Skill Targets

Skill Targets Subsystem

After you define a peripheral, you must define the skill targets associated with the peripheral. The following figure shows the elements in a skill targets subsystem.

Figure 1: The Skill Targets Subsystem
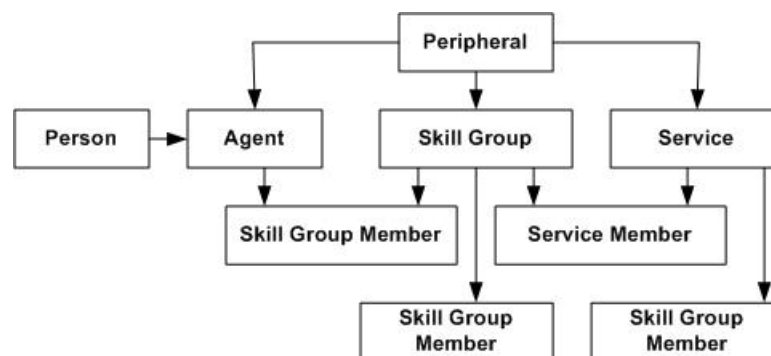
Skill targets are the entities that the system software chooses to handle calls at a peripheral: services, skill groups, and agents.

The other members in the skill target subsystem define relationships among skill targets:

- Agents are members of skill groups.

- Skill groups are members of services.

- An enterprise skill group is a collection of skill groups, usually from different peripherals.

• An enterprise service is a collection of services, usually from different peripherals.

The rest of this chapter describes how to define these skill targets and establish the relationships among them.

Services

You must provide information about each service associated with a peripheral. A *service* is a type of caller need that the peripheral handles; for example, sales, support, and information might all be services.

Use the Service Explorer to configure services and their associated records.

Service Explorer

The following sections show you how to use the Service Explorer to view and configure a service and its associated routes, peripheral targets, and labels.

View Service

To view a service, follow these steps:

Step 1 In the Configuration Manager menu, select **Tools** > **Explorer Tools** > **Service Explorer**. The Service Explorer window appears.

Step 2 In the **Select filter data** box, select the peripheral associated with the service you want to view. You can choose the name from the drop-down list.

Note Once you have saved a service record to the Unified ICM database, you cannot change the peripheral to which it is associated.

Step 3 Select any other filters you want. **None** in the Optional filter box means all services associated with the selected peripheral will be displayed.

Step 4 Click **Retrieve**. This lists in the tree list box the names of retrieved services.

Note A tree object is unassigned if it was made by another configuration tool and was not assigned (mapped) to a parent object; for example, a label might not have been assigned to a peripheral target or a route might not have been assigned to a service, and so on.

Step 5 In the tree list box, select a service to display its configuration information on the right side of the window.

Step 6 If the service has a route associated with it, click its icon in the tree list box to display its configuration information. Do the same for a peripheral target associated with the route and a label associated with the peripheral target.

Modifying, Defining, and Deleting Services

The following sections show you how to modify, define, and delete services.

Modify a Service

To modify a service, do the following:

Step 1   Follow the steps for viewing a service.

Step 2   Edit the configuration information.

> **Note**   You cannot modify fields that are greyed out.

With the mouse, you can select an object and then move it to another part of the tree, as long as its object type belongs in that tree location. For example, to move a route to another service, select it and then move the pointer to that service. When that service becomes highlighted, lift your finger off the mouse. You can also use the Bulk Configuration tool to take the output of a switch and create 20 or 30 labels. Then, using the Service Explorer, you can attach the labels to an appropriate location.

When you make a modification, the **Changed** icon ⊡ appears next to the selected item in the tree list box.

Step 3   Click **Save**.

The modified data is saved in the Unified ICM database and the **Changed** icon is removed from the edited object in the tree list box.

Related Topics

[View Service](), on page 2

Define a Service or Associated Record

To define a service and/or its associated records, follow these steps:

Step 1   In the Configuration Manager menu, select **Tools** > **Explorer Tools** > **Service Explorer**. The Service Explorer window appears.

Step 2   In the *Select filter data* box of the Explorer window, click **Retrieve**. This enables the **Add Service** button.

Step 3   Click **Add Service**. A new service appears in the tree list box with a **To Be Inserted** icon ⊞

next to it. Tabbed fields also appear on the right for the new service's configuration information.

Step 4   Fill in the tabbed fields.

Step 5   Click **Add Route** and fill in its configuration records.

Step 6   Click **Add Peripheral Target** and also **Add Label** and fill in those records.

Selecting an item in the tree list box enables the **Add** button for more items of that type and for the associated item immediately beneath it in the tree, if it can have one.

Step 7   If desired, set security settings on the records.

Step 8   Click **Save**.

Related Topics

[Apply Security Settings]()

Delete a Record

To delete a record:

Step 1 In the Explorer tree list box, select the item or associated items whose records you want to delete.

> **Note** Deleting any item in the tree list box with branches beneath it also deletes those branches. For example, if you delete a service, you also delete its associated route, peripheral target, and label, if it has such. Deleting a label deletes only that label.

Step 2 Click **Delete**. This places a **Marked for Deletion** icon ⊠ next to the selected item in the tree list box. This also toggles the **Delete** button to **Undelete**.

To undelete an item marked for deletion, select it in the tree list box and click **Undelete**.

Step 3 Click **Save**.

This deletes from the database items marked for deletion and removes them from the tree list box. Once you do this, you cannot undelete deleted items.

Skill Groups

Enter information about each skill group associated with each peripheral. A *skill group* is a collection of agents that share a common set of skills.

Use the Configuration Manager's Skill Group Explorer to view, modify, or define a skill group.

Skill Group Explorer

The following sections show you how to use the Skill Group Explorer to view and configure a skill group and its associated routes, peripheral targets, and labels.

View a Skill Group

To view a skill group, follow these steps:

Step 1 In the Configuration Manager's menu, select **Tools** > **Explorer Tools** > **Skill Group Explorer**. The Skill Group Explorer window appears.

Step 2 In the **Select filter data** box, select the peripheral associated with the skill group you want to view. You can choose the name from the drop-down list of peripheral enterprise names.

Step 3 Select any other filters you want. None in the Optional filter box means all skill groups associated with the selected peripheral will be displayed.

Step 4 Click **Retrieve**. This lists in the tree list box names of skill groups.

Step 5 In the tree list box, select a skill group to display its configuration information on the right side of the window.

Step 6 If the skill group has a route associated with it, click its icon in the tree list box to display its configuration information. Do the same for a peripheral target associated with the route and a label associated with the peripheral target.

Note A tree object is unassigned if it was made by another configuration tool and was not assigned (mapped) to a parent object; for example, a label might not have been assigned to a peripheral target or a route might not have been assigned to a service, and so on.

Modifying, Defining, and Deleting Skill Groups

The following sections show you how to modify, define skill groups.

Modify a Skill Group

To modify a skill group, follow these steps:

Step 1 Follow the steps to view a skill group.

Step 2 Edit the configuration information.

With the mouse, you can select an object and move it to another part of the tree, as long as its object type belongs in that tree location. For example, to move a route to another skill group, select it and move the pointer to that skill group. When that skill group becomes highlighted, lift your finger off the mouse. You can also use the Bulk Configuration tool to take the output of a switch and create 20 or 30 labels. Then, using the Explorer, you can attach the labels to an appropriate location.

Note You cannot modify fields that are greyed out.

You cannot update the Peripheral field. To modify the Peripheral Number, you can use the Cisco Unified Contact Center Management Portal (CCMP).

When you make a modification, the **Changed** icon 🔁 appears next to the selected item in the tree list box.

Step 3 Click **Save**.

The modified data is saved in the Unified ICM database and the **Changed** icon is removed from the edited object in the tree list box.

Related Topics

View a Skill Group, on page 4

Define a Skill Group or Its Associated Records

✎

Note Skill groups on the Child Central Controller, on page 6 contains an example of how to configure skill groups for a child deployment.

To define a skill group and/or its associated records, follow these steps:

Step 1   In the Configuration Manager's menu, select **Tools** > **Explorer Tools** > **Skill Group Explorer**. The Skill Group Explorer window appears.

Step 2   In the **Select filter data** area of the Explorer window, click **Retrieve**. This enables the **Add Skill Group** button.

Step 3   Click **Add Skill Group**. A new skill group appears in the tree list box with a **To Be Inserted** icon next to it. Tabbed fields also appear on the right for the new skill group's configuration information.

Step 4   Fill in the tabbed fields.

> **Note**   These fields are not automatically populated.

Step 5   Click **Add Route** and fill in its configuration records.

Step 6   Click **Add Peripheral Target** and also **Add Label** and fill in those records.

Selecting an item in the tree list box enables the **Add** button for more items of that type and for the associated item immediately beneath it in the tree, if it can have one.

Step 7   If desired, set security settings on the records.

Step 8   Click **Save**.

Related Topics

[Apply Security Settings](#)

Skill groups on the Child Central Controller

Access the Configuration Manager on the Child Administration & Data Server to configure skill groups.

Configure Skill Groups on the Child Central Controller

Use the Configuration Manager Skill Group Explorer Tool to configure skill groups SG01 and SG02 on the Child Central Controller.

To configure skill groups on the Child Central Controller:

Step 1   Start the **Skill Group Explorer Tool**.

Step 2   On the Main window of the Agent Explorer Tool, click **Retrieve**.

Step 3   Click **Add Skill Group**.

The Skill Group tab appears.

Step 4   Complete all the fields and click **OK**.

The skill group name appears in the list, as with all Explorer tools.

Step 5   Select the **Skill Group Member** tab and click **Add**.

The Add Skill Group Member dialog appears.

Step 6   Select the agents to add to the skill group, then click **OK**.

The agents become members of the skill group.

Step 7   Select the skill group in the tree list, then click **Add Route**.

The Route tab appears.

Step 8   Provide the Route Name and click **Save**.

The route name appears in the tree list and the skill group is added to the peripheral.

Step 9   Repeat this to add one more skill group.

Step 10   Click **Save**, then **Close** to exit the Skill Group Explorer Tool.

Skill Groups–to–Services Mapping

When you define services and skill groups, you can establish the mappings of skill groups to services. Each skill group can be mapped to zero, one, or more services; each service can be mapped to zero, one, or more skill groups.

You can define some service member skill groups as being primary for the service. The system software uses the primary attribute in determining the destination for a call to the service. For example, the Longest Available Agent (LAA) for a service is really the LAA for primary groups configured for that service.

Map Skill Groups to Services

To map skill groups to services, follow these steps:

Step 1   Within the Configuration Manager menu, select **Tools** > **Explorer Tools** > **Service Explorer**. The Service Explorer window appears.

Step 2   Select the filters you want and click **Retrieve**. The retrieved services appear in the list box.

Step 3   Select the service you want and click the **Service Members tab**.

Step 4   This step depends on whether you want to add or to remove skill groups:

a) To remove skill groups, select a skill group's name and click **Remove**.

b) To add skill groups, click **Add** and in the **Add Service Member** dialog, select the skill groups and click **OK**.

The available skill groups are all those defined for the selected peripheral.

Step 5   In the Service Members tab, select the **Primary** check box for any skill groups that you want to be primary.

Step 6   When finished, in the Skill Group Explorer window, click **Save**.

Skill Groups Per Agent Limit

Unified ICM and Unified CCE impose a default limit on the number of skill groups that you can assign to a single agent. Once this limit is reached, more skill groups cannot be assigned.

You can use the Configuration Limit Tool to specify your own limit on the number of skill groups that can be assigned to an agent. For optimum performance, you can specify a limit far lower than the system default.

For performance considerations in choosing a skill groups per agent limit, see the *Solution Design Guide for Cisco Unified Contact Center Enterprise*.

Warning Setting a default value for skill groups per agent that is higher than the system default can adversely affect system performance. Cisco does not support configurations that exceed the default value.

Caution The Configuration Limit tool is a command-line tool utility from the bin directory of all Unified ICM and Unified CCE Administration & Data Servers. Access is limited to users with privileges for the Setup or Config Groups in Active Directory for the chosen customer instance. For more information about the Configuration Limit tool, see the *Outbound Option Guide for Unified Contact Center Enterprise*.

Change Skill Groups Per Agent Limit

To change the skill groups per agent limit using the Configuration Limit tool, complete the following steps:

Step 1 From the Windows menu, select **Start** > **Run**, type **configlimit** , and then click **Enter**.

Note Run the Configuration Limit tool on the same machine as the Distributor for the instance you want to configure. If more than one instance of the Administration & Data Server is installed on the Distributor machine, use the Select Administration Server tool to select the instance you want to configure.

Step 2 To view currently configured parameter limits, run the following command:

```
cl /show
```

Step 3 To change the skill groups per agent limit, enter a command in the following format:

```
cl /id 1 /value [ConfigLimitCurrentValue] [/update]
```

Where:

• id 1 = the ID of the skill groups per agent limit.

• ConfigLimitCurrentValue = the parameter limit. In this case, the parameter limit is the skill groups per agent limit.

For example, to change the skill groups per agent limit to 5, enter the following:

```
cl /id 1 /value 5 /update
```

Note Using the Configuration Limit tool, you can change the ConfigLimitCurrentValue only. You cannot change the ConfigLimitDefaultValue.

Additional Requirements

Lowering the Limit

If you have modified the skill groups per agent limit to be lower than the system default, no additional changes are necessary. The new, lower limit will be enforced immediately. Note that the new limit will *not* affect agents whose existing skill group membership exceeds the new limit until the next attempt to add a new skill group for those agents. At that time, the new limit will be enforced, preventing you from adding additional skill groups.

Exceeding the Default Limit

If you modified the skill groups per agent limit to be higher than the system default (despite the preceding warning), certain deployments require additional changes to your system to use the new limit. These additional changes (listed in the following sections) also allow you to add more skill groups.

UCCE Gateway PG

For UCCE Gateway deployments, modify the following registry keys on your UCCE Gateway PGs to include the new value. A change to the registry will require that the PG service be restarted.

Cisco Unified Contact Center Enterprise Gateway Peripheral Interface Manager (PIM) (Cisco Unified Contact Center Enterprise parent):

```
HKEY_LOCAL_MACHINE\SOFTWARE\Cisco Systems, Inc.\ICM\< customer_instance
>\PG{n}[A|B]\PG\CurrentVersion\PIMS\pim{m}\ACMIData\Config\MaxSkills
```

Cisco Unified Contact Center Express Gateway PIM (Cisco Unified Contact Center Express parent):

```
HKEY_LOCAL_MACHINE\SOFTWARE\Cisco Systems, Inc.\ICM\< customer_instance
>\PG{n}[A|B]\PG\CurrentVersion\PIMS\pim{n}\ACMIData\Config\MaxSkills
```

Persons

Associate every agent with a person record. The person record stores the login name, first name, last name, and password. On Unified ICM you can have multiple agents per person. An agent is an "extension" of a person on a given peripheral.

The Person List tool allows you to list the persons currently defined in the Unified ICM database, to define new ones, and to view, edit, or delete the records of existing ones.

Note If you are using the Enterprise Chat and Email feature, you can create Agents in CCE Configuration Manager. Creating Agents in the Enterprise Chat and Email makes them available in Configuration Manager. However, if you create the agent in Configuration Manager, you must enable the agent in Enterprise Chat and Email.

Available person records are records that have not been mapped to any agent records (including logically deleted ones) at the peripheral selected in the Agent Explorer. To free a person associated with a logically deleted agent, use the Configuration Manager's Deleted Objects tool to permanently delete the logically deleted agent.

Agents

An *agent* is a person who handles calls from a peripheral or supervises those who do. You need to set up each agent associated with each peripheral.

An *agent gadget* is an application which handles calls from a peripheral. You need to set up each agent gadget associated with each peripheral.

Use the Configuration Manager's Agent Explorer to configure agents.

Related Topics

Modify Agent Record

To view or modify agents records, follow these steps:

Step 1   In the Configuration Manager menu, select **Tools** > **Explorer Tools** > **Agent Explorer**. The Agent Explorer window appears.

Step 2   In the **Select filter data** box, select the peripheral with which the agent is associated. Enter any other filters you want and click **Retrieve**.

The retrieved enterprise names for the agents are displayed in the list box.

Step 3   Select the agent name whose properties you want to view and use the tabs on the right side of the window to view the properties.

Step 4   Edit the properties appropriate. See the online help if you have questions.

Step 5   When finished, in the Agent Explorer window, click **Save**.

Create an Agent

An *agent* is a person who handles calls from a peripheral or supervises those who do. You need to set up each agent associated with each peripheral.

When you create a new agent, you can also identify the agent as a supervisor.

Note   contains an example of how to configure agents for a child deployment.

⚠️

Caution Adding an agent is no longer allowed, in the following conditions:

1. Out of Compliance expiry: The system is operating with an insufficient number of licenses and system in enforcement mode.

2. Authorization expiry: The system has not communicated with **Cisco Smart Software Manager**, or satellite for 90 days and the system has not automatically renewed the entitlement authorizations.

3. Evaluation expiry: The license evaluation period expired.

To create an agent:

Step 1 In the Configuration Manager menu, select **Tools** > **Explorer Tools** > **Agent Explorer**. The Agent Explorer window appears.

Step 2 In the **Select filter data** box, select the peripheral with which the agent is to associated and click **Retrieve**. This enables the **Add Agent** button.

Step 3 Click **Add Agent**.

Step 4 In the property tabs on the right side of the window, enter the appropriate property values. (See the online help for field definitions.) Use the Agent tab to define the agent (and optionally designate the agent as a supervisor) and the Skill Group Membership tab to map the agent to any skill groups.

Note An agent team can have only one primary supervisor. There is no upper limit to the number of secondary supervisors for a team. Refer to the online help for instructions on how to assign a primary supervisor.

Step 5 When finished, click **Save**.

Agent Configuration on the Child Central Controller

Access the Configuration Manager on the Child Administration & Data Server to configure agents.

Configure Agents on the Child Central Controller

Use the Configuration Manager Agent Explorer tool to configure agents on the Child Central Controller.

✎

Note When you configure an agent on the Child Central Controller, the agent is automatically assigned to a default skill group. However, if you log onto the parent to view the agent (that you configured on the child), the default skill group appears in the list of assigned skill groups and not in the default skill group box.

To configure agents on the Child Central Controller:

Step 1 Start the **Agent Explorer tool**.

Step 2 On the Main window of the Agent Explorer tool, click **Retrieve**.

Step 3 Click **Add Agent**.

The Agent tab appears.

Step 4   Complete all the fields except the Password and the Peripheral Name fields.

The agent name information appears in the list, as with all Explorer tools.

Step 5   Repeat this process to add at least three agents.

Step 6   Click **Save**, and then **Close** to exit the Agent Explorer tool.

Designate Agent Supervisor

You can identify an agent as a supervisor.

If you define an agent as a supervisor:

- If single sign-on is *disabled* either globally or for the agent you want to designate as a supervisor, the supervisor must have an Active Directory account. If the supervisor does not have an Active Directory account, the designation fails.

- If single sign-on is *enabled* either globally or for the agent you want to designate as a supervisor, you must enter the individual's name in the format that your identity provider requires.

To create an agent who is a supervisor:

Step 1   In the Configuration Manager menu, select **Tools** > **Explorer Tools** > **Agent Explorer**. The Agent Explorer window appears.

Step 2   In the **Select filter data** box, select the peripheral with which the agent is to associated and click **Retrieve**. This enables the **Add Agent** button.

Step 3   Click **Add Agent**.

> **Note**   You must add the agent supervisor, as both member and supervisor, to the **Member** tab on the agent team list. To get the benefit from the Team layout in Finesse, the agent supervisor must be a member of the team.

Step 4   In the property tabs on the right side of the window, enter the appropriate property values. Use the Agent Tab to define the agent and designate the agent as a supervisor. Use the Skill Group Membership Tab to map the agent to any skill groups. (See the Configuration Manager online help for more information.)

> **Note**   An agent team can have only one primary supervisor. There is no upper limit to the number of secondary supervisors for a team. Refer to the online help for instructions on how to assign a primary supervisor.

Step 5   When finished, click **Save**.

Agent to Skill Group Assignment

After you have set up skill groups and agents, enter the assignments of agents to skill groups as configured for the peripheral. Each agent can belong to zero, one, or more skill groups.

You can use the Configuration Manager's Skill Group Explorer to map agents to skill groups.

Assign Agents to a Skill Group

Follow these steps to assign agents to a skill group:

Step 1 Within the Configuration Manager menu, select **Tools** > **Explorer Tools** > **Agent Explorer**. The Agent Explorer window appears.

Step 2 Select the filters you want and click **Retrieve**. The retrieved agents appear in the list box.

Step 3 Select the agent you want assign to a skill group and click the **Skill Group Membership** tab.

Step 4 This step depends on whether you want to add or remove an agent. On the Skill group membership tab:

a) To remove the selected agent from a skill group, select the appropriate skill group and click **Remove**.

b) To add the selected agent to a skill group, click **Add**, and in the Add Skill Group Member dialog, select the appropriate skill group and click **OK**.

Step 5 When finished, in the Agent Explorer window, click **Save**.

Enable or Disable Agent Data at a Peripheral and Define an Agent Distribution

Follow these steps to enable/disable agent data at a peripheral and define an agent distribution:

Step 1 In the Configuration Manager menu, select **Tools** > **Explorer Tools** > **PG Explorer**. The PG Explorer window appears.

Step 2 Click **Retrieve**.

Step 3 In the tree list box, expand the appropriate logical controller and select the peripheral.

Step 4 In the Agent Distribution tab, select or deselect the **Enable agent reporting** check box.

Step 5 In the Agent Distribution Entries list box, select an existing distribution site or create a new one by clicking **New** and entering values for the following fields:

a) **Administration & Data Server site name**. The Admin site name for the Primary/Secondary Pair (Site) name, as specified in the Web Setup tool.

b) **Agent real time data**. If checked, enables the flow of agent real time data from the peripheral to the Administration & Data Server. Unchecked, disables the flow of agent real time data.

c) **Agent historical data**. If checked, enables the flow of agent historical data from the peripheral to the Administration & Data Server. Unchecked, disables the flow of agent historical data.

Step 6 Click **Save** to apply your changes.

Agent State Trace

You can set Agent State Trace to track every state (available, talking, and so on) that an agent passes through. To turn on this feature for an agent, in the **Agent Explorer**, on the **Advanced** tab, check the **Agent State Trace** check box.

> ✎
>
> **Note** When you enable Agent State Trace, the system tracks every state change for each agent you select. This puts an added load on system software resources, such as network bandwidth and database space, and can impact system performance. You may only track up to 100 agents with Agent State Trace at any one time. You should also take the added load into account when planning your system capacity.

When you check the **Enable agent reporting** check box, configure the **Agent distribution entries** in the **PG Explorer** tool, and check the **Agent State Trace** check box, the Agent_State_Trace table in the database is populated.

Agent Configuration Data from Peripheral

An automatic call distribution (ACD) requires all the available agents to be configured to allow the agents to log in to the call handling devices with their peripheral number (Agent ID) or peripheral name, password, and so on. Also, these agents are configured to handle specific categories of calls based on Skill Group. There are some other data elements configured on the ACD such as last name, first name, and other class of services.

The Unified ICM Agent Level Reporting requires these agents to be configured in Unified ICM to identify them with full name, peripheral name, or enterprise name on both the real-time and historical reports.

The agentcfg.exe command line tool provides a process of configuring the agent configuration data elements available on an ACD into the Agent table in the Unified ICM database. This can also be automated by scheduling the process to run as an AT job at a specific time during a day. The frequency of scheduling the agent configuration process depends on your requirements.

Each peripheral requires the Agent configuration process to run.

Import Agent Data

Follow these steps to import agent data:

Step 1 Retrieve the agent configuration data from the peripheral.

Step 2 Form all the information in a tab-delimited text file with one row per agent. Each row of the file must contain the following fields, in order:

```
PeripheralNumber FirstName LastName Description PeripheralName
```

Step 3 To import data from the file into the system software, enter one of the following commands at the command prompt:

```
AgentCfg <Peripheral ID or Peripheral Name> <Input file name> [<Second input file>] [<Option>]
```

These variables are defined as:

a) <Peripheral ID or Peripheral Name>:

Peripheral ID or Peripheral Name of the peripheral that you want to configure.

b) <Input file name>:

The name of the input file contains the agent *or* skill group member configuration data on the ACD in the appropriate format (described in the next section). The file must contain header information, otherwise the tool assumes the data is for the Agent table.

Full or relative path is allowed.

c) <Second input file>:

If the first file contains Agent data, the second file must contains Skill Group Member data. If the first file contained Skill Group Member data, the second file must contain Agent data.

If no files contain headers, it is assumed that Agent data is in the first file and Skill Group Member data is in the second file. If headers are provided, the files may be specified in either order.

Full or relative path is allowed.

d) <Option>:

/show Only - show configuration changes without committing to the database.

/nodelete - the tool will not perform any delete operations. All inserts and updates will be saved.

Example:

1. `AgentCfg.exe peripheral1 c:\temp\agentData.txt c:\temp\skillGrpMemData.txt`

   This example will configure both agent and skill group member data for peripheral1.

2. `AgentCfg.exe peripheral1 c:\temp\skillGrpMemData.txt`

   This example will configure skill group member data for peripheral. The file must contain header information.

Step 4   When the system software invokes the AgentCfg command, it performs the following steps for each line in the input file:

The following steps are performed for each line in the input file:

a. The system software attempts to match the PeripheralNumber value to a configured agent for the peripheral.

   If it finds a match, it proceeds directly to step b.

   If it cannot find a match, it creates a new agent row in the database using the data from the input file, and proceeds to step b.

b. The system software checks to see if the "temporary" flag is set. If it is, it updates the existing record.

c. The system software checks whether the peripheral name values also match.

   If the FirstName and LastName values match, the system software updates the existing record with the given Description and PeripheralName values. (If the existing record was for a temporary agent, the agent is no longer temporary after the update.)

   If the values do not match, the system software marks the existing record as deleted and inserts a new row with the data from the input file. If an agent is configured for the peripheral in the database, but is not listed in the input file, the system software marks the agent as deleted in the database.

d. The system software does a loop through the Skill Group Member input file container and compares the records in the file with those in the database:

   • If the record is found in the file but does not exist in the database, the record is inserted.

   • If the record is found in the database but does not exist in the file, the record is deleted.

Input File Formats

When using the AgentCfg.exe tool to import data, the input files must be formatted as described below. Note that the _ _TABLE and _ _COLUMNS entries, and the line below each are together considered the header. The header is not always required. The beginning of this section indicates when headers are needed.

Agent Configuration Data File

The input file must contain the list of all the agents configured on the ACD for that peripheral in the following format:

```
_ _TABLE
Agent
```

Indicates the name of the table to which the data will be configured. The table name is always **Agent** (do not change this line).

```
_ _COLUMNS
```

Indicates the tab-delimited column names that correspond to the data values (do not change this line). The columns need to be in the order shown below:

```
PeripheralNumber<tab>FirstName<tab>LastName<tab>Description<tab>PeripheralName

1045<tab>F1045<tab>L1045<tab>Auto Configured by Router<tab>F1045.L1045

1046<tab>F1046<tab>L1046<tab>Auto Configured by Router<tab>F1046.L1046

1047<tab>F1047<tab>L1047<tab>Auto Configured by

Router<tab>F1047.L1047<eof>
```

The following indicates the tab delimited data values that correspond to the column names:

```
1045<tab>F1045<tab>L1045<tab>Auto Configured by Router<tab>F1045.L1045
```

Skill Group Member Configuration Data File

Note that the __TABLE and __COLUMNS entries and the line below each are together considered the header. The header is not always required.

The input file contains the list of all the skill group member data as a relation between skill group and agents, which configured on the ACD for that peripheral in the following format:

```
_ _TABLE
Skill_Group_Member
```

Indicates the name of the table to which the data will be configured. The table name is always **Skill_Group_Member** (do not change this line).

```
_ _COLUMNS
```

Indicates the tab delimited column names that correspond to the data values (do not change this line). The columns need to be in the order shown below.

```
SkillGroupEnterpriseName <tab> AgentPeripheralNumber SkillGroupExterprise1<tab>1045
SkillGroupExterprise2<tab>1046 SkillGroupExterprise1<tab>1046
```

SkillGroupEnterpriseName is the ExterpriseName of the skill group that the agent belongs to.

AgentPeripheralNumber is the agent's login ID assigned at the switch, which is the same as the above Agent Peripheral Number.

The following indicates the tab delimited data values that correspond to the column names:

```
SkillGroupExterprise1<tab>1045
```

Manage Security

The system generates agent passwords using advanced hashing.

Advanced hashing helps you to ensure greater security of agent passwords in non-SSO mode. To enforce advanced hashing of agent passwords, you must enable the **Enforce** button under the tab, **Manage Security**.

Before you enforce the global switch, consider the following to ensure that the agent authentication is successful.

1. All the PG's must be version 12.6 (1) or later.

2. All the agent passwords must be re-entered.

When you disable **Enforce**, the system authenticates passwords using old and advanced hashing. When you enable **Enforce**, the system authenticates passwords only using advanced hashing.

Note You will be able to disable the global switch from the API. For more information, on how to disable the global switch see *Agent Security API* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-programming-reference-guides-list.html

Note The **Manage Security** option is removed from 12.6(1) ES34 onwards for Unified CCE deployments.

Enterprise Data

Within a script, you often want to examine a set of possible targets on different peripherals before deciding where to send the call. For example, if you are routing a sales call, you might want to check the Sales skill groups at each call center to find which has the longest available agent or shortest expected delay.

An *enterprise service* is a set of services that can be referenced in a script. The individual services can be associated with different peripherals. Similarly, an *enterprise skill group* is a set of skill groups that can be referenced in a script. The individual skill groups can be associated with different peripherals.

In addition to using them within a script, you can track enterprise services and enterprise skill groups through monitoring screens and reports. This allows you to easily follow the performance, for example, of all Support services within the system.

Enterprise Services

Within a routing script, you can use an enterprise service as a shorthand for a set of services. You might want to scan several services to find, for example, the service with the shortest expected delay. Within the script, you can specify individual services to scan or, if you have an enterprise service defined, you can simply specify the enterprise service.

Assign Specific Services

Follow these steps to create an enterprise service and assign specific services:

Step 1 In the Configuration Manager menu, select **Tools** > **List Tools** > **Enterprise Service List**. The Enterprise Service List window appears.

Step 2 In the Select filter data box, select the filters you want and click the Members tab. This enables the **Add** button and lists the currently defined enterprise services for the selected business entities.

Step 3 Click **Add**.

Step 4 In the Attributes tab, enter values for the following fields:

a) **Name**. A name for the enterprise service. This name must be unique among all enterprise services in the system.

b) **Business Entity**. Reserved for future use.

c) **Description**. Any other information you want about the enterprise service. Any other information you want to add about the enterprise service.

Step 5 Click **Save** to save the changes.

Step 6 Click the **Attribute** tab.

Step 7 In the **Attribute** tab, click **Add**.

Step 8 In the **Add Services** dialog, select the services you want to add and click **OK**. The dialog closes and the selected services are listed as members in the **Attribute** tab.

Step 9 When finished, click **Save** to save the changes.

Enterprise Skill Groups

Just as you can use an enterprise service as a shorthand for a collection of services, so you can use an enterprise skill group as a shorthand for a collection of skill groups. The skill groups can be defined on different peripherals.

Create an enterprise skill group

Follow these steps to create an enterprise skill group:

Step 1 In the Configuration Manager menu, select **Tools** > **List Tools** > **Enterprise Skill Groups List**. The Enterprise Skill Group List window appears.

Step 2 In the Select filter data box, select the filters you want and click **Retrieve**. This enables the **Add** button and lists the currently defined skill groups for the selected business entities.

Step 3 Click **Add**, and in the **Attributes** tab, enter values for the following fields:

a) **Name**. A name for the enterprise skill group. This name must be unique among all enterprise skill groups in the system.

b) **Business Entity**. Reserved for future use.

c) **Description**. Any other information you want to add about the enterprise skill group.

Step 4 Click **Save** to save the changes.

Step 5 Click the **Members** tab.

Step 6   In the Members tab, click **Add**.

Step 7   In the Add Enterprise Skill Group Member dialog, select the skill groups you want to add and click **OK**. The dialog closes and the selected skill groups are listed as members in the Members tab.

> **Note**   The Skill Group list includes base skill groups as well as primary and secondary groups for those switches that support them. Typically, add either the base group or the associated primary and secondary groups, but not all three, to the enterprise skill group.

Step 8   Click **Save** to save the changes to the database.

Precision Queue Configuration

Precision queues are a combination of steps that include attributes, defined terms for the selected attributes, wait times, and Consider If formulas.

Precision queues are configured using the **CCEAdmin** > **Organization Setup** > **Skills** > **Precision Queue**

For more information on precision queues and precision routing, see the *Cisco Unified Contact Center Enterprise Features Guide* at http://www.cisco.com/en/US/products/sw/custcosw/ps1844/products_feature_guides_list.html.