SAP BusinessObjects

Query Builder User Guide

- SAP BusinessObjects Event Insight 4.0 Support Package 3

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Contents

Working with Query Builder

You use Query Builder to construct, submit, and track query status. You can subscribe to events and retrieve the results in tabular form.

1.1 Starting Query Builder

To start Query Builder, select **Start > Programs > SAP EventInsight > Query Builder > Query Builder**.

1.2 Changing the Query Builder preferences

1. Select **Window > Preferences**.

   The "Preferences" window opens.
2. Modify the parameter values as required.
3. To apply the changes, click **Apply**.
4. To restore the default settings, click **Restore Defaults**.
5. To save the changes, click **OK**.

1.2.1 Changing the MetaData server address

To connect Query Builder to a MetaData Server other than the default servers, you need to change the Query Builder parameters.

1. Select **Window > Preferences**.

   The "Preferences" window opens.
2. Select **Query Builder**.
3. Set the MetaData Server address in the `host:port` format.

If the value is incorrect or missing, the auto discovery service is used to find a MetaData Server on the local network.

4. To save the changes, click **OK**.

1.2.2 Changing the Security Service address

To connect Query Builder to a Security Service other than the default service, you need to change the Query Builder parameters.

1. Select **Window > Preferences**.

   The "Preferences" window opens.

2. Select **Query Builder**.
3. Set the Security Service server address in the `host:port` format.

   If the value is incorrect or missing, the auto discovery service is used to find a Security Service on the local network.

4. To save the changes, click **OK**.

1.2.3 Changing the CEP Manager parameters

To connect Query Builder to a CEP engine other than the default, you need to change the Query Builder parameters.

1. Select **Window > Preferences**.

   The "Preferences" window opens.

2. Select **Query Builder**.
3. Set the CEP engine server address in the host and port fields.
4. If you have enabled authentication on the CEP Engine, enter the username and password in the relevant fields.
5. If you have enabled SSL on the CEP Engine, select **Enable SSL**.

1.2.4 Changing Query Manager Parameters

You can enable guaranteed delivery of the Query Manager.

1. Select **Window > Preferences**.

The "Preferences" window opens.

2. Select **Query Builder > Query Manager**.
3. Set the parameters as necessary.

1.2.5 Configuring the batch size in the Query Builder preferences

Changes to the batching parameters at this level only affect newly created graphs; there is no option to apply the parameters to existing graphs.

1. In Query Builder, go to **Window > Preferences > Query Builder > Query Graph**.
2. In the panel to the right, select **Enable Batching**, and enter the settings for the **Batch size** and **Maximum Delay (ms)** parameters.
3. Click **OK**.

Related Topics

- Event batching
- Batching parameters
- Configuring event batching parameters on a query graph

1.3 Query Builder user interface

Described below are commonly used Query Builder views.

General category

View	Description
Console	Displays log of actions.
Palette	Displays selection action types, connection tool, and node types.
Properties	Displays properties of the selected object.

LE Common category

The Messages view displays error messages that are processed during application runtime, for example, a graph that failed to load due to an exception.

Query Builder Views category

View	Description
Graph Parameters	Displays graph parameters that are used in graph node attribute placeholders. Graph parameters in query nodes are specified using the `${parameter}` format. For example, a password in a DB Output node may be specified as `${passwd}`, and in the Graph Parameters view you set it to `mypwd` by specifying the `parameter name`/value as `passwd/mypwd`.
Graph Results	Displays received events.
Graph Tree	Displays query graphs stored on the metadata server.
Notification Templates	Provides format for user notifications.
Validation Messages	Displays graph validation messages. If a graph validations fails (for example, some of the nodes have unconnected ports or some node parameters are not set correctly) then this view displays errors and the appropriate location (such as the path to a graph or a source).

1.4 Understanding the Query Builder palette

Query graphs are used to describe event processing. A node can be an event source, receiver, sender, or filter, depending on the node type. You add a node to a query graph using the palette.

The following table describes the palette buttons for working with query graphs:

Selection and connection buttons

Button	Description
Select	Activates selection mode, in which you can select a query graph node.
Connection	Activates node connection mode, in which you can connect output and input port of two different query nodes in a graph.

Graph node buttons

Button	Description
CQL node	Write direct CQL to correlate events using the CEP engine.
DB Output node	Used to send events to a database.

Button	Description
Event node	Specifies input event types.
Filter node	Filter events based on specific criteria.
Flattening node	Simplifies events by outputting a selected subset of the input event.
Notification node	Redirects events displayed on different communication devices, such as mobile phone or email.
Output node	Marks events to send to UI and displays events in the graph result view.
Trigger node	Subscribes to another event within a graph execution.
Java node	Writes java code to filter events.
Java script node	Writes java script to filter events Semantic node Drag and drop CQL to correlate events.
JMS node	Lets you output events to a configured JMS destinations.

Event Insight Users

Event Insight is a system collecting, filtering, managing, aggregating, propagating and publishing business events. Event Insight uses three personas using the same strategy as other SAP Business Intelligence applications: Administrator, Power Users and End Users.

Administrators

Administrators uses the Unified Admin UI tool to manage the Event Insight nodes. Administrators understand when and how events are created on the source systems. They need technical knowledge of the system landscape, system connectivity and networking.

Power Users

Power Users model and query the event streams created by the Administrator. They graphically model and publish alerts to which Business Users.

Using the Query Builder, the Power User builds query graphs that correlate events and determine which events can be published to subscribers. Power Users need business and technical knowledge to design query graphs and the ability to create dashboards and reports based on event information. They are responsible for modeling event semantics, creating queries and wiring event queries.

Business Users

Business users receive and analyze events. They subscribe to Event Insight events and view them through live dashboards, and can be notified of these events via mobile devices.

Setting up an Event Insight dashboard

To configure an Event Insight dashboard for consumption by end users, complete the following tasks:

1. Log into the Unified Admin UI.
2. Connect to a data source using the "Component Configuration" perspective.
3. Create an event schema using the "Event Schema Editor" or" Component Configuration" perspective.
4. Create a mapping if necessary using the "Schema Mapping" perspective.
5. Start the mapping.
6. Deploy a configuration to poll for events using "Component Configuration" or "Node Administration" perspective.
7. Close the Unified Admin UI.
8. Open the Query Builder application.
9. Create a query graph to consume and process the events.
10. Export the query graph.
11. In Xcelsius Dashboard Designer using the Event Insight Dashboard Design plug-in, create a dashboard to consume the events.

Related Topics

- Creating a query graph in Query Builder
- Exporting a graph

Query graphs

4.1 Creating a query graph in Query Builder

1. In Query Builder, right-click a graph or group in the "Graph Tree" and select **Add New Graph**.

   The new graph is created in the selected group.

2. Enter a name of the graph.

   Note:
   If graph should be created in root instead of a group, click **New Query Graph** in the global toolbar.

3. Click **Find** to select a global schema instance.

   The "Select Global Schema Instance" window opens.

4. Select an appropriate global schema instance from the list and click **OK**.

4.2 Configuring event batching parameters on a query graph

Users have the option to modify the Batching parameters that apply to any CQL or Semantic nodes that are added to the query graph. When modifying the Batching parameters at the query graph level, the user also has the option to update the event batching parameters for all CQL or Semantic nodes that exist in the graph.

1. In Query Builder, right-click the query graph in the "Graph Tree".
2. Select **Configure Batching**.
3. Select one of the following:
   - **Apply the changes to newly created nodes only**
   - **Apply the changes to existing nodes and newly created nodes**

     Note:
     If this option is used, the batching parameters for existing nodes on the query graph are overwritten.

Related Topics

- Configuring the batch size in the Query Builder preferences
- Batching parameters

4.3 Renaming a query graph in Query Builder

1. In Query Builder, right-click the query graph that you want to rename and select **Rename**.

   The "Enter Name" window opens.
2. Enter the new graph name and click **OK**.

4.4 Copying a query graph in Query Builder

1. In Query Builder, right-click the query graph that you want to copy and select **Copy**.

   The "Enter Name" window opens.
2. Enter the name of the new graph and click **OK**.

4.5 Deleting a graph or a graph group

1. In the "Graph Tree" pane, right-click the graph or the graph group that you want to delete and select **Delete**.
2. In the confirmation window, click **OK**.

   Note:
   Only empty graph groups can be deleted.

4.6 Query graph connections

A connection binds output and input ports of different nodes in the graph. To add a connection, at least one node with an in port and one node with an out port are required.

In the graph editor the in port is displayed as a green triangle on the left side of the node, and the out port is displayed as a red triangle on the right side of the node.

4.6.1 Adding a connection in a query graph

1. In the query graph palette, select **Connection**.
2. In graph editor, connect the in and out ports for the appropriate nodes.

   Note:
   A connection must start at the out port and finish in the in port. Invalid connections are shaded orange.

3. To move the connection ports, drag and drop the connection out and in ports as necessary.

4.6.2 Deleting a connection in a query graph

1. In Query Builder, open the existing query graph.
2. Right-click the connection and select Delete.

Note:
Another way of deleting the connection is to select the connection and press the "Delete" button on your keyboard.

4.7 Error messages in graphs

Every time you modify a graph, for example, add a node, add a port, or change a parameter, the graph is validated. Any problems that are found are displayed in the "Validation Messages" view.

For each problem, the error message displays the description, creation time, and the element in which the problem occurs. Double-click the validation message to show more information.

Validation messages can be shown for all graphs or only for selected graph. In the "Validation Messages" view menu, click **Preferences** and select the appropriate scope for messages.

4.8 Starting a query graph in Query Builder

- In the "Graph Tree", right-click the graph and select **Start Graph**.
  The started graph icon appears next to the graph.

The "Graph Results" view opens and displays the results.

4.9 Stopping a query graph in Query Builder

- In the "Graph Tree", right-click the graph and select **Stop Graph**.
  The query graph stops and the started graph icon are removed from the "Graph Tree".

4.10 Setting the guaranteed delivery of query graphs

You enable guaranteed delivery in query graphs to ensure that no messages are lost because of traffic problems.

- In the "Graph Tree", right-click the graph and select **Guaranteed Delivery**.

Query graphs with enabled guaranteed delivery are displayed in bold in the "Graph Tree".

Importing and exporting graphs

5.1 Importing a graph

1. In the "Graph Tree" pane, right-click the graph group that you want to import the graph into and select **Import Graphs**.
2. Locate and select the graph that you want to import.

   The selected graph is imported to the selected group, and the graph name is the same as the file name.

5.2 Importing a graph from the repository

1. In the "Graph Tree" pane, right-click the graph group that you want to import the graph into and select **Import from Repository**.
2. Select the graph that you want to import and click **OK**.

   The graph is imported to the selected group and the name is the same as the graph name in the repository.

5.3 Exporting a graph

1. In the "Graph Tree" pane, right-click the graph that you want to export and select **Export Graphs**.
2. Select the export destination.
3. In the confirmation window, click **OK**.

5.4 Exporting a graph from the repository

1. In the "Graph Tree" pane, right-click the graph that you want to export and select **Export to Repository**.
2. In the confirmation window, click **OK**.

Query graph groups

6.1 Creating a graph group

1. In Query Builder, right-click a graph or group in the "Graph Tree", and select **Add New Group**.
2. Enter the name of the group and click **OK**.

Nodes

7.1 Creating a node in a query graph

1. In the "Graph Tree" pane, double-click the query graph.
2. To select the type of node, select "Event type node" in the palette and click the graph editor.

   The "Select Element" window opens.
3. Select the appropriate event node type from the list and click **OK**.

   The added node is displayed in the graph editor. Valid nodes are shaded green. A node that is shaded red indicates a detected error, such as a missing connection or invalid node parameters.

7.2 Deleting a node in a query graph

1. In the "Query Graph" editor, select the node to delete.
2. Right-click the selected node and select **Delete**.

   The node is deleted.

Note:
Another way of deleting the node is to double-click the node and press the "Delete" button on your keyboard.

7.3 Editing node parameters

1. In the graph editor, select the node that you want to edit.
2. In the "Properties" view, edit the property value manually or use the value list, if available.

   The node parameters are updated automatically.

7.4 Modifying the batching parameters on a CQL or Semantic node

To modify a CQL or Semantic node in the **Graph Editor**:

1. In Query Builder, open the query graph.
2. Right-click the query graph in the query graph panel.
3. Select **Configure Batching**.
4. Configure the batching parameters.

Related Topics

- Event batching
- Batching parameters

7.5 Running multiple instances of Query Builder in a single node deployment

Problem: If all the useable ports have been used, the user is presented with the following error and Query Builder fails to start: "Query Builder will not start since all available framework entry ports have been used".

Resolution: Each instance of the Query Builder needs to bind to a unique framework entry port to enable multiple instances of the Query builder to run on a single host. You can configure the framework entry port for the Query Builder in the following ways:

- From a single port: `corp.sap.pal.le.Framework.Entry.port=9278`
- From a list that includes more than one port: `corp.sap.pal.le.Framework.Entry.port=9278,9999,9675,7845,9123`
- From a bounded range: `corp.sap.pal.le.Framework.Entry.port=9000-9678`
- From an unbounded range: `corp.sap.pal.le.Framework.Entry.port=6780-*`

The default port value is 9273.

The port binding is displayed on the Query Builder status bar, for example `Framework Entry Port: 9273`.

Caution:
If the Query Builder is shut down, followed by an immediate restart of the application, you can also see the error because Query Builder takes time to shutdown. After Query Builder has completely shutdown, you can launch the application without error.

7.6 Trigger nodes

A trigger node is a sophisticated event source that allows runtime subscription and supports subscription event parameters binding.

A trigger node has one input and one output port. On every incoming event (an event on an input port), the node triggers a new subscription for event type (E1) which is specified when you configure the trigger node. The event type's schema (ES1) defines the output port of the node. An incoming event may be of any type, and it does not have to coincide with E1.

The trigger node can use the incoming event's fields as event parameters of a newly created subscription for E1. This mapping is done with simple expressions. All events of type E1, which are the results of the triggered subscriptions, are sent to the node's output port. Triggered subscription termination is also configurable; it is based on the received event count or timeout.

7.6.1 Creating a trigger node in Query Builder

You can create a trigger node in Query Builder that triggers subscriptions on incoming events.

1. In Query Builder, create a graph or choose an existing graph.
2. Select **Trigger Node** from the palette and click the graph editor.

   The "Select Element" window opens.
3. To connect the input port of the trigger node with some other node's output port for which the event schema is defined, select the trigger node and open its properties view.
4. Set an "Event type".

   There are two ways to set an event type parameter:

   - Enter the value. With this method, the value is a constant, and is always passed when subscribing disregarding the contents of the incoming event.
   - Use a simple expression to bind an attribute in the incoming event to the event type parameter. The expression specification is: `->attribName1 ->attribName2 ->... ->attribNameN`, where `attribName` is an attribute name in the incoming event.

     Note:

     - If an attribute name in the expression is succeeded by `->` that means that this attribute must have a nested structure and contain sub attributes. The last attribute name in the expression must correspond to a flat attribute, like Integer or String. If an attribute in the incoming event is a list, it is possible to access its elements using the `get()` token. There are three available parameters to pass to this token: an arbitrary integer, which represents the index in the list, `first`, which represents the first element in the list and `last`, which respectively points to

the last element in the list. An index out-of bounds problem is treated inside the trigger node. In this case, no value is set to a corresponding event type parameter. An example of valid expression with `get():->attribName1->get(3)-->attribName2->get(last)` where `attribName1` and `attribName2` are lists.

- Any type of error in the expression will lead to an empty event parameter passed at the subscription time.

5. Set the "Strategy".

   The strategy indicates how the subscription is managed. There are two strategies:

   - Event count means that subscription will be terminated after the number of received events reaches the value which is specified in "Strategy value" property.
   - Timeout strategy means that subscription will be terminated after number of milliseconds specified in "Strategy value" property.

6. Set the "Time to live" property as necessary.

   The "Time to live" sets a global timeout for a triggered subscription. No matter what strategy was chosen, the subscription will be terminated after the number of milliseconds specified in this property is reached. In most cases the subscription should be terminated by the Strategy and Strategy value combination and the "Time to live" value should take this into consideration.

All other properties are event type parameters which are passed when subscribing to the event type. These properties are displayed according to the event type you have chosen. If an event type has no parameters, no additional properties appear.

After all properties have been set, the trigger node becomes valid; its output port schema coincide with the event type schema. All events produced by the trigger node are sent to its output port.

7.7 Flattening nodes

A flattening node can process events with complex structures and output events with simple structures.

In Query Builder, the flattening node can be found in the palette.It can be used to:

- Turn a list of data in one event into a sequence of events.
- Simplify event structures before using CQL node for processing. CQL node only accepts events with certain data types.

A flattening node has one input port and one output port. On every incoming event (an event on an input port), the flattening node extracts a user specified element and produces output events from this element.

The node properties:

Property	Description
`path`	The element from the input event the flattening node must process for output.

The output data type from the flattening node depends on the data type of the element defined by the `path` property.

If `path` is set to a list element, then for every incoming event each entry in the list element will correspond to an output event. The list is effectively flattened into a sequence of individual events.

7.8 Notification nodes

The Notification node in Query Builder provides Event Insight users with notifications via instant messages, email and SMS.

The Notification node can be found in the palette and used as a sink node in a query graph, if the user wants to be notified based on events that arrive on the Notification node.

A Query Node is provided for notification management. The table below lists Event Insight components of the Notification feature.

Component	Description
Notification node	Query Node visible in the Query Builder palette that allows you to configure the condition, type and contents of notifications.
`NotificationManager`	A bundle which must be deployed and started on a bundle manager. During event flow processing, it generates and distributes service-level notification events to the Event Insight network.
`NotificationService`	A bundle which provides the notification service, and a consumer capable of receiving and processing service-level notification events. It is responsible for the distribution of physical notifications, and responsible for intercommunication with third party notification services.

7.8.1 Notification node parameters

Parameter	Description
E-mail	Recipient email address
Jabber recipient	Recipient Jabber ID
Phone number	Recipient phone number

Parameter	Description
Online	Notification used when recipient Jabber client is online
Offline	Notification used when recipient Jabber client is offline
Other	Notification used when recipient Jabber client is in any other status
SMS Gateway	SMS gateway to be used to send short messages to the recipient using specified Phone number
Template Path	Path to template in metadata repository to be used to format notification message
Service ID	Service IDs process service-level notification events generated by notification manager. This allows users to specify on which Bundle Managers notification messages are to be sent.

7.8.2 Notification types available

You can specify the following forms of notifications:

- Email
- Jabber
- SMS
- None (no notifications sent)

7.8.3 Notification templates

With templates, you can format notification messages and limit user notification sending possibilities. Users select a Template Path for which they have read access permissions for in order to have notifications to be sent by the Notification Service.

The Notification Templates view provides exploration and management functionality. Templates and their groups can be created, deleted, and modified in this view.

Templates may contain placeholders which are replaced by real values taken from event contents during the Event Insight runtime. Placeholder's must be specified using the following format:

```
${placeholder_name}
```

7.8.4 SMS gateways

You use such SMS gateways as:

- AT&T
- Cingular
- MetroPCS
- Nextel
- Sprint
- T-Mobile
- Verizon
- Virgin Mobile
- Centennial Wireless

7.9 Complex Event Processing (CEP) engine

7.9.1 Editing a CEP query

1. Double-click the CQL node.

   When you make changes in the CEP editor, the related CEP node query is also updated. You can also edit the CEP query in the "Properties" view.

   After you select a CEP query, the editor opens. The CEP text editor highlights reserved CEP keywords (for example, select and insert).

2. After you have updated the query, click **Save**.

If the query is a valid CEP query and the port schemas are correct, the CQL node is displayed in green.

7.9.1.1 Guidelines for using a CQL node

- The query may contain only one `SELECT` statement or one `CREATE ACTIVE TABLE` statement.
- A `SELECT` statement defines a continuous query and requires an output port.

- A `CREATE ACTIVE TABLE` statement defines an active table, which is a table that will be updated with the data produced by a query following the `CREATE ACTIVE TABLE` statement. No output port is required.
- For each input, an auto generated attribute time_stamp is added. You can view this attribute in the port properties.

7.9.2 Defining ports for a CEP node

You can define ports and port schemas for a CEP node.

1. Right-click the node and select **Add Port**.

   The "Add Port" window opens. You can define schemas only for output ports. For input ports, the schema is calculated from the connected node port's schema, and you cannot edit the event schema.

   You can define a port schema by adding attributes one by one or can be created from exiting event type schema.

2. To create a schema from exiting event type schema, click **Create From Existing Schema**.

   The "Select Event Schema" window opens. Event types can be either local or global. Select the event type with the appropriate schema.

3. To edit existing port information, go to the "Properties" view, right-click the node, and select **Edit port**, or double-click the port.

   Note:
   This functionality is available only for CEP ports.

7.9.2.1 Limitations for defining ports on CEP nodes

You cannot bind CEP parameters to default values because Event Insight does not offer parameter logic. Simple parameter value replacement destroys the purpose of parameters (the ability to update them during query execution).

Event Insight supports bindings between input and output streams in any combination. Event Insight does not retain information about bindings that contain local streams as target or sink, so relations cannot be represented using a query graph.

There is no type inference in the case of multiple queries in one module.

Event batching

Batching in Event Insight is a mechanism for accumulating events and publishing them to the CEP engine. Events are published in a single operation as opposed to the default behavior which publishes events individually. In landscapes where the Inter Arrival Time (IAT) of events is small, batching reduces the overhead associated with publishing events by reducing its effect on event latency.

The choice of values for the batching parameters is related to the Inter Arrival Time (IAT) of events. There is a negative correlation between batching parameters and the IAT of events; this relationship is likely to impact your choice of values for the batching parameters.

Batching is disabled by default. When batching is enabled, events are accumulated and submitted to the CEP engine when either:

- The number of accumulated events equals the **Batch Size**.
- The **Maximum Delay** since the last batch was submitted has elapsed. The number of events submitted under this scenario is variable.

Batching can be configured at three levels:

Level	Description
Query Builder preferences	Batching parameters at the Query Builder application level act as the defaults for any newly created query graphs.
Query graph	Batching parameters can be modified at the Query Graph level and act as defaults for any CQL or Semantic nodes added to the graph.
CQL or Semantic Node	After a CQL or Semantic node has been added to a query graph the default batching parameters that have been applied to the CQL/Semantic node can be modified for a particular node.

Related Topics

- Configuring the batch size in the Query Builder preferences
- Configuring event batching parameters on a query graph
- Batching parameters
- Modifying the batching parameters on a CQL or Semantic node

8.1 Batching parameters

Table 8-2: Batching parameters

Parameter	Description
Batch size	The maximum number of accumulated events that are submitted to the CEP Engine.
Maximum Delay (ms)	The maximum time interval between the submissions of events to the CEP Engine.
Enable Batching	When selected, events are submitted to the CEP engine as described by the **Batch Size** and the **Maximum Delay (ms)** parameter.
Maximum Delay Controller Threads	The size of the thread pool for timers that ensure batches are submitted when the **Maximum Delay (ms)** period is reached. **Note:** There is one pool per CEPManager Instance. This parameter is performance-related and does not typically need to be modified by users.

The **Batch Size**, **Maximum Delay (ms)** and **Enable Batching** parameters are located in and can be configured in the Query Builder Preferences. They can also be configured at the query graph level or at the CQL or Semantic node level. The **Maximum Delay Controller Threads** parameter can be configured on the CEPManager instance.

For information on configuring the CEPManager, consult the *Adding a service instance to a service or service factory* topic in the Unified Admin UI documentation.

Related Topics

- Configuring the batch size in the Query Builder preferences
- Configuring event batching parameters on a query graph
- Maximum delay controller threads

8.2 Maximum delay controller threads

When you configure the **Maximum Delay Controller Threads** parameter, you are increasing or decreasing the number of threads available in the thread pool responsible for submitting batches of events to the CEP engine.

The thread pool is only used when the maximum delay is reached, not when the batch size is reached. When the number of threads specified by this parameter is reached, no more new threads will be added to the thread pool. After events are submitted, the thread is returned to the thread pool for reuse.

If events have been submitted after reaching the maximum delay, and if the number of concurrent batches of events being submitted is continuously above the maximum, for example by 2, this may have a performance impact. This occurs because batches will have to wait for a thread to become available. In this scenario one would want to increase the maximum value by 2. The ideal setting for this parameter allows one thread to be available in the thread pool to service batch submissions when required.

Appendix

9.1 Important terms and acronyms

The following acronyms are used in the Event Insight document:

Terms	Acronym	Context
Access Control List		The list of BI platform principals that have access to an object.
Access Policy		A definition of the access rights to resources.
Action		Something a subject can do with a resource (Subscribe, Read)
Adaptive Processing Server		The Adaptive Processing Server is a component of the BI platform, and a process running within the BI platform server. Refer to the *Business Intelligence Platform Administrator Guide* for more information.
Authentication		Verification that subjects are who they claim to be.
Authorization		The action of specifying an access policy.

Terms	Acronym	Context
Bridge Node		In an Event Insight multi-node deployment, the Bridge Node: • Is the host machine that communicates with the CMS server. You designate only one server as the Bridge Node. • Is a password-protected machine that hosts the Security service and the MetaData service. • Hosts the System Landscape Directory functionality which enables the grid deployment landscape to be viewed by SAP support personnel.
Business Scenario		From a microeconomic perspective, a business scenario is a cycle, which consists of several different interconnected logical processes in time. Typically, a business scenario includes several company departments and involves with other business partners. From a technical point of view, a business scenario needs at least one SAP application (SAP ERP, SAP SCM, or others) for each cycle and possibly other third-party systems. A business scenario is a unit which can be implemented separately and reflects the customer's prospective course of business.
Business Intelligence platform	BI platform	The Business Intelligence platform that powers the management and secure deployment of specialized end-user tools for reporting, query and analysis, and performance management on a scalable and open services-oriented architecture.
Central Management Console	CMC	Allows you to create and manage BusinessObjects Enterprise users and groups. It also enables you to publish, organize, and set security levels for all of your BusinessObjects Enterprise content. Additionally, the CMC enables you to manage servers and create server groups.

Terms	Acronym	Context
Central Management Server	CMS	Maintains a database of information about your SAP BusinessObjects Business Intelligence platform (in the CMS system database) and audited user actions (in the Auditing Data Store). All platform services are managed by the CMS. The CMS also controls access to the system files where documents are stored, and information on users, user groups, security levels (including authentication and authorization), and content. For more information, refer to the *Business Intelligence Platform User Guide*.
Central System Monitoring	CEN	A system used to monitor business processes executed in a number of local systems.
Common Information Model	CIM	Provides a common definition of management information for systems, networks, applications and services, and allows for vendor extensions. CIM's common definitions enable vendors to exchange semantically rich management information between systems throughout the network. The XML file that Event Insight's SLDDataSupplier generates for transfer to the SLD is complaint with the CIM model.
Complex Event Processing	CEP	Complex event processing consists of processing many events happening across all the layers of an organization, identifying the most meaningful events within the event cloud, analyzing their impact, and taking subsequent action in real time.
Component		A component is the smallest individual unit considered within the Solution Development Lifecycle; components are separately produced, delivered, installed and maintained.
Computing Center Management System	CCMS	A set of integrated tools for monitoring and administration SAP system landscapes. The CCMS performs tasks in the following areas: • System monitoring across the entire landscape • Determining and displaying statistical data • System management (for example, starting and stopping SAP systems, configuration, printing, background processing, resource management, and database administration)

Terms	Acronym	Context
Host		A physical server Synonymous with node
Landscape		The topology of a deployed customer system.
Landscape Management Database	LMDB	Provides the infrastructure for centralized landscape data management in SAP Solution Manager. The LMDB gathers landscape data from SLD systems. The LMDB retrieves and enhances SLD data, providing it to client applications. Technical systems data is registered in the SLD and gathered in the LMDB.
Managed System		The Event service instance deployment to be monitored for configuration changes.
Managing System		The service instance of Solution Manager on which the end to End Root Cause Analysis application runs.
Node		A node is a host.
Open Shortest Path First	OSPF	Open Shortest Path First is an adaptive routing protocol for Internet Protocol (IP) networks. It is defined as OSPF Version 2 in RFC 2328 (1998) for IPv4.
Principal		A BI platform user or group of users.
Resource		Something on which permission is granted, for example an event or configuration.
SAP Solution Manager		The Managing System.
SAPHOSTAgent		A newer version of SAPOSCOL, on which the Diagnostic Agents execute. With Diagnostics Agents 7.20 and greater, SAPHOSTAgent is installed automatically.
Schema		In Event Insight, a set of events.

Terms	Acronym	Context
Site		A Geographic location. Can contain several hosts.
SLD Agent	sldreg	`sldreg`, the SLD Agent is installed on that node only. The `sldreg` program should be installed on the Event Insight server where the SLDDataSupplier node will be run. For Event Insight node grid deployments, an Event Insight server is selected to communicate with the SLD server.
Solution Manager Diagnostic Agent	SMD Agent	Responsible for communication between managed and managing systems.
Subject		An entity (such as a human, process, or collection) that is assigned permissions to perform an action on a resource. Subject is the Event Insight term for a user or user group, and is equivalent to the Principal.
System Identifier	SID	Used to identify a Technical System. In the SLD, Technical Systems with identical SID are distinguished by their DB Host. In the SAP Solution Manager (SMSY), the extended SID is used for that purpose. The LMDB extends SIDs sent by SLD when needed, and offers Extended SIDs at system creation. Extended SID = SID + 5 chararacter suffix (optional, only used if needed) Allowed characters in the SID: A-Z, 0-9 in any sequence Allowed characters in the Suffix: A-Z, 0-9, "_" Automatically generated prefixes consist of 5 digits including leading zeros (e.g. ABC00001). **Tip:** To find managed systems in the SAP Solution Manger, use wildcards.

Terms	Acronym	Context
System Landscape Directory	SLD	The central information repository in SAP NetWeaver for your system landscape. It contains information about technical systems, landscapes, business systems, products, and software components in your system landscape. The `sldreg` executable is used to transfer data to the SLD for a system that is neither AS ABAP nor AS Java based, for example Event Insight. When triggered by other SAP systems, the sldreg sends data in an XML format using a predefined document type definition (DTD). It uses an HTTP connection.
Technical System		Runtime environment that executes the Event Insight applications. It is identified with a system identifier (SID). A Technical system can be running on one or more servers and has one database service instance that is shared between the parts of the systems running on different servers. In Event Insight terms, this corresponds to grid deployment of Event Insight, using the MetaData server as the shared database.

More Information

Information Resource	Location
SAP BusinessObjects product information	http://www.sap.com
SAP Help Portal	Navigate to http://help.sap.com/businessobjects and on the "SAP BusinessObjects Overview" side panel click **All Products**. You can access the most up-to-date documentation covering all SAP BusinessObjects products and their deployment at the SAP Help Portal. You can download PDF versions or installable HTML libraries. Certain guides are stored on the SAP Service Marketplace and are not available from the SAP Help Portal. These guides are listed on the Help Portal accompanied by a link to the SAP Service Marketplace. Customers with a maintenance agreement have an authorized user ID to access this site. To obtain an ID, contact your customer support representative.
SAP Service Marketplace	http://service.sap.com/bosap-support > Documentation • Installation guides: https://service.sap.com/bosap-instguides • Release notes: http://service.sap.com/releasenotes The SAP Service Marketplace stores certain installation guides, upgrade and migration guides, deployment guides, release notes and Supported Platforms documents. Customers with a maintenance agreement have an authorized user ID to access this site. Contact your customer support representative to obtain an ID. If you are redirected to the SAP Service Marketplace from the SAP Help Portal, use the menu in the navigation pane on the left to locate the category containing the documentation you want to access.
Docupedia	https://cw.sdn.sap.com/cw/community/docupedia Docupedia provides additional documentation resources, a collaborative authoring environment, and an interactive feedback channel.
Developer resources	https://boc.sdn.sap.com/ https://www.sdn.sap.com/irj/sdn/businessobjects-sdklibrary

Information Resource	Location
SAP BusinessObjects articles on the SAP Community Network	https://www.sdn.sap.com/irj/boc/businessobjects-articles These articles were formerly known as technical papers.
Notes	https://service.sap.com/notes These notes were formerly known as Knowledge Base articles.
Forums on the SAP Community Network	https://www.sdn.sap.com/irj/scn/forums
Training	http://www.sap.com/services/education From traditional classroom learning to targeted e-learning seminars, we can offer a training package to suit your learning needs and preferred learning style.
Online customer support	http://service.sap.com/bosap-support The SAP Support Portal contains information about Customer Support programs and services. It also has links to a wide range of technical information and downloads. Customers with a maintenance agreement have an authorized user ID to access this site. To obtain an ID, contact your customer support representative.
Consulting	http://www.sap.com/services/bysubject/businessobjectsconsulting Consultants can accompany you from the initial analysis stage to the delivery of your deployment project. Expertise is available in topics such as relational and multidimensional databases, connectivity, database design tools, and customized embedding technology.

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