



# Business Process Monitor

Software Version: 9.50

## BPM Real Device Monitoring

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# Contents

BPM Real Device Monitoring .....	6
What is BPM Real Device Monitoring? .....	7
BPM Real Device Monitoring System Architecture .....	8
Requirements .....	9
Limitation .....	9
Installation .....	10
Configure Mobile Devices .....	11
Recording Scripts .....	12
Deploying Scripts .....	14
Working with Amazon Web Services (AWS) .....	15
Working with a Genymotion Emulator .....	19
BPM Real Device Monitoring Best Practices .....	20
Connecting to Mobile Center over a Secure Connection .....	21
Send documentation feedback .....	22

# BPM Real Device Monitoring

# What is BPM Real Device Monitoring?

BPM Real Device Monitoring displays the availability and performance of mobile applications, installed on devices in multiple locations.

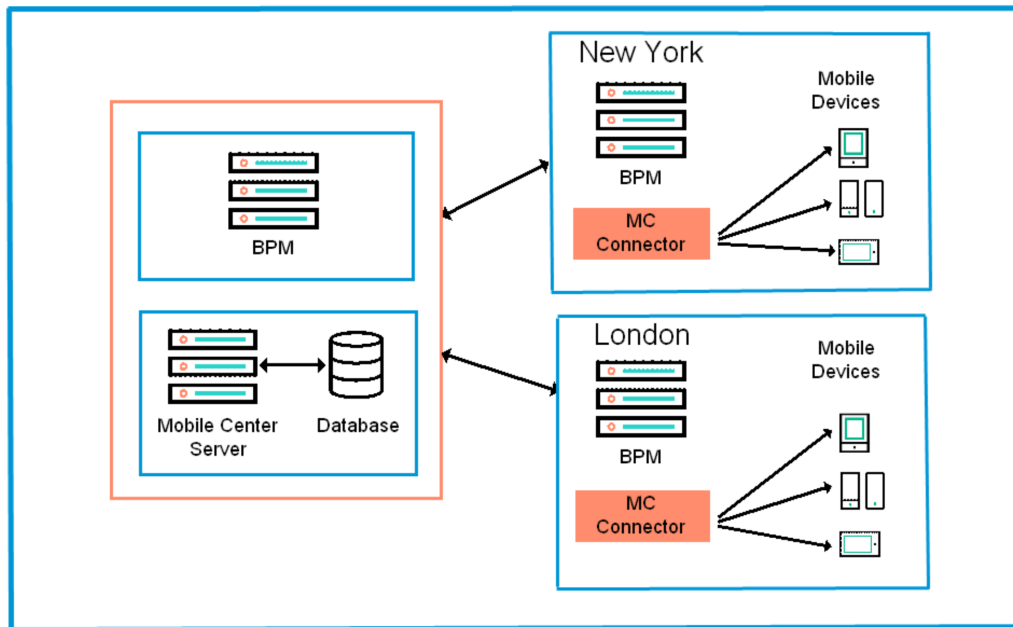
BPM Real Device Monitoring enables you to record applications on real mobile devices, play the recording from BPM, and report the measurements to BPM.

BPM Real Device Monitoring measures mobile application performance to identify trends over time. This enables you to identify spikes or sudden changes in performance. Changes in mobile application performance can be isolated to a specific time, location, carrier, device type, or mobile operating system.

For an evaluation version of BPM Real Device Monitoring, contact [mobilehelp@hpe.com](mailto:mobilehelp@hpe.com).

# BPM Real Device Monitoring System Architecture

BPM Real Device Monitoring requires each mobile device to be connected to an Mobile Center connector in each location from which you want to monitor.





# Requirements

BPM Real Device Monitoring has the following requirements at each location:

- Windows server with BPM 9.50 and VuGen 12.55
- Dedicated physical server or virtual machine, running Mobile Center (latest supported version is Mobile Center 2.6 and Mobile Center 2.7).

For Mobile Center requirements, search for "Server requirements" in

[https://admhelp.microfocus.com/mobilecenter/en/2.60/Content/Resources/\\_TopNav/\\_TopNav\\_Home.htm](https://admhelp.microfocus.com/mobilecenter/en/2.60/Content/Resources/_TopNav/_TopNav_Home.htm).

- Android or iOS mobile devices

For a complete list of supported devices, search for "Supported devices" in

[https://admhelp.microfocus.com/mobilecenter/en/2.60/Content/Resources/\\_TopNav/\\_TopNav\\_Home.htm](https://admhelp.microfocus.com/mobilecenter/en/2.60/Content/Resources/_TopNav/_TopNav_Home.htm).

## Limitation

Mobile Center 2.7 supports BPM 9.50 using UFT 14.03 scripts only.

## Installation

Installing BPM Real Device Monitoring involves the following steps:

- Install BPM 9.50, including any relevant patches and hotfixes. For details see the BPM Deployment Guide.
- Install VuGen 12.55, including any relevant patches and hotfixes. For details see the VuGen documentation.
- Install and configure Mobile Center server, for details, see [https://admhelp.microfocus.com/mobilecenter/en/2.60/Content/Resources/\\_TopNav/\\_TopNav\\_Home.htm](https://admhelp.microfocus.com/mobilecenter/en/2.60/Content/Resources/_TopNav/_TopNav_Home.htm).

# Configure Mobile Devices

You need to configure each mobile device connected to the Mobile Center server. For details search for "Connect devices to Mobile Center" in

[https://admhelp.microfocus.com/mobilecenter/en/2.60/Content/Resources/\\_TopNav/\\_TopNav\\_Home.htm](https://admhelp.microfocus.com/mobilecenter/en/2.60/Content/Resources/_TopNav/_TopNav_Home.htm).

# Recording Scripts

Recording a script is done using *VuGen TruClient Native Mobile* protocol or *UFT GUI Test*.

In TruClient, you can create customized parameters when creating a new TruClient Native Mobile script.

In UFT, you need to enable support for Mobile Center:

1. In UFT, open the **Test Settings** dialog box > **Run** pane.
2. Under **Business Process Monitor**, select the following:
  - **Save image of desktop when error occurs**
  - **Allow test to run on Mobile Center**

## NOTE:

If you have BSM 9.24 or earlier, use the script template to create new True Client Native protocol scripts. This allows the BSM machine to read the default parameters and record True Client scripts in 12.52 or earlier.

1. Open the following file:  
TruClient: **<BPM installation directory>/resources/TruClientNativeMobile\_TemplateForBPM.zip**
2. Extract the contents of this file to the Scripts folder on the VuGen machine.
3. In VuGen IDE, click **Open** and select the template.
4. Click **Save script as...** and give the script a new name.

For details of how to record a TruClient script, search for "Connect TruClient to Mobile Center" in [https://admhelp.microfocus.com/mobilecenter/en/2.60/Content/Resources/\\_TopNav/\\_TopNav\\_Home.htm](https://admhelp.microfocus.com/mobilecenter/en/2.60/Content/Resources/_TopNav/_TopNav_Home.htm).

For details of how to record a UFT script, search for "Create and run tests in UFT" in [https://admhelp.microfocus.com/mobilecenter/en/2.60/Content/Resources/\\_TopNav/\\_TopNav\\_Home.htm](https://admhelp.microfocus.com/mobilecenter/en/2.60/Content/Resources/_TopNav/_TopNav_Home.htm).

## After Recording the Script

After you have recorded the script do the following:

1. Delete, edit, and add transactions to the script as required.
2. Click the play button to test the script.
3. Once you have made the necessary changes to the script, save the script. If you are using TruClient, manually close the interface.
4. Export the script to a zip file:

- **TruClient:** Select **File > Manage Zip Files > Export to zip File... > runtime files only.**
- **UFT:** Select **File > Export Test.**

# Deploying Scripts

To deploy a script, you need to upload the script to APM or AppPulse Active, and for each location assign the BPM Mobile locations and the script parameters.

1. Upload the recorded scripts to APM or AppPulse Active, create an application that will run the scripts, update the application thresholds, and assign the application to the required BPM Mobile locations.

**NOTE:**

Review the performance thresholds based on average script execution time after assigning BPM data collector to an application. It consists of scripts that are to be executed on mobile devices using Mobile Center.

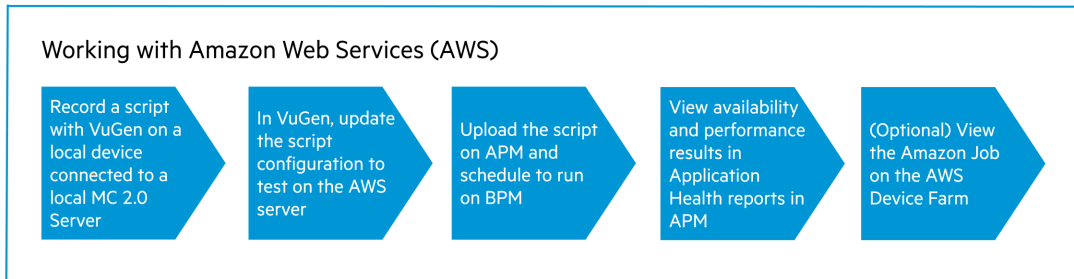
Mobile scripts take longer to run than regular scripts, so you should increase the thresholds.

2. Click to update the script parameters for each location.

Without this step, scripts will run only on the Mobile Center server and on the mobile devices on which they were recorded.

# Working with Amazon Web Services (AWS)

You can use BPM with a Mobile Center installation that is integrated with Amazon Web Services (AWS). This allows you to run TruClient/UFT scripts on mobile devices sitting on the AWS Device Farm.



## Pre Requisites

- Mobile Center installed on AWS  
To run scripts on AWS, you need an Amazon account and need to integrate Mobile Center with the AWS Device farm. For details, see the [Mobile Center documentation](https://admhelp.microfocus.com/mobilecenter/en/2.60/Content/AWS%20installation.htm?Highlight=AWS%20Installation) ([https://admhelp.microfocus.com/mobilecenter/en/2.60/Content/AWS%20installation.htm?Highlight=AWS Installation](https://admhelp.microfocus.com/mobilecenter/en/2.60/Content/AWS%20installation.htm?Highlight=AWS%20Installation)).
- VuGen 12.55 to record a TruClient Native Mobile Script
- BPM 9.50

### NOTE:


To confirm that VuGen and BPM have access to the MC server, navigate to the MC server URL directly from the BPM browser machine.

## Record Script in TruClient

Record the script with TruClient Native Mobile protocol on a local device connected to a local MC server.

## Update Script Parameters

Once you have recorded the script locally, you need to modify the following parameters so that the script can be replayed in AWS:

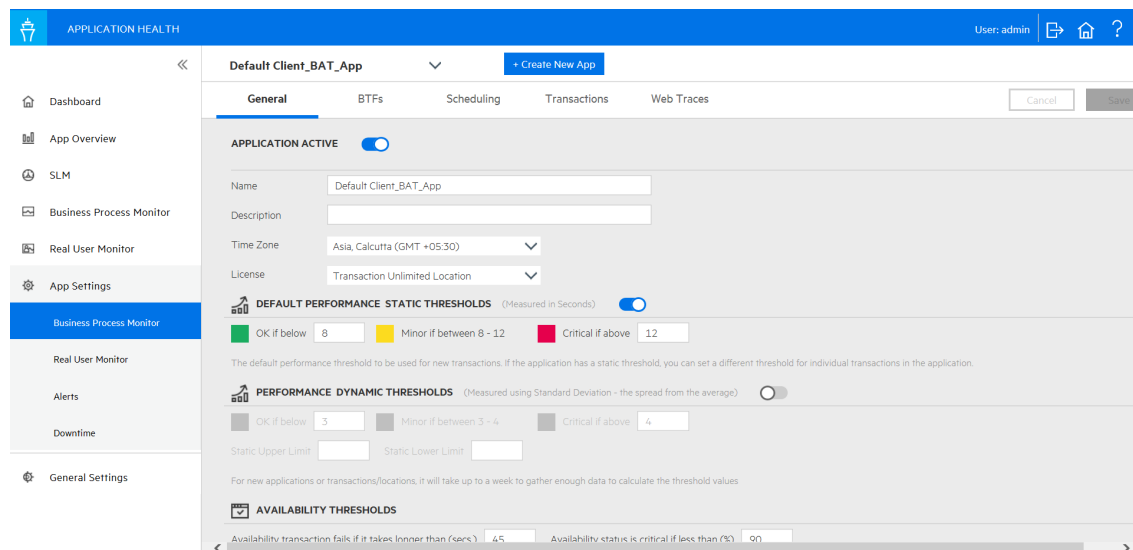
1. In VuGen, select **File > New Script and Solution > TruClient Native Mobile Protocol**.
2. Click  to open the TruClient General Settings dialog box and set the following parameters:

- **Server URL Port** – Enter the URL of the Mobile Center on the ASW machine, for example:  
port - myserver.amazonaws.com:8080
  - **User name** – The administrator user name to access Mobile Center.
  - **Password** – The password to access Mobile Center.
3. Click **Develop Script** to open the script in TruClient.
  4. In the TruClient Native Mobile tab, expand the **Prepare mobile device** section.
  5. Under **Step**, choose **Select by > Capabilities**.
  6. Under **Arguments**, select an OS Type and OS Version, and a Source Lab of **Amazon WS**.

### Upload the Script to APM and Attach to BPM

Upload the enhanced TC Native Mobile script to APM. The script is added to the application, linked to BPM as a data collector, and scheduled to run periodically.

You can modify the script in Application Health interface (**Application Health > App Settings > Business Process Monitor**).



Once the replay starts on AWS, it connects to the available matching device on the AWS Device Farm, the application launches and the script is executed successfully.

### View the Application Health Reports in APM

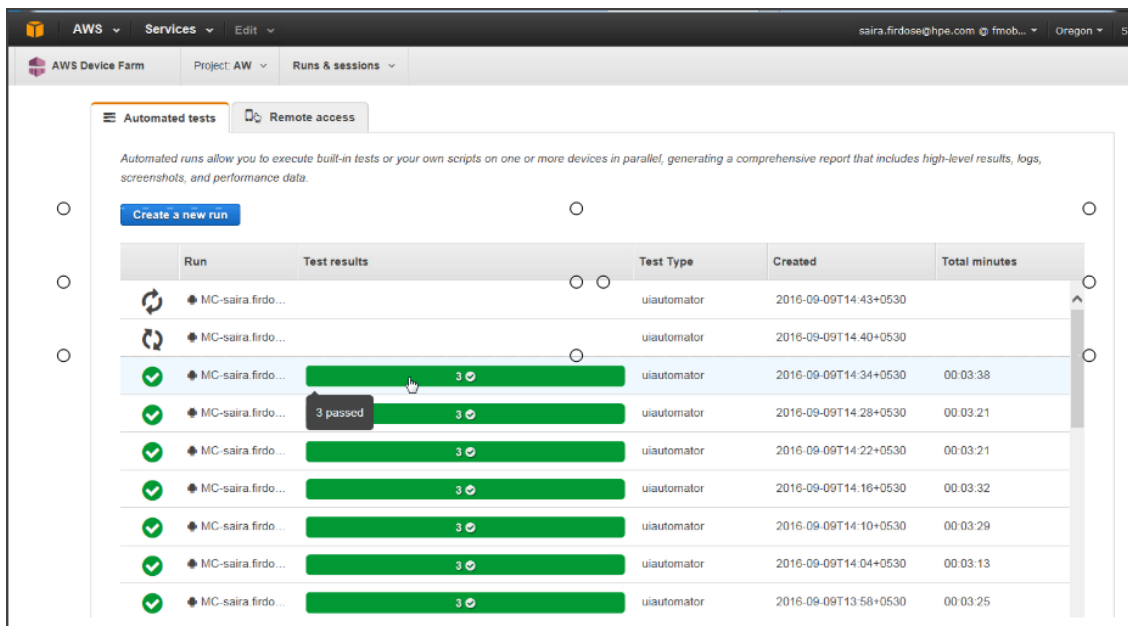
You can view the Application Overview report to view Availability and Performance results of the mobile application.

### View the Amazon Job on the AWS Device Farm

AWS displays the test results against each run.



The test results displays the actual device used to run the application. The device selection on AWS is based on the capabilities (OS Type /OS version/Manufacturer) entered in the TC script.



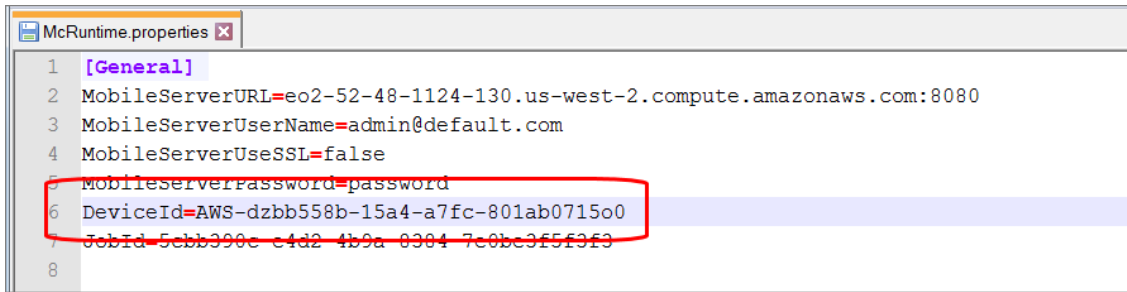
The Test results capture complete information of the Script Run. Click on the results to view the following:

- **Details tab** – General information about the problem
- **Logs section** – Any information Device Farm logged during the test
- **Screenshots tab** – A list of any screenshots Device Farm captured during the run the device, grouped by suite.
- **Performance tab** – Information about any performance data Device Farm generated for the device during the run, for example. CPU utilization of the device or memory utilization of the device.

The details of the device picked up is listed as AWS.

Alternatively you can get the device name and server URL from the BPM Log:

1. Open the latest "Site" folder in the following directory:  
**<BPM application directory>\workspace\agent1\**
2. Open the latest TruClient script folder under the relevant "Site":  
**C:\ProgramData\HP\BPM\workspace\agent1\Site<X>\<App Name>\**
3. Open the file McRuntime.properties  
 The device name is listed in the last line of the properties folder, normally starting with AWS.



```
McRuntime.properties
1 [General]
2 MobileServerURL=eo2-52-48-1124-130.us-west-2.compute.amazonaws.com:8080
3 MobileServerUserName=admin@default.com
4 MobileServerUseSSL=false
5 MobileServerPassword=password
6 DeviceId=AWS-dzbb558b-15a4-a7fc-801ab0715o0
7 JobId=5cbb390e-c4d2-4b9a-8384-7c0bc3f5f3f3
8
```

## Working with a Genymotion Emulator

You can use BPM and Mobile Center with Genymotion to emulate activity on Android operating systems. For details, see [Working with emulators](#) in the Mobile Center help.

# BPM Real Device Monitoring Best Practices

## *Recommended naming conventions in BPM*

The location name should contain all the parameters that you want to differentiate in each location. For example, if you are monitoring different devices and multiple carriers in the same city, you should include the carrier and device name in the location name. For example **LosAngeles\_Verizon\_GalaxyS4**.

# Connecting to Mobile Center over a Secure Connection

Mobile Center allows you to work in secure environments using SSL and to apply certificates when necessary. If Mobile Center is working in a secure environment, import the SSL certificate to the BPM machine:

1. Install SSL certificates on the BPM machine. For details, search for "Install SSL certificates" in [https://admhelp.microfocus.com/mobilecenter/en/2.60/Content/Resources/\\_TopNav/\\_TopNav\\_Home.htm](https://admhelp.microfocus.com/mobilecenter/en/2.60/Content/Resources/_TopNav/_TopNav_Home.htm).
2. Export the certificate from the browser:
  - a. In a browser, open the Mobile Center site.
  - b. In the address bar, click on the Lock icon and save the certificate to a local drive.
3. Open a Command Prompt and run the following import commands:

```
cd C:\HP\BPM\JRE\bin
```

```
keytool -import -trustcacerts -keystore "C:\HP\BPM\JRE\lib\security\cacerts" -storepass <password> -noprompt -alias mc -file <certificate location>
```

**Example:**

```
keytool -import -trustcacerts -keystore "C:\HP\BPM\JRE\lib\security\cacerts" -storepass changeit -noprompt -alias mc -file C:\Temp\mcCertificate.cer
```

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