IBM Opportunity Detect Version 9 Release 1.1 November 26, 2014

System Tables



Note

Before using this information and the product it supports, read the information in "Notices" on page 23.

This edition applies to version 9, release 1, modification 1 of IBM Opportunity Detect (product number 5725-D16) and to all subsequent releases and modifications until otherwise indicated in new editions.

© Copyright IBM Corporation 1999, 2014.

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

Chapter 1. About this document 1	Privacy Policy and Terms of Use Considerations 25
Chapter 2. IBM Opportunity Detect design time system table reference 3	
Chapter 3. IBM Opportunity Detect run time system table reference 19	
Before you contact IBM technical support	
Notices	

Chapter 1. About this document

This section provides an introduction to the purpose and scope of this document and the terms and conditions of use.

Purpose of this document

This document is intended to help your company understand the IBM[®] Opportunity Detect data model for integration purposes.

Important: You should not modify the Opportunity Detect system tables directly (rather than through the user interface). If you modify the Opportunity Detect system tables directly, you may compromise the Opportunity Detect functionality and make it more difficult for IBM Technical Support to resolve any problems that may occur.

Terms and conditions of use

The enclosed information is confidential and proprietary to IBM and accordingly may only be used in accordance with the terms of your current and valid confidentiality agreement.

This information should be shared within your company only on a need-to-know basis. If you are unable to confirm whether your company has a current and valid confidentiality agreement with IBM that appropriately protects the enclosed data from public disclosure, DO NOT CONTINUE THROUGH THIS DOCUMENT AND INSTEAD RETURN IT IMMEDIATELY TO IBM .

Future system table changes

IBM reserves the right, at any time, to change system table schemas and the contents of this document for the Opportunity Detect product. If you choose to develop custom integrations using Opportunity Detect system tables, these components need to be reviewed and possibly modified to work with future releases of Opportunity Detect system tables.

There is no guarantee of backwards compatibility or automated migration for custom-developed or third-party extensions using the Opportunity Detect system tables. IBM does not support any use of the Opportunity Detect system tables outside of standard application use conducted through the Opportunity Detect application or standard tools shipped as part of the product.

Chapter 2. IBM Opportunity Detect design time system table reference

This section provides details on each of the IBM Opportunity Detect design time system tables. Some fields are for future use.

Important: The data types shown in the tables are generic types that may be different in your Opportunity Detect installation, depending on the database type. For example, in the 9.1.x release, only DB2 is supported for system tables, so the data type shown as DATETIME will be TIMESTAMP, and NVARCHAR data will be VARGRAPHIC.

AudienceLevel

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID for the audience level.
name	NVARCHAR	100	false	The display name for the audience level in the user interface.
code	NVARCHAR	1	false	The code associated with the audience level. This code is used in the names of files that contain the transaction and profile data.
origin	INT		false	Indicates whether the audience level was created by a user or by the system. In real time mode, audience levels are created by the system.
createDateTime	DATETIME		false	The date and time when the audience level was created.
modifyDateTime	DATETIME		true	The date and time when the audience level record was last modified.

Stores the customer defined audience level information (formerly known as entity).

Component

The central repository for all components.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID of the component.
componentTypeId	VARCHAR	36	false	The unique ID of the component type.
name	NVARCHAR	100	false	The user defined name of the component.
description	NVARCHAR	200	true	The user defined description for the component.
xmlRule	XML		true	The definition of the component, stored in XML format.

Field	Туре	Length	Null?	Description
status	INT		false	The status of the component: complete or incomplete.
nameSpace	NVARCHAR	100	false	The workspace origin of a component. When a component reference is pasted into a workspace, the name of the workspace from which the component was copied is shown in parentheses after the component name in the component list.
tag	NVARCHAR	50	true	The user defined tag for the component.
origin	INT		false	Indicates whether the component was created by a user or by the system. In real time mode, components are created by the system.
negativeEvent	INT		false	Indicates whether the component can be used as a negative event.
createDateTime	DATETIME		false	The date and time when the component was created.
modifyDateTime	DATETIME		true	The date and time when the component was last modified.

ComponentDataSource

Stores the relationship between a component and data source.

Field	Туре	Length	Null?	Description
componentId	VARCHAR	36	false	The unique ID of the component where the data source is being used.
allowsDataSourceId	VARCHAR	36	true	The ID of the transaction data source that the component is allowed to use.
usesDataSourceId	VARCHAR	36	true	The ID of the transaction data source that the component is configured to use.
allowsProfileId	VARCHAR	36	true	The ID of the profile data source that the component is allowed to use.
usesProfileId	VARCHAR	36	true	The ID of the profile data source that the component is configured to use.
audienceId	VARCHAR	36	true	The ID of the audience level that the component is allowed to use.

ComponentType

Stores the component type list.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID that identifies the component type throughout the application.
type	NVARCHAR	100	false	An internal name associated with the component type.
category	NVARCHAR	100	false	Indicates the whether the component produces an event or data.

Connector

Stores connector information.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID that identifies the connector throughout the application.
name	NVARCHAR	100	false	The display name associated with the connector.
description	NVARCHAR	200	true	The user defined description of the connector.
type	NVARCHAR	20	false	The type of the connector: file, table,TCP, Real Time (displayed as Web Service in the user interface), or Trigger Table.
createDateTime	DATETIME		false	The date and time when the connector was created.
modifyDateTime	DATETIME		true	The date and time when the connector was last modified.

CustomType

Stores all field definitions and other attributes for container, select function, and join function components.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID of the custom field. Custom fields are used only with container, select, or join components.
name	NVARCHAR	50	false	The name of the custom field.
componentId	VARCHAR	36	false	The unique ID of the component to which the custom field belongs
dataTypeId	VARCHAR	36	false	The unique ID of the data type of the custom field.
length	INT		true	The length of a string field.

Field	Туре	Length	Null?	Description
defaultValue	NVARCHAR	36	true	This field is not used.
outputName	NVARCHAR	50	true	The user defined name that is displayed in the component editor for the select function, and used by the select function.
aggregateFunction	NVARCHAR	20	true	The list of functions available for users to apply to fields in Select and Container components.
nullable	INT		true	This field is not used.
isUnique	INT		true	This field is not used.
createDateTime	DATETIME		false	The date and time when the custom field was created.
modifyDateTime	DATETIME		true	The date and time when the custom field was last modified.

DatabaseConnection

Stores database connection information.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID that identifies the connection.
name	NVARCHAR	100	false	The user defined display name associated with the database connection.
databaseName	NVARCHAR	200	false	The name of the database.
serverName	NVARCHAR	200	false	The name of the database server.
databaseType	VARCHAR	20	false	The type of the database.
userId	NVARCHAR	50	false	The user name for the database account that the system uses to access the database.
password	NVARCHAR	50	false	The password for the database account that the system uses to access the database.
port	INT		true	The port on which the database server listens.
createDateTime	DATETIME		false	The date and time when the connection was created.
modifyDateTime	DATETIME		true	The date and time when the connection was last modified.

DataSource

Stores data source information.

Field	Туре	Length	Null?	Description
id	VARCHAR	36		The unique ID that identifies the data source throughout the application.

Field	Туре	Length	Null?	Description
name	NVARCHAR	100	false	The user defined display name for the data source.
description	NVARCHAR	200	true	The user defined description of the data source.
type	NVARCHAR	20	false	The type of data source (transaction, file profile, or database profile).
customAttributes	NVARCHAR	2000	true	
origin	INT		false	Indicates whether the data source was created by a user or by the system. In real time mode, data sources are created by the system.
createDateTime	DATETIME		false	The date and time when the data source was created.
modifyDateTime	DATETIME		true	The date and time when the data source was last modified.

DataSourceField

Stores data source field definitions.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID that represents the field.
dataSourceId	VARCHAR	36	false	The unique ID associated with the data source that the fields belong to.
name	NVARCHAR	100	false	The internal name of the field, used by the system and not displayed.
description	NVARCHAR	200	true	The user defined description of the field.
dataTypeId	VARCHAR	36	false	The unique ID that represents the data type of the field.
nameValueListId	VARCHAR	36	true	The unique ID associated with a named value list that is associated with the field.
аррТуре	NVARCHAR	100	false	The type of the field: audience ID, transaction date, or attribute.
displayName	NVARCHAR	100	false	The name that is displayed in the user interface when users reference the data source field.
audienceId	VARCHAR	36	true	The audience level associated with the data source field.
createDateTime	DATETIME		false	The date and time when the field was created.
modifyDateTime	DATETIME		true	The date and time when the field was last modified.

DataType

Stores a list of the available data types.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID that represents the data type.
name	NVARCHAR	100	false	The internal name that the system uses to identify data types.
displayName	NVARCHAR	100	false	The name of the data type that appears in the user interface.
length	INT		true	Allowed length of the data in fields of this type.
precision	INT		true	Precision of the data in fields of this type.
scale	INT		true	Scale of the data in fields of this type.
origin	INT		false	Indicates whether the data type was created by a user or by the system. In real time mode, data types are created by the system.
createDateTime	DATETIME		false	The date and time when the data type was created.
modifyDateTime	DATETIME		true	The date and time when the data type was last modified.

DeploymentConfiguration

Stores deployment configuration details.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID that identifies the deployment configuration.
name	NVARCHAR	100	false	The user defined display name associated with the deployment configuration.
serverGroupId	VARCHAR	36	false	The ID of the server group that the deployment configuration uses.
workspaceId	VARCHAR	36	false	The ID of the workspace that the deployment configuration is associated with.
deployed	INT		false	Indicates whether the deployment configuration has been deployed.
origin	INT		false	Indicates whether the deployment configuration was created by a user or by the system. In real time mode, deployment configurations are created by the system.
systemLogLevel	INT		false	This field is not used.

Field	Туре	Length	Null?	Description
createDateTime	DATETIME		false	The date and time when the deployment configuration was created.
modifyDateTime	DATETIME		true	The date and time when the deployment configuration was last modified.

DeploymentHistory

Stores histories of deployment configurations.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID that identifies the deployment configuration history record.
version	INT		false	The sequential number per workspace and deployment configuration that identifies the deployment configuration version.
deploymentConfigurationId	VARCHAR	36	false	The unique ID of the deployment configuration.
action	NVARCHAR	50	false	Indicates whether the deployment configuration was deployed or un-deployed. With IBM Interact integration, re-deployed is also a possible value.
status	INT		false	The status of the deployment or undeployment: succeeded or failed.
message	NVARCHAR	2000	true	The message indicating that the action was successful, or an error message indicating why it failed.
actionDateTime	DATETIME		false	The date and time when the action completed.

DeploymentNotification

Stores the relationship between a deployment configuration and notification files for that configuration.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID of the notification.
deploymentConfigurationId	VARCHAR	36	false	The unique ID of the deployment configuration.
scriptFileName	NVARCHAR	50	false	The name of the notification batch file.

Encoding

Stores a list of the available file connectors and various attributes.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID that represents the encoding used by feed files.
name	NVARCHAR	20	false	The name that the system uses to determine what file encoding to use.
displayName	NVARCHAR	100	false	The display name shown in the list of encodings in the user interface.

FileConnector

Stores a list of the available file connectors and various attributes.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID that represents the file connector.
fileName	NVARCHAR	100	false	The name of the feed file that is associated with the file connector.
currencyLocaleId	VARCHAR	36	false	The unique ID of the currency locale that is associated with the file connector.
dateLocaleId	VARCHAR	36	false	The unique ID of the date locale that is associated with the file connector.
encodingId	VARCHAR	36	false	The unique ID of the file encoding that is associated with the file connector.

Locale

Stores locale information.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID associated with the locale information.
language	NCHAR	3	false	The language associated with the locale.
country	NCHAR	2	false	The country associated with the locale.
variant	NVARCHAR	100	true	The variant, if any, associated with the locale.
displayName	NVARCHAR	100	false	The display name for the locale.

NameValueItem

Stores details about named value list items.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID that represents the named value list item.
nameValueListId	VARCHAR	36	false	The unique ID of named value list to which the named value item belongs.
name	NVARCHAR	100	false	The display name of the list item.
value	NVARCHAR	100	false	The value of the list item.
createDateTime	DATETIME		false	The date and time when the list item was created.
modifyDateTime	DATETIME		true	The date and time when the list item was last modified.

NameValueList

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID of the named value list.
name	NVARCHAR	100	false	The user defined name of the list.
description	NVARCHAR	200	true	The user defined description of the list.
dataTypeId	VARCHAR	36	false	The unique ID of the data type assigned to the list items.
origin	INT		false	Indicates whether the named value list was created by a user or by the system. In real time mode, named value lists are created by the system.
createDateTime	DATETIME		false	The date and time when the list was created.
modifyDateTime	DATETIME		true	The date and time when the list was last modified.

Partition

Stores details about the partition.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID associated with the partition.
name	NVARCHAR	100	false	The name of the partition.
createDateTime	DATETIME		false	The date and time when the partition record was created.
modifyDateTime	DATETIME		true	The date and time when the partition record was last modified.

RealTimeConnector

Stores information for web service connections, used in real time mode.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID associated with the web service connector (Web service is the display name for the connector in the user interface. It is named RealTime in the database).

RunConfiguration

Stores the most recent run configuration for a deployment configuration that was run as a batch run.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID that identifies the run configuration.
deploymentConfigurationId	VARCHAR	36	false	The unique ID of the deployment configuration.
artificialTransaction	INT		true	Indicates whether the user chose to use artificial transaction mode for a run.
bClearState	INT		true	This field is not used.
bNotification	INT		true	Indicates whether the user chose to have a notification sent at the completion of the batch run.
runInRecovery	INT		true	Indicates whether the user chose to run the job in recovery mode.
defaultFeedPath	NVARCHAR	255	true	The default feed path for all file data sources used in the run. This can override the default feed path on the server group definition.
inactivityMode	INT		true	Stores the inactivity mode for the system.
inactivityDate	DATETIME		true	The inactivity date that was used for processing inactivities.
systemLogLevel	INT		false	An integer that represents the logging level associated with the batch run.

Server

Stores server names and the number of Run Time Instances (RTI) to launch on the server.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID of the server.
serverName	NVARCHAR	50	false	The name of the server.

Field	Туре	Length	Null?	Description
createDateTime	DATETIME		false	The date and time when the server record was created.
modifyDateTime	DATETIME		true	The date and time when the server record was last modified.

ServerGroup

Stores details about server group configurations.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID of the server group.
streamInstanceId	VARCHAR	36	true	The ID of the Streams instance associated with the server group.
name	NVARCHAR	50	false	The name of the server group.
usage	NVARCHAR	200	true	The usage of the Server Group: production, test, or development.
rtDatabaseConnectionId	VARCHAR	36	false	The ID of the database connection that the system uses used to connect to the run time database.
forProduction	INT		true	Indicates whether the server group is designated for production use. Use of production server groups is restricted to users with the correct permissions.
createDateTime	DATETIME		false	The date and time when the server group record was created.
modifyDateTime	DATETIME		true	The date and time when the server group record was last modified.

StreamInstance

Stores the Streams instance IDs.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID of the connector that is associated with the Streams instance.
instanceId	NVARCHAR	100	false	The unique ID of the Streams instance.

TableConnector

Stores information necessary to connect to a database table.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID of the table connector.
tableName	NVARCHAR	100	false	The name of the database table that the connector is associated with.

Field	Туре	Length	Null?	Description
sharable	INT			Indicates whether the table connector can be shared by other server groups.
contentType	NVARCHAR	50	true	The type of data stored in the table: state or outcome.

TCPConnector

Stores information for TCP connections, used in real time mode.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID associated with the TCP connector.

Version

Stores information about the application installation.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID of the version information record.
version	NVARCHAR	100	false	The version number of Opportunity Detection at the time of installation or upgrade.
task	NVARCHAR	500	true	Indicates whether the instance was created by an install or upgrade.
message	NVARCHAR	100	true	Information about the installation version and the installation type: base install or upgrade.
createDateTime	DATETIME		false	The date and time when the version record was created.

Workspace

Stores information about workspaces.

Field	Туре	Length	Null?	Description
id	VARCHAR	36	false	The unique ID associated with the workspace.
partitionId	VARCHAR	36	false	The partition associated with the workspace.
name	NVARCHAR	100	false	The name of the workspace.
description	NVARCHAR	200	true	The description of the workspace.
publishedDateTime	DATETIME		true	This field is not used.
status	INT		false	Indicates whether the workspace is ready to run.

Field	Туре	Length	Null?	Description
origin	INT		false	Indicates whether the workspace was created by a user or by the system. In real time mode, workspaces are created by the system.
deployedDateTime	DATETIME		true	The date and time when the workspace was last deployed.
createDateTime	DATETIME		false	The date and time when the workspace record was created.
modifyDateTime	DATETIME		true	The date and time when the workspace contents are modified with significant changes. For example, changing the name of the workspace does not update this field.

XComponentComponent

Stores the relationships between the components.

Field	Туре	Length	Null?	Description
componentId	VARCHAR	36	false	The unique ID of the component that is dependant upon another component.
referenceId	VARCHAR	36	false	The unique ID of the component that is being referenced
relationship	INT		false	The numerical value that represents the relationship as either parent or child.

XComponentCustomType

Stores the relationships between custom data types and components.

Field	Туре	Length	Null?	Description
componentId	VARCHAR	36	false	The unique ID of the component.
customTypeId	VARCHAR	36	false	The unique ID of the select or container custom fields referenced by the component.

XDeploymentDataSource

Stores the relationship between deployment configurations and a data sources.

Field	Туре	Length	Null?	Description
connectorId	VARCHAR	36	false	The unique ID of the connector used in the deployment configuration.

Field	Туре	Length	Null?	Description
dataSourceId	VARCHAR	36	false	The unique ID of the data source associated with the connection in the deployment configuration.
databaseConnectionId	VARCHAR	36	true	The unique ID of the database connection used in the deployment configuration.
deploymentConfigurationId	VARCHAR	36	false	The unique ID of the deployment configuration.

XServerGroupDatabaseConnection

Stores the relationship between a server group and the available database connections.

Field	Туре	Length	Null?	Description
serverGroupId	VARCHAR	36	true	The unique ID of the server group.
databaseConnectionId	VARCHAR	36	true	The unique ID of the database connection used in the server group.

XServerGroupDataSource

Stores the relationship between server groups and data sources.

Field	Туре	Length	Null?	Description
connectorId	VARCHAR	36	false	The unique ID of the connector associated with a data source.
dataSourceId	VARCHAR	36	false	The unique ID of the data source.
databaseConnectionId	VARCHAR	36	true	The unique ID of the database connection.
serverGroupId	VARCHAR	36	false	The unique ID of the server group.

XComponentDataSourceField

Stores the association between data source fields and components that use them.

Field	Туре	Length	Null?	Description
componentId	VARCHAR	36	false	The unique ID of the component.
dataSourceFieldId	VARCHAR	36	false	The unique ID of the data source field that is being referenced by a component.

XComponentNameValueItem

Stores the association between a named value item and components that use them.

Field	Туре	Length	Null?	Description
componentId	VARCHAR	36	false	The unique ID of the component.

Field	Туре	Length	Null?	Description
nameValueItemId	VARCHAR	36		The unique ID of the named item value field that is being referenced by a component.

XServerStreamInstance

Stores the relationship between the Streams servers and instances.

Field	Туре	Length	Null?	Description
serverId	VARCHAR	36	false	The unique ID of the Streams server.
streamInstanceId	VARCHAR	36	false	The unique ID of a database connection.
numberOfEngines	INT		true	The number of Streams instances on the server.

XWorkspaceComponent

Stores the relationship between components and a workspace.

Field	Туре	Length	Null?	Description
workspaceId	VARCHAR	36	false	The unique ID of the workspace.
componentId	VARCHAR	36	false	The unique ID of the component that belongs to the workspace.
ready	INT		false	This field is not used.

XWorkspaceUser

Stores the workspace favorites for users.

Field	Туре	Length	Null?	Description
workspaceId	VARCHAR	36	false	The unique ID of the workspace.
userId	INT			The ID of the user from the Marketing Platform database.

Chapter 3. IBM Opportunity Detect run time system table reference

This section provides details on each of the IBM Opportunity Detect run time system tables. Some fields are for future use.

Important: The data types shown in the tables are generic types that may be different in your Opportunity Detect installation, depending on the database type. For example, in the 9.1.x release, only DB2 is supported for system tables, so the data type shown as DATETIME will be TIMESTAMP, and NVARCHAR data will be VARGRAPHIC.

Run

Field	Туре	Length	Null?	Description
id	INT		false	A ID associated with the batch run.
deploymentConfigurationId	VARCHAR	36	false	The unique ID of the deployment configuration used for the run.
workspaceId	VARCHAR	36	false	The unique ID of the workspace associated with the deployment configuration.
startTime	TIMESTAMP		false	The date and time when the run was started.
endTime	TIMESTAMP		true	The date and time when the run finished.

Stores run information.

RunDetail

Stores run detail information.

Field	Туре	Length	Null?	Description
id	INT		false	A unique ID associated with the run detail record.
runId	INT		false	The unique ID of the run.
startTime	TIMESTAMP		false	The date and time when the run was started
endTime	TIMESTAMP		true	The date and time when the run completed.
state	INT		true	A numerical value that represents the final state for the batch run.
isRecovery	INT		true	Indicates whether this was a recovery run or normal run.
parameters	VARCHAR	1000	true	Stores all the run parameters that were used in the run.

RunState

Stores run status for each run detail record for each run.

Field	Туре	Length	Null?	Description
id	INT		false	A ID associated with the run detail.
runDetailId	INT		false	The run detail ID.
runDetailRunId	INT		false	The run ID.
runTimeStamp	TIMESTAMP		false	Thedate and time associated with the system state record.
state	INT		false	A numerical value that represents the final state for the run detail

Before you contact IBM technical support

If you encounter a problem that you cannot resolve by consulting the documentation, your company's designated support contact can log a call with IBM technical support. Use these guidelines to ensure that your problem is resolved efficiently and successfully.

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.

Information to gather

Before you contact IBM technical support, gather the following information:

- 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

When you call IBM technical support, you might be asked to provide information about your environment.

If your problem does not prevent you from logging in, much of this information is available on the About page, which provides information about your installed IBM applications.

You can access the About page by selecting **Help > About**. If the About page is not accessible, check for a version.txt file that is located under the installation directory for your application.

Contact information for IBM technical support

For ways to contact IBM technical support, see the IBM Product Technical Support website: (http://www.ibm.com/support/entry/portal/open_service_request).

Note: To enter a support request, you must log in with an IBM account. This account must be linked to your IBM customer number. To learn more about associating your account with your IBM customer number, see **Support Resources** > **Entitled Software Support** on the Support Portal.

Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing IBM Corporation North Castle Drive Armonk, NY 10504-1785 U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

Intellectual Property Licensing Legal and Intellectual Property Law IBM Japan, Ltd. 19-21, Nihonbashi-Hakozakicho, Chuo-ku Tokyo 103-8510, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk. IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation 170 Tracer Lane Waltham, MA 02451 U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

All IBM prices shown are IBM's suggested retail prices, are current and are subject to change without notice. Dealer prices may vary.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not

been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs. The sample programs are provided "AS IS", without warranty of any kind. IBM shall not be liable for any damages arising out of your use of the sample programs.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

Trademarks

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at www.ibm.com/legal/copytrade.shtml.

Privacy Policy and Terms of Use Considerations

IBM Software products, including software as a service solutions, ("Software Offerings") may use cookies or other technologies to collect product usage information, to help improve the end user experience, to tailor interactions with the end user or for other purposes. A cookie is a piece of data that a web site can send to your browser, which may then be stored on your computer as a tag that identifies your computer. In many cases, no personal information is collected by these cookies. If a Software Offering you are using enables you to collect personal information through cookies and similar technologies, we inform you about the specifics below.

Depending upon the configurations deployed, this Software Offering may use session and persistent cookies that collect each user's user name, and other personal information for purposes of session management, enhanced user usability, or other usage tracking or functional purposes. These cookies can be disabled, but disabling them will also eliminate the functionality they enable.

Various jurisdictions regulate the collection of personal information through cookies and similar technologies. If the configurations deployed for this Software Offering provide you as customer the ability to collect personal information from end users via cookies and other technologies, you should seek your own legal advice about any laws applicable to such data collection, including any requirements for providing notice and consent where appropriate.

IBM requires that Clients (1) provide a clear and conspicuous link to Customer's website terms of use (e.g. privacy policy) which includes a link to IBM's and Client's data collection and use practices, (2) notify that cookies and clear gifs/web beacons are being placed on the visitor's computer by IBM on the Client's behalf along with an explanation of the purpose of such technology, and (3) to the extent required by law, obtain consent from website visitors prior to the placement of cookies and clear gifs/web beacons placed by Client or IBM on Client's behalf on website visitor's devices

For more information about the use of various technologies, including cookies, for these purposes, See IBM's Online Privacy Statement at: http://www.ibm.com/privacy/details/us/en section entitled "Cookies, Web Beacons and Other Technologies."



Printed in USA