

How to Install and Use the BlackBerry Browser Push Action



Applies to:

SAP MII 12.1 and 12.2

Summary

The purpose of this document is to provide a high level overview of the steps that need to be taken to install the BlackBerry Browser Push Action block into the 12.1 or 12.2 MII Workbench.

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Business Scenario

The SAP MII product supports the addition of custom targeted actions for various systems. The BlackBerry Browser Push operation leverages this product flexibility to allow users to push alert messages and URL links to a BlackBerry. This can be used in various scenarios where events occur that people want to be notified of when they are on the move. For example the Maintenance Engineer is off performing a low priority task. If a machine goes down or begins to operate out of its specification range and high priority alert message can be generated and set to the BlackBerry of the Maintenance Engineer along with a URL to a MII page that can have other relevant plant information.

Introduction

The BlackBerry system architecture allows for various services to be performed. The primary one that is discussed in this document is the ability to alert someone of an event with various priorities and pass them a URL to real-time information. The system architecture for the BlackBerry Setup is shown below:

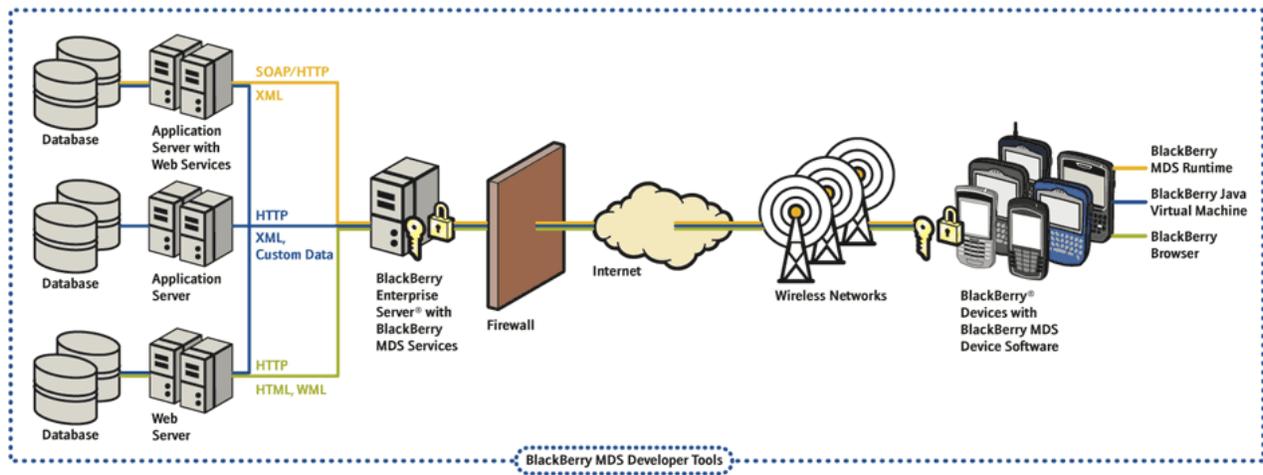


Figure 1: BlackBerry Enterprise System Architecture

The MII server, since it also functions as a fully functional web server fits cleanly into this network architecture for servicing HTTP requests from the BlackBerry Enterprise Server (BES). In order for the MII Server to “Push” a notification to the BES server to send an alert message to a BlackBerry device a couple of files need to be added to the MII Server to create a custom action block in the MII Business Logic Environment. This document will walk through the necessary files and the location of where they go on the MII server. There is also an example page that can be setup in order to demo this functionality. This demo requires that the following be installed from the BlackBerry Website: Blackberry Device Simulators (v4.1) and Blackberry Email and MDS Services Simulator Package (on this page <http://www.blackberry.com/developers/downloads/simulators/index.shtml>). These installations require the Java 5.0 SDK to be installed on the machine as well. For more technical information about how to configure MII for various mobile devices see the “How to configure the MII Server and MII Pages for Mobile Devices” document that is posted on the SDN. It is highly recommended that this document is reviewed before implementing the BlackBerry Push example in this document.

Uploading and Deploying the Custom Actions

The deployment of custom actions is documented in the MII 12.x Help documentation which can be found online (<http://help.sap.com> -> Select SAP Business Suite and on the left under SAP Manufacturing choose Manufacturing Integration & Intelligence).

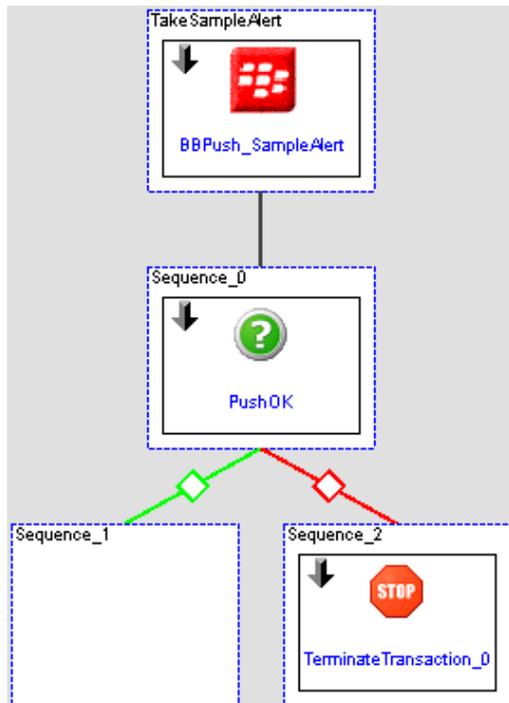
The specifics for installing these actions are simply to navigate to the following in MII:

1. System Management -> Custom Actions
2. Select Upload Button
3. In the Assembly File Upload window
4. For Assembly file [browse to the BlackBerryBrowserPush.jar](#)
5. Press the Save button
6. Press the Deploy Button

Your action will now appear in the MII Workbench the next time you open up the transaction editor under the Category "BlackBerry".

Creating a Simple Application using the BlackBerry Push Action

Create the following transaction, the new action block is location in the **BlackBerry** category:



Use this configuration for the BB Action:

System Parameters	
BES Credential Alias	LocalAdministrator
BES Server	<BES Server>
BES Port	8080
MII Credential Alias	LocalAdministrator
MII Server	<MII Server>
MII Port	50000
Push Parameters	
Push Type	Browser-Channel
Priority	high
Email	<BB User EMail Address>
Push Title	<Title - Appears on Device>
Push ID	<ID - IDs channel for updates>
Push URL	<MII Page URL>
UnRead Icon URL	<Icon for a Message that isn't Read>
Read Icon URL	<Icon for a Message that is Read>
Trace	<input type="checkbox"/>

Here's a more complete example with sample data values:

System Parameters	
BES Credential Alias	LocalAdministrator
BES Server	phln00444541b
BES Port	8080
MI I Credential Alias	LocalAdministrator
MI I Server	phln00444541b
MI I Port	50000

Push Parameters	
Push Type	Browser-Channel
Priority	high
Email	
Push Title	Take Sample
Push ID	HACCP
Push URL	}BPush/BBPushNotification.irpt?ExampleParam=abc123
UnRead Icon URL	000/XMII/CM/SAP/Common/Images/sap_icon_unread.gif
Read Icon URL	541b:50000/XMII/CM/SAP/Common/Images/sap_icon.gif
Trace	<input checked="" type="checkbox"/>

Some of the parameter values will need to be changed to fit your system, they are: MII Server, MII Port, UnRead Icon URL, Read Icon URL

Set the Push URL to point to the **BBPushReceive.irpt** page, for example:
CM/SAP/FunctionalExamples/BBPush/BBPushNotification.irpt?ExampleParam=abc123

*** It is important to note that the MII & BES Username and Password fields are still available via the Link Editor but for security and transport reasons it is recommended to use the Credential Aliases.**

Configure the conditional and termination action blocks as follows:



PushOK - Conditional

Description:

Incoming Links:

Type: Assign

From: BBPush_SampleAlert.Success

To: PushOK.Input1

Inputs:

Input1	false
Output	false
InputCount	1
LogicalAnd	false



TerminateTransaction_0 - TerminateTransaction

Description:

Incoming Links:

Type: Assign

From: BBPush_SampleAlert.LastErrorMessage

To: TerminateTransaction_0.TerminationMessage

Inputs:

TerminationMessage	Transaction Execution Terminated Upon Request
TerminateWithError	true

Save this transaction in the following location as:

SAP\FunctionalExamples\BBPush

Call it **BlackBerryPushExample**

Create the following XacuteQuery

Selected Transaction: SAP/FunctionalExamples/BBPush/BlackBerryBrowserPush

Output Parameter: *

Input Parameters:

- BESHostName (The IP address of the BES Server)
- EEmail (Email address or Distribution List to push a
- Priority (The push message priority can be set to: l
- PushURLString (This is the relative URL to the pag
- Title (The Name of the push title)
- Type (The type of push to send)

Start Date of Mapped Input: Paste

End Date for Mapped Input: Paste

#	Mapped Param. Target	P
1	Title	Take Sample
2	EEmail	simulator@pushme.com
3	Priority	high
4	PushURLString	
5	Type	Browser-Channel
6	BESHostName	phIn00419082a

Save it as **SAP/FunctionalExamples/BBPush/BlackBerryPushExampleXQuery**

Create both of the HTML Pages that are referenced in **Appendix A** of this document.

Save both of them to SAP\FunctionalExamples\BBPush\

Now it is time to setup MII link to the newly created page using the MII navigation editor.

Start both the BlackBerry Device Simulator (recommend the 8830) and the BlackBerry Email and MDS Services. There is special configuration required if you are using a Proxy to access the internet. If you are using a proxy, see the troubleshooting section of this document for what to do.

From your Browser navigate to the BBPushNotificaiton.irpt page, set the priority to high and press the "Send" button. Look at the BlackBerry simulator is should now look similar to:



Appendix A

Push Trigger Web Page (Save as **BBPushNotification.irpt**):

```

<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8">
<title>BB POST Example</title>
<link rel="stylesheet" type="text/css" href="<Your Stylesheet>">
<script language="JavaScript">

// This function will call the BB Push transaction and push the alert message to the Mobile Device
function showAlert() {

    var qObj = document.getElementById('BlackBerryBrowserPush').getQueryObject();

    qObj.setParam(1, document.getElementById('txtTitle').value);
    qObj.setParam(2, document.getElementById('txtEMail').value);
    qObj.setParam(3, document.getElementById('selPriority').value);
    // Param 4 is the Push URL
    qObj.setParam(5, document.getElementById('selType').value);

    if(BlackBerryBrowserPush.executeCommand())
        alert('Alert Successfully Sent');
    else
        alert(BlackBerryBrowserPush.getLastError());
}

// This function will remove the pushed channel alert from the device
function deleteChannel() {

    var qObj = document.getElementById('BlackBerryBrowserPush').getQueryObject();

    qObj.setParam(1, document.getElementById('txtTitle').value);
    qObj.setParam(2, document.getElementById('txtEMail').value);
    qObj.setParam(3, document.getElementById('selPriority').value);
    // Param 4 is the Push URL
    qObj.setParam(5, 'Browser-Channel-Delete');

    if(BlackBerryBrowserPush.executeCommand())
        alert('Alert Successfully Sent');
    else
        alert(BlackBerryBrowserPush.getLastError());
}
</script>
</head>

<body>
<form name="frmMain">
    <table border="1" width="316" id="table1" class="Table">
        <tr>
            <td width="94%" colspan="2" class="PageSmHeader" align="center">Push to
BB</td>
        </tr>
        <tr>
            <td width="24%" class="tdSubSmHeader">Title</td>
            <td width="71%" class="tdSubSmHeader">

```

```

        <input type="text" name="txtTitle" id="txtTitle" size="26" value="Take Sample"></td>
    </tr>
    <tr>
        <td width="24%" class="tdSubSmHeader">Email</td>
        <td width="71%" class="tdSubSmHeader">
            <input type="text" name="txtEMail" id="txtEMail" size="26"
value="simulator@pushme.com"></td>
    </tr>
    <tr>
        <td width="24%" class="tdSubSmHeader">Priority</td>
        <td width="71%" class="tdSubSmHeader">
            <select size="1" id="selPriority" name="selPriority">
                <option value="low">Low</option>
                <option value="medium">Medium</option>
                <option value="high">High</option>
            </select></td>
    </tr>
    <tr>
        <td width="24%" class="tdSubSmHeader">Type</td>
        <td width="71%" class="tdSubSmHeader">
            <select size="1" id="selType" name="selType">
                <option value="Browser-Channel">Channel</option>
                <option value="Browser-Message">Message</option>
                <option value="Browser-Content">Content</option>
            </select></td>
    </tr>
    <tr>
        <td colspan="2" class="tdSubSmHeader" align="center">
            <input type="button" value="Send" name="btnSend" onclick="pushAlert()">
            <input type="reset" value="Reset" name="btnReset">
            <input type="button" value="Delete Channel" name="btnDeleteChannel"
onclick="deleteChannel()"> </td>
    </tr>
</table>
</form>
<applet name="BlackBerryBrowserPush" id="BlackBerryBrowserPush" codebase="/Illuminator/Classes"
code="iCommand" archive="illum8.zip" width="1" height="1" mayscript>
    <param name="QueryTemplate" value="SAP/BBPush/BlackBerryPushExampleXQuery">
    <param name="InitialUpdate" value="false">
</applet>
</body>
</html>

```

Push URL Target Page (Save as **BBPushReceive.irpt**):

Demonstrates how to pass parameters/values from the pushed icon to a web page, notice the {parameters}.

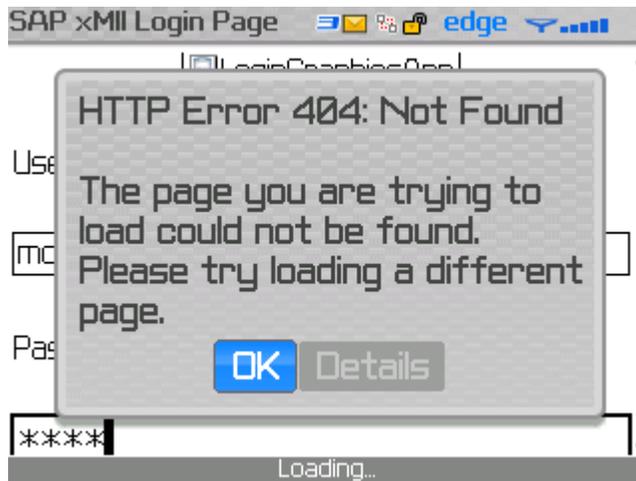
```

<html>
<head>
<meta http-equiv="Content-Language" content="en-us">
<meta http-equiv="Content-Type" content="text/html; charset=utf-8">
<title>Pushed Page</title>
</head>
<body>
<p>Login Name: {IllumLoginName}</p>
<p>SentParam: {ExampleParam}</p>
</body>
</html>

```

Troubleshooting Tips

If you get the following error message on your BlackBerry Simulator:



With these details:



The application whose context path is "/>

Then the Push URL value is pointing to a page that is not on your MII server.

If Business Logic Fails to start when launched:

Make sure that the Java Web Start Cache is completely cleared and that all files were copied to the appropriate directories.

If you are using a Proxy to Connect to the Internet:

If you are using a proxy to connect to the internet the BlackBerry MDS Services need to be setup to use this proxy. Open up the following file (Your exact directory may be slightly different depending on the version):

C:\Program Files\Research In Motion\BlackBerry Email and MDS Services Simulators
4.1.0\MDS\config\rimpublic.property

In this file modify the "[HTTP HANDLER]" section to fit your configuration, don't forget to set the proxyEnabled = true

SDN Reference Documents

MII Forum

<https://www.sdn.sap.com/irj/sdn/forum?forumID=237>

MII Wiki

<https://wiki.sdn.sap.com/wiki/display/xMII>

MII Getting Started Guide – Located on the SDN Wiki

From the MII Wiki link above, navigate to Guide & Guidelines section.

How to configure the MII Server and MII Pages for Mobile Devices

From the MII Wiki link above, navigate to Guide & Guidelines section.

BlackBerry Browser Push Channels

<http://www.blackberry.com/knowledgecenterpublic/livelink.exe?func=ll&objId=1162261&objAction=browse&sort=name>

On Page 68, each “Push Type” is described in detail.

References

<http://www.blackberry.com/downloads/>

<http://sdn.sap.com>

<http://help.sap.com>

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