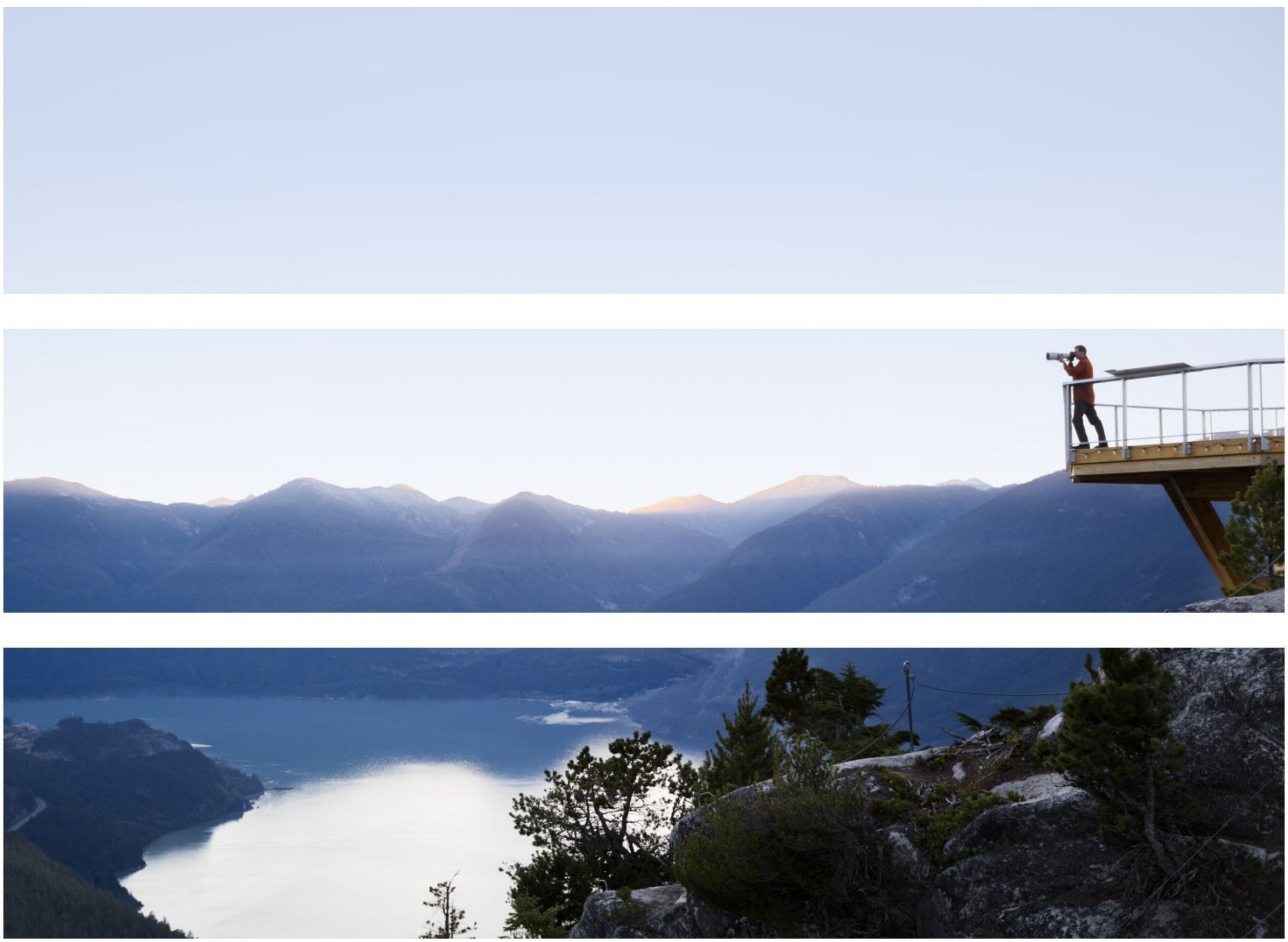
Hewlett Packard
Enterprise

Application Performance Management

Version 9.40, Released August 2017

Getting Started With BPM - Best Practices

Published August 2017



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Contents

Chapter 1: Introduction

This section introduces the Getting Started With BPM - Best Practices and includes the following topics:

- "Scope and Motivation" below
- "Why Use BPM?" below

Scope and Motivation

Business Process Monitor (BPM) is one of the HPE Application Performance Management (APM) data collectors. BPM proactively monitors enterprise applications in real time, identifying performance and availability problems before users experience them. It enables you to monitor sites from various locations, emulating the end-user experience, and so assess site performance from different client perspectives.

The purpose of this document is to provide BPM users with an understanding of how to deploy BPM quickly and correctly, and how to realize value in a short time.

The target audience for this guide is customers who are new implementers of BPM, or HPE partners who already have APM knowledge, but are new to BPM. While no deep networking/encryption knowledge is needed, you will need to know the protocol and encryption used by the monitored application.

Why Use BPM?

BPM should be used to gather data during inactive hours of the users, so you will be able to detect problems before a real user encounters them. In addition, BPM is the basic monitor for building SLAs, because it has the same transaction monitored at the same time intervals.

Chapter 2: Installing BPM

The following provides instructions for installing BPM.

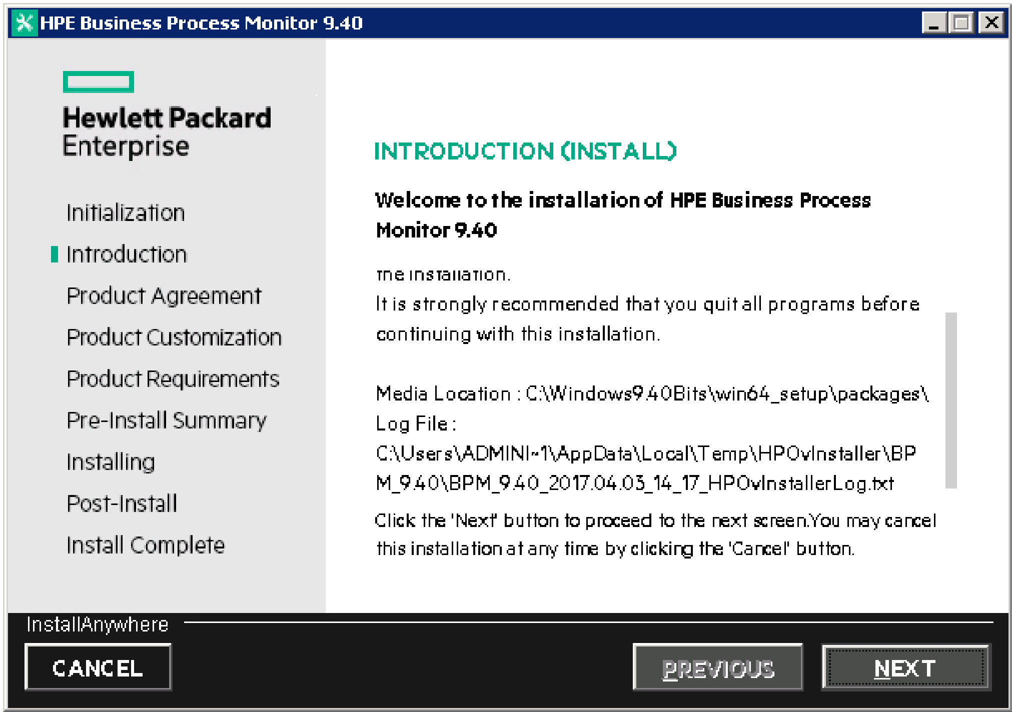
Before beginning the installation, verify that you have minimum requirements. For details, see the Business Process Monitor Deployment Guide.

1. Download the BPM setup file from the HPE SMTA web site:
   a. Go to the HPE SMTA web site (http://prssc.int.hpe.com/smta/smta.cgi) and sign in.
   b. Next to **Release Name**, select **APM0930** and click **Search**.
   c. Download the required zip file:

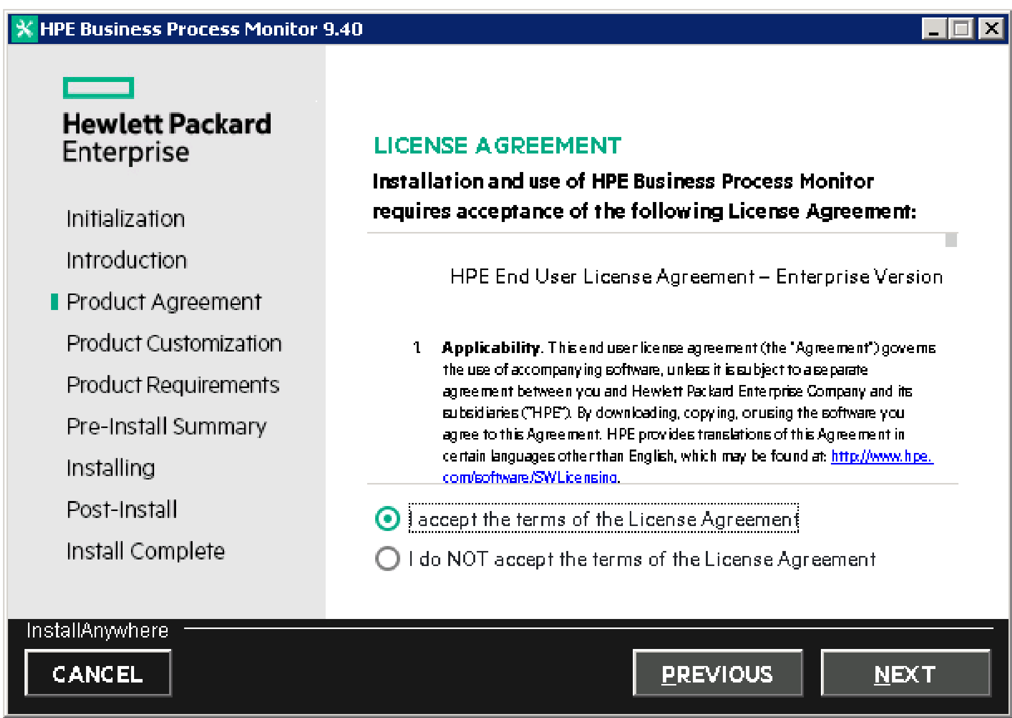
      HPE_Business_Process_Monitor_9.30_Windows_x64_Setup.zip

      HPE_Business_Process_Monitor_9.30_Linux_x64_Setup.zip
2. Save the file under: C:\Temp.
3. Click the executable installation file. The BPM Setup wizard appears.
4. In the first screen, select your language and click **OK.**

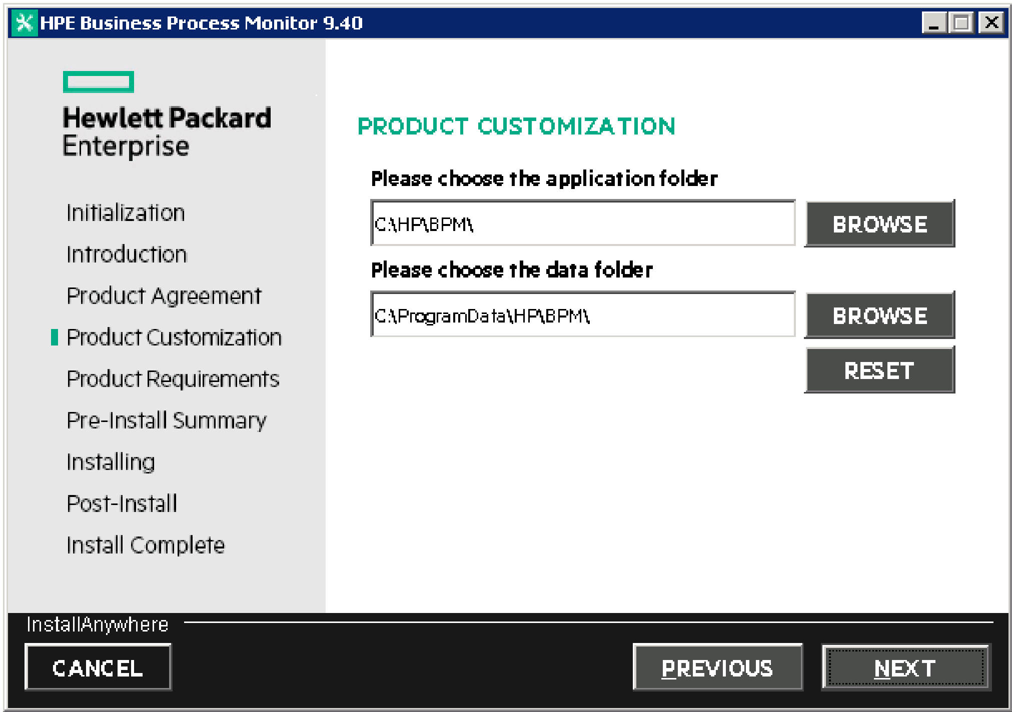
5. In the Introduction screen, read the introduction text and click **Next**.



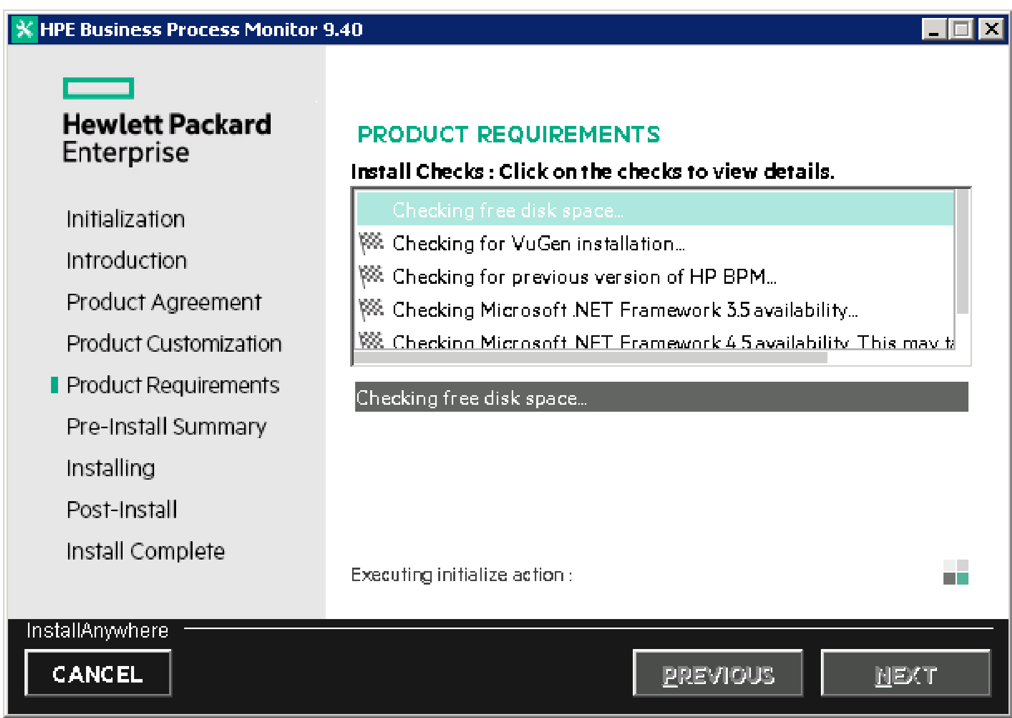
6. In the Product Agreement screen, accept the license agreement and click **Next**.



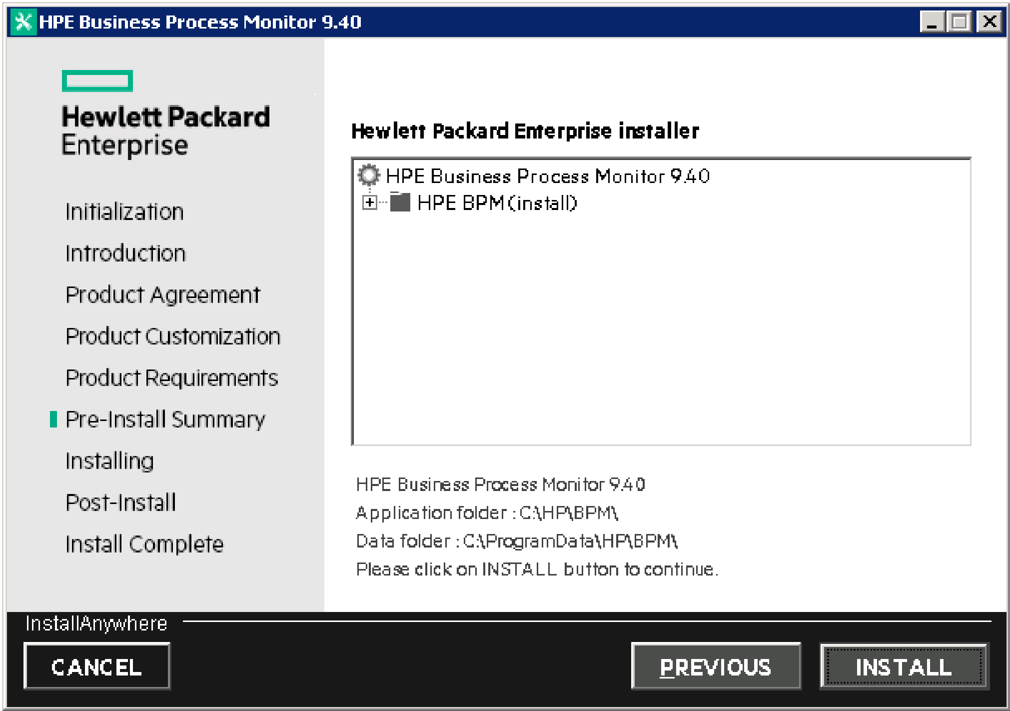
7. In the Product Customization screen, accept the default folders or browse to and select the application and data folders and click **Next**.



8. In the Product Requirements screen, verify that there is enough disk space for the installation and click **Next**.



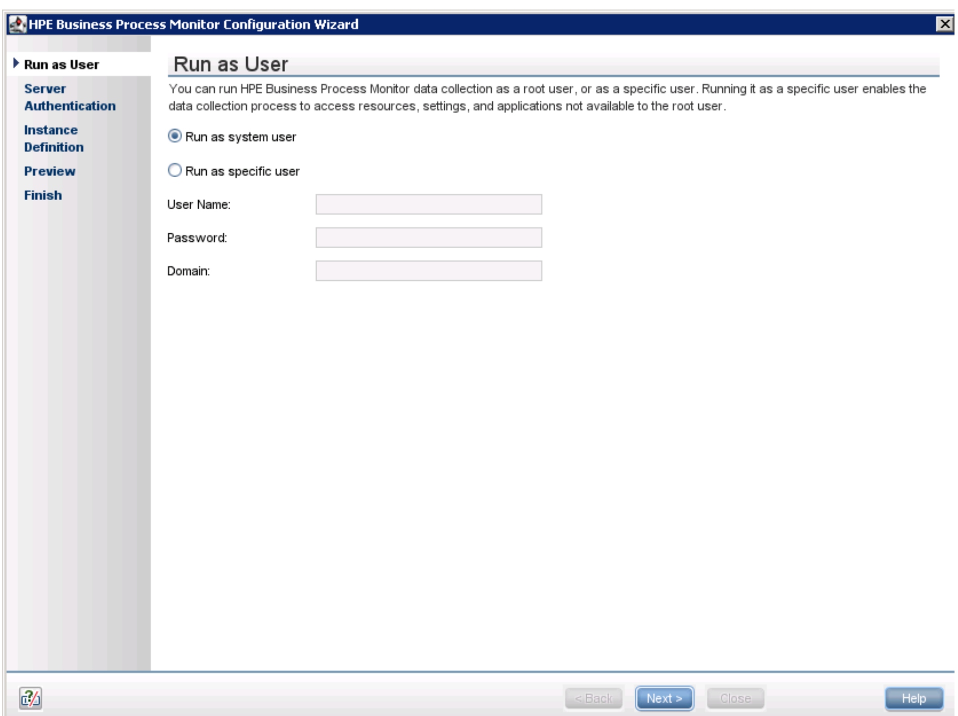
9. In the Pre-Install Summary screen, verify that the application and data folder paths are correct and click **Install**.



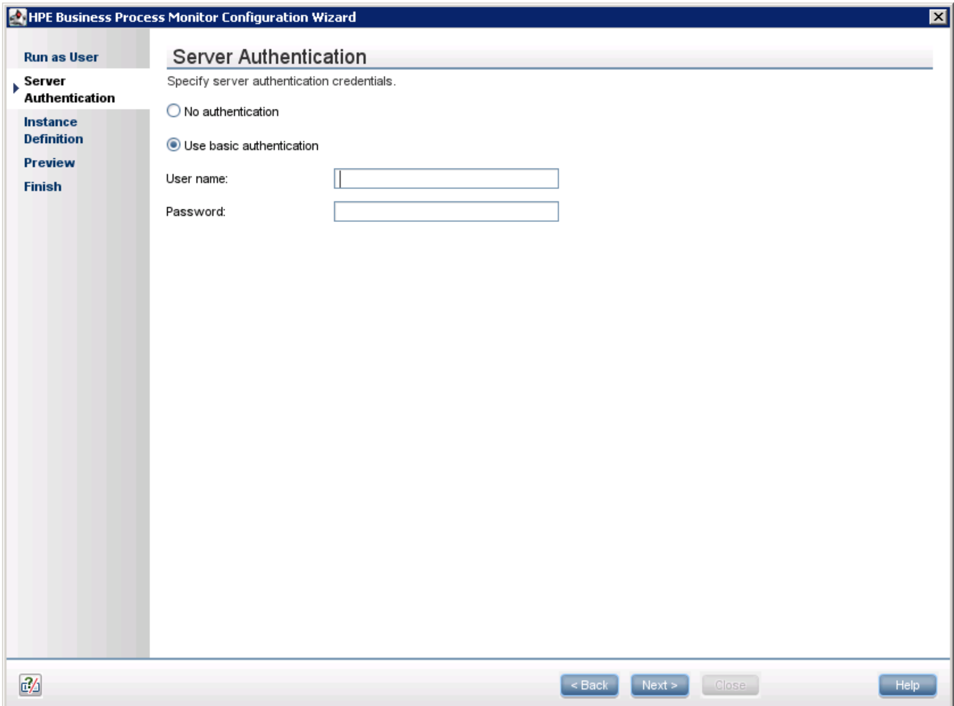
The Installing screen appears.

The BPM Configuration wizard is automatically launched after the setup program installed the BPM application.

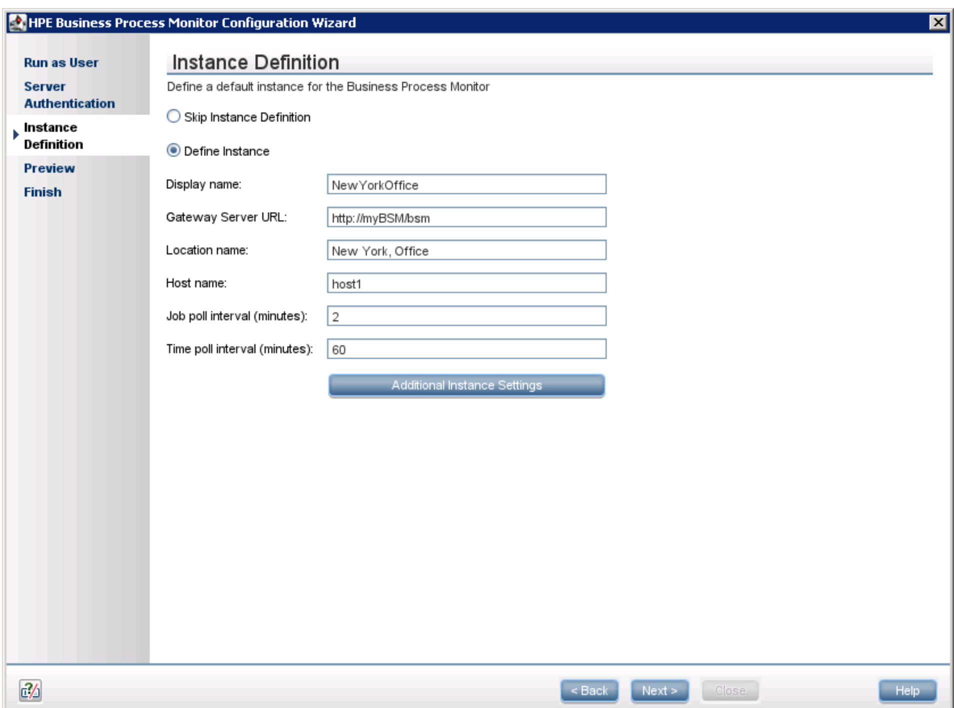
10. In the Run as User screen of the BPM Configuration Wizard, configure the BPM data collection to run as a system user, or as a specific user. Running it as a specific user limits access to resources, settings, and applications located on the local machine. (This may not be true for resources located on remote machines, where a specific user may have different privileges than the local system user.)



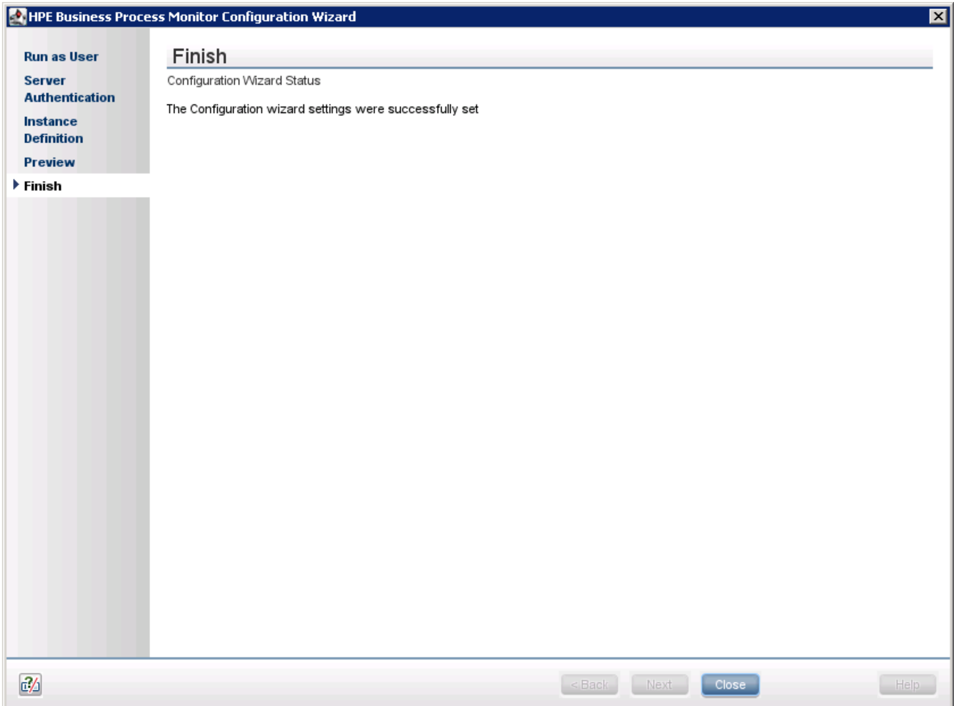
11. If your APM gateway server is protected, in the Server Authentication screen, select **Use basic authentication** and enter your APM user name and password.



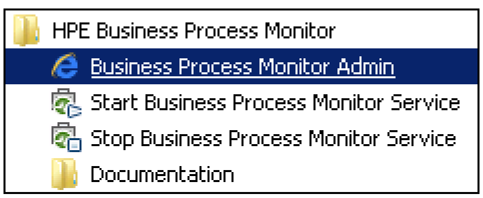
12. In the Instance Definition screen, select **Define Instance** and type your APM details. The Location name is used for script assignment, so give it a meaningful name (for example, New York, Office).



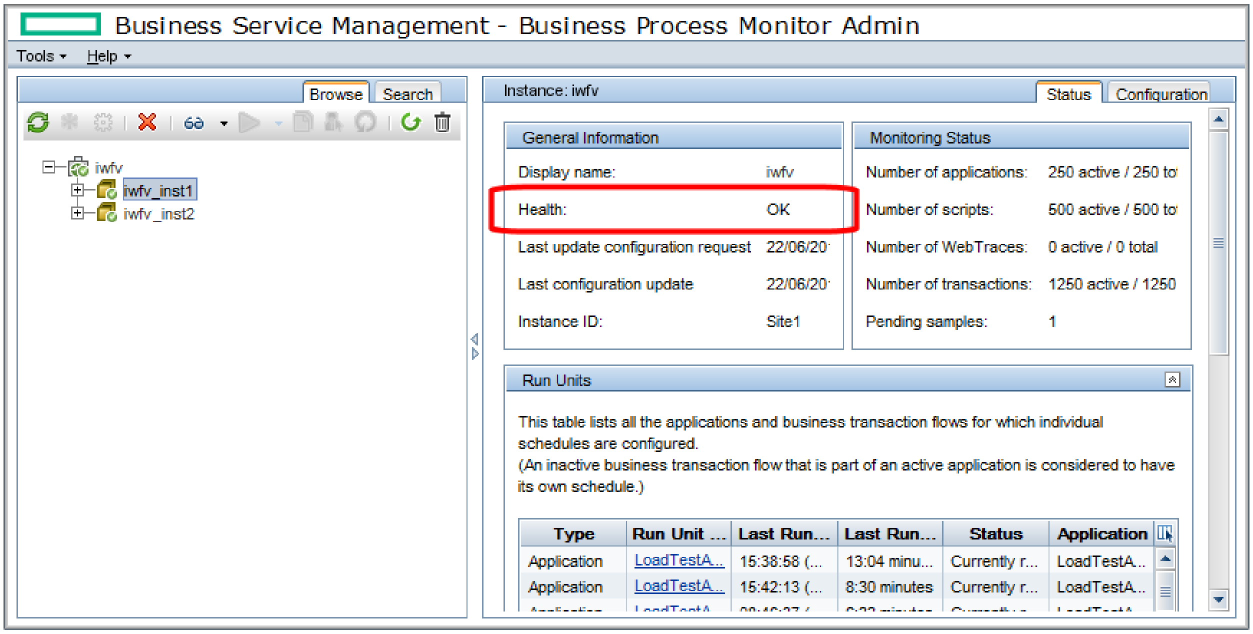
13. When the Finish screen appears, click **Close**.



14. In Windows, select **Start > Programs > HPE Business Process Monitor > Business Process Monitor Admin** (or in an internet browser, access **http://<local host>:2696/**).

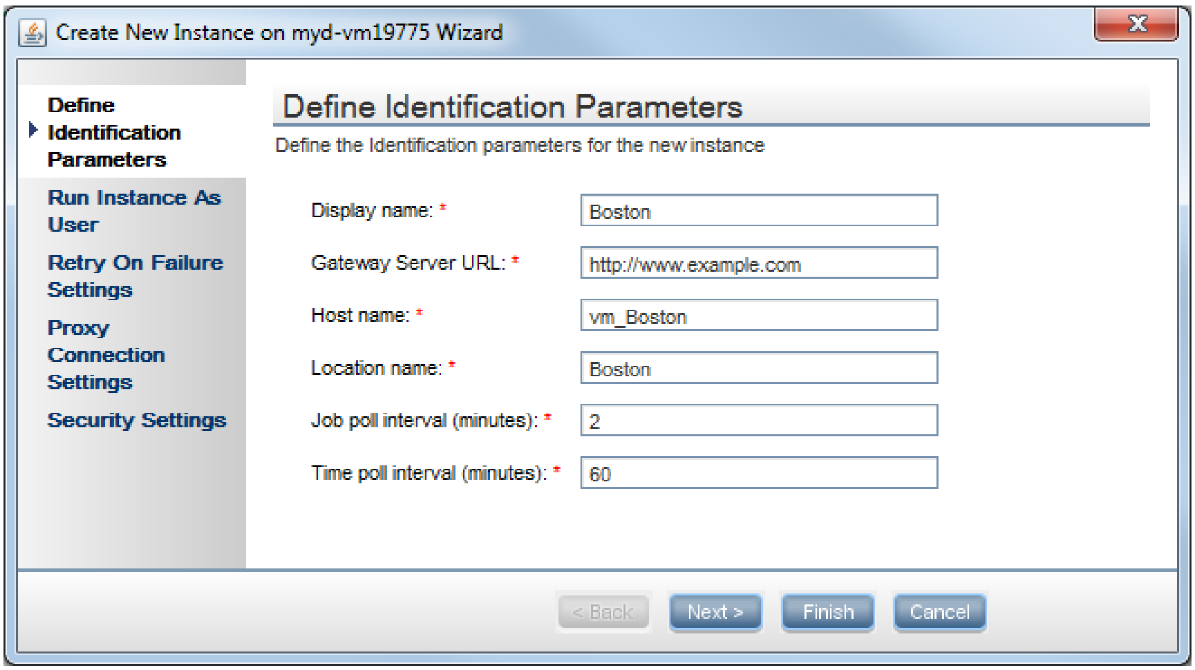


15. Verify that your instance connected successfully by checking the Health value in the General Information page.

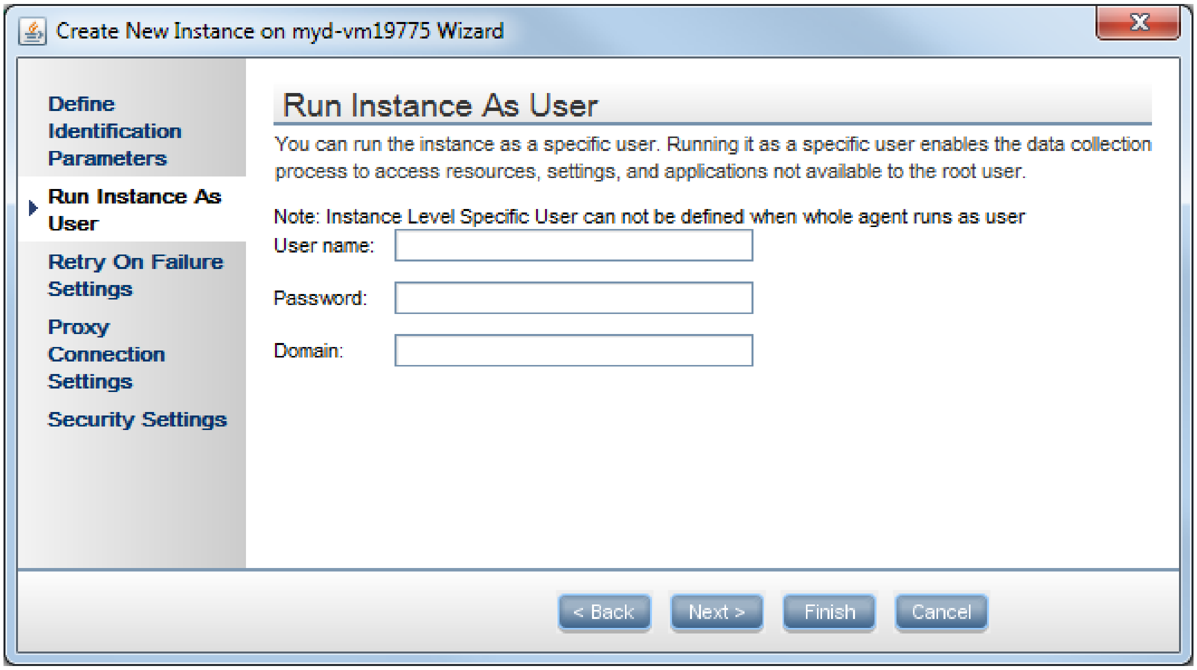

Business Service Management - Business Process Monitor Admin
Tools
Help
Browse
Search
iwfv
iwfv_inst1
iwfv_inst2
Instance: iwfv
Status
Configuration
General Information
Display name: iwfv
Health: OK
Last update configuration request 22/06/20
Last configuration update 22/06/20
Instance ID: Site1
Monitoring Status
Number of applications: 250 active / 250 to
Number of scripts: 500 active / 500 to
Number of WebTraces: 0 active / 0 total
Number of transactions: 1250 active / 1250
Pending samples: 1
Run Units
This table lists all the applications and business transaction flows for which individual schedules are configured.
(An inactive business transaction flow that is part of an active application is considered to have its own schedule.)
Type
Run Unit ...
Last Run...
Last Run...
Status
Application
Application LoadTestA... 15:38:58 (... 13:04 minu... Currently r... LoadTestA...
Application LoadTestA... 15:42:13 (... 8:30 minutes Currently r... LoadTestA...

Chapter 3: Connecting BPM to APM

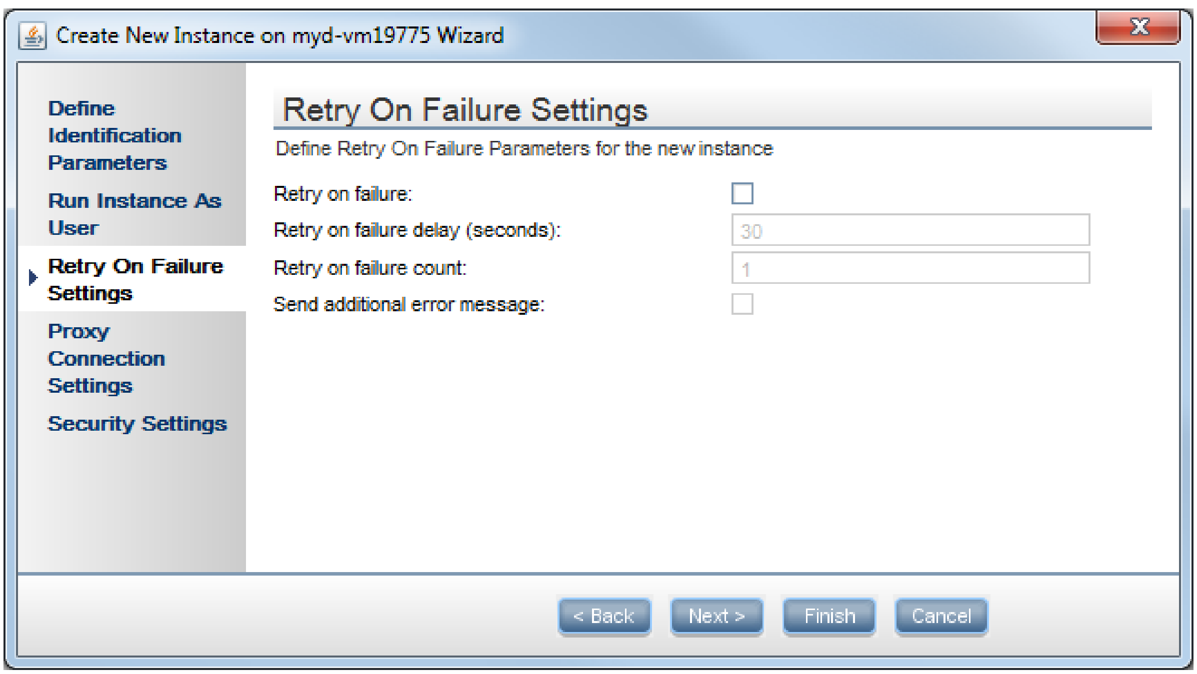
1. From your internet browser, access **http://<local host>:2696/**. The BPM application appears.
2. Click the Create New Instance button . The Create New Instance Wizard appears.
3. In the Define Identification Parameters screen, define the identification parameters for the new instance. All fields are mandatory. Make sure you can access the Gateway Server URL from the BPM machine. The Location name is used for script assignment, so give it a meaningful name (for example, Boston, Office).



4. Click **Next**. The Run Instance as User screen appears.



5. If you need to run the instance as a specific user, enter the user name, password and domain. Leave these values blank if you do not need to run the instance as a specific user.
6. Click **Next**. The Retry on Failure screen appears.



7. The Retry on Failure setting enables you to control how BPM responds when a script fails. If a script fails, this may be caused by a temporary problem not related to the script, for example a temporary network or Internet error. When this option is enabled, if a script fails the first attempt, BPM attempts again. Only the last attempt is displayed in BPM reports.

   Enter the following information:

- **Retry on Failure:** Select this option to activate the Retry on Failure option.

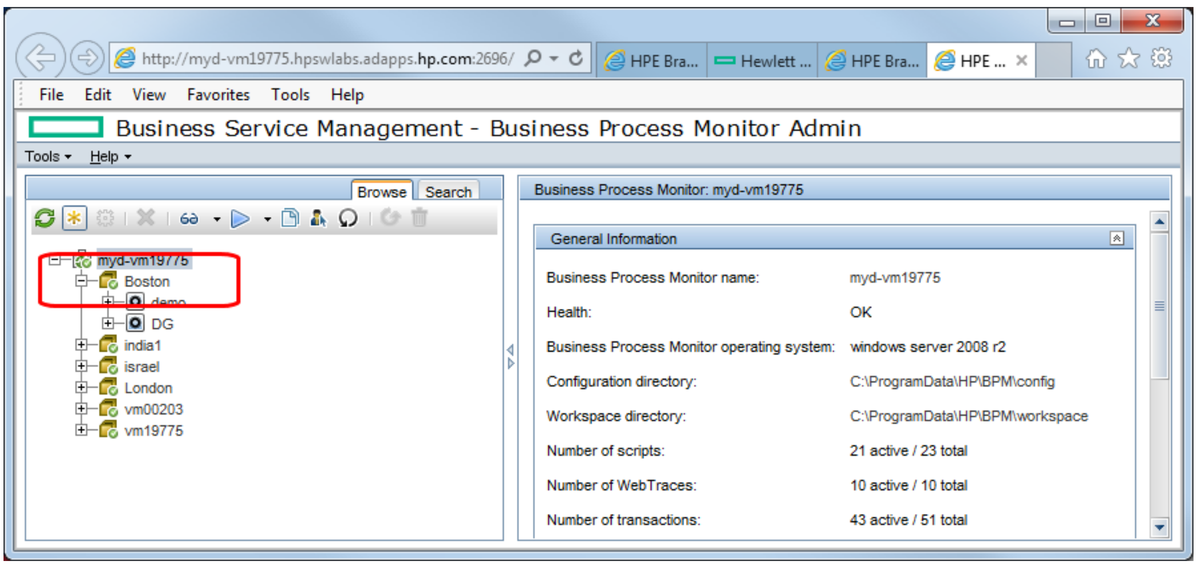
- **Retry on failure delay:** The number of seconds to wait before retrying. Note that a long failure delay may cause the application to skip a scheduled run.

- **Retry on failure count:** The maximum number of attempts to retry the script before the script is defined as "Failed".

- **Send additional error message:** Select this option to include the number of attempts in the failure error message.

8. If required, click **Next** to set the proxy connection and security settings, or click **Finish** to close the wizard.
9. Refresh your browser and verify that BPM successfully connected to your APM.
10. If your Gateway Server URL is not accessible from your BPM machine, or if you need a proxy, an error message appears. If this occurs, click the **Configuration** tab, reconfigure the details, and click **Save**.

    If you successfully connected, the following status appears.

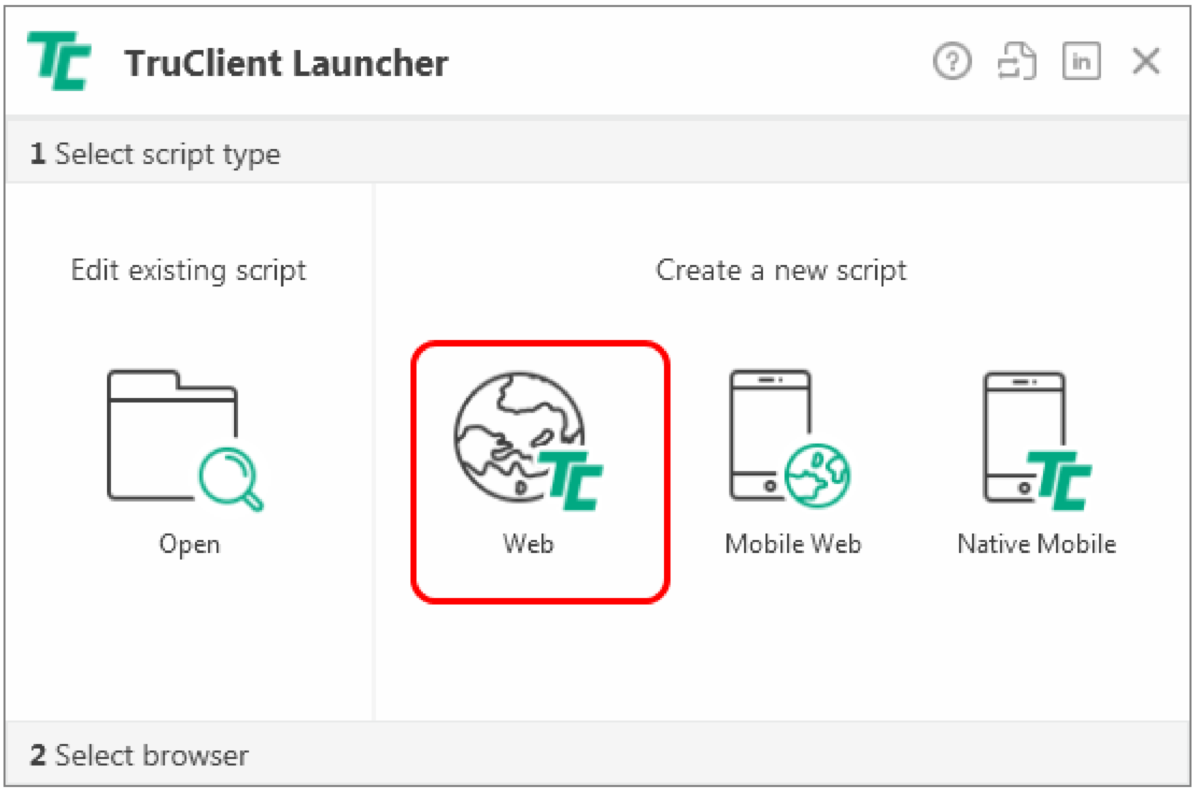


Chapter 4: Creating Scripts in TruClient

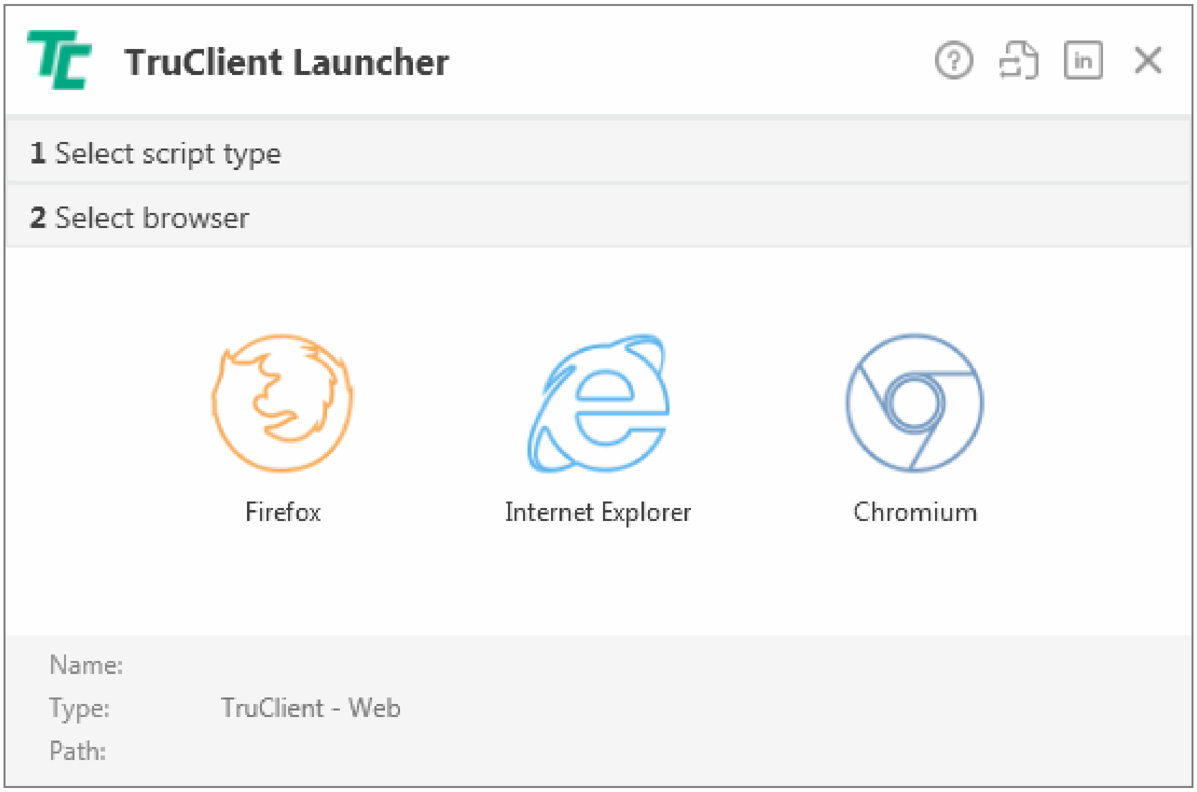
Note: If you are using script services from other team members or companies, you can download the Business Process Template for BPM Scripting Requests from the HPE Software Support site (https://softwaresupport.hpe.com) to define your script requirements.

You can create scripts using the standalone version of TruClient.

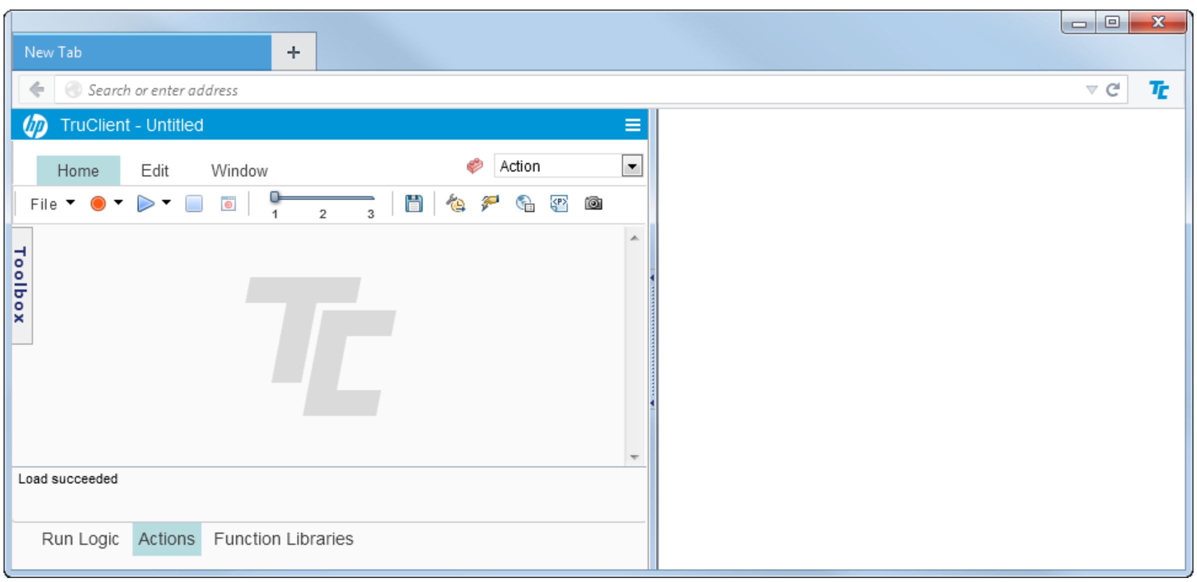
1. Open TruClient and create a new script of type **Web**.

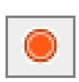


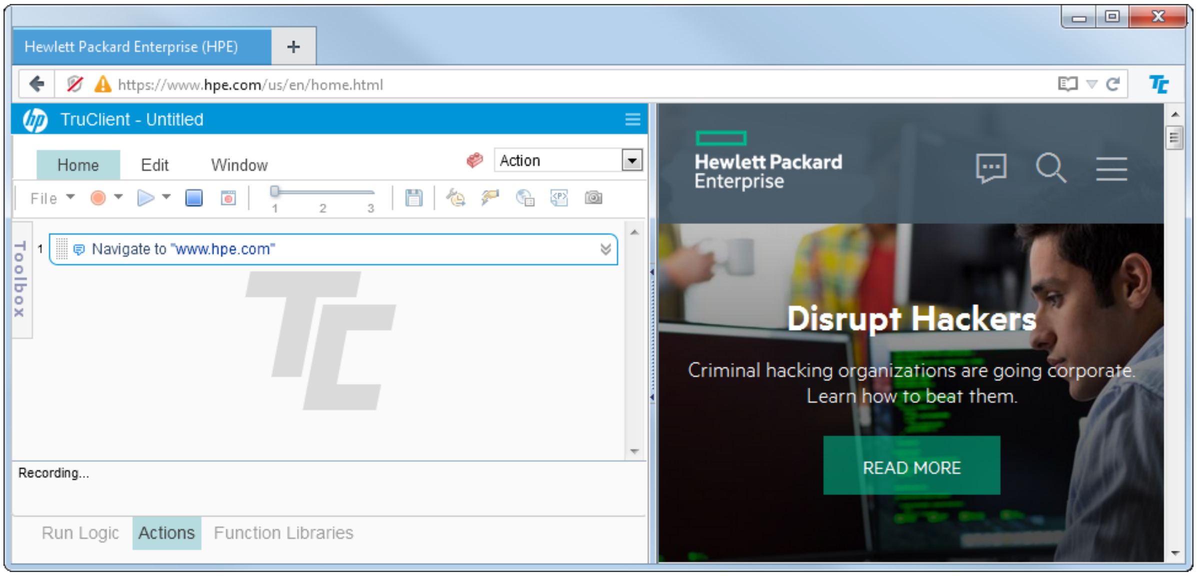
2. Select a browser.

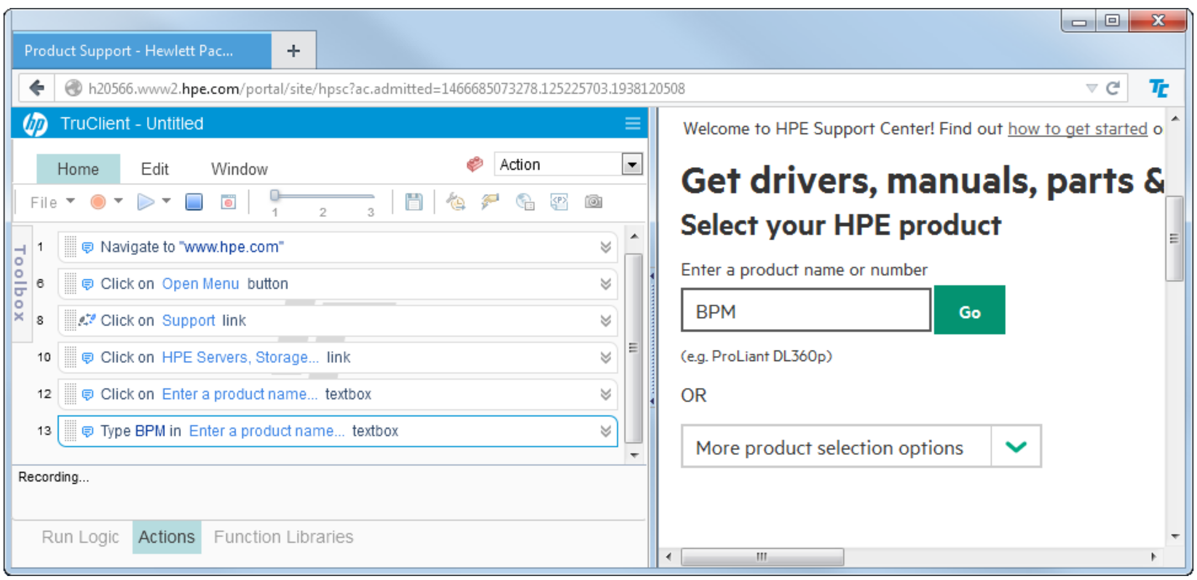


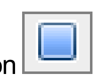
TruClient opens the selected browser with the TruClient Toolbox docked in the browser window.



3. Click the Start Recording button  to record browser activity.
4. In the browser address bar, type the address of your web application. Each action you perform is indicated by a recording event in the TruClient add-in.

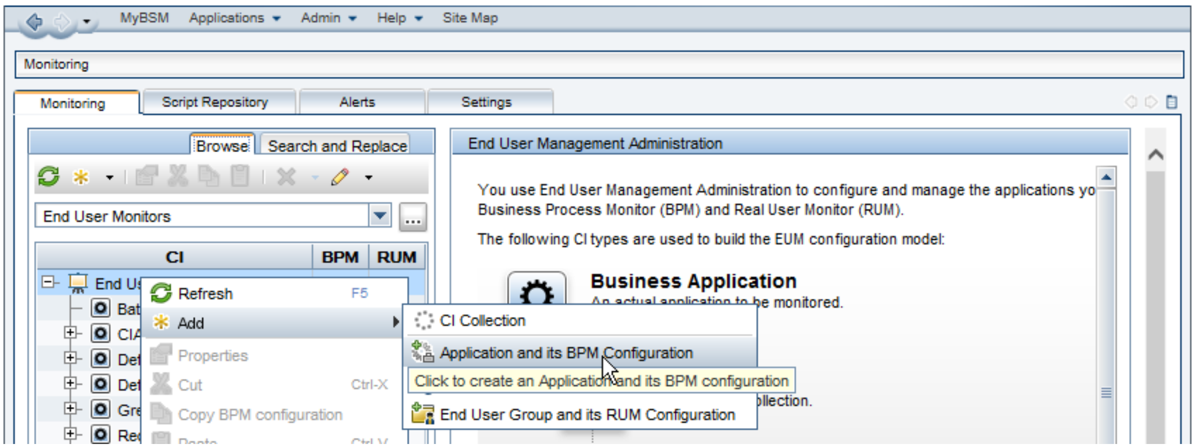




5. After completing the required browser activity, click the Stop button  to stop recording.
6. Select **File** > **Save Script** and save the script as a *.usr file.
7. Use additional TruClient functionality to modify the script. For details see the TruClient documentation.
8. When you have completed the script, select **File** > **Export to Zip (Runtime only)** to create a zip file that can be imported into APM.

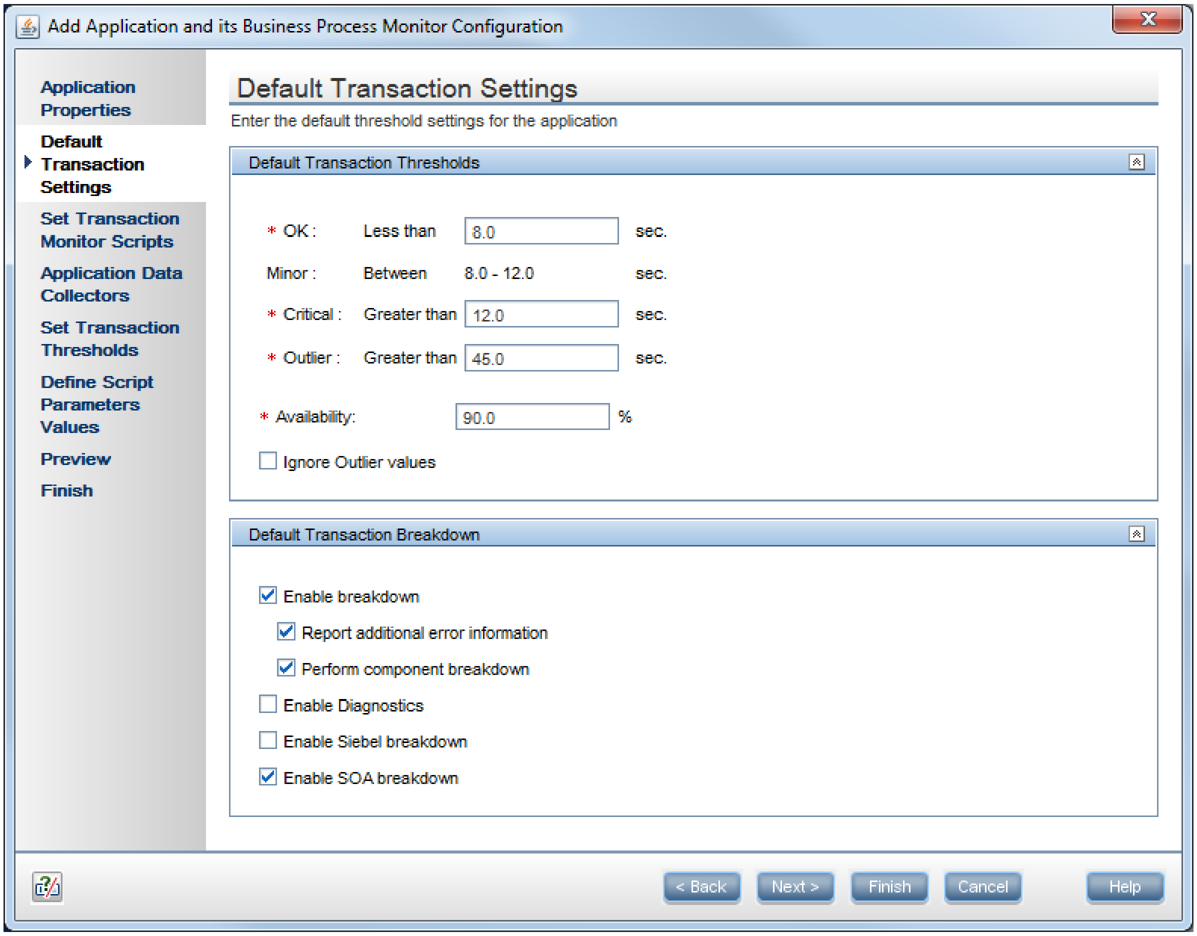
Chapter 5: Creating Business Applications

1. In APM, select **Admin > End User Administration > Monitoring**.
2. Right-click **End User Management** (default view) and select **Add > Application and its BPM Configuration**.

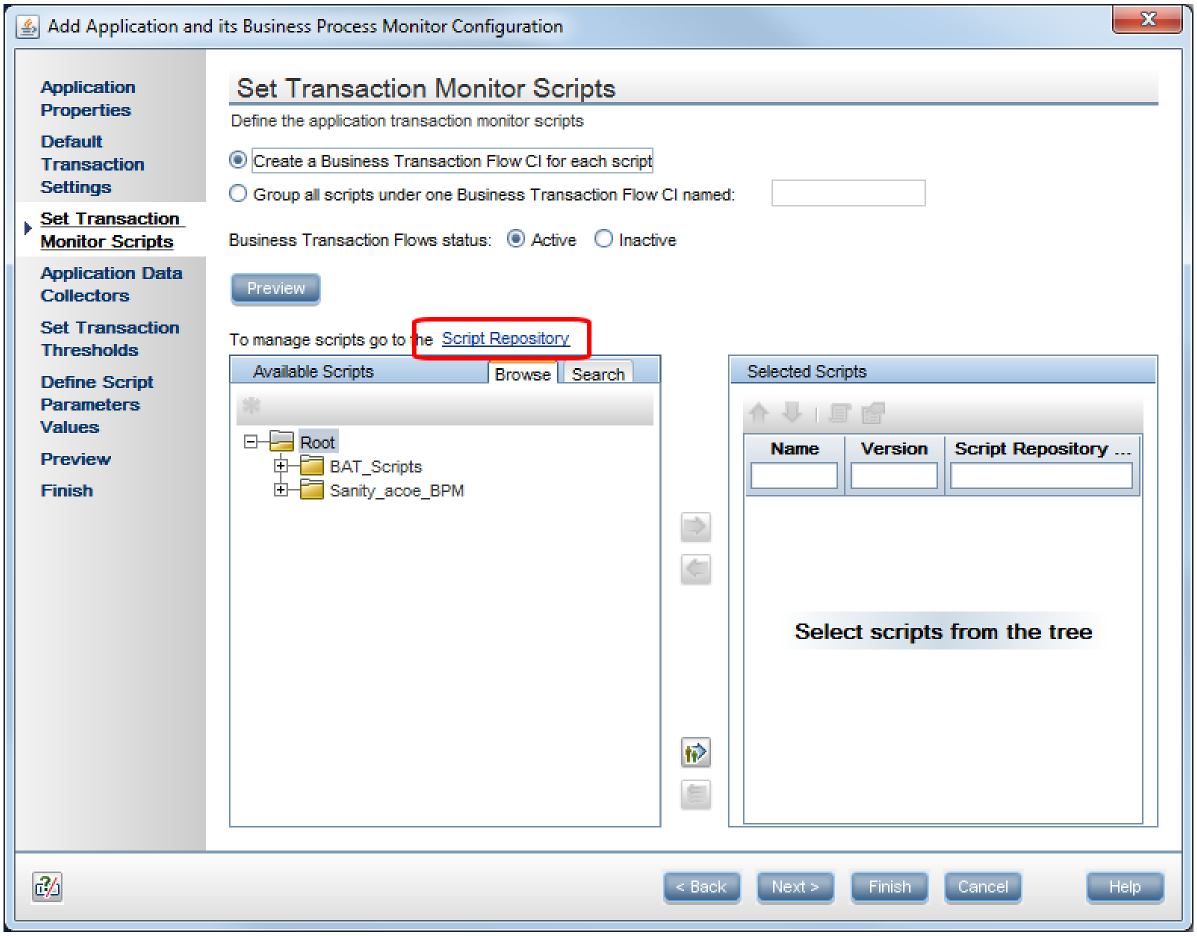


3. In the Default Transaction Settings screen, define your transaction settings for performance monitoring.

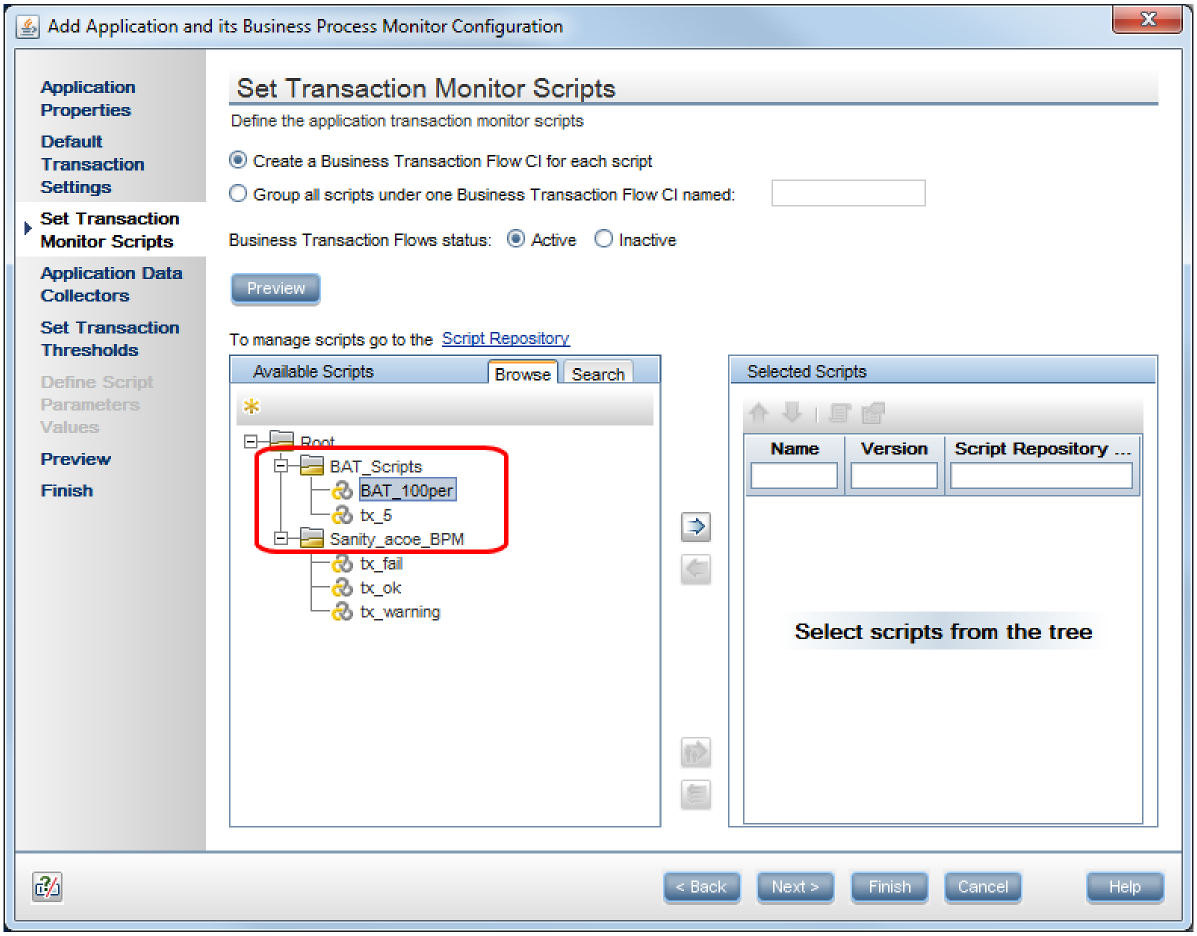
> **Note:** You can wait to define these settings after you determine your application's expected behavior.



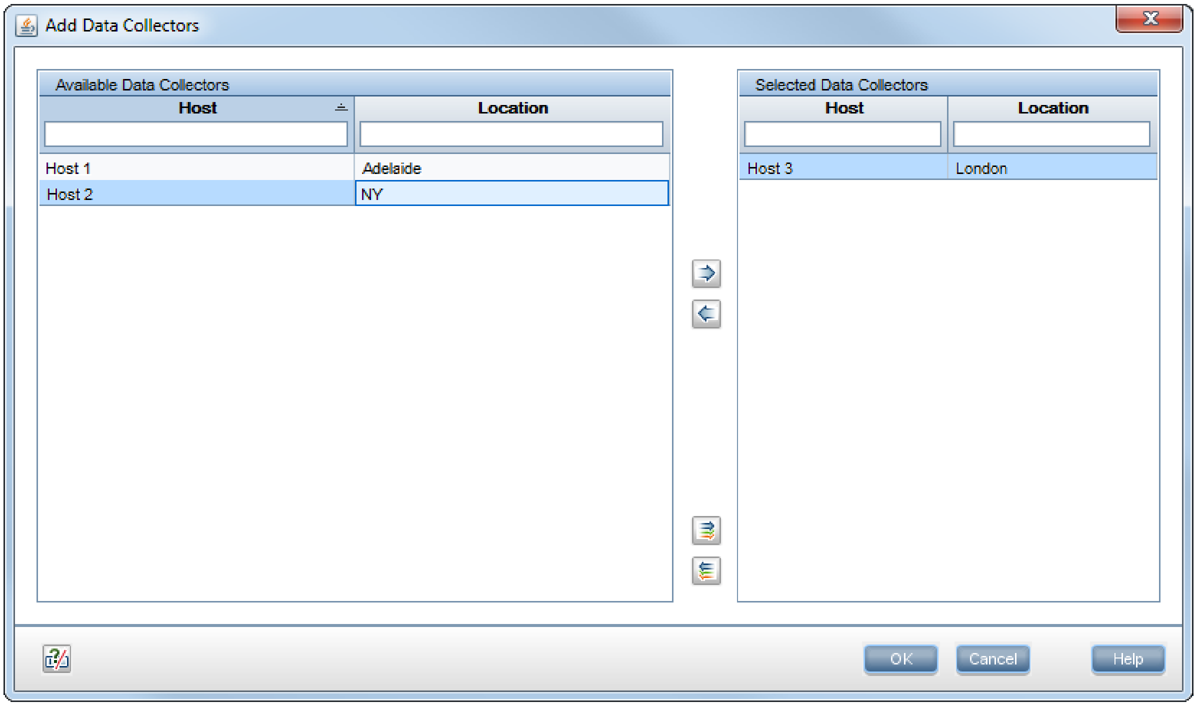
4. In the Set Transaction Monitor Scripts screen, click **Script Repository** to view the scripts in the repository.



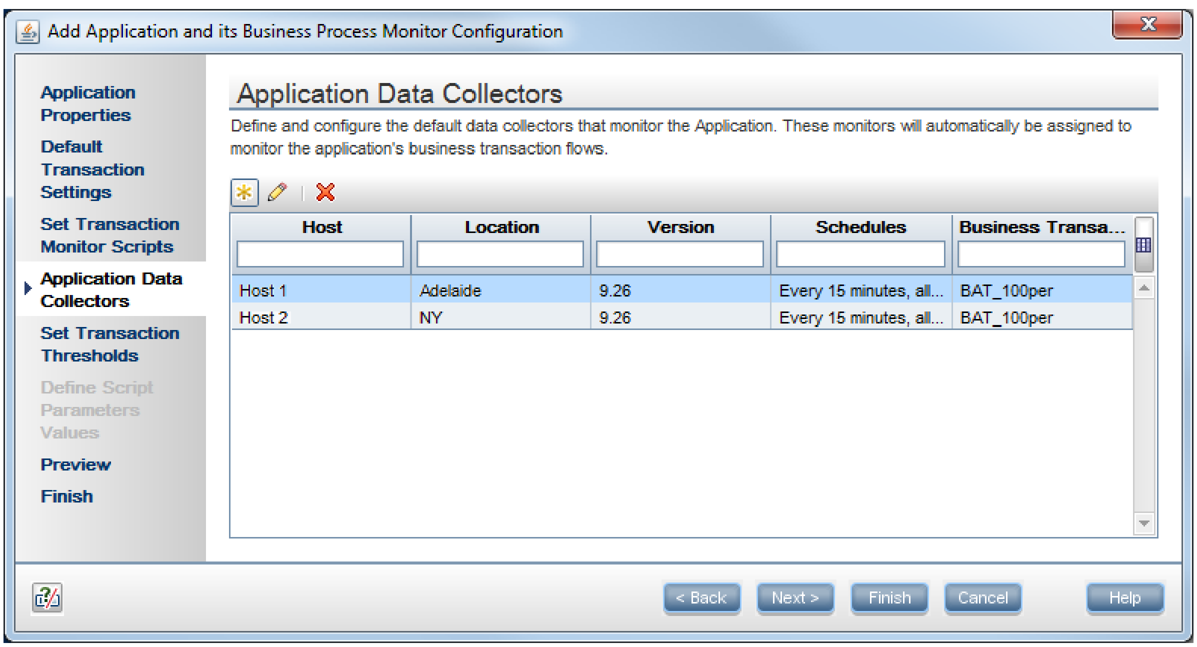
5. To select a script, double-click the script in the Available Scripts tree.



6. In the Application Data Collectors screen, click .
7. In the Add Data Collectors screen, assign the data collectors to a location.



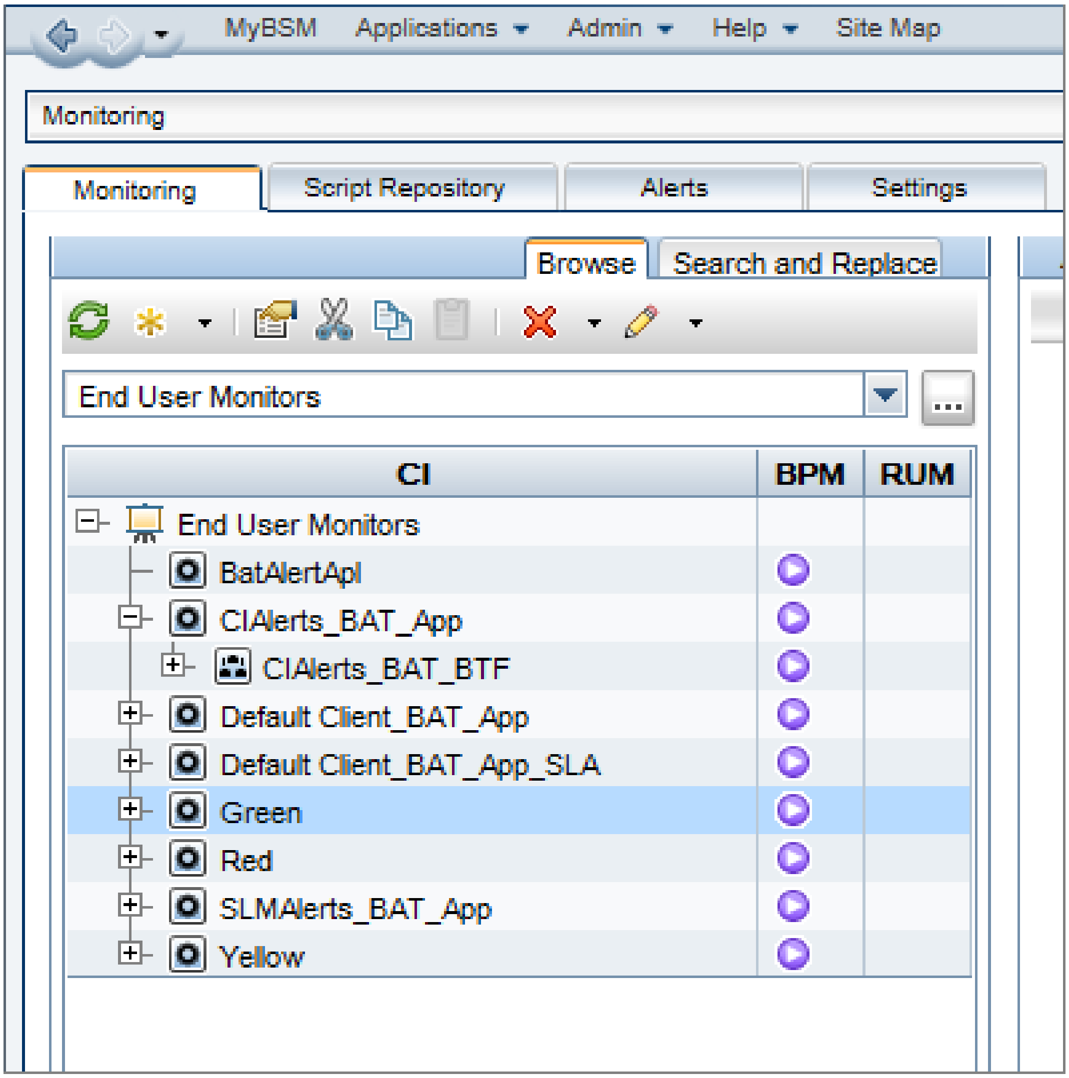
8. In the Application Data Collectors screen, edit the schedule for each location, or leave the default value (every 15 minutes).



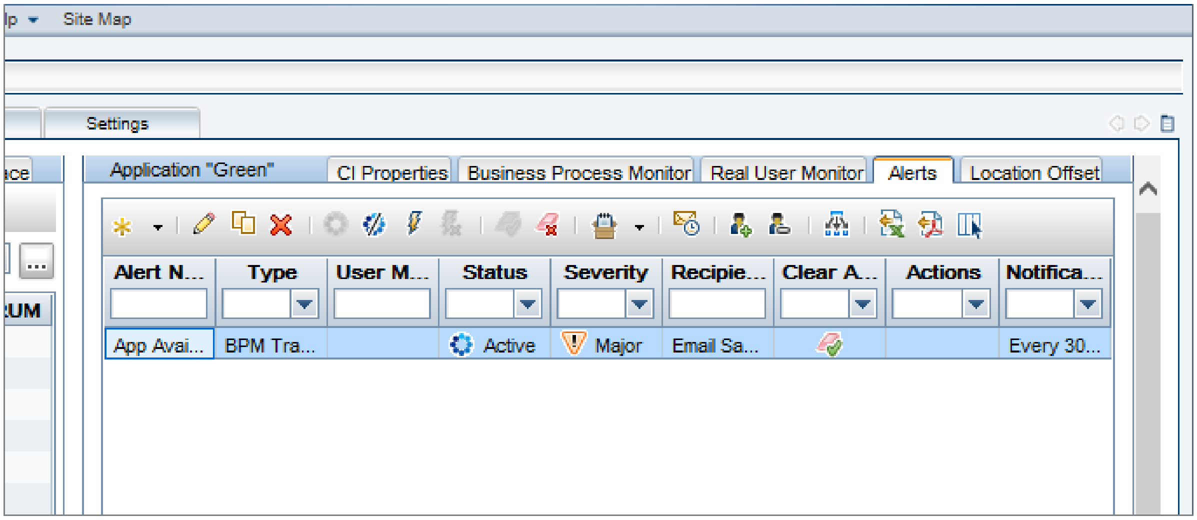
9. After reviewing your settings, click **Finish** and your script will start to run. It can take up to 20 minutes to see the first data point, depending on BPM's scheduled jobs.

Chapter 6: Configuring Alerts

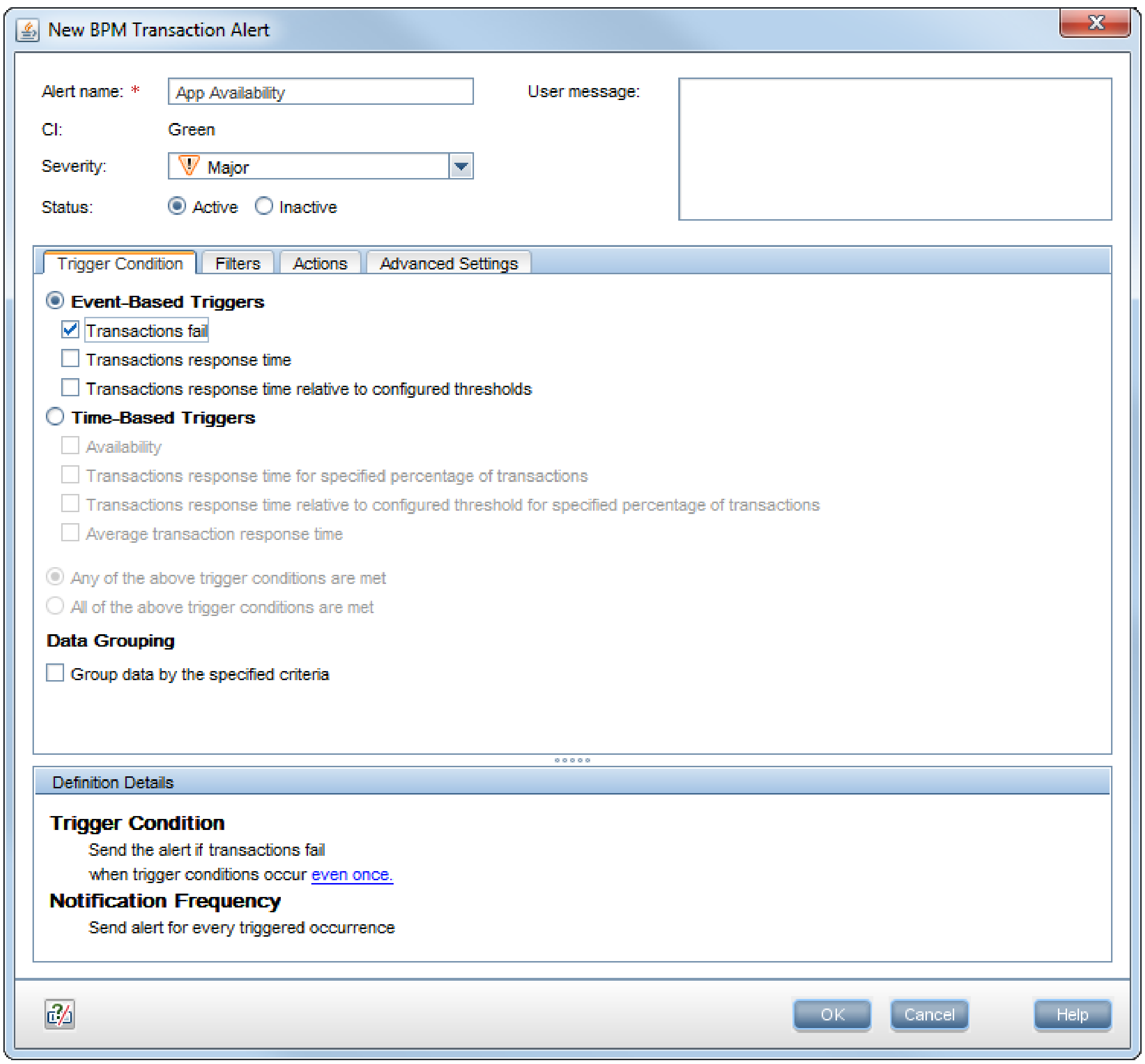
1. In APM, Select **Admin** > **End User Management**.
2. In the **Monitoring** tab, select your application.



3. Open the **Alerts** tab in the right pane and double-click on an existing alert, or click  to create a new alert.



4. Click the **Trigger Condition** tab.

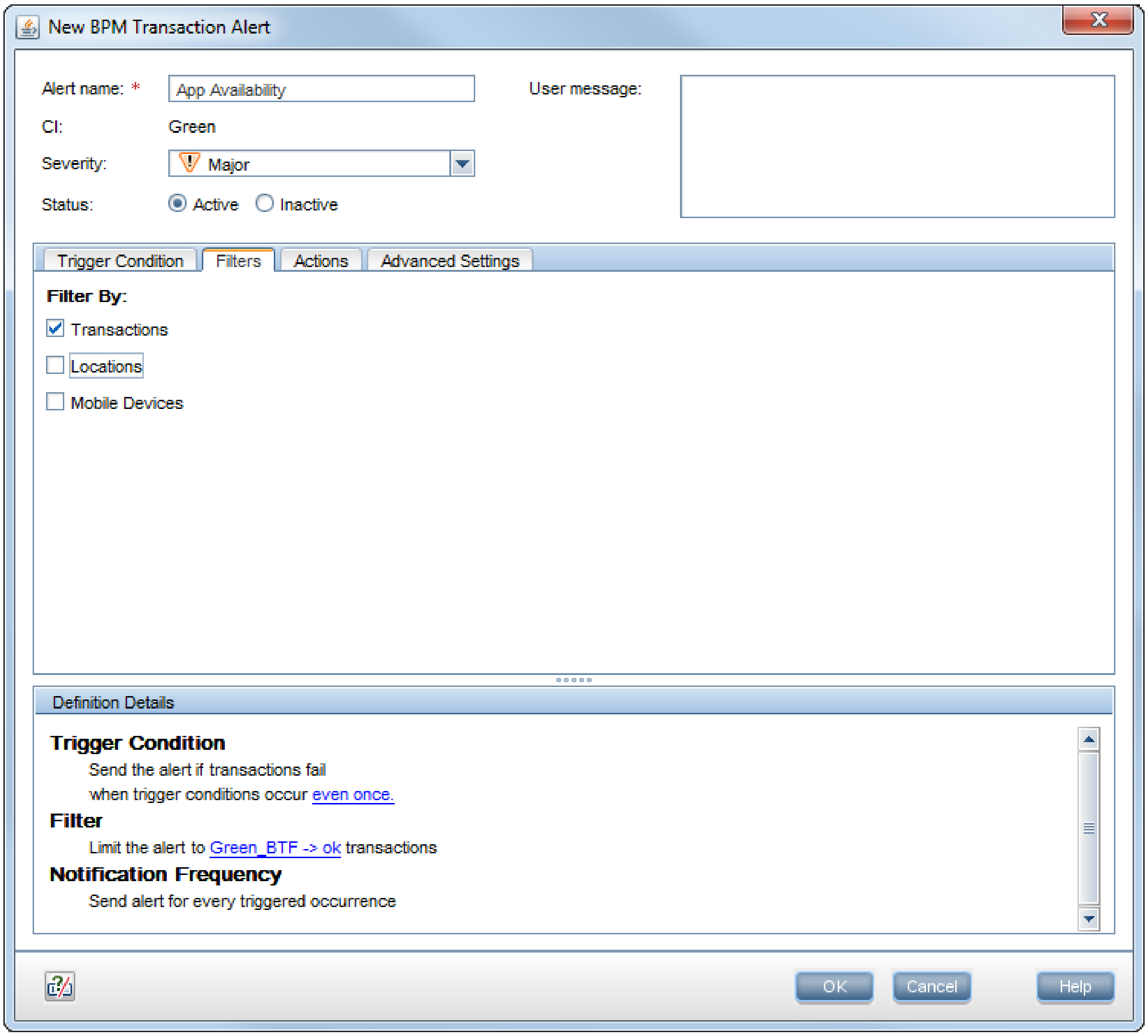


5. In the **Alert name** field, type a meaningful name for the alert. In Outlook, you will be able to filter your

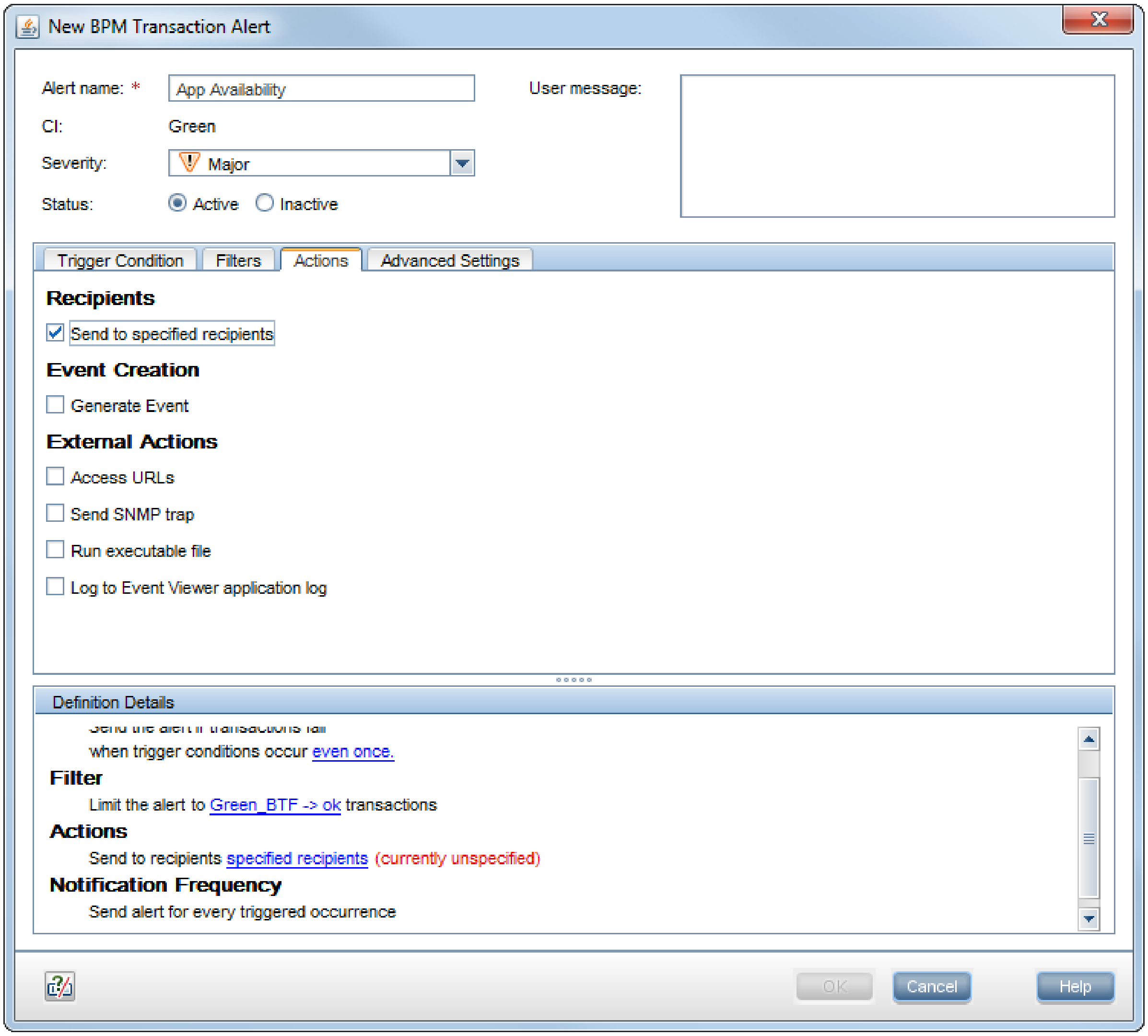
alerts by this name.

> **Note:** The contents of the **Severity** field is for internal use. The trigger criteria is set according to the number of locations you have, and the frequency of the monitor runs. If you have four locations around the word, and if two subsequent runs fail, then a real problem alert is indicated and false alerts are ignored.

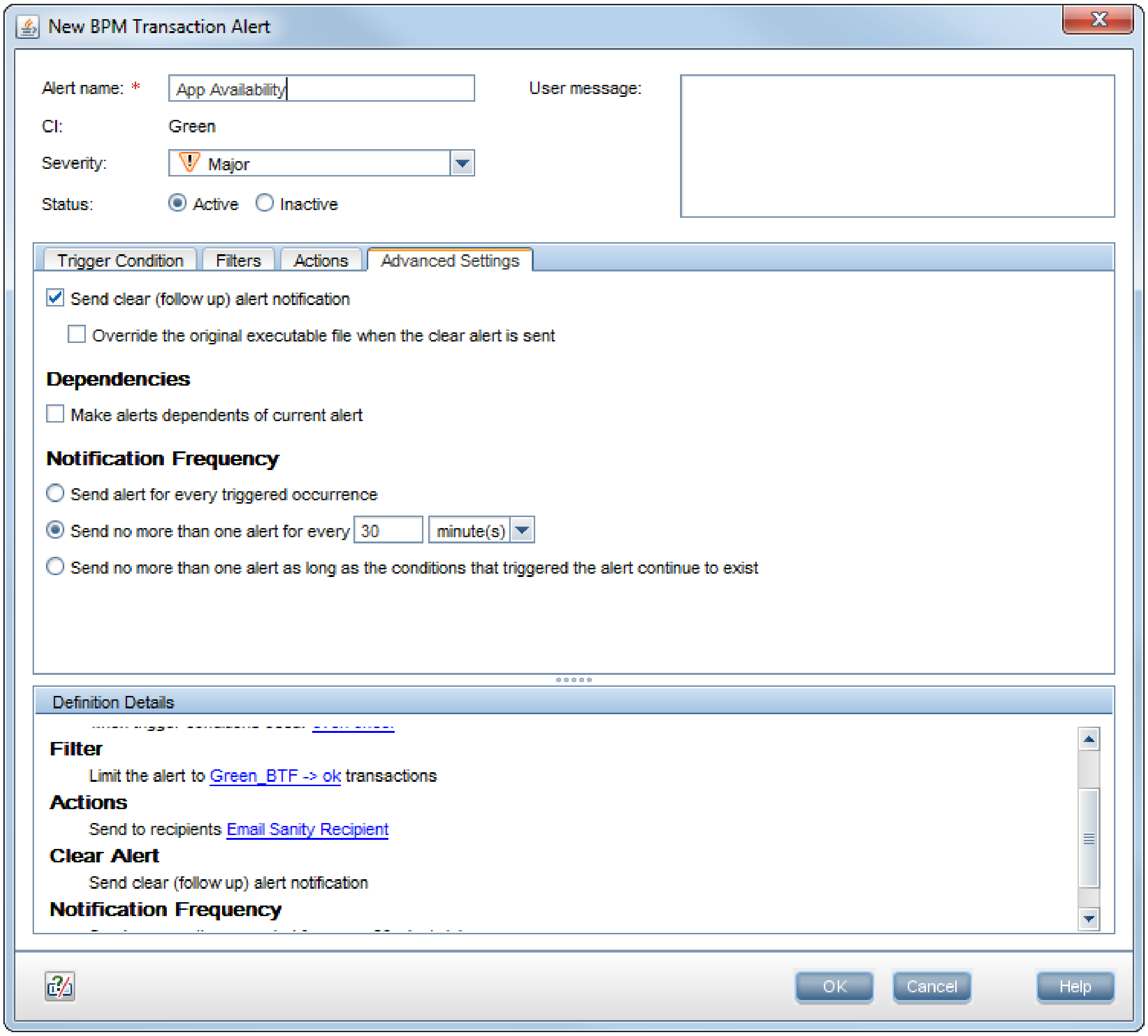
6. Click the **Filters** tab.



7. Select the relevant transactions by which to filter the alert.
8. Click the **Actions** tab.



9. Select the **Send to specified recipients** option and in the Definition Details area, click **specified recipients** and select the required recipients.
10. Click the **Advanced Settings** tab.



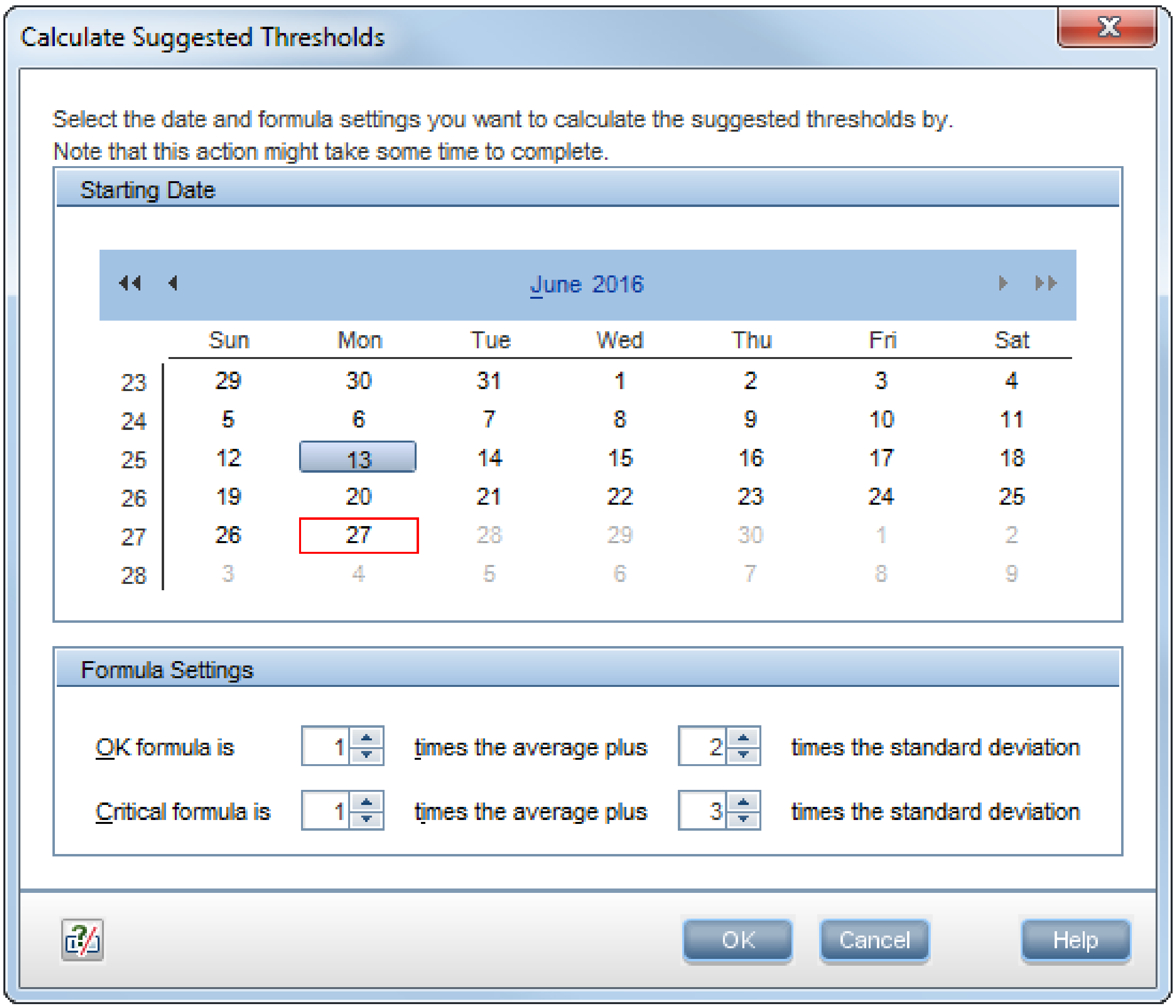
11. To send an alert when the trigger condition clears, click the **Send clear (follow up) alert notification** option.

12. To limit the number of alerts that are sent, click the **Send no more than one alert for every** option and enter the time period.

Chapter 7: Configuring Transaction Thresholds

In APM there are three methods for setting performance transaction thresholds:

- **Manual** – Provides full control of the transaction thresholds
- **Semi-automatic** – Utilizes the Calculate Suggested Thresholds tool which provides static thresholds based on a specific time period.



- **Automatic** – Provides automatic threshold baselines

In order to get accurate results, take into account that each location has different thresholds. You can set a different threshold for each transaction location.

To create threshold baselines for Business Process Monitor, you first need to activate a general key to enable this feature. Then you adapt the thresholds for each application. We recommend that you create the thresholds one at a time in order to ensure that the results are accurate. You can then add the results to your best practices.

For more information, see the Business Process Monitor Administration Guide which is available for download from the HPE Software Support site: https://softwaresupport.hpe.com.

Chapter 8: Viewing Data in APM

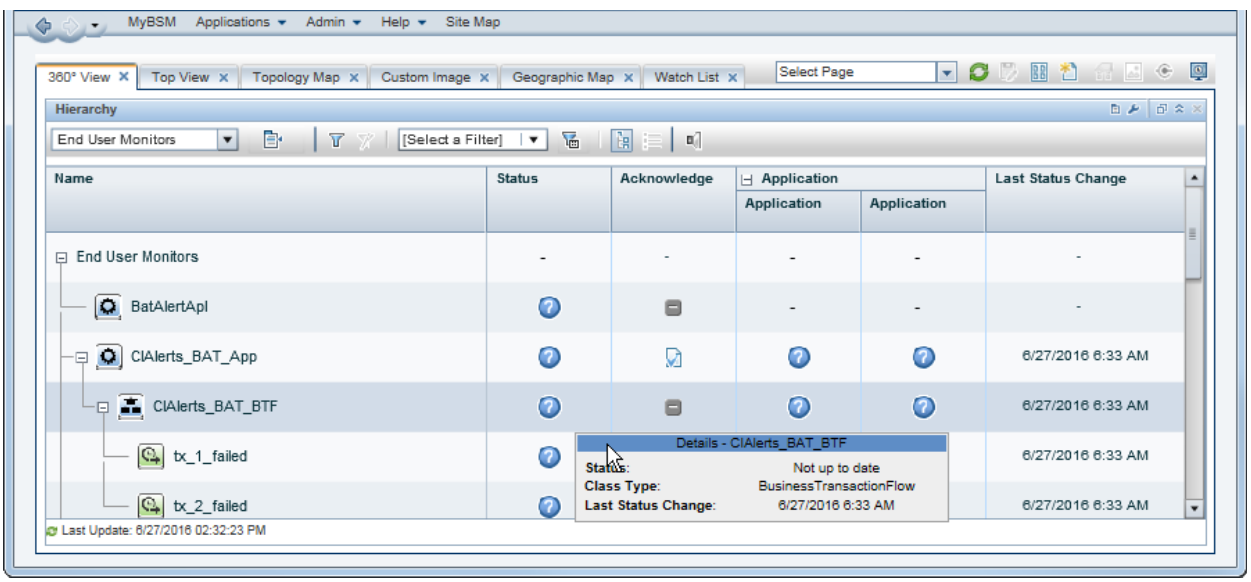
You can view your monitored application data by accessing the 360° View in System Health or by running the BPM Performance Over Time report.

Viewing Data in Service Health

The BPM checks if there is a new configuration every 2 minutes. If you schedule your script to run an application every 15 minutes, the first data point arrives within 17 minutes.

If a script fails, a red icon  appears near the relevant transaction CI, You need to fix the script, and upload it again.

1. In APM, click **Application > Service Health > 360° View**.
2. Under **Hierarchy**, select **End User Monitors**.
3. In the **Name** column, click the application to expand it. The latest monitored data is displayed.



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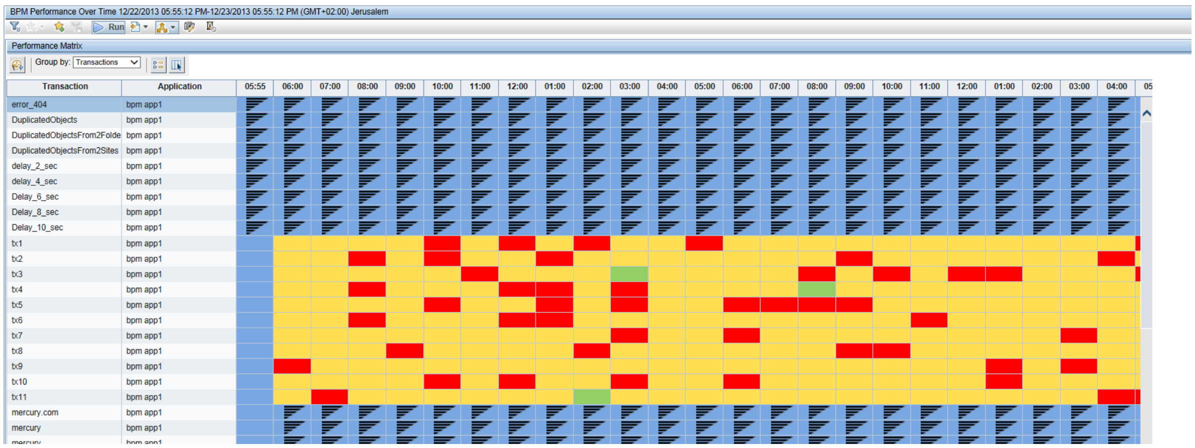
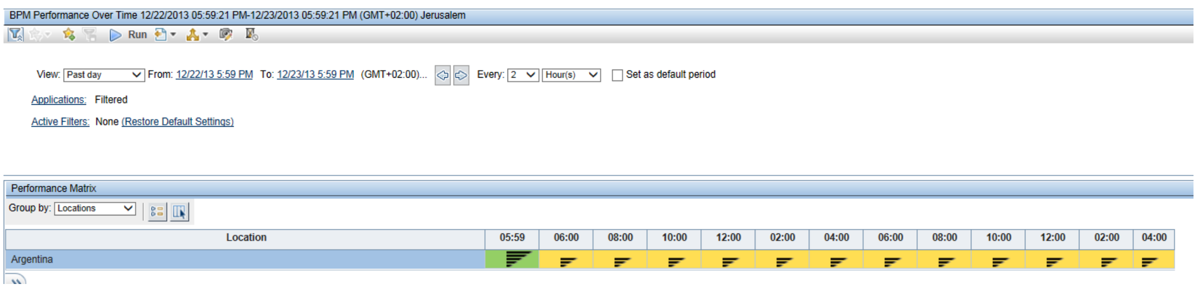
Viewing Data in BPM Performance Over Time Report

You can view your data in the BPM Performance Over Time report. This is one of the most important reports for BPM monitoring. The BPM Performance Over Time report displays a flat view of the data for all your BPM applications and transactions.

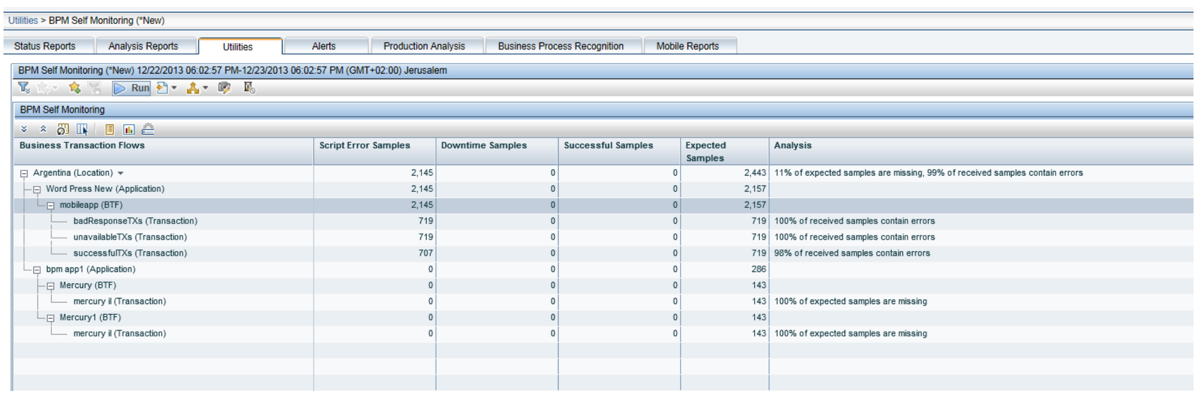
1. In APM, click **Applications > End User Management > Analysis Reports > BPM Performance Over Time**.
2. In the **Application Filter**, select your application.
3. Click **Run**.



4. To verify that all your BPMs are reporting, in the **Group by** field, select **Location.**The report displays our BPM data and you can determine if all you BPMs are reporting data as expected.



5. To view an advanced report that summarizes all data collection problems, in APM, click **Applications > Utilities > BPM Self Monitoring**. The BPM Self Monitoring report displays valuable information about your BPM health based on the data that is expected to arrive.

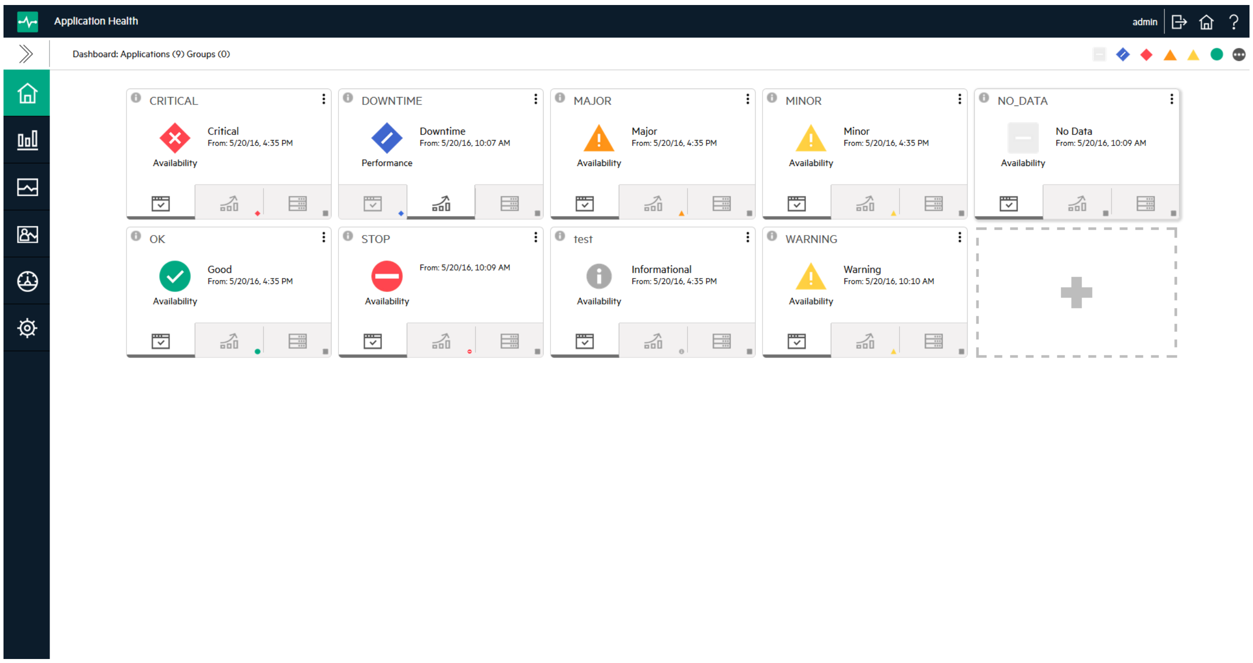


Business Transaction Flows	Script Error Samples	Downtime Samples	Successful Samples	Expected Samples	Analysis
Argentina (Location)	2,145	0	0	2,443	11% of expected samples are missing, 99% of received samples contain errors
Word Press New (Application)	2,145	0	0	2,157	
mobileapp (BTF)	2,145	0	0	2,157	
badResponseTXs (Transaction)	719	0	0	719	100% of received samples contain errors
unavailableTXs (Transaction)	719	0	0	719	100% of received samples contain errors
successfulTXs (Transaction)	707	0	0	719	98% of received samples contain errors
bpm app1 (Application)	0	0	0	286	
Mercury (BTF)	0	0	0	143	
mercury il (Transaction)	0	0	0	143	100% of expected samples are missing
Mercury1 (BTF)	0	0	0	143	
mercury il (Transaction)	0	0	0	143	100% of expected samples are missing

Viewing Application Health Reports

Application Health includes Business Process Monitor reports which enable you to monitor the performance, availability, and volume of your applications' health.

To access Application Health, in APM select **Applications > Application Health> Business Process Monitor (****)**.



Application Health includes the following Business Process Monitor reports:

Status Over Time Report

The Status Over Time report shows a summary of all synthetic transactions and all locations in an application, and their status over time.

Location Isolation Report

The Location Isolation report shows the availability or performance status of an application by location. Locations are sorted by severity and the worst five locations are included in the report's graph by default. You can select additional locations from the list on the left of the graph.

You can filter the list by transaction by selecting the required transactions from the dropdown list above the list of locations.

You can select whether to view data based on *Availability* or *Performance*. At the bottom of the report there is a timeline with icons to indicate when alerts were recorded. This timeline includes all alerts recorded by the system, including alerts in locations not currently displayed.

Transaction Isolation Report

The Transaction Isolation report shows the availability or performance status of an application's transactions, for selected locations. The transactions are sorted by severity and the worst five transactions are included in the report's graph by default.

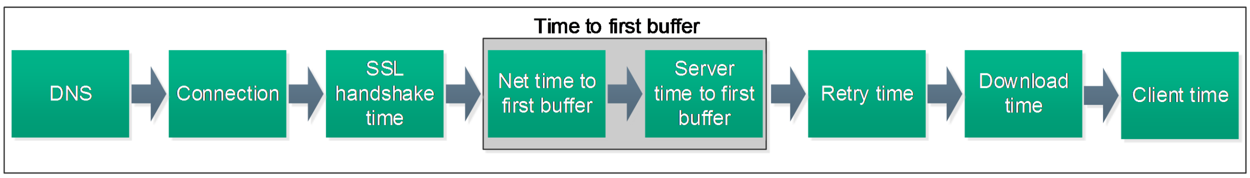
You can select whether to view data based on *Availability* or *Performance*. The timeline at the bottom of the report indicates times when alerts were generated.

You can view the Transaction Isolation report for a time frame of 2 hours, 12 hours, day, week, or month. When viewing data for a day, aggregated data is used except for the last hour, for which raw data is used.

Layer Isolation Report

The Layer Isolation report shows transaction layer response times for selected transactions.

The main transaction breakdown components are as follows:



Component Breakdown Report

The Component Breakdown report displays page component elements as they are loaded into a browser in their exact loading order. Data is displayed in a waterfall format.

This report lists all components in a transaction. For example, a transaction may include several html files, images, and css files. For each component, the report lists the request size and the time it took to complete the request.

Because each page component has its own breakdown bar, the report helps you identify if there are specific components that are problematic or if there is a problem with specific domains or in a network layer.

You can select which transaction components to display. For example, you may want to hide the Connection, DNS, and Retry time so that you can troubleshoot problems during the initial stages of a transaction.

You can filter the report by transaction, location, or sample.

The data displayed on the report corresponds to a time unit on the Component Breakdown report. This is typically an hour or a day. If you are viewing data for more than a day, the report displays the minimum and maximum values for the time frame. To see further details you need to select a specific hour in the Layer Isolation report.

Location Map

The Location Map shows an interactive map that displays the location of synthetic transactions, and their status over time. At the top of the page you can select whether to view data based on *Availability* or *Performance*.

Failure Log

The Failure Log report displays details of error messages for selected locations or transactions. You can filter the report by location or transaction.

For each error, the report displays time, error name, location, transaction, and details of the error message. If the error includes a snapshot, you can open a new tab with an image of the application at the time of the error.

Alert Log

The Alert Log lists all synthetic alerts (alerts generated by BPM), for a single transaction, over the selected time frame. This report includes both Availability and Performance alerts.

Viewing Data in Scheduled Reports

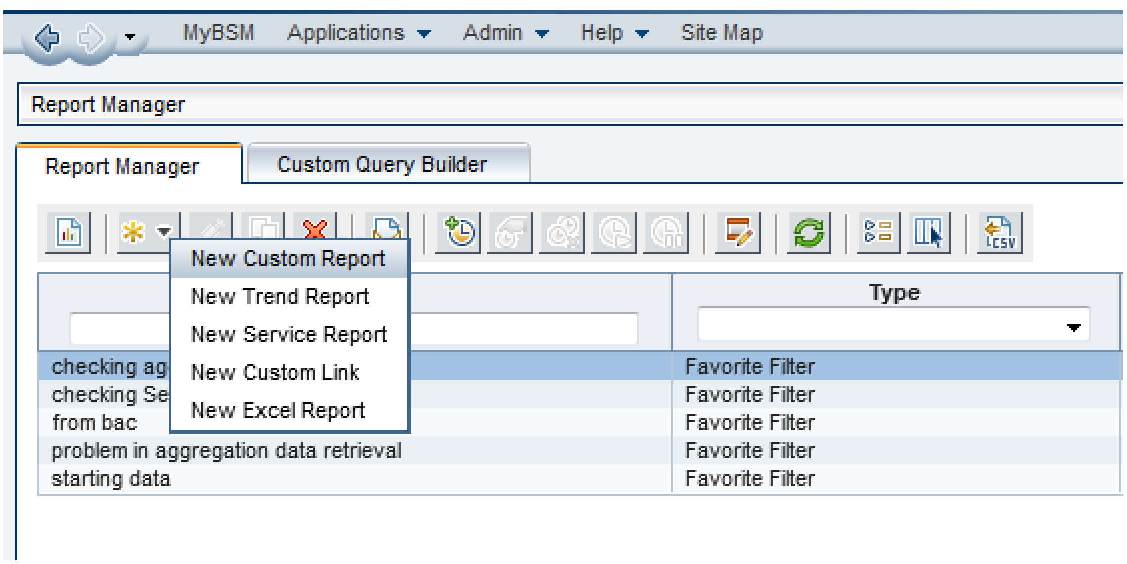
You can configure schedules to enable specified recipients to automatically receive reports, through email, at regularly defined intervals.

You can schedule Custom Reports, Trend Reports, and Service Reports defined in the Report Manager, or reports saved from the specific report page. You can also schedule Favorite Filter reports.

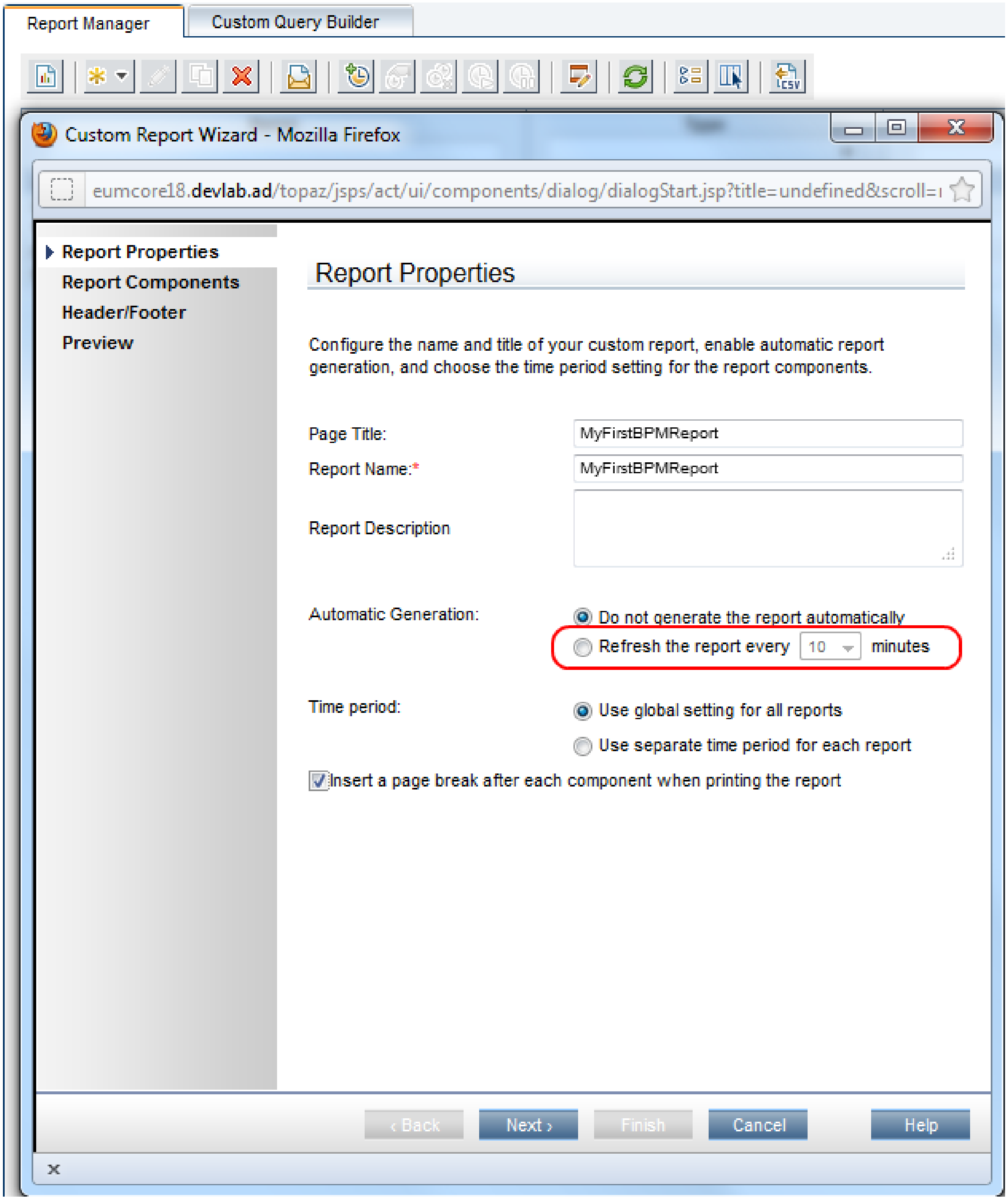
1. To create a scheduled report, click **Applications > User Reports > Report Manager**.

   This page enables you to manage the contents of Report Manager and view, edit, and clone existing components, configure new user reports, email reports, and create a schedule for selected reports to run.

2. Click  and select **New Custom Report** to create your first report using the built-in APM reports.

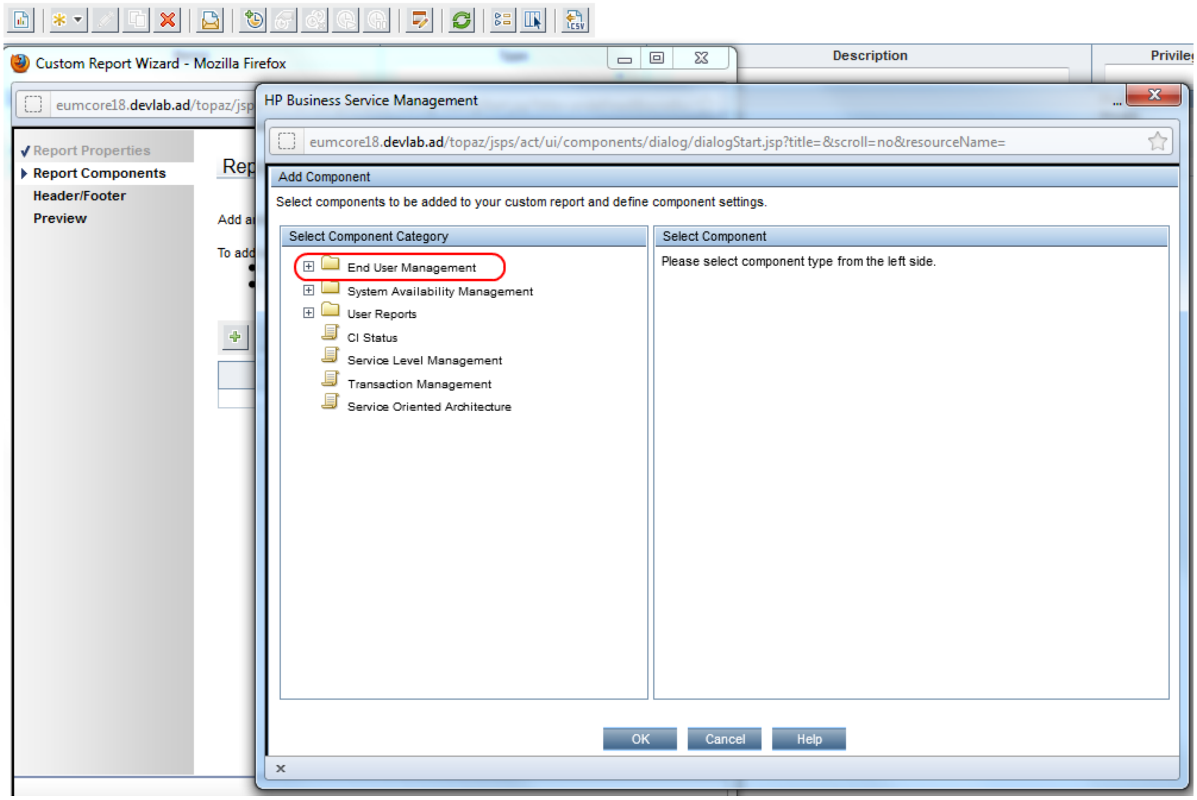
3. If you want to run this report in the background, select the **Refresh the report every** option and select the number of minutes.



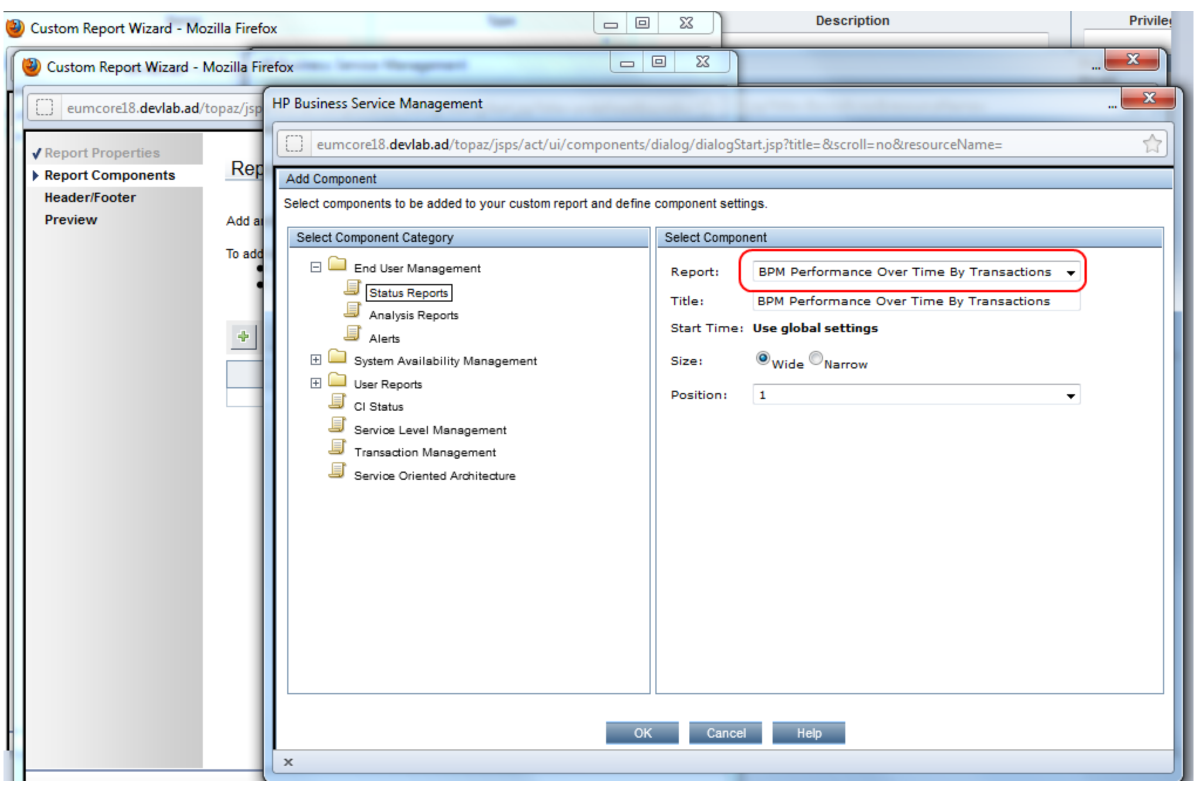
4. Click **Next**.

5. In the **Report Components** page, click . The **Add Component** page appears.

6. All BPM report are located in the **End User Management** folder.

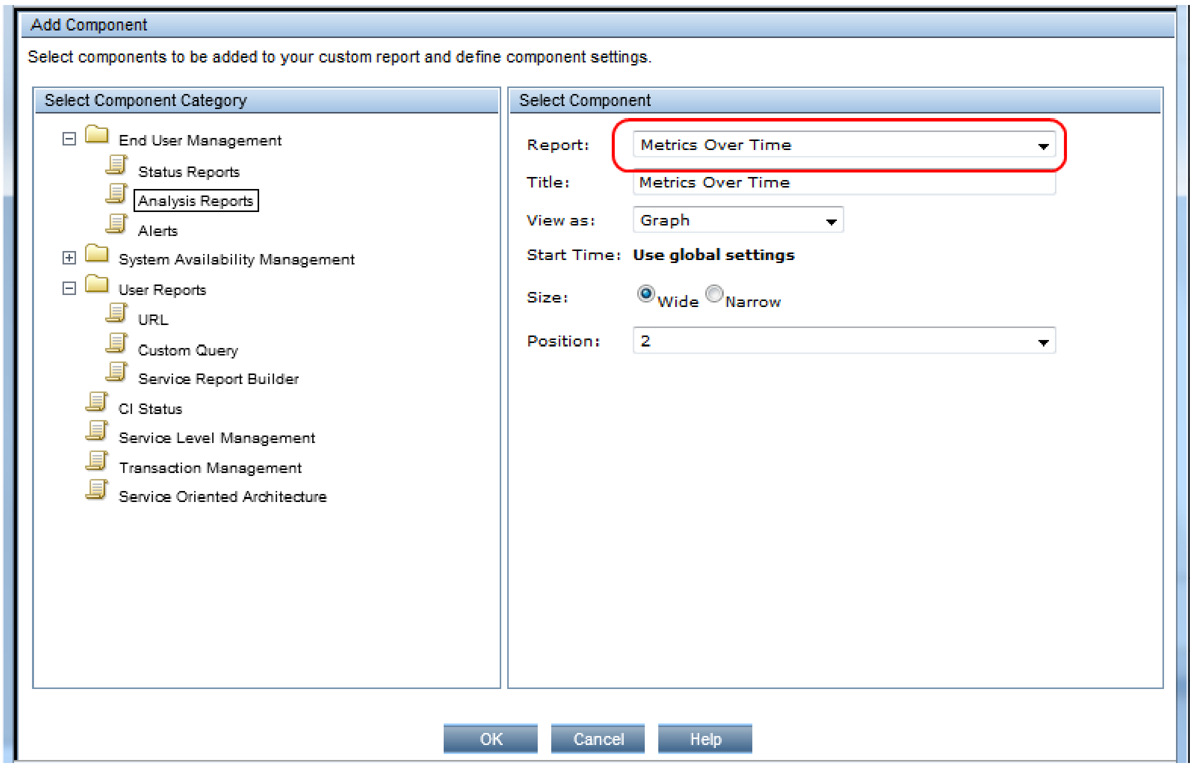


7. Expand the contents of the **End User Management** folder and click **Status Reports**.

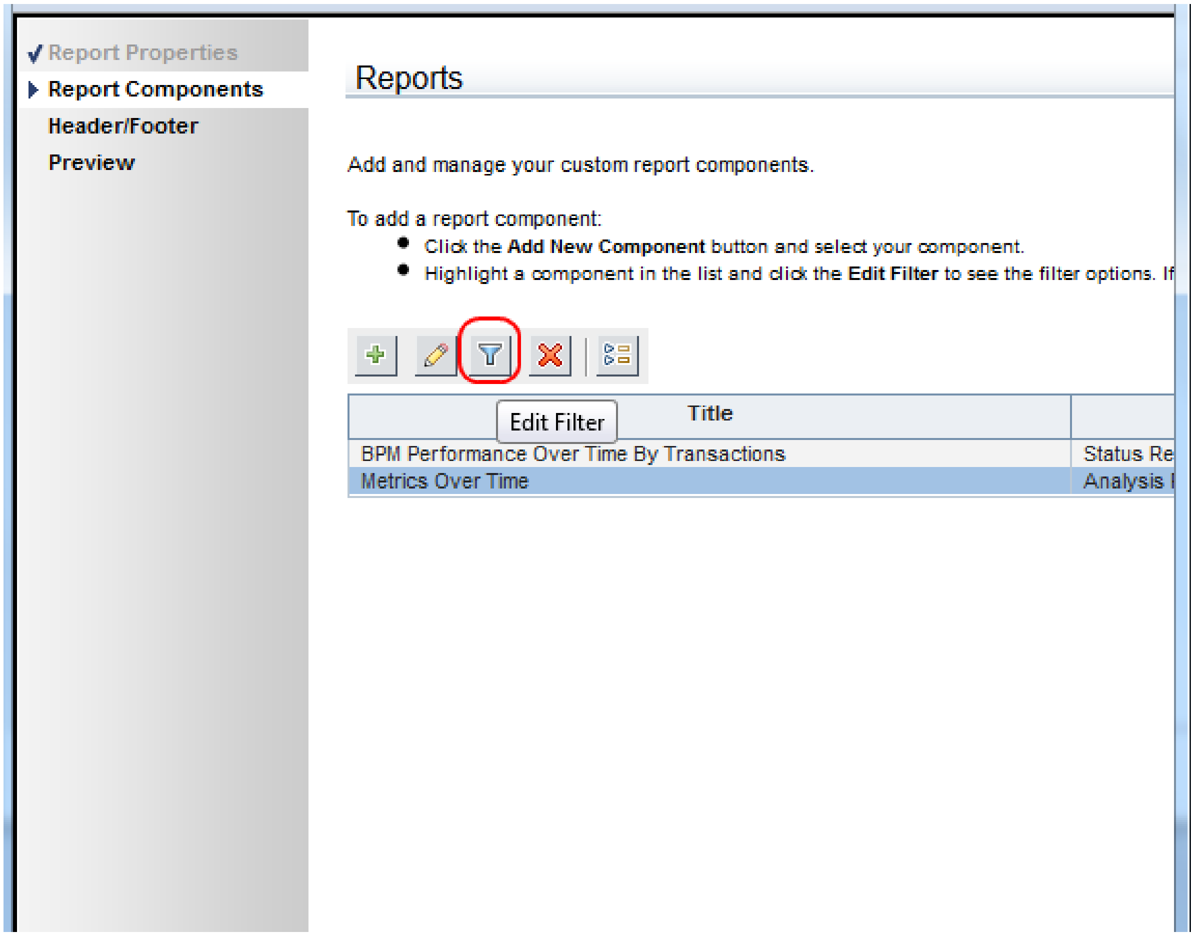


8. From the **Report** drop down list, select **BPM Performance Overtime By Transaction**.

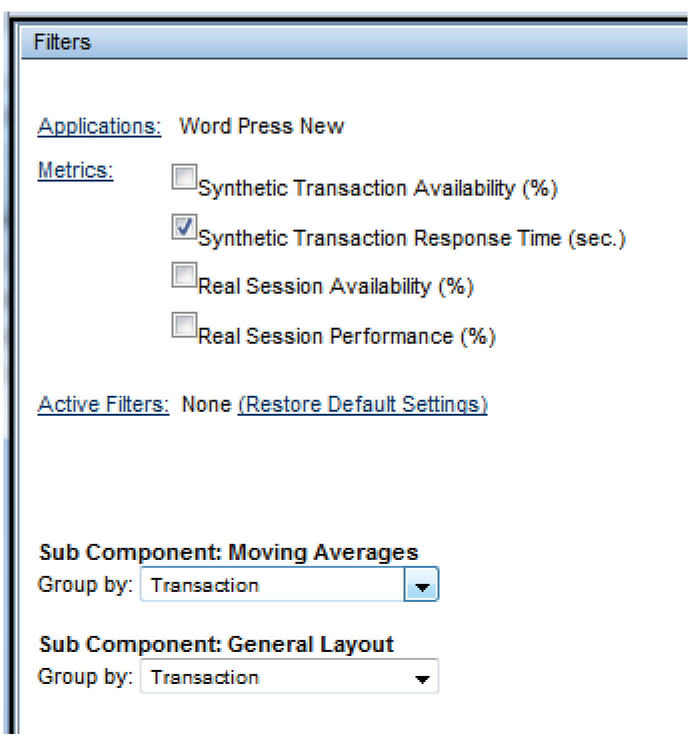
9. Click **OK**.
10. In the **Report Components** page, click . The **Add Component** page appears.
11. Under the **End User Management** folder, click **Analysis Reports**.
12. From the **Report** drop down list, select **Metrics Over Time** for a report that displays over time measurements.



13. Click **OK**.
14. For each report, select the report and click the **Edit Filter** button.



15. Select the relevant application.



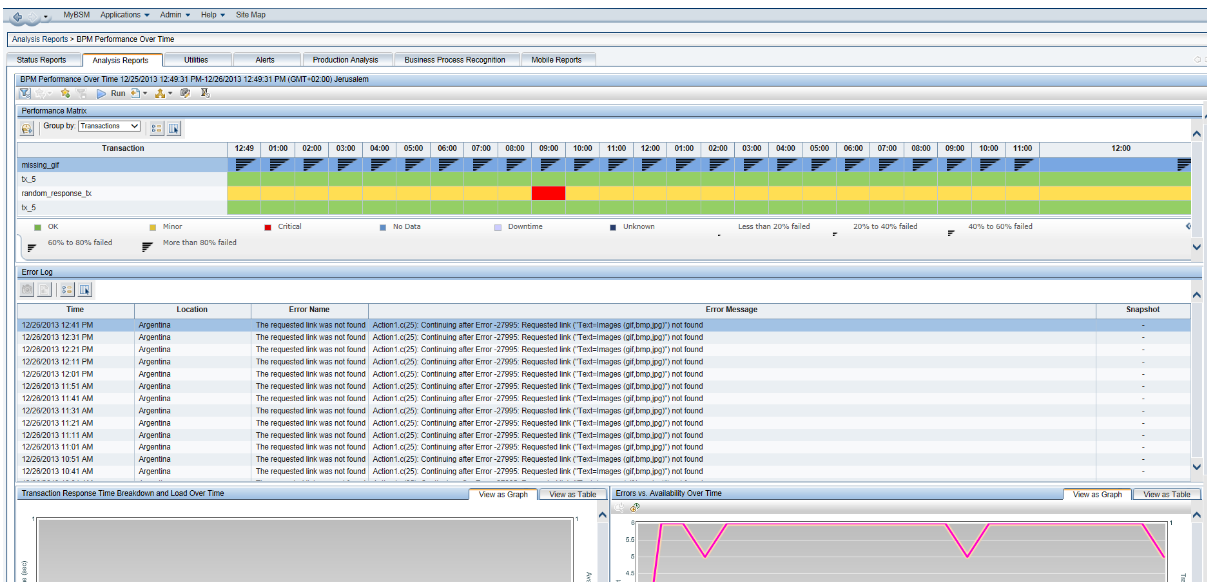
Chapter 9: BPM Report Recommendation

Use the following reports for isolating problems:

- **Performance Over Time Report**

  You can view your application availability and performance in one report. You can select to view the data by transaction or by location over time. By clicking on a specific transaction or location, you can view the Error Log, Snapshot on Error, Transaction Breakdown, and Error vs Availability Over Timer in the same screen.

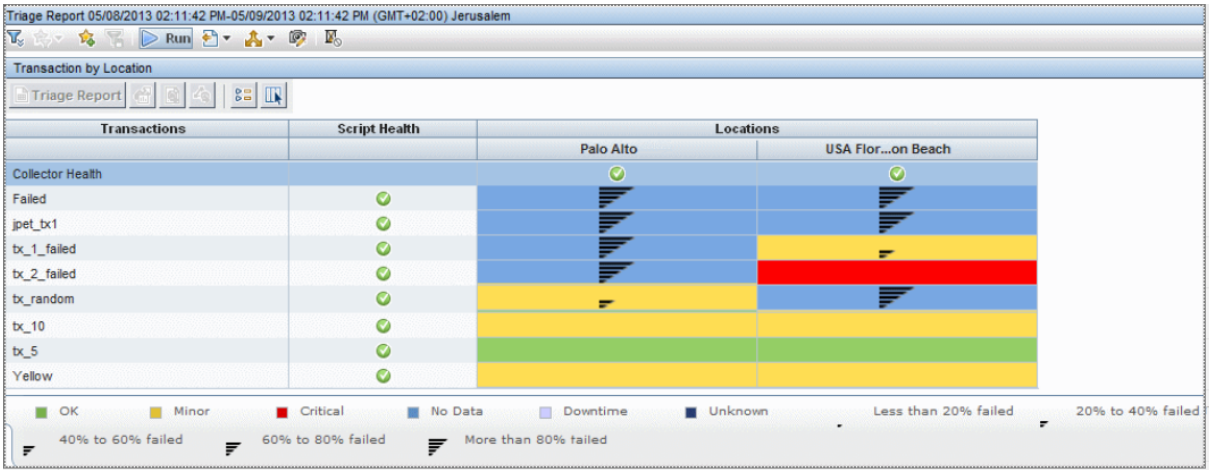
  In APM, select **Applications > End User Management > Analysis Reports > BPM Performance Over Time**.

- **Triage Report**

  Data in the Triage report is organized by transactions and locations, and includes a transaction breakdown component, as well as graphs showing error data. This report also includes information about the health of the transaction scripts running at the various locations (Script Health), as well as indicators for the health of the BPM data collectors.

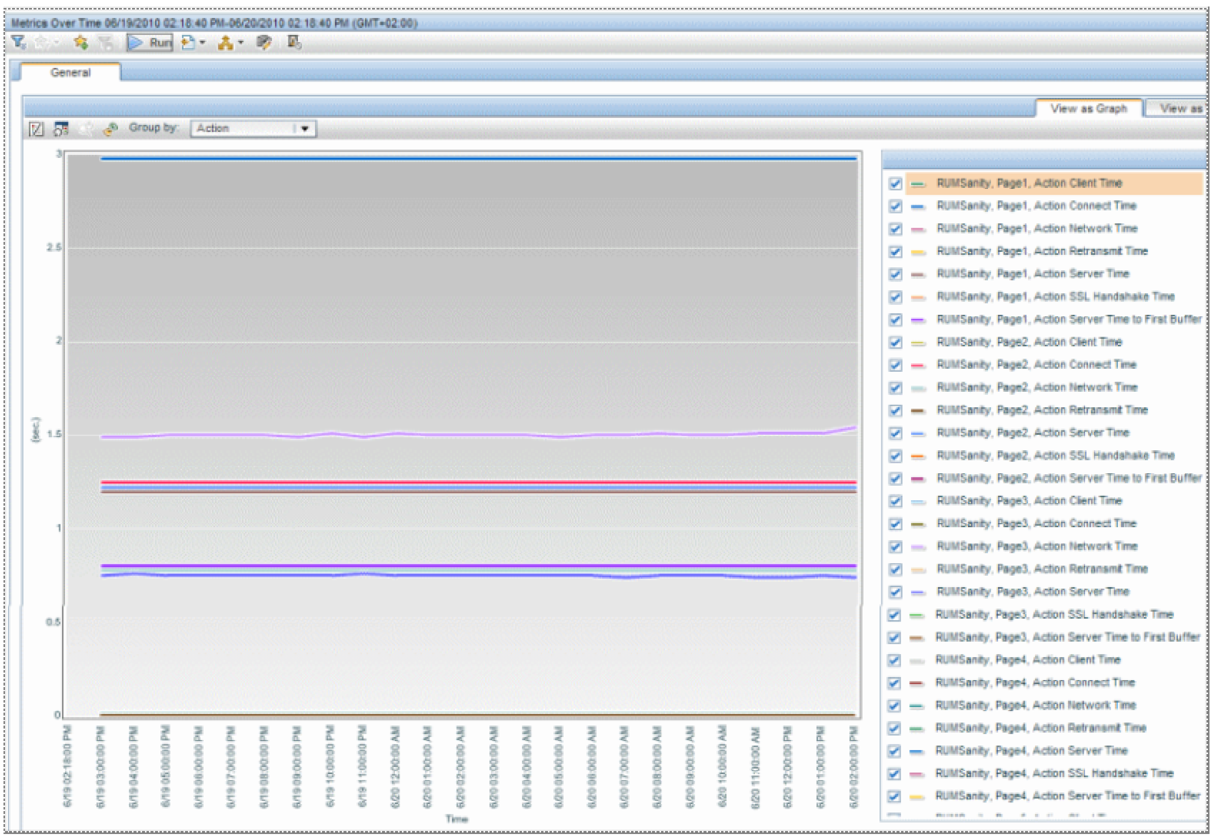
  In APM, select **Applications > End User Management > Analysis Reports > Triage Report**.



- **Metrics Report**

  This report enables you to select one or more metrics for selected applications and to view their behavior over a period of time. By selecting multiple metrics, you can compare their behavior to discover possible correlations between them. You can also view data for up to four different time comparisons.

  In APM, select **Applications > End User Management > Analysis Reports > Metrics Over Time**.



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Feedback on Getting Started With BPM - Best Practices (Application Performance Management 9.40)

Just add your feedback to the email and click send.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to docteam@hpe.com.

We appreciate your feedback!