iWD Deployment Guide

IWD GAX Plug-in Configuration

5/10/2025

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Business Structure

Business Structure

[+] DESCRIPTION

The Business Structure is a hierarchy of business units. Each Tenant can contain one or more Solutions as the first level of the hierarchy. Below Solutions are Departments. Below Departments are Processes. For example:

- East London Office—Solution (note that this meaning means the top node of a business structure, rather than the meaning of Solution in Genesys Configuration environment.)
  - Finance Department—Department
    - Accounts Payable—Process
    - Order Processing—Process

> **Warning**
> All node names have to be unique within the parent node. For example, moving department D1 to another solution which already has a department named D1 generates an error.

> **Warning**
> Only one business structure per Tenant is possible.

Levels of a Business Structure for a Tenant:

- **[+] SOLUTIONS**

  Solutions are used for partitioning logical and physical resources for purposes of user access control and load partitioning (performance). Normally there will be one Solution per Tenant, though you can configure multiple solution instances per tenant, if necessary (for example, “Production” and “Test”).

  A Solution in iWD represents a runtime environment, which is composed of the following:

  - Runtime nodes—iWD runtime application instances that are within the Java application server in which services are being run

  - Services—Services that enable iWD functionality, such as Data Mart, Statistics Adapter, and logging.
  - Business logic—Primarily the configuration of iWD departments and processes.

  The Solution level in a Business Structure corresponds to the Global level in Genesys Rules System for the processing logic of business rules.

- **[+] DEPARTMENTS**

  A Department represents an administrative unit within a Solution. A Solution can contain many Departments. The Department level of a Business Structure corresponds to the Department level in Genesys Rules System for the processing logic of business rules.

- **[+] PROCESSES**

  A Process represents an administrative unit within a Deparatment. A Department can contain many Processes. The Process level of a Business Structure corresponds to the Process level in Genesys Rules System for the processing logic of business rules.

Display Options

Filters and Constraints

Configuration Server respects tenancy permission settings. You can access only those objects that you have been granted permissions and privileges to access.

You can filter the contents of this list in two ways:

1. Type the name or partial name of an object in the **Quick Filter** field.
2. Click the cube icon to open the **Tenant Directory** filter panel. In this panel, click the Tenant that you want to select. Use the **Quick Filter** field in this panel to filter the Tenant list.

You can sort the items in the list by clicking the **Name** column. Clicking a second time reverses the sort order. You can add or remove columns by clicking **Select Columns**.

To select or de-select multiple objects at once, click **Select**.

Data Fields

Each entry is shown with the following data fields:

- **Name**—The element's name.
- **Type**—`Solution`, `Department` or `Process`
- **ID**—The runtime ID of this element.
- **Contact Name**—Contact name for queries about this element.
- **Description**—Free-format text description of the element.

Solutions

To create a new Solution

1. Click **New**.
2. From the displayed list, select the **Solution** element.
3. Complete the Solution data fields on the form tabs and click **Save**.

To create a new Solution by cloning

1. Either:
   - Select one Solution and click **More**: or;
   - Display the details of an existing Solution.
2. Click **Clone**.
3. Edit the Solution data fields.

Other Actions

From this context you can **Delete** this Solution.

> ### Warning
> Deleting a Solution can have huge implications for the operation of a contact center. Do not undertake these without serious consideration.

Solution Details

- **Solution Name**—The Solution name. Mandatory when you add a new Solution.
- **ID**—The ID of the Solution. Mandatory when you add a new Solution. The system will propose a default new Runtime ID.
- **Timezone**—Solution timezone. Use the drop-down list to change this.
- **First Day of Week**—The first day of the working week for this Solution. Use the drop-down list to change this.

- **Description**—Free-format text description of the Solution.

Interaction Server Settings

- **Interaction Server**—The Interaction Server for this Solution. Use the drop-down list to change this. This drop-down list contains those Interaction Servers which contain the Solution's parent Tenant on their Tenants list.
- **Port**—The connection port of the Interaction Server. Use the drop-down list to change this. This drop-down list contains the Interaction Server chosen above ports from the ports list.

Important

If two Solutions are configured to use the same Interaction Server, be aware that the Port settings (that is, secure or non-secure) of the Solution that is configured *second* are the ones that the Interaction Server will use. It is preferable to ensure that both Solutions' Port settings are of the same type—either both secure, or both non-secure. Every configuration object or parameter that references the Port ID (and therefore can be either secure or non-secure) will work in the same way—the setting of the one configured second (where two Solutions are configured) is the one that the Interaction Server will use. This affects connection protocol, local timeout, remote timeout, trace mode and transport protocol parameters.

- **Connection Protocol**—The connection protocol of the Interaction Server. Use the drop-down list to change this. This parameter is set as the connection attribute of the Interaction Server connection in the iWD Manager application.
- **Protocol Timeout**—The timeout configured for the connection protocol.
- **Local Timeout**— The timeout configured on the local server. This parameter is set as the connection attribute of the Interaction Server connection in the iWD Manager application.
- **Event Buffer Size**—The maximum size in bytes of the event buffer.
- **Remote Timeout**—The timeout configured on the remote server. This parameter is set as the connection attribute of the Interaction Server connection in the iWD Manager application.
- **Threads**—The number of threads available.
- **EventLog JDBC URL**—The URL of the JDBC event log. Mandatory for all database engines set in the Eventlog DAP (connected to Interaction Server set above), apart from MSSQL.
- **Attribute Filter Include**—Attributes included here will appear in the Custom Attributes displayed in the Global Task List in iWD Manager.
- **Attribute Filter Exclude**—Attributes excluded here will not appear in the Custom Attributes displayed in the Global Task List in iWD Manager.

Departments

To create a new Department

1. Select the Solution or Solution element in which the new Department will be created.
2. Click **New**.
3. From the displayed list, select the **Department** element.
4. Complete the Department data fields on the form tabs and click **Save**.

To create a new Department by cloning

1. Either:
   - Select one Department and click **More**: or;
   - Display the details of an existing Department.
2. Click **Clone**.
3. Edit the Department data fields.

Other Actions

From here you can **Clone**, **Delete** or **Move** this Department. You can move the Department only to a Solution. Any Processes configured under it will also be moved. Runtime IDs are not moved in the Move function—you must create a new one for the Department and all its child Processes in its new Solution.

> ### Warning
> Deleting or Moving a department can have huge implications for the operation of a contact center. Do not undertake these without serious consideration.

Department Details

- **Department Name**—The department name. Mandatory when you add a new Department.
- **ID**—The department's Runtime ID. Mandatory when you add a new Department. The system will propose a default new Runtime ID.
- **Contact Name**—The contact name for the department, for informational purposes.
- **Contact Email**—The contact email for the department, for informational purposes.

- **Contact Phone**—The contact phone number for the department, for informational purposes.
- **Start Date**—The date on which the department becomes active. If left empty, the period start date is unconstrained.
- **End Date**—The last day that the department is active. If left empty, the period end date is unconstrained (that is, the department will be active infinitely).
- **Description**—Free-format text description of the Department.

Department Attributes

Click **Add** to create new attributes.

- **Name**—The attribute name
- **Type**—Select from the drop-down list. Valid values are:
  - `Text`
  - `Percentage`
  - `Number`
  - `Date`
  - `Lookup Table`
- **Value**—The attribute value. If the type is a lookup table, then the value is set from the drop-down list.
- **Description**—Free-format text description of the attribute.

Department Metrics

Click **Add** to create a set of user-defined metrics, for reporting purposes.

[+] MORE

A key component of dashboards and reports is the comparison of actual metrics against target goals. Understanding the effectiveness or efficiency of organizations requires measuring performance against important goals that have been set by the organization. Targets can be associated with a number of objects, such as processes, departments, or tenants. For example, a work-time goal for a task will differ, based on its process; for example, orders will take longer than address changes. You can use metrics to measure this. Example:

When a metrics value is set, it will be stored as a named attribute in Data Mart. If the value is changed, the updates are pushed through to Data Mart with a `valid_from` and `valid_to` date/time stamp. This is important for historical reporting. For example, if you update the target on November 1 from 2.5 to 3.5, all tasks up to November 1 will use 2.5, and all new tasks will use 3.5. If the value is set at a department level, it applies to all processes, unless there is a specific value for that process. For example, Department 1 has four processes: A, B, C, and D. Cost/Task @ Department 1 = 2.50, which applies to Processes B, C, and D. Cost/Task @ Process A = 1.50, which applies only to Process A.

- **Name**—The metric name
- **Type**—Select from the drop-down list. Valid values are:
  - `Text`
  - `Percentage`
  - `Number`
  - `Date`
  - `Lookup Table`
- **Value**—The attribute value. If the type is a lookup table, then the value is set from the drop-down list.
- **Description**—Free-format text description of the attribute.

Processes

To create a new Process

1. Select the Department or Department element in which the new Process will be created.
2. Click **New**.
3. From the displayed list, select the **Process** element.
4. Complete the Process data fields on the form tabs and click **Save**.

To create a new Process by cloning

1. Either:
   - Select one Process and click **More**: or;
   - Display the details of an existing Process.
2. Click **Clone**.
3. Edit the Process data fields.

Other Actions

From here you can **Clone**, **Delete** or **Move** this Process. You can move the Process only to a Department. Runtime IDs are not moved in the Move function—you must create a new one for the Process in its new Department.

> **Warning**
> Deleting or Moving a Process can have huge implications for the operation of a contact center. Do not undertake these without serious consideration.

Process Details

- **Process Name**—The Process name. Mandatory when you add a new Process.
- **ID**—The Runtime ID of the Process. Mandatory when you add a new Process. The system will propose a default new Runtime ID.
- **Contact Name**—The contact name for the process, for informational purposes.
- **Contact Email**—The contact email for the process, for informational purposes.
- **Contact Phone**—The contact phone number for the process, for informational purposes.
- **Start Date**—The date the process becomes active. The start date of the process cannot be earlier than the start date of the parent department.
- **End Date**—The last day that the process is active. If left empty, the period end date inherits the end date value of the parent department.
- **Description**—Free-format text description of the Process.

Process Attributes

Click **Add** to create new attributes.

- **Name**—The attribute name
- **Type**—Select from the drop-down list. Valid values are:
  - `Text`
  - `Percentage`
  - `Number`
  - `Date`
  - `Lookup Table`
- **Value**—The attribute value. If the type is a lookup table, then the value is set from the drop-down list.
- **Description**—Free-format text description of the attribute.

Process Metrics

Click **Add** to create new metrics.

[+] MORE

A key component of dashboards and reports is the comparison of actual metrics against target goals. Understanding the effectiveness or efficiency of organizations requires measuring performance against important goals that have been set by the organization. Targets can be associated with a number of objects, such as processes, departments, or tenants. For example, a work-time goal for a task will differ, based on its process; for example, orders will take longer than address changes. You can use metrics to measure this. Example:

When a metrics value is set, it will be stored as a named attribute in Data Mart. If the value is changed, the updates are pushed through to Data Mart with a `valid_from` and `valid_to` date/time stamp. This is important for historical reporting. For example, if you update the target on November 1 from 2.5 to 3.5, all tasks up to November 1 will use 2.5, and all new tasks will use 3.5. If the value is set at a department level, it applies to all processes, unless there is a specific value for that process. For example, Department 1 has four processes: A, B, C, and D. Cost/Task @ Department 1 = 2.50, which applies to Processes B, C, and D. Cost/Task @ Process A = 1.50, which applies only to Process A.

- **Name**—The attribute name
- **Type**—Select from the drop-down list. Valid values are:
  - `Text`
  - `Percentage`
  - `Number`
  - `Date`
  - `Lookup Table`
- **Value**—The attribute value.
- **Description**—Free-format text description of the attribute.

Data Mart

Data Mart

> **Important**
> To apply changes to Datamart settings, you must restart iWD Runtime Node.

Display Options

Filters and Constraints

Configuration Server respects tenancy permission settings. You can access only those objects that you have been granted permissions and privileges to access.

You can filter the contents of this list in two ways:

1. Type the name or partial name of an object in the **Quick Filter** field.
2. Click the cube icon to open the **Tenant Directory** filter panel. In this panel, click the Tenant that you want to select. Use the **Quick Filter** field in this panel to filter the Tenant list.

You can sort the items in the list by clicking a column head. Clicking a column head a second time reverses the sort order. You can add or remove columns by clicking **Select Columns**.

To select or de-select multiple objects at once, click **Select**.

Data Fields

Each entry is shown with the following data fields:

- **Name** — Name of the solution hosting iWD Data Mart.

General

Data Fields

- **Application**—The name of iWD Runtime Node application attached to selected Solution. There is a one-to-one relationship between Solutions requiring Data Mart and iWD Runtime Node applications. The iWD Runtime Node can be detached from the Solution by entering a blank name in this field.
- **Host**—Host where iWD Runtime Node is installed. Selectable from the list of hosts configured in GAX Configuration Manager.
- **Port**—Port assigned to iWD Runtime Node. Numeric field, the value must be between 1 and 65535 inclusive. The port must be unique within host.
- **ETL Scripts Directory**—The directory on the server in which iWD Data Mart ETL scripts are stored. For example, the default path used when iWD Data Mart is installed is `C:\Program Files\GCTI\iWD Data Mart\etl`.
- **Number of Threads**—Performance tuning: The size of the thread pool.

- **Ignored Dimensions**—Performance tuning: list of dimensions that will be ignored by Load Intraday job. One dimension per line.
- **Default Dimension Key**—Performance tuning: default value which will be used for ignored dimensions' keys.

Logging

The Logging tab configures internal logging capabilities within the iWD Runtime Node.

- **Log Level** — The Service log level. This should be set to Info unless otherwise instructed by Genesys Technical Support. The possible log levels are:
  - Debug — the most detailed informational events that are most useful in debugging an application.
  - Info — informational messages that highlight the progress of the application.
  - Warning — potentially harmful situations.
  - Error — error events that might not affect the application’s ability to run.
  - Trace — turns on all logging.
  - Off — turns off all logging.
- **Log Directory** — The directory in which the log files will be stored, for all services. If it starts with / (on Unix-based operating systems) or a drive letter (on Windows), an absolute path will be used; otherwise, the path is relative from the iWD Runtime Node installation directory.
  Note: It is strongly recommended that you only set the file path to a directory on a local machine, not a remote location such as a shared network drive. Logging to a remote location can severely impact performance.
- **Log Age** — Sets the number of days that log files should be kept in the system. A value of 0 disables this limit.
- **Log Size** — Sets a limit on the size of a single log file, in megabytes. A value of 0 disables this limit.
- **Log Files** — Sets a limit on the number of log files that are kept for this service, excluding the current log file. A value of 0 disables this limit.

Database

The Database tab defines a connection to a Data Mart database server. The configured database and user must exist in the database server. The user must have read/write permissions to the database.

- **Application**—The name of the Database Access Point application associated with Data Mart instance.
- **Database**—The name of the database. This is available only for MS SQL Server.
- **SID**—Oracle System ID of the database. The Oracle System ID (SID) is used to uniquely identify a particular database on a system. This is available only for Oracle database.
- **Server**—The database server. Selectable from list of configured hosts.
- **Port**—The TCP port number of the database server.

- **User Name** mdash;The database user name.
- **Password**—The password for the database.
- **Auto-Sync**—The iWD Data Mart database will be initialized automatically the first time the Database Service and Kettle ETL Service are started. If the Auto-Sync option is selected, this initialization is automatic, and the Database Service will also check for updates to the iWD Data Mart database whenever a new version of iWD Data Mart is installed. The Auto-Sync option will also initialize ETL plug-ins.
- **Custom URL**—Add a specific custom URL here to override any default value for Data Mart database.

Stat Server

The **Stat Server** tab configures Statistics Adapter job and defines the connection to Genesys Stat Server. Statistics Adapter processes the statistical data created by the Aggregate Stats ETL job and writes stat-types and filters in the configuration for Genesys Stat Server. CCPulse+ requests iWD statistics from Stat Server, and reads the stat-types and filters from the Stat Server configuration.

- **Application**—The Stat Server's application name. Selectable from the list of installed Stat Server applications. Each Data Mart requires a separate Stat Server instance, so only Stat Server that are not already associated appear on the list.
- **Dimension Mapping**—Defines how statistical dimensions are mapped.
  - **Filter**—Dimensions are mapped to CCPulse+ filters.
  - **Virtual Queue**—Dimensions are mapped to Genesys virtual queues.
- **Virtual Queue Name**—Name of the Genesys virtual queue to which statistics are distributed. Applicable only if Dimension Mapping is set to Virtual Queue.
- **Service Index**—Statistical service index for configuration options. This should be unique inside the set of indexes, assigned to statistical services served by the one instance of Genesys Stat Server.
- **Extension File Name**—Required to support a Genesys reporting environment with multiple instances of Stat Server Java Extensions. This is the name of the Stat Server Java extension jar file (`BPR_iWD_Extension.jar`). This file is saved to the Stat Server installation directory during installation of the iWD Stat Extensions. You can find the location of this file in Stat Server configuration options as the value of the `java-libraries-dir` option in the `java-config` section.
- **Extension Section Name**—Required to support a Genesys reporting environment with multiple instances of Stat Server Java Extensions. This property maps to the section name for the specific Stat Server Java Extension in the Stat Server configuration.

Schedules

The Schedules tab configures execution schedule of three Data Mart job groups. The syntax follow standard CRON scheduling expression. For example, the following expression will cause the job to be executed every 15 minutes:

```
0 0,15,30,45 * * * ?
```

For more information about CRON scheduling, see **Quartz Scheduler documentation**.

- **Intraday**—The schedule for the Intraday job group: Load Config, Load Intraday, Aggregate Intraday, Aggregate Stats and Statistic Adapter. Typically scheduled to run every 15 minutes.
- **Historical**—The schedule for the Historical job group: Load Historical, Aggregate Historical and Maintain. Typically scheduled to run once a day, after midnight.
- **Prune**—The schedule for Prune job. Typically scheduled to run once a day, after Historical group.

Expirations

The Expirations tab configures the Maintain job, which deletes expired facts from Data Mart tables.

- **Record Details**—The number of days after which the detailed task (`task_fact`, `task_event_fact`, and `task_work_fact`) data will be removed from the database.
- **Aggregation 15 min**—The number of days after which the data will be removed from 15-minute aggregation tables.

Tenant Attributes

The **Tenant Attributes** tab enables selection of up to 5 of a tenant's custom attributes, that will be loaded into the `CUSTOM_DIM` dimension and associated to the tenant via the `CUSTOM_DIM_KEY` field.

- **Custom Attribute 1-5**—User-configured custom Tenant attributes, selectable from the list of Custom Attributes attached to the Tenant.

Department Attributes

The **Department Attributes tab** allows selection of up to 5 of a departments's custom attributes that will be loaded into the `CUSTOM_DIM` dimension and associated to the departments via the `CUSTOM_DIM_KEY` field.

- **Custom Attribute 1-5**—User-configured custom Department attributes, selectable from the list of Custom Attributes attached to any Department within the Solution.

Process Attributes

The **Process Attributes** tab allows selection of up to 5 of a process' custom attributes, that will be loaded into the `CUSTOM_DIM` dimension and associated to the processes via the `CUSTOM_DIM_KEY` field.

- **Custom Attribute 1-5**—User-configured custom Process attributes, selectable from the list of Custom Attributes attached to any Process within the Solution.

Task Attributes

The **Task Attributes** tab defines up to 10 names of a task's custom attributes that will be loaded into the `task_fact` custom attribute fields (`CUSTOM_ATTRIBUTE 1-10`). Names must start with a letter, and only underscores and alphanumeric characters are supported.

In order for Kettle to pick them up, it is necessary to create fields in the Event Log Database. In the `rpt_interaction` and `rpt_esp` tables, add the fields in the following format:

```
*: Name: <attribute_name>, type: varchar(length).
```

These fields should be added to the mappings in the Event Log DAP options in the `esp-custom-data` and `itx-custom-data` sections.

For example, in order to store a custom attribute with the name `order_total` in the iWD Data Mart, as a task custom attribute:

1. Create a new column in the `rpt_interaction` table: `order_total, type: varchar(50)`
2. Create a new column in the `rpt_esp` table: `order_total, type: varchar(50)`
3. Create a new option in the `esp-custom-data` section of the Event Log DAP options:
   `order_total=order_total`
4. Create a new entry option in the `itx-custom-data` section of the Event Log DAP options:
   `order_total=order_total`
5. Add `order_total` to the Task Attributes list in iWD GAX Plugin.

Dimension Mapping

The **Dimension Mapping** tab defines up to 5 comma-separated names of a task's custom attributes that will be loaded into the `CUSTOM_DIM` dimension and associated to the task via the `CUSTOM_DIM_KEY` field. Names must start with a letter, and only underscores and alphanumeric characters are supported.

In order for Kettle to pick them up, it is necessary to create fields in the Event Log Database. In the `rpt_interaction` and `rpt_esp` tables, add the fields in the following format:

```
*: Name: <attribute_name>, type: varchar(length).
```

These fields should be added to the mappings in the Event Log DAP options in the `esp-custom-data` and `itx-custom-data` sections.

For example, in order to store a custom attribute with the name `order_total` in the iWD Data Mart, as a task custom attribute:

1. Create a new column in the `rpt_interaction` table: `order_total, type: varchar(50)`
2. Create a new column in the `rpt_esp` table: `order_total, type: varchar(50)`
3. Create a new option in the `esp-custom-data` section of the Event Log DAP options:
   `order_total=order_total`

4. Create a new entry option in the `itx-custom-data` section of the Event Log DAP options: `order_total=order_total`
5. Add `order_total` to Dimension Mapping list in iWD GAX Plugin.

Lookup Tables

Lookup Tables

Lookup Tables

[+] MORE

You can specify lookup tables that can be used in rules, custom attributes, and metrics. Lookup tables are simple key/label pairs and are displayed as dropdown controls. Although business rules are managed in the Genesys Rules System, it is still possible to create rule parameters that use values from iWD Lookup Tables. Example: the `taskChannels` parameter in the iWD Standard Rules Template presents the user with a list of task channels that are read from an iWD Lookup Table.

The `taskChannels` parameter is configured as a database type rule parameter. The configuration of that parameter instructs the Genesys Rules Authoring Tool how to query the iWD configuration database to retrieve the values of the out-of-the-box iWD Lookup Table called channels. To create additional rule parameters that will retrieve the values from other Lookup Tables, you can make copies of the `taskChannels` parameter and modify the SQL query, changing the name of the Lookup Table from channels to the name of your Lookup Table.

Display Options

Filters and Constraints

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You can filter the contents of this list in two ways:

1. Type the name or partial name of an object in the **Quick Filter** field.
2. Click the cube icon to open the **Tenant Directory** filter panel. In this panel, click the Tenant that you want to select. Use the **Quick Filter** field in this panel to filter the Tenant list.

You can sort the items in the list by clicking a column head. Clicking a column head a second time

reverses the sort order. You can add or remove columns by clicking **Select Columns**.

To select or de-select multiple objects at once, click **Select**.

Data Fields

Each entry is shown with the following data fields:

- **Name**—The element's name.

Actions

To add a new Lookup Table

Either:

- From the List view, click **New** and complete the Lookup Table's details.
- Display the details of a Lookup Table and click **Clone**, then edit the details.

To add a new key/label pair to a Lookup Table

Display the Lookup Table by selecting it, then click **Add** and complete the new details.

Other Actions

From this context you can **Delete** or **Move** this Lookup Table. You can move the Lookup Table only to another Tenant. Runtime IDs are not moved in the Move function—you must create a new one for theLookup Table in its new Tenant.

> ### Warning
> Deleting or Moving a Lookup Table can have huge implications for the operation of a contact center. Do not undertake these without serious consideration.

Distribution Points and Lookup Tables

Distribution Points are attributes that can be assigned to tasks in business rules, and there is still a Distribution Point dimension for this purpose in the iWD Data Mart schema.

Distribution Points must be configured as Lookup Tables at the `Tenant` level. The following procedure describes the steps that are used to configure Distribution Points as Lookup Tables.

Configuring Distribution Points as Lookup Tables

1. In iWD GAX Plugin, configure a new Lookup Table for your tenant. The name of the Lookup Table must be `distributionPoints`.
2. The `distributionPoints` lookup table must be configured under the iWD managed tenant in which the rule action to assign the distribution point to a task is defined.
3. Start using the rule action `Assign distribution point` in your business rules.

   There is a rule action in the iWD Standard Rule Template called `Assign distribution point` that uses a rule parameter configured to read the values from the `distributionPoints` Lookup Table. This rule action can be used in a business rule.