the `\conf\IAConfig.xml` file and add the following line to the service-configs section:

```
<path>bmcRemedyChangeManagement/changeManagement.xml</path>
```
3. Open the `changeManagement.js` file (now located in `<IAInstall_Dir>\integrationservices\bmcRemedyChangeManagement\`) and modify the following parameters:
 - **RemedyURL:** replace “localhost” with your Remedy Change Management server’s IP address.

- **RemedyServerName:** replace “REMEDYCM” with the name of the service hosting Change Management webservice.
4. Save and close the `changeManagement.js` file, and then restart the Integration Agent.

3. Configuration

Before you can begin using the integration, you must configure BMC Remedy Change Management and AlarmPoint. This chapter explains the configuration processes required for each product and the configuration processes for the optional User Synchronization and Custom Forms components.

3.1 Configuring BMC Remedy Change Management

Configuring Remedy for the integration requires the following steps:

- Import the workflow definition file
- Add the AlarmPoint category to Work Info

3.1.1 Importing the Workflow Definition File

The workflow described in this document is provided in a definition file that must be imported into BMC Remedy Change Management.

To import the workflow definition file:

1. Log in to the Remedy Administrator tool, and then click **Accounts**.
2. In the Account dialog box, click **Add**, and then specify the name of the server on which Remedy is installed.

Note: *If the Remedy Server is installed on Solaris, enter the IP address of the Solaris machine.*

3. Click **OK** to close the Account dialog, and then click **OK** again to log in.
4. In the Server Window dialog box, select the server.
5. Click **Tools > Import Definitions > From Definition File**.
6. Select the `AP-CM-Definitions.def` file in the extracted integration archive (located by default in `components\remedycm\`), and then click **Open**.
7. Select the **Replace Objects on the Destination Server** check box.
8. In the Import Definitions dialog, click **Add All**, and then click **Import**.
9. When the import is complete, click **OK**, and then click **Close**.

3.1.2 Adding the AlarmPoint category to Work Info

To make the annotations more informational it is necessary to add the AlarmPoint category within the CHG:WorkLog form.

To add buttons and menus:

1. Log in to the BMC Remedy Administrator tool.
2. In the Server Window, select **Forms**, and then double-click **CHG:WorkLog**.
3. Double-click the **Work Info Type** field.
4. Click the **Attributes** tab, and then select the first attribute in the **General** section.
 - If the AlarmPoint value already exists, skip to step 8.
5. In the **Value** and **Alias Value** fields, type `AlarmPoint`.
6. In the **ID** field, enter a unique ID within the range between the first attribute and the next attribute ID.

7. Click **Add After**.
8. Close the Field Properties window.
9. Double-click the **Source** field.
10. Click the **Attributes** tab, and then select **Email**.
11. In the **Value** and **Alias Value** fields, type `MobileGateway`.
12. In the **ID** field, enter a unique ID within the range between the Email and next attribute value.
13. Click **Add After**.
14. Click **File > Save Form**.

3.2 Configuring AlarmPoint

Configuring AlarmPoint requires the following steps

- Define an Event Domain.
- Define an Integration Service.
- Define Custom Fields
- Add an AlarmPoint Mobile Gateway User.

3.2.1 Defining an Event Domain

The AlarmPoint webserver must be running to perform this portion of the integration.

Note: *If the “remedycm” Event Domain is already configured in AlarmPoint (for use with the AlarmPoint for BMC Remedy Change Management Advanced integration), you can skip this section.*

To define an Event Domain:

1. Log in to AlarmPoint as a Company Administrator, and click the **Developer** tab.
2. On the Event Domains page, click **Add New**.
3. Enter the following information into the form:
 - **Name:** remedycm
 - **Description:** BMC Remedy Change Management Integration
 - **Script Package:** Remedy Change Management
4. Click **Save**.

Note: *If the Remedy Change Management script package option does not exist, leave the Script Package field blank.*

3.2.2 Define an Integration Service

This integration uses a default integration service of “bmcRemedyChangeMgmt”; it is strongly recommended that you use this default integration service. For the installation to be successful, the integration service name must match the service specified in the `changeManagement.xml` file installed on the Integration Agent.

To define an Integration Service:

1. In AlarmPoint, on the Event Domains page, click the **remedycm** Event Domain.

2. On the Event Domain Details page, click **Add New** in the Integration Services area.
3. Enter the following information into the form:
 - **Name:** bmcRemedyChangeMgmt
 - **Description:** BMC Remedy Change Management Integration Service
 - **Path:** bmcRemedyChangeManagement/menu.jsp
4. Click **Save**.

3.2.3 Define Custom Fields

The Mobile Gateway uses custom fields defined in AlarmPoint to hold the login information for Remedy. By default, the custom fields are “Chg Management User” and “Chg Management Password”; it is strongly recommended that you use these default field names.

Note: *These custom fields are optional and do not need to be defined for the Mobile Gateway to function.*

To define the custom fields:

1. In AlarmPoint, click the **Admin** tab.
2. In the Administration menu on the left side of the screen, click **Custom Fields**.
3. Click **Add New**.
4. Enter the following Information into the form:
 - **Field Name:** Change Mgmt User
 - **Type:** Text
5. Click **Save**.
6. Click **Add New**.
7. Enter the following Information into the form:
 - **Field Name:** Change Mgmt Password
 - **Type:** Password
8. Click **Save**.

Note: *For more information about custom fields see the AlarmPoint Installation and Administration Guide.*

3.2.4 Creating a Mobile Gateway User

The “Has Mobile Access” check box on the User Details page determines whether a User can log into the Mobile Gateway. You can grant access to an existing User by selecting the Has Mobile Access check box, or create a new User and select the check box while adding them.

To allow the default User to access the Mobile Gateway:

1. In AlarmPoint, click the **Users** tab.
2. On the Find Users page, click **S**.
3. In the list of returned Users, click **Smith, Bob**.
4. On the Details for Bob Smith page, select the **Has Mobile Access** check box.

- If you defined the custom fields, enter the **Remedy User** and **Remedy Password** information into the custom fields.
5. Click **Save**.

Note: *For more information about Mobile Gateway Users see the AlarmPoint Mobile Gateway Guide.*

4. Software Component Integration

It is recommended that the applications be run in the following order:

- BMC Remedy Change Management
- AlarmPoint Java Client
- AlarmPoint Application and Notification Server Nodes

Consult the respective user manuals for details on starting these applications.

4.1 Query for a Change Request

The following validates that the Mobile Gateway, Integration Agent, and BMC Remedy Change Management are properly configured.

To query for a change request:

1. Log in to the Mobile Gateway as bsmith:



- If more than one Integration Service is available, select the **BMCRemedyChangeMgmt** service:



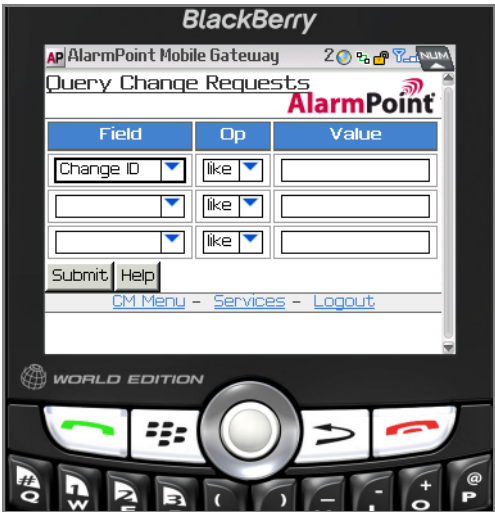
2. If prompted, enter the Remedy login credentials specified in the custom fields:



3. Click the **Query Change Requests** menu item:



4. Enter the search terms using the fields and drop-down lists:



5. Click **Submit Query**.
- The Mobile Gateway should display a list of all Remedy change requests matching the search criteria:



6. Click the **CR#** (Change_Infrastructure_ID) for a request to view its details:



7. To change the status of the request, select the status you want to change to in the drop-down list and click **Update**:



The following screens illustrate some of the other navigational tools and options available through the AlarmPoint Mobile Gateway for BMC Remedy Change Management:



5. Optimizing and Extending the Integration

This section describes some of the available methods you can use to optimize or extend AlarmPoint Mobile Gateway for BMC Remedy Change Management.

5.1 Adding a Custom Query to the Home Page

To add a custom query and link to the home page, add the following to the `bmcChangeManagement\changeManagement.jsp` file installed on the Mobile Gateway:

```
MAIN_MENU_OPTIONS.put("Query Label", "Qualification");
```

Note: For more information about constructing *Qualifications for Remedy*, consult the *BMC Remedy Change Management documentation*.

5.2 Creating a URL Alias

The `urlAlias.jsp` page in the Mobile Gateway is used to drive directly from an AlarmPoint notification to the Create New Change Request or Update Change Request screens. It supports the following parameters:

| Name | Description |
|-------------------------------|--|
| newChangeRequest | If this parameter is set, a new change request will be created and you will be taken to the Create New Change Request screen. If it is not specified, set this value to "1". |
| InfrastructureChangeID | The ID number of the change request to update. If the <code>newChangeRequest</code> parameter is not set, this field must be set to a valid change request number. |
| Field Name | <p>The name of an API Caption of a field for the change request. For each parameter set, it will update the field on the change request with that value.</p> <p>The following parameters are configurable:</p> <ul style="list-style-type: none"> • Change_Timing • Change_Type • Company (Requested by Support Company) • Company3 (Change Manager Support Company) • First_Name • Last_Name • Risk_Level • Status • Support_Group_Name (Change Manager Support Group) • Support_Organization (Change Manager Support Organization) • Urgency • Impact • Summary • Location_Company |

For example, if you want to load the change request with the current event's infrastructure_change_id and update the assignee to be the current User (with a Location Company of "My Company", a Change Timing of "Normal" and a Urgency of "2-High"), insert the following code into the HTML email section of the presentation script:

```
@person = @event::getRecipient($recipient.owner)
$hasMobileAccess = $person.hasMobileAccess
$accessibleServices = @person::getAccessibleIntegrationServices($event.domain)
$hasAccessToService = $accessibleServices::contains("BMCRemedyChangeMgmt")
IF ($hasMobileAccess && $hasAccessToService)
    @urlAlias = @event::createUrlAlias()
    @urlAlias::setTarget("http://localhost:8888/mg/jsp/bmcRemedyChangeManagement/
        urlAlias.jsp")
    @urlAlias::setHost("http://localhost:8888")
    @urlAlias::setTimeout(3600)
    @urlAlias::setParameter("username", $person.targetName)
    @urlAlias::setParameter("InfrastructureChangeID", $event.change_id)
    @urlAlias::setParameter("First_Name", $person.firstName )
    @urlAlias::setParameter("Last_Name", $person.lastName )
    @urlAlias::setParameter("Change_Timing", "Normal" )
    @urlAlias::setParameter("Location_Company", "My Company" )
    @urlAlias::setParameter("Urgency", "2-High" )
    $alias = @urlAlias::activate()
    $content.message = $content.message & "<a href=\u0022" & $alias & "\u0022>Update Change
        Request " & $event.change_id & "</a>"
ENDIF
```

Note: For more information about the URL Alias script object method, see the AlarmPoint Developer's Guide & Scripting Reference.

5.3 Uninstalling

For instructions on removing an AlarmPoint deployment, refer to the *AlarmPoint Installation and Administration Guide*.

6. Configuration Variable Reference

This section outlines and describes the configuration variables available in the Mobile Gateway and Integration Agent.

6.1 Mobile Gateway Configuration Variables

The following configuration variables are contained in the `bmcRemedyChangeManagement/configuration.jsp` file installed on the Mobile Gateway:

| Variable | Type | Description | Default Value |
|--|---------|--|--|
| MAIN_MENU_COUNTS | Boolean | Enables the queries on the home page to be run | true |
| MAIN_MENU_OPTIONS | map | Defines what queries should be displayed on the homepage. | High Urgency Change Requests My Working Change Requests Unassigned Change Requests |
| PAGINATE_RESULTS | Boolean | Enables pagination of lists of change requests | true |
| RESULTS_PER_PAGE | int | Defines how many results should be displayed on each page of change requests | 10 |
| CM_USER_NAME_FIELD | string | Defines the name of the custom field containing Remedy login credentials | “Change Mgmt User” |
| CM_PASSWORD_FIELD | string | Defines the name of the custom field containing Remedy login credentials | “Change Mgmt Password” |
| VERIFY_CM_CREDS | Boolean | Enables the validation of entered Remedy login credentials when loading the homepage | true |
| CM_LISTS_EXPIRED | long | Defines how long (in milliseconds) to cache list values retrieved from Remedy | 3600000 |
| SHOW_RELATIONSHIPS | Boolean | Shows the Relationships tab for the Change Request Details | true |
| MAX_SUMMARY_DISPLAY_IN_CHARACTERS | int | Shows the Maximum characters to display for the summary on the Change Request List page. | 30 |

| Variable | Type | Description | Default Value |
|-----------------------------------|------|--|---------------|
| SLEEP_TIME_IN_MILLISECONDS | int | Specifies the time to sleep between when the request is saved and when the request is retrieved from Remedy (allowing time for any automatic changes to be performed). | 2000 |

6.2 Integration Agent Configuration Variables

The following configuration variables are found in the `bmcRemedyChangeManagement/changemanagement.js` file installed on the Integration Agent:

| Variable | Type | Description | Default Value |
|-------------------------|--------|--|-------------------------------|
| remedyURL | String | Defines the URL of the Change Management web services | <code>http://localhost</code> |
| remedyServerName | String | Defines the name of the Service hosting Change Management web services | <code>REMEDYCM</code> |

7. Contacting AlarmPoint

You can access the AlarmPoint Systems Web Site at <http://www.alarmpoint.com>. From this site you can obtain information about the Company, the Products, Support and other helpful information. You may also access the Customer Support Site from the main web page. In this protected site you will find current product releases, helpful hints, patches, release notes, and other tools provided by AlarmPoint Systems, Inc.

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