

Version 10 Release 0
June, 2016

IBM Opportunity Detect Release Notes

IBM

Note

Before using this information and the product it supports, read the information in "Notices" on page 11.

This edition applies to version 10, release 0, modification 0 of IBM Opportunity Detect (product number 5725-D16) and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. New features and changes in IBM Opportunity Detect 10.0

This section describes the new features and changes introduced in the 10.0 release of IBM® Opportunity Detect

Some of these features were available in versions earlier than 9.1.1, when Opportunity Detect was re-written. They have now been added to the new version of Opportunity Detect. In the descriptions below, these features are marked as parity features.

For additional details, see the documentation for this version of Opportunity Detect.

Trend components (parity)

Trend components detect changes in activity measured over defined periods of time. Before you can create a trend component, your trigger system must include a Container or Select component that the trend can use as a data source.

Three components track trends.

Trend component

Detects simple trends. For example, the average rolling monthly balance has been increasing or decreasing by 10% over the last three months.

Spike component

Detects an unusually large change in activity. For example, a deposit is 50% larger or smaller than any other deposit made in the last 3 months.

Exceeded Standard Deviation (ESD) component

Detects activity outside of the standard variance for a specified time period. For example, a monthly balance that is greater than or less than the average monthly balance for the past 12 months by two standard deviations.

Sequence pattern (parity)

With the Sequence Pattern component, you can specify a series of incoming events, and set the number of times the complete sequence of events must occur before the component fires.

Like operator (parity)

When you create a Boolean expression in a component and you select the Like operator, you can use a regular expression to set the criteria for comparison.

The regular expression must conform to the Streams Processing Language requirements, described here: https://www-01.ibm.com/support/knowledgecenter/SSCRJU_3.2.0/com.ibm.swg.im.infosphere.streams.spl-languagespecification.doc/doc/primitivetypes.html. Pay particular attention to escaping backslashes.

Date functions (parity)

The following features have been added.

- You can subtract dates in Math expressions. For example, you can subtract a date derived from a data source from a date constant such as the beginning of the current month.
- When you define a time span, you have the following options for the **Type** field in the **Select Period** window.
 - Constant
 - Container
 - Date Constant
 - Data Source
 - Math Expression
 - Select

This expands your options for the way the number of time units is calculated.

- When you define a time span, you have the following options for the **Value** field in the **Select Period** window. These time constants are based on the current transaction, and they return an integer, as shown below.

Table 1. Date constants that return an integer

Date constant	Value
Current Second	1 - 60
Current Minute	1 - 60
Current Hour	1 - 24
Current Day of the Month	1 - 31
Current Day of the Week	1 - 7 Sunday = 1
Current Week	<ul style="list-style-type: none">• January 1 = day 1 of week 1• In a leap year, December 30 is in week 53
Current Month	1 - 12
Current Quarter	1 - 4
Current Year	Four digits

GroupBy function (parity)

The Group By function is available in Select and Container components. This function groups together all the records that have identical values in this field and returns one or more groups of rows. The Group By function can be applied only to a single field in a component.

Additional delimiters for batch files (parity)

You select from a list of the following available delimiters when defining a file connector.

- pipe (vertical line: |)
- comma
- semi-colon
- tab

Export / import utility

The export/import utility transfers Opportunity Detect workspace logic from one environment to another.

The export/import utility operates at the workspace level. You can export all workspaces or specify the workspaces you want to export.

The utility creates an XML file that contains a specification of the workspace logic and all of its dependencies. The export includes all the defined data sources, audience level codes, and named value lists regardless of their usage in the exported workspace.

After export, you can transfer the XML file to the target environment and import the logic. After an export/import cycle, the logic transferred is functionally equivalent in both environments.

Monitoring utility

Opportunity Detect provides a monitoring tool for deployments running on Streams. The monitoring tool runs as a JConsole service. You can view details in real time at three levels: deployment, Streams server, and Opportunity Detect engine. You can also monitor the health of the Real Time Web Connector service and the Remote Control Service.

Any change in deployment status from healthy to unhealthy triggers a notification to Opportunity Detect Opportunity Detect users, who can subscribe to receive these notifications in their inbox and also in email, if email notifications have been configured. Administrators can also create notifications that appear in the tool, using the JConsole notifications feature.

If you plan to use the monitoring tool, the names of your deployment configurations must be unique across your entire Opportunity Detect installation. If you have used the same name for multiple deployment configurations, change the names to ensure that they are unique

Delayed insert

You can select a **Delayed insert** option in Container Manipulator components. When you choose the Delayed insert option, the system adds the values to the contents of the Container only after all logic in the trigger system has finished processing the transaction.

Real time file connector

Real time file connectors enable Opportunity Detect to connect to transaction data that is in fixed width file format and that is updated frequently. Opportunity Detect reads these files in real time. You configure your automation system to place the properly formatted file in an input directory that you specify when you create the connector in the Opportunity Detect user interface.

When you create the real time file connector you have the option to apply a Bloom filter to eliminate duplicate data based on fields that you specify.

After Opportunity Detect consumes the data, the files are automatically moved to another directory that you specify for preprocessed files.

On demand access for profile data

By default, Opportunity Detect caches profile data, which provides optimal performance. However, for very large profile data sets, you have the option to switch to on demand access for profile data. This eliminates the out of memory issues that caching large amounts of profile data can cause.

To enable on demand access to profile data, go to the **Settings > Configuration** page, open the **IBM Opportunity Detect and Interact Advanced Patterns | System | Processing Options** category, and set the **Cache profile records** property to **false**.

Support for Rabbit MQ in queue connectors

Queue data source connectors can now work with Rabbit MQ in addition to the previously supported Active MQ and WebSphere MQ servers.

New option during installation to create a system table data source connection in the web application server

You can allow the installer to create the connection to the Opportunity Detect system tables in the web application server. To enable automatic data source creation during installation, on the Datasource Creation panel, select the **Create Opportunity Detect Datasource** check box and supply information about your application server.

- The installer creates the data source using `OpDetectionDS` as the JNDI name.
- The installer adds the JDBC driver to your web application server classpath automatically.

Context-sensitive help for Configuration properties

When you view configuration properties under **Settings > Configuration**, you can choose **Help > Help for this page** to display context-sensitive help. For example, if you request help for the **Campaign | caching** page, you see a help topic that specifically describes all of the caching options. You must have an internet connection to use this feature.

Upgrade paths

Because version 10.0 is a major release, you can upgrade directly from 8.6.x, 9.0.x, or 9.1.x in a single step. For instructions, see your product's Upgrade Guide.

Chapter 2. Known issues

This section describes the known issues in the 10.0 version of Opportunity Detect.

Validation fails for manually created expressions	Defect 223720	If you manually enter an expression in a component, validation fails even if the expression is valid. The workaround is to use the value selector to create your expressions.
Unable to use the <code>im -0n</code> (inactivity mode on) parameter on the command line	PMR 220127, Defect 220175	When you run a batch deployment from the command line and use the <code>im -0n</code> option, the run fails. The workaround is to run the deployment from the user interface.
In a silent mode installation, <code>ojdbc7.jar</code> is not present	Defect 224701	When you install Opportunity Detect in silent mode, and if you are using Oracle for your system tables, the <code>ojdbc7.jar</code> file is not installed in the required locations. The workaround is to place the <code>ojdbc7.jar</code> file manually in the following locations. <ul style="list-style-type: none">• On the design time server<ul style="list-style-type: none">– <code>[Opportunity_Detect_home]/cli/lib</code>– <code>[Opportunity_Detect_home]/tools/librarymgr/lib</code>– <code>[Opportunity_Detect_home]/InteractService/wlp/lib</code>• On the run time server<ul style="list-style-type: none">– <code>/home/streamsadmin/OpDetection/monitor/lib</code>– <code>/home/streamsadmin/OpDetection/StreamsRemoteControlService/wlp/usr/servers/StreamsRCS/dropins/StreamsRCS/WEB-INF/lib</code>

Chapter 3. Fixed defects

This section describes the fixed defects in the 10.0 version of Opportunity Detect.

APAR 199635	When you used Web Service data source connectors, if you included the transaction time in the Outcome, the Outcome did not write to the message log. This has been fixed.
APAR 202895, PMR 202896	When you used Web Service data source connectors, if you used more than one input data source, you were unable to deploy the workspace. This has been fixed.
APAR 199227	You were unable to process more than 1000 rows from a profile table. This has been fixed.
PMR 206839	The Web Service data source connector produced messages in varying formats, depending on how the Action was fired. This has been fixed.
PMR 217960	When fields in different data sources had the same names, deployments failed. This has been fixed.
Enhancement 200798, Enhancement 196759	Added user name and password based authentication for Queue data source connectors using WebSphere MQ.
PMR 218298, Defect 222745	If you used a port scanner that used the mutable version to tokenize, real time deployments failed. This has been fixed.
PMR 220127, Defect 220175	When you ran a batch deployment from the command line and used the <code>im -0n</code> option, the run failed. This has been fixed.

Chapter 4. Known limitations

This section describes the known limitations in the 10.0 version of Opportunity Detect.

Unexpected results for Forward Inactivity components in multiple deployments using the same State History table	Enhancement 202780, APAR 202786	If two deployments of different workspaces run against the same state history table, if there are Forward Inactivity components in either of the workspaces, then these components must be placed in both deployments. If not, then the deployment that does not have the Forward Inactivity interferes with the inactivity processing for the other deployment.
Deployments fail when multiple workspaces are deployed simultaneously	Defects 200534, 201851	Attempting to deploy multiple workspaces simultaneously causes a conflict with a shared resource. There is a high probability that at least one of the deployments will fail. To avoid the issue, limit deployments to one workspace at a time.
The database password is not updated when you install Interact Advanced Patterns over Opportunity Detect	Defect 177556	<p>If you install Interact Advanced Patterns over Opportunity Detect, and you select the manual option, you must manually update the password attribute of the <code>properties</code> tag in the <code>server.xml</code> file. This file is located in the <code>InteractService/wlp/usr/servers/InteractService</code> directory under your Opportunity Detect installation.</p> <p>You can use the <code>securityUtility</code> located under the <code>InteractService/wlp/bin</code> directory under your Opportunity Detect installation to encrypt the password. For example:</p> <pre>./securityUtility encode <i>your_password</i></pre>
The Action component does not fire for some workspaces when the Outcome is mapped to a Web Service connector	Defect 198305	When the Outcome data source is mapped to the Web Service connector, and if the trigger system contains only one Action component that is listening for a Forward Looking or negative Pattern component, no outcome message is sent. In this case, you need a second Action component that is listening for another type of component; then all outcome messages will be sent.

<p>The XML file for the command line utility is not updated when the Run Time component is installed on a different machine from the Design Time component</p>	<p>Defect 199632</p>	<p>When you do not install the Run Time component on the same machine as the Design Time component, the RemoteControlCLI.xml file is not updated with the host and port of the Streams Remote Control service. This file must be configured if you want to use the RemoteControlCLI utility.</p> <p>To work around this issue, update the file manually to replace [RCS_SERVER] and [RCS_PORT] with the host and port of the Streams Remote Control Service.</p> <p>The RemoteControlCLI.xml file is located in the cli directory under your Opportunity Detect design time installation.</p>
<p>The monitoring tool shows the same number of total transactions for all workspaces or a null pointer exception occurs</p>	<p>Defect 219989, Defect 219002</p>	<p>In some cases, the monitoring tool can have either of the following issues.</p> <ul style="list-style-type: none"> • The same number of total transactions is shown for all workspaces. • A null pointer exception occurs. <p>These issues can occur when Streams instances are not shut down gracefully. To resolve the issue, do the following.</p> <ul style="list-style-type: none"> • In the Opportunity Detect user interface, stop all deployments. • Stop the Streams server. • On the runtime server, manually remove all job id files under \$DETECT_HOME/apps/RealTimeProxy/ . <p>The name format of these files is rtp.jobid.streams-instance-name.host. For example: rtp.jobid.streams1@streamsadmin.myHost.</p> <ul style="list-style-type: none"> • Restart the Streams server

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If you are not a designated support contact at your company, contact your IBM administrator for information.

Note: Technical Support does not write or create API scripts. For assistance in implementing our API offerings, contact IBM Professional Services.

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- A brief description of the nature of your issue.
- Detailed error messages that you see when the issue occurs.
- Detailed steps to reproduce the issue.
- Related log files, session files, configuration files, and data files.
- Information about your product and system environment, which you can obtain as described in "System information."

System information

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