

# SCOPTTEL IP PBX Software - Managing Automatic Call Distribution (ACD)

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Automatic Call Distribution queues put callers into a queue and typically play Music on Hold or custom announcement messages to keep them informed or relaxed while they wait for an agent to become available.

- Studies prove that a caller listening to Music on Hold will stay on hold longer than a caller hearing a ring back tone
- Agents are typically employees of a contact center that login to one or more queues in order to answer callers.
- Typically an agent cannot answer more than one call at a time (although SCOPTEL queue options can be configured to allow more than one call to be presented to an agent). There is typically a break period after a hangup so the agent can do some post call processing
- A SCOPTEL queue can play a forced announcement before joining the caller to a queue
- A SCOPTEL queue can play a Expected Wait Time announcements and/or periodic announcement to a waiting caller
- SCOPTEL supports 5 agent priorities per queue (Skills Based Routing)
- SCOPTEL supports Advanced Skills Based Routing (Object Based Skills Based Routing)
- ACD reports live in the server cradle to grave and do not require an external database or server
- There is no limit to the number of queues or agents that can be configured per server
- The SCOPSTATS reporting engine is used to generate Historical and Realtime reports
- SCOPSTATS is a web based Javascript engine which requires no client installation on any PC

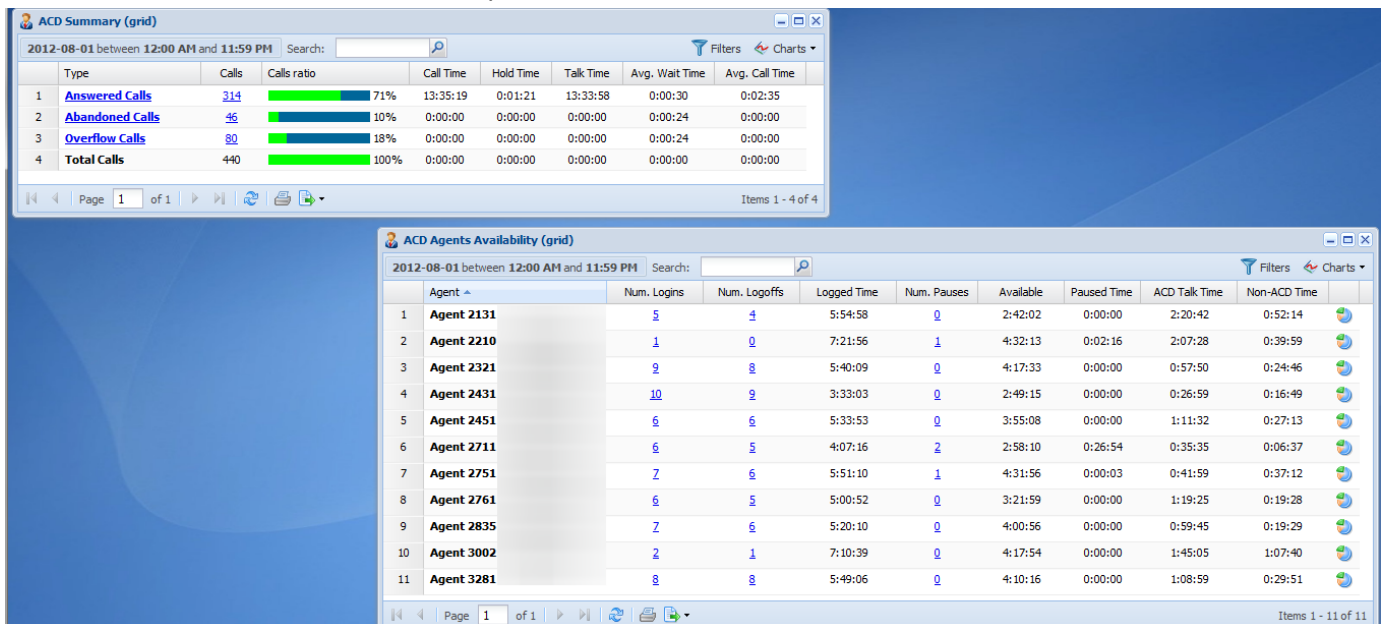
## Background

- A caller can exit a queue by dialing a DTMF key from their phone keypad which will follow the Auto Attendant rules applied to each queue
- The reporting system can generate many advanced reports ad hoc
- Service Level represents a percentage of calls answered before a pre - defined time period defined in seconds
- SCOPTEL supports a Custom Service Level per queue
- Each ACD call can have a different disposition :
  - Abandoned (caller hangs up before an agent can answer or call can be overflowed) (CLID information is saved in reports)
  - Answered (agent answers the caller) (CLID information is saved in reports)
  - Overflow (caller reaches a queue condition that transfers the caller to a new destination) (CLID is saved in reports)
  - Overflow Caller Exit with Key or Single Key Destination
- Agents are considered not logged if they are paused or not logged in
- You can use Incoming Lines>CallerID>CallerID/Source to ring area codes and numbers to any queue

## Ring Strategies

Calls are distributed among the members configured to the queue(s). Use the drop list to select a Ring Strategy:

- Ring all -ring all available channels until one answers.
- Least Recent -Ring interface which was least recently hung up by this queue. The agent must answer a call before it can hang up. Therefore if the agent status precludes answering a call the call distribution may stall here. Not a recommended method.
- Fewest Calls-Ring the Agent with fewest completed calls from this queue. This can cause issues if an agent logs in after a substantial period of time allowing other agents to answer calls first. Calls will not be distributed to other agents until all agents have answered an equal number of calls.
- Random-ring random interface
- Round Robin -Round robin with memory, remember where we left off last ring pass. This is the recommended method and ensures the most even distribution of calls to all agents.
- Linear-rings interfaces in the order specified in this configuration file. If you use dynamic members, the members will be rung in the order in which they were added/logged to the queue(s).
- Here are some examples of the many SCOPSTATSRealtimeACD panels
- You can also drill down into each report in real time



## Pre-requisites

Before building an ACD queue you must:

- Enable the Queues and Agents module in Configuration>Telephony Modules
- Define the ACD feature codes in the Configuration>Features Code tab and commit changes
- Decide on a ring strategy
- Add all of your agents
- Record your announcements (IVR prompts) using the Sound Manager see: <https://blog.scopserv.com/2017/09/SCOPTEL-prompt-management/>
- Decide on a Service Level for each queue in seconds
- Build any Auto Attendants needed to support caller DTMF input to exit the queue (see module 14)
- Decide on whether to remove a caller from a queue or allow a caller to enter a queue if there are no logged agents
- Configure Overflow Destinations. If Overflows are not configured for a queue then calls will be terminated with busy signals.

## Feature Codes

Agent (ACD) Access Codes must be configured prior to building your queues and logging in agents

Here the default feature codes are displayed and a customized list is also displayed

Agent (ACD) Access Codes	
Route By Agent	: Disable
Direct Agent (ACD)	: *903
Agent Login	: *900
DND on Agent Logout ?	: No <i>If checked, DND will be set to the extension logging out an agent and unset when logging in.</i>
Agent Login (External)	: *897
Class of Service	: System Default Default: System Default
Use Incoming CallerID for External Agent ?	: No <i>If not checked, an external agent will be prompted to enter the phone number to be called.</i>
Agent Pause	: *901
DND on Agent Pause ?	: No <i>If checked, DND will be set to the extension pausing an agent and unset when unpausing.</i>
Pause Tag/Code	: *902

Agent (ACD) Access Codes	
Route By Agent	: Disable
Direct Agent (ACD)	: Disable
Agent Login	: *50
DND on Agent Logout ?	: No <i>If checked, DND will be set to the extension logging out an agent and unset when logging in.</i>
Agent Login (External)	: Disable
Class of Service	: System Default Default: System Default
Use Incoming CallerID for External Agent ?	: No <i>If not checked, an external agent will be prompted to enter the phone number to be called.</i>
Agent Pause	: *51
DND on Agent Pause ?	: No <i>If checked, DND will be set to the extension pausing an agent and unset when unpausing.</i>
Pause Tag/Code	: Disable

## Agent Status

### queue show

In the Asterisk app\_queuesystem there are basic and weighted states using penalties. The command 'queue show' can be executed to show queue memberships.

Example: CLI> queue showdebcomainbtn-reception has 0 calls (max unlimited) in 'rrmemory' strategy (3s holdtime, 11s talktime), W:0, C:12, A:4, SL:75.0% within 5s

### Members:

[Local/225@debcomainbtn-agent/n](#) (ringinusedisabled) (dynamic) (in call) (In use) has taken 2 calls (last was 97 secs ago)

- The agent membership belongs to local channel 225 and the agent is on an ACD call therefore in use

[Local/216@debcomainbtn-agent/n](#) (ringinusedisabled) (dynamic) (In use) has taken 4 calls (last was 57 secs ago)

- The agent membership belongs to local channel 216 and the agent is on a NON-ACD call and therefore in use

[Local/213@debcomainbtn-agent/n](#) (ringinusedisabled) (dynamic) (paused) (Not in use) has taken no calls yet

- The agent membership belongs to local channel 213 and the agent is paused, not on any call but cannot take any new ACD calls since the agent is paused

## SCOPSTATS

- SCOPSTATS can also be used to display Agent Status but in case of conflict the 'queue show' output will always show the agent status as per Asterisk.
- By selecting an agent row the SCOPSTATS admin can control Agent availability using the Login, Logout, Pause buttons.

Agent	Name	Current State	Logged	Available	Paused	On Call	ACD	Non-ACD	Occupancy	Location	Penalty Level
1	Reception	Paused (0:12:58)	0:13:10	-	0:13:04	0:00:17	0:00:00	0:00:17	2.2 %	Colombe Remote (213)	0
2	Reception2	Non-ACD Call (0:00:18)	0:25:11	0:23:38	0:01:09	0:01:46	0:00:10	0:01:36	7.0 %	Jen Taylor (216)	0
3	Reception3	Offline (0:01:29)	0:00:08	0:00:08	0:00:00	0:00:10	0:00:00	0:00:10	100 %		0
4	Reception4	ACD Call (0:00:04)	0:17:06	0:14:46	0:00:00	0:05:02	0:02:20	0:02:42	29.4 %	Shirley Van (225)	0

## Agent Types

There are four types of agents: #. Dynamic Local Agents #. Dynamic External Agents #. Static Agents #. Static External Agents

It is best practice for agents to login at the beginning of their shift, Pause during the shift when not ready, and only logout at the end of their shift.

All Agent Types can dial the Agent Pause Code to Pause their agent membership in all assigned queues.

SCOPSTATS is required if an Agent must login/logout or Pause in specific queues. Feature Code Usage always does login/logout or pause in all queues the agent is a configured member. For additional details refer to <https://blog.scopserv.com/2017/01/scopstats-admin-guide/>

Usage | Agent needs to go on a break:

- Agent Dials Agent Pause Code (configured in the Telephony Features Code Manager)
- Agent is Paused in all queues and cannot receive new calls while logged into the queue(s)

## Dynamic Agent

Dynamic Agents get a unique extension number and are not associated with any extension until they use the 'Agent Login' or 'Agent Login (External)' Feature Code or Dynamic Agents can roam to any extension on their assigned tenant.

- Example:
  - Agent Extension: 1
  - Name: John Smith
  - Password: 1234
- Agent 1 needs to login to SIP extension 222 | Usage:
  - From SIP extension 222 the user dials the ACD Login Feature Code (default \*50)
  - User is prompted for Agent Login and enters 1#
  - User is prompted for Password and enters 1234#
  - Agent 1 is now logged to SIP extension 222 and a member of all assigned queues

- If Agent 1 dials the Agent Login code again the Agent is logged off SIP extension 222 and all assigned queues and is no longer an Available member.

## ***Dynamic External Agent***

Dynamic External Agents are added as queue members in exactly the same way as Dynamic Local Agents. The only difference in their operation is the feature code used to login the agent extension.

- Example:
  - Agent Extension: 1
  - Name: John Smith
  - Password: 1234
  - Agent Login (External) Feature Code: \*52
- Agent 1 needs to login to cell phone number 9055551234 | Usage:
  - From any SIP extension within the same tenant the user dials the Agent Login (External) Feature Code: \*52
  - User is prompted for the external number to be used for call transfer and enters 9055551234
  - User is prompted for their agent extension and enters 1#
  - User is prompted for Password and enters 1234#
  - Agent 1 is now logged to external number 9055551234 and a member of all assigned queues
  - If Agent 1 dials the Agent Login (External) Feature Code again the Agent is logged off the external number and all assigned queues and is no longer an available member.

## ***Static Local Agent***

- Static Agents cannot use the ACD Login Feature Code because they are always considered logged queue members. Trying to login or logout will generate an error prompt. They are added as queue members with the Phone drop list selection.
- Static Agents are always associated with a local physical extension and they are added to Queue Memberships as Phones
- Static Agents may dial the ACD Pause Feature code so they do not receive calls during break periods.

## ***External Agent***

- External Agents can be added to queue(s) as members using the Queue Manager using the drop list selector External Number
- External Agents are always associated with an external number and they are added to Queue Memberships as an External Number
- External Agents cannot pause their queue membership. If the External Number cannot be reached a failover must be configured.

## ***ACD Manager***

### ***Add a new Agent***

- Click on the Agents tab
- Click on Add a new Agent

You must click on Commit button in order to apply Change.

## Queues and Agents: Agents

Call Queues **Agents** Agent Groups Queue Rules Skill Based Routing Queues (ACD) Callback Tag/Pause Code

Agents: [1 to 3 of 3] + Add a new Agent

Search:  Search

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Extension	Name	Description	Web GUI	Tenant	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	Reception			debcomainbtn	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2	Reception2			debcomainbtn	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	Sales 3			debcomainbtn	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## Dynamic Agents / General

- Choose a Tenant if there are multiple tenants configured
- Enter an Agent Extension number (usually starts at 1 and does not conflict with extension numbers)
- Enter the Agent's Login Password
- Enter the Agent's Full name as it should appear in the reports
- Click on the Options tab

Queues and Agents: Agents

Call Queues **Agents** Agent Groups Queue Rules Skill Based Routing Queues (ACD) Callback Tag/Pause Code

Agents

General **Queues** Options Caller ID Web Authentication

\* Extension :   
Default: 7558

Password :

Full Name :

Description :

## Options

- Maximum Concurrent Calls is normally set to 1 but can be set higher if the Queue's Ring in Use option is enabled
- Skills Based Group is normally set to None.
  - Instructions on Advanced Object Based Skills Based Routing can be found here
  - <http://blog.scopserv.com/en/2012/06/how-to-implement-skill-based-routing-acd-on-SCOPTTEL-pbx/>
- There is an option to Monitor (Record) all calls per queue but you can leave the queue option disabled if you only wish to record specific agents
- Enter a Recording Tab to include special text in the ACD reports when a call is recorded (monitored)
- The Caller ID and Web Authentication tab are optional
- Click on the Add button when done

- Add additional Agents as required

## Queues and Agents: Agents

Call Queues

**Agents**

Agent Groups

Queue Rules

Skill Based Routing

Queues (ACD) Callback

Tag/Pause Code

### Agents

General

Queues

**Options**

Caller ID

Web Authentication

\* Maximum Concurrent Calls ? :   
Default: 1

Skill Based Group  :

Enable Call Recording (Incoming calls) ? :


Recording Tag  :

## Queues Manager

### Add a new Queue

- On the Queues and Agents>Call Queues tab
- Click on Add a new Queue



 You must click on Commit button in order to apply Change.

## Queues and Agents: Call Queues

Call Queues: oncall

Call Queues

Agents

Agent Groups

Queue Rules

Skill Based Routing










Queues (ACD) Callback

Tag/Pause Code

Call Queues: [1 to 2 of 2]

 Add a new Queue

Search:  Search

<input type="checkbox"/>			Queue ID	Name	Description	Strategy	Maximum Users	Wrapup Time	Announce Position	Agent(s)	Tenant	<input type="checkbox"/>	
<input type="checkbox"/>			001	oncall		Round Robin	0	0		<a href="#">Level 1</a> 3: Sales 3 (AGENT) <a href="#">Level 2</a> <a href="#">Level 3</a> <a href="#">Level 4</a> <a href="#">Level 5</a>	debcomainbtn	<input checked="" type="checkbox"/>	
<input type="checkbox"/>			020	reception	Queue	Round Robin	0	0	<input checked="" type="checkbox"/>	<a href="#">Level 1</a> 1: Reception (AGENT) 2: Reception2 (AGENT) <a href="#">Level 2</a> <a href="#">Level 3</a> <a href="#">Level 4</a> <a href="#">Level 5</a>	debcomainbtn	<input checked="" type="checkbox"/>	

### General

- If there is more than one Tenant then choose a tenant from the drop list
- Give the queue a useful name which will appear in the ACD reports
- Do not use upper case or special characters or spaces in the queue name
- Click on the Announce tab when done



## Queues and Agents: Call Queues

Call Queues

Agents

Agent Groups

Queue Rules

Skill Based Routing

Queues (ACD) Callback

Tag/Pause Code

### Call Queues

General

Announce

Members

Fallback/Overflow

Queue Options

Agent Options

Security

Alarms

Wallboard and Thresholds




\* Name :

Description :

## Announce

- This example shows a viable configuration for announcements.
- The Announce Message is forced regardless if agents are available. Optional
- The Agent Announcement plays back to the agent when the agent answers a queued call if configured. Optional
- The Periodic Announcement plays back at the selectable interval. Optional.
- Callers typically hear Music On Hold between announcements but the queue can be configured to play a ring back to the caller so the caller is not aware they are waiting in a queue
- Announce Queue position will announce the waiting position to the caller. Optional
- Click on the Select button to add a prompt(s)
- Click on Members when done

## Call Queues


General	<b>Announce</b>	Members	Fallback/Overflow	Queue Options	Agent Options	Security	Alarms	Wallboard and Thresholds
Time Delay before announcement playback :		<input type="text"/> <i>You can specify 0.5 for an 1/2 seconds.</i>						
Announce Message(s) :		<input type="text" value="pls-wait-connect-call"/>					 <input type="button" value="Select"/>	
<i>Message(s) to play before a caller entering the queue.</i>								
Agent Announcement :		<input type="text"/>					<input type="button" value="Select"/>	
<i>An announcement may be specified which is played for the member as soon as they answer a call.</i>								
Enable Periodic Announcement ? 		<input checked="" type="checkbox"/>						
Announce Frequency (in seconds) :		<input type="text" value="45"/> Default: 60						
Play announcements in Random order ? :		<input type="checkbox"/>						
Announce Message :		<input type="text" value="pls-stay-on-line"/>					<input type="button" value="Select"/>	
Include estimated Hold Time in announcements ? :		<input type="text" value="Yes"/> Default: Yes						
Announce Queue position ? 		<input checked="" type="checkbox"/>						
Announce Frequency (in seconds) :		<input type="text" value="30"/> Default: 90						
Seconds rounding time :		<input type="text" value="10 seconds"/> Default: 10 seconds						

## Members

- In this example Round Robin is used (typical selection)
- Agents in Level 1 (High) will receive calls whenever they are available
- Agents in Levels 2-5 are placed in lower priority and calls will only be distributed if each higher priority level has no available agents.
- There are a total of 5 Agent Priority levels (Level 1 is the highest priority).
- Use the Select button for each Level to add one or more Agents to this queue
- Click on Fallback/Overflow after adding all of your agent assignments.

## Call Queues

General   Announce   **Members**   Fallback/Overflow   Queue Options   Agent Options   Security   Alarms   Wallboard and Thresholds

\* Ring Strategy  : Round Robin ▼  
*If 'Ring In Use' is enabled (under Agent Options) we recommend that you use the 'Ring All' strategy*

**Agents**

\* Level 1 (High) : 1: Reception (AGENT)  
2: Reception2 (AGENT) Select

*An agent cannot be defined in more than one (1) level.*

Level 2 : 3: Sales 3 (AGENT) Select

Level 3 : Select

Level 4 : Select

Level 5 (Low) : Select

## Dynamic Agent Members

To add a Dynamic Agent use the drop list Agent selection

**Select**

Find:  from Agent ▼ Search

\* Please select info(s) \*

- 1: Reception (AGENT)
- 2: Reception2 (AGENT)
- 3: Reception3 (AGENT)
- 4: Reception4 (AGENT)
- all (Group)

>>

\* Add these by clicking OK \*

- 1: Reception (AGENT)
- 2: Reception2 (AGENT)
- 3: Reception3 (AGENT)
- 4: Reception4 (AGENT)

Delete

OK Cancel

## Static Agent Members

To add a Static Agent use the drop list Phone selection

**Select**

Find:  from Phone

\* Please select info(s) \*

- 0: General Delivery (RINGGROUP)
- 110: Sales Desk (SIP)
- 111: Test 111 (SIP)
- 112: Test 112 (SIP)
- 120: 120 (SIP)
- 121: 121 (SIP)
- 122: 122 (SIP)
- 123: 123 (SIP)
- 124: 124 (SIP)
- 125: 125 (SIP)
- 200: ring testing (RINGGROUP)

>>

\* Add these by clicking OK \*

- 1: Reception (AGENT)
- 2: Reception2 (AGENT)
- 3: Reception3 (AGENT)
- 4: Reception4 (AGENT)

Delete

OK Cancel

## External Agent Members

To add a External Agent use the drop list External Number selection and Add the external number to dial.

**Select**

from External Number  External Number: 9055551234

\* Add these by clicking OK \*

- 1: Reception (AGENT)
- 2: Reception2 (AGENT)
- 3: Reception3 (AGENT)
- 4: Reception4 (AGENT)

**Valid Formats:**

5551212  
5551212;John Doe

Delete

OK Cancel

## Fallback/Overflow

- There are three conditions which trigger a Fallback Overflow and they are defined in the Queue Options for each queue.
- Failure to configure destinations for each condition will result in the default Busy playback and a hangup:
  1. Maximum Waiting Time (Timeout) -Defined by Maximum Waiting time in Queue (in seconds)
  2. Maximum Waiting Caller (Full) -Defined by Maximum number of people waiting in the queue
  3. No Agent Available -Defined by Join/Leave Agent Status

General	Announce	Members	Fallback/Overflow	Queue Options	Agent Options	Security	Alarms	Wallboard and Thresholds
<b>Maximum Waiting Time (Timeout)</b>								
<b>Destination #1</b>		Extension(s)		Default: Busy Tone				
* Extension		Phone: 216: Jen Taylor (SIP)		▲		▼		Select
<b>Use User-defined CallForward ?</b>		<input checked="" type="checkbox"/>						
Call Rotation Schedule		Disabled ▼						
<b>Distinctive Ring (SIP Device)</b>		Disabled ▼						
Volume Gain (RX/TX)		0 ▼ 0 ▼						
Class of Service (Outgoing Calls)		default ▼						
<b>Add Call Diversion SIP header ?</b>		<input type="checkbox"/>						
<b>Use original Inbound CallerID ?</b>		<input type="checkbox"/>						
<b>Customize CallerID ?</b>		<input type="checkbox"/>						
<b>Maximum Waiting Caller (Full)</b>								
<b>Destination #1</b>		Voicemail		Default: Busy Tone				
* Voicemail		214: Virginia		▲		▼		Select
Skip Instruction ?		<input type="checkbox"/>						
Message to play		Busy ▼						
		Default: Busy						
<b>No Agent Available</b>								
<b>Destination #1</b>		Extension(s)		Default: Busy Tone				
* Extension		Phone: 216: Jen Taylor (SIP)		▲		▼		Select
<b>Use User-defined CallForward ?</b>		<input checked="" type="checkbox"/>						
Call Rotation Schedule		Disabled ▼						
<b>Distinctive Ring (SIP Device)</b>		Disabled ▼						
Volume Gain (RX/TX)		0 ▼ 0 ▼						
Class of Service (Outgoing Calls)		management ▼						
<b>Add Call Diversion SIP header ?</b>		<input type="checkbox"/>						
<b>Use original Inbound CallerID ?</b>		<input type="checkbox"/>						
<b>Customize CallerID ?</b>		<input type="checkbox"/>						

## Queue Options

### Join/Leave Agent Status

Join Empty status -The caller will not be distributed to the queue and the Fallback/Overflow>No Agent Available rule(s) will be triggered based on each rule. These conditions can be turned off by enabling the Disable Join Empty option.

Leave when Empty status -The waiting caller already in call distribution will be removed from the queue and the Fallback/Overflow>No Agent Available rule(s) will be triggered based on each rule. These conditions can be turned off by enabling the Disable Leave When Empty option.

## Rules

### In Use:

An agent is not considered available if the agent is currently on a call.

### ***Unavailable:***

If the agent is a member of the queue but has not logged in, then do not consider the agent to be available.

### ***Penalty:***

An agent is not considered available if the agent penalty is less than QUEUE\_MAX\_PENALTY.

### ***Invalid:***

Do not consider an agent to be available if the agent has an 'invalid' device state.

### ***Unknown:***

Do not consider an agent to be available if the queue is unable to determine the agent's current device state.

### ***Paused:***

An agent is not considered available if the agent is paused.

### ***Wrapup:***

An agent is not considered available if the agent is currently in wrapuptimeafter taking a call.



### ***Ringling:***

An agent is not considered available if the agent's device is currently ringing.

## ***Agent Options***

- The Agent Options optionsare well described on the management page.
- The Agent Timeout is responsible for generating 'Missed Calls' in the SCOPSTATSACD Reports. If the Agent is presented a call and does not answer within the Agent Timeout then a 'Missed Call' is added to the ACD reports. Missed Calls are generally an indication that the users are not logging out at the end of the day or pausing before they leave to go on break. In this scenario the Auto Pause feature may be enabled to automatically Pause the agent if they 'miss' a call. The Enable Auto Logout function can force all agents to be logged off at the configured time. In any case 'Missed Calls' are an indicator that Agents require additional training.
- Security, Alarms, Wallboard and Thresholds are all optional items which are especially useful in SCOPSTATSto flag visual indicators when Service Levels are dropping below desired values.
- Click Add to finish creating the queue

## Call Queues

General	Announce	Members	Fallback/Overflow	Queue Options	Agent Options	Security	Alarms	Wallboard and Thresholds
Report Caller's Hold Time to the Agent ? : <input type="checkbox"/>								
Report number of waiting Caller's to the Agent ? : <input type="checkbox"/>								
Number of seconds to delay before connect the caller : <input type="text"/>								
Reset Agent timeout on BUSY/CONGESTION ? : <input type="checkbox"/> <i>This can be useful if agents are able to cancel a call with reject or similar.</i>								
Wait before sending a new call (Wrapup) (in seconds) : <input type="text"/>								
Agent must absolutely Tag last call before receive new call (Wrapup Code) ? : <input type="checkbox"/> <i>If you need Wrapup Tag and an agent is member of multiple queues, all queues must have this option enabled.</i>								
Auto Pause  : <input type="checkbox"/> <i>Automatically set the Agent on Pause if not answer before Timeout.</i>								
Ring In Use : <input type="checkbox"/> <i>Enable this option if you want to send calls to Agents where devices are known to be 'In Use'. Please note Agents/Extensions maximum incoming/concurrent calls must be defined and higher than 1.</i>								
Agent Timeout (sec) : <input type="text" value="15"/> <i>Number of second to ring the Agent extension.</i>								
Wait time before retry all members again ? (in seconds) : <input type="text" value="5"/> Default: 5								
Allow to transfer incoming call by dialing # ? : <input checked="" type="checkbox"/> Default: True								
Allow to hangup by dialing * ? : <input checked="" type="checkbox"/>								
Allow to park incoming call ? : <input checked="" type="checkbox"/>								
Enable 'On Demand Recording' ? : <input type="checkbox"/>								
Enable Auto Logout ?  : <input type="checkbox"/>								

## Queues (ACD) Callback

### Background

This feature allows a caller to exit a queue but first request a callback from the Contact Center when an agent is available rather than waiting in queue.

- The caller requests the callback by dialing a digit on their keypad that matches a Key action defined on the Auto Attendant Menu. So a new Auto Attendant configuration is required.
- The Auto Attendant is assigned to the required queue using the Single Digit Key Press drop list option in the Queues Manager
- The matching queue must already exist to be associated with the Callback configuration
- The following slides presume knowledge of the SCOPEL IVR Auto Attendant Configuration. Refer to <https://blog.scopserv.com/2019/02/how-to-manage-auto-attendants-ivr-menus/>

### Usage

- Once a caller reaches a queue they will hear the normal Queue Announcements.
- Any of the Announcements may be recorded to include instructions on how to receive a Callback or exit the Queue via a Key Press. Other Key Press options could include a digit to dial to transfer to a preconfigured Voicemail Box, Extension, External Number, Operator etc...
- Depending on which Key press the caller chooses the Queue will Exit the Caller with Key Press. If the Callback Key Press option is the key pressed then the caller will be prompted for Callback, Disconnected and called back once an Agent becomes available.
- Once the caller receives their callback the Queue will announce to the caller that they are receiving their callback and then join the caller with the available Agent.

### Add a new Callback (ACD)

- From the ACD Manager click on the Queues (ACD) Callback tab

- Click on Add a new Queues (ACD) Callback

The screenshot shows the top navigation bar with 'ACD' selected. Below it is a yellow notification bar: "You must click on Commit button in order to apply Change." The main header is "Queues and Agents: Queues (ACD) Callback". A sub-header contains tabs: "Call Queues", "Agents", "Agent Groups", "Queue Rules", "Skill Based Routing", "Queues (ACD) Callback", and "Tag/Pause Code". Under "Queues (ACD) Callback:", there is a search bar and a button "Add a new Callback (ACD)" which is highlighted with a red box. Below this is a grey bar with a warning icon and text: "No information have been specified." At the bottom of this section is an "Action:" dropdown menu set to "- select an action -".

- Give this callback a name
- Click on the Announce Messages tab

The screenshot shows the configuration form for a "Queues (ACD) Callback". It has three tabs: "General", "Announce Messages", and "Options". The "General" tab is active. The form contains a required field "Name" with the value "salesacdcallback" and a larger "Description" text area which is currently empty. At the bottom of the form are "Add" and "Cancel" buttons.

## Announce Messages

Callback Message(s)

- Description: Message to play when the caller request a callback.
- Example script: You have requested a callback a sales agent will return your call when they are available.

Invitation Message(s):

- Description: Message to play when the PBX callback the caller.
- Example script: This is the sales department from Company ABC returning your call.
- Use the Select Tools to add each pre-recorded prompt
- Click on the Options tab




## Queues and Agents: Queues (ACD) Callback


Call Queues Agents Agent Groups Queue Rules Skill Based Routing **Queues (ACD) Callback** Tag/Pause Code

### Queues (ACD) Callback

General **Announce Messages** Options



Callback Message(s) : 0105 : salesacdcallback (Global)  

*Message to play when the caller request a callback.*

Invitation Message(s) : 0106 : salespbxplayback (Global)  

*Message to play when the PBX callback the caller.*

The caller must confirm the Callback before join the :  Queue ?

### Options

- It is on this tab where you associate an existing ACD Queue with this Queues (ACD) Callback object
- Choose your preferred language for the Callback and choose a secure Class of Service to match the Outgoing Line(s) used for the callback.
- If you uncheck the default option to Use CallerID as Callback number then the caller will have to enter a callback number from their touch tone keypad
- Configure any other options as needed and click Add

## Queues and Agents: Queues (ACD) Callback

[Call Queues](#)[Agents](#)[Agent Groups](#)[Queue Rules](#)[Skill Based Routing](#)[Queues \(ACD\) Callback](#)[Tag/Pause Code](#)

### Queues (ACD) Callback

[General](#)[Announce Messages](#)[Options](#)

#### Callback Queues

\* Queue : Queue Priority : Queue Timeout : *This allow to override the default Queue Timeout. If set to 0, we will use the default value.*Skill Based Rule : \* Minimum Available Agent : *The Callback will be made only if the minimum number of Available agents is reached.*

#### Callback Options

Language : Maximum concurrent Callback : *If defined, we will generate calls until we reach the specified limit.*The caller can specify a Callback time ? : \* Class of Service (Outgoing Calls) : Schedule : Maximum Retry : 

Default: 3

Retry Time Interval (in seconds) : 

Default: 30

Delay before execute Callback (in seconds) : 

Default: 5

#### Callback Number

Use CallerID as Callback number ? *If unchecked, we will always prompt for a Callback Number.*Ask for the Callback number if the CallerID is Private/Unknown ? : Maximum CallerID Number Length ? : Number of digit to strip ? : Prefix to add to Number : 

#### CallerID (Outgoing Call)

Set Custom Caller ID ? 

## Auto Attendant Keys Assignment

- Navigate to Applications>Auto Attendants
- Click on Add a new Auto Attendant
- Give the Auto Attendant a name on the General tab
- Click on the Key Assignment tab
- Select a Key and set the Destination #1 to pull down option Queue (ACD) Callback in the sub menu choose the ACD Queue you want to apply to this key.
- Optionally define more Key values and configure each Destination to set other Exit with Key Press options for the caller to exit the Queue with a Key Press
- Click Add when done

. image: ../assets/trainings/Module15ScopTELManagingACD21.png

**Edit ACD Queue | Queue Options | Single Digit Key Press assignment**

- The last step is to Edit the previously configured ACD Queue Options tab to associate the Single Digit Key Press option with the Auto Attendant Menu that was created to invoke the key press to Queue (ACD) Callback Menu.
- Save this configuration and Commit your changes

**Call Queues**

General   Announce   Members   Fallback/Overflow   **Queue Options**   Agent Options   Security   Alarms   Wallboard and Thresholds


Queue ID :   
*This unique number allow agents to dynamically join or pause/unpause a specific Queue*

Weight of Queue :

Auto Fill :   
*Enable this feature to makes sure that when the waiting callers are connecting with available members in a parallel fashion until there are no more available members or no more waiting callers. This can cause some issues on Asterisk when set to 'No'.*

Service Level (in seconds) :   
Default: 60

Language :

Music On Hold  :

Queue Ruleset :


**Enable Dynamic Maximum number of people waiting in the queue ?**   
*Formula: Maximum Length = ( (Valid members \* %logged) + (Active members \* %active) + (Avalables members \* %avail) + (Paused members \* %paused) ) / 100*

Maximum number of people waiting in the queue :

Maximum Waiting time in Queue (in seconds) :   
Default: 300

Ring instead of playing MoH ? :

Single Digit Key Press :

Retry on timeout ?  :