

Automatic call distribution, AC

OPERATIONAL DIRECTIONS



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GENERAL

The MX-ONE provides two types of Automatic Call Distribution, ACD feature: Integrated Automatic Call Distribution, where call distribution is handled by the MX-ONE, and Computer Telephone Interface, CTI based Automatic Call Distribution, where call distribution is handled outside the MX-ONE.

It is possible for a customer to have a CTI based ACD system, but also have an Integrated ACD solution as a backup system within the same system, with the same DTS extensions as agent positions in both ACD systems.

1.1

DESCRIPTION - INTEGRATED AUTOMATIC CALL DISTRIBUTION

Integrated Automatic Call Distribution is an automated solution to distribute a large quantity of incoming calls to predetermined services requested by the caller. Each service must principally be connected to an ACD group that consists of one or more agents handling the calls. In this way, it is possible to handle a large number of incoming calls without the corresponding need for Private Branch Exchange (PBX) operators to route the calls.

The agents are assigned as members and can answer calls from one or more ACD groups. The selection of a free member can be based on the selection priority and the type of selection. The selection priority makes it possible to route the calls to the most skilled members within a group. Between members with the same selection priority, different types of selection can be made either in sequential order, where the members are selected in the order they were initiated into the groups, or by load selection, where the member who has been free for the longest time is selected first.

In addition to this ACD basic feature, there are a number of other facilities, as follows, that can be used to build up a complete call center solution:

- Recorded voice announcement
- Estimated waiting time announcement for the ACD
- Automatic Network Call Distribution
- Dialed Number Information Service (DNIS) for the ACD

When all the agent positions are busy, the ACD places incoming calls in queue and a call progress message is provided. Depending on the selected options, the callers can be provided with a recorded voice announcement, connected to music-on-wait, overflowed to another destination, or any combination that best suits the needs of an organization application.

An ACD group can use another ACD group as a backup group to prevent losses of ACD calls when the Line Interface Module (LIM), where the ACD group resides, becomes unavailable, by being blocked or isolated, or if it restarts.

1.2

DESCRIPTION - CTI BASED AUTOMATIC CALL DISTRIBUTION

CTI based Automatic Call Distribution is an automated solution to distribute a large quantity of incoming calls through a Call Center Application installed outside the

MX-ONE. It consists of an ACD group (also called a CTI Group) without any members inside the MX-ONE, and is monitored and controlled by the Call Center Application.

The Call Center Application together with the PBX provides all the features required for Automatic Call Distribution, that is, Recorded voice announcement, Estimated waiting time announcement, Skill based routing, re-queuing to ACD group, and Call Monitoring and Controlling.

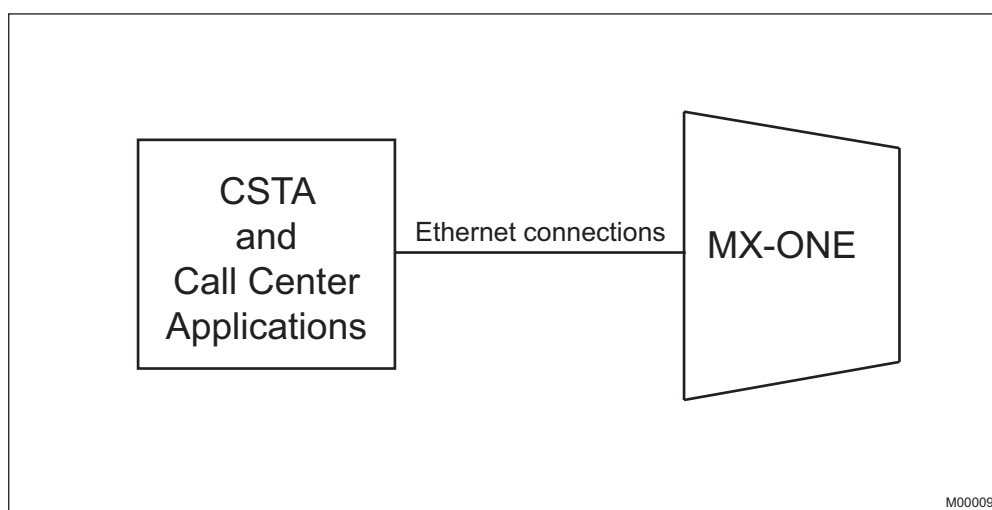


Figure 1: Connection of an Interface between the Call Center Application and the MX-ONE Service Node

The function is set by I/O commands.

1.3

GLOSSARY

For a complete list of abbreviations and glossary, see the description for *ACRONYMS, ABBREVIATIONS AND GLOSSARY*.

1.4

DEFINITIONS

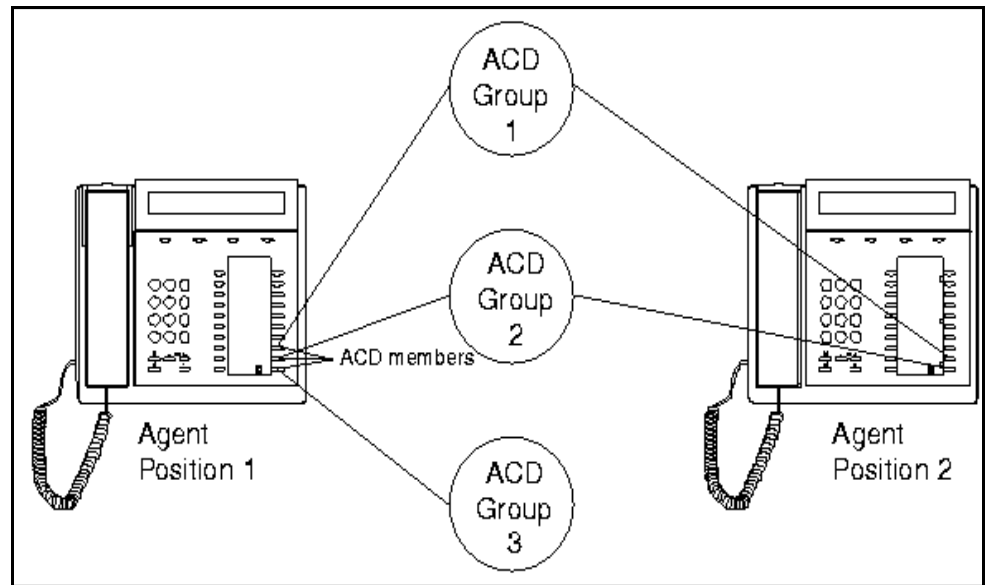


Figure 2: ACD Groups

1.4.1

ACD GROUP

An ACD group consists of a number of ACD members.

1.4.2

ACD MEMBER

An ACD member is an Additional Directory Number (ADN) with an ACD class of service assigned as a member in an ACD group. An ACD member can be called on the ACD group's directory number. The ACD member can optionally be called directly on the ADN directory number.

1.4.3

AGENT POSITION

An agent position is any digital extension (Own Directory Number (ODN)) with an ACD class of service having at least one of its ADNs assigned as an ACD member.

1.4.4

SUPERVISOR POSITION

The supervisor position is any digital extension with an ACD supervisor class of service, which allows the supervisor to do the following:

- Silent intrusion on an ACD member
- ACD group Follow-Me (internally or externally)
- ACD group do-not-disturb

1.4.5

CTI GROUP

A CTI group is an ACD group without any members in the MX-ONE (Service Node) monitored by the Call Center Application.

2 PREREQUISITES

-

3 AIDS

I/O terminal.

4 REFERENCES

In these operational directions, references are made to the following documents:

Operational directions:

DNIS for ACD

Name Identity

Command descriptions:

Blocking

Automatic Call Distribution, AC

Parameter descriptions:

Automatic Call Distribution, AC

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PROCEDURE

The following procedure is recommended for the initiation of the Integrated ACD function:

1. Initiate digital extensions and category data for ACD use (agent position).
2. Initiate ADNs and category data for ACD member use.
3. Initiate application system parameters.
4. Initiate ACD system parameters.
5. Initiate ACD groups and category data.
6. Initiate ACD members.
7. Initiate ACD options.
8. Initiate backup groups for ACD groups (if desired).

The following procedure is recommended for initiation of the CTI group:

1. Initiate the Computer Supported Telecommunications Application (CSTA) Application.
2. Initiate the CTI group and category data.
3. Monitor the CTI group from the CSTA Application or Call Center Application.

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EXECUTION - INTEGRATED AUTOMATIC CALL DISTRIBUTION

6.1 AGENT POSITION (ODN)

6.1.1 INITIATING AN ODN AS AGENT POSITION

General

The digital extension to be used as an agent position must be initiated.

Prerequisites

-

Execution

Key the command *KSEX/* or *KSCAC* to initiate the agent position.

Key the command *KSCAP* to verify the initiation.

Key the command *auth_code* to initiate a common authorization code.

Key the command *auth_code* to verify the result.

Key the command *diversion -i* to initiate ODN as ODN's diversion position (diversion to itself).

Key the command *diversion -p* to verify the result.

6.1.2 ALTERATION OF THE AGENT POSITION

General

The agent position can be changed to a normal extension.

Prerequisites

To change to a normal extension, first remove all the ACD members from the extension.

Execution

Key the command *KSCAC* to change the parameter ADC, thereby changing it to a normal extension.

Key the command *KSCAP* to verify the result.

6.2 AGENT POSITION (ADN)

6.2.1 INITIATING ADNS FOR ACD MEMBER USE

General

A maximum of eight ADNs can be assigned to ACD member use on one agent position.

Prerequisites

The digital key system telephone needs to be assigned as an agent position.

Execution

Key the command *KSANI* or *KSCAC* to initiate the ADNs to be used as ACD members.
Key the command *KSCAP* to verify the result.

Note: As long as the ADN number is not assigned to an ACD group, it is impossible to log on the telephone.

6.2.2 ALTERING ACD ADNS TO NORMAL ADNS

General

ADNs for an ACD member can be changed to normal ADNs.

Prerequisites

To change to a normal ADN, first remove any assignments to an ACD group.

Execution

Key the command *KSCAC* to change the parameter ADC, thereby changing an ACD ADN to a normal ADN.

Key the command *KSCAP* to verify the result.

6.2.3 MULTI MEMBER BUSY ON ACD MEMBER AT CALL TO OR FROM ODN

General

When this function is selected, the ACD member will not receive any new calls while the agent is busy on the ODN.

Prerequisites

-

Execution

Key the command *KSCAC* to change the parameter ADC, thereby changing the MMB status for an ACD ADN.

Key the command *KSCAP* to verify the result.

6.3 APPLICATION SYSTEM PARAMETERS

6.3.1 MAXIMUM QUEUING TIME TO ACD GROUPS

General

The maximum queuing time to ACD groups can be stated with an Application System (AS) parameter. The external or internal calling party receives free information during the queuing time.

On timeout, the calling party receives a congestion message.

Prerequisites

-

Execution

Key the command *ASPAC* with *PARNUM=31* to set the maximum queuing time with free information.

Key the command *ASPAP* to verify the result.

6.3.2

FALSE B-ANSWER

General

A false B-answer can be sent over a non-intelligent private or public trunk, an intelligent private trunk when calling party is an extension or operator or a SIP extension to prevent a time-out of incoming calls to an ACD group.

Prerequisites

The AS parameter value for the maximum queuing time to an internal group hunting group or an ACD group number (PARNUM = 31) must be greater than the value that is to be assigned to the false B-answer time duration.

Note: To send a false B-answer, the incoming route must have at least clear forward availability.

Execution

Enter the command *ASPAC* with *PARNUM = 138* and *PARNUM = 148* to initiate the time duration prior to sending the false B-answer.

Enter the command *ASPAC* to verify the result.

Enter the command *ASPAC* with *PARNUM = 147* to enable the false B-answer to be sent.

Enter the command *ASPAC* to verify the result.

6.4

ACD SYSTEM PARAMETERS

6.4.1

DELAY CALL SELECTION

General

A delayed call can be selected when an agent position becomes free after a completed ACD call. There are the following two methods to choose from:

- Individual selection

A delayed call will be selected by the queue priority.

- Load selection

The delayed call with the highest number of queue cycles will be selected. The time for a queue cycle is shorter with a higher queue priority.

Prerequisites

-

Execution

Key the command *ACPAC* with *ACDNUM=1* to initiate the applicable delayed call selection.

Key the command *ACPAP* to verify the result.

6.4.2

DIRECT CALL TO AN ACD MEMBER

General

A direct call to an ACD member is made by dialing the ADN number. This kind of call cannot be queued.

Prerequisites

-

Execution

Key the command *ACPAC* with ACDNUM=3 to state if direct calls to ACD member are allowed.

Key the command *ACPAP* to verify the result.

6.4.3

ACD CALL OVERFLOW TO THE NEXT FREE ACD AGENT

General

When this function is selected, the ACD call will continue to reach the next free ACD agent, or will not be distributed to the next free ACD agent on timer expiry, that is, at the maximum ring time on an ACD member.

Prerequisites

-

Execution

Key the command *ACPAC* with ACDNUM=5 to state whether the call will continue to reach the next free ACD agent.

Key the command *ACPAP* to verify the result.

6.4.4

VALIDATING THE PIN CODE

General

When this function is selected, it states whether the PIN number will be validated when the ACD agent unlocks the extension.

Prerequisites

-

Execution

Key the command *ACPAC* with ACDNUM=6 to validate the ACD PIN.

Key the command *ACPAP* to verify the result.

6.4.5

DEFLECTING CALLS FROM AN ACD QUEUE

General

When the last ACD agent logs off or when the CSTA monitor is lost on a CTI group, the ACD parameter (ACDVAL=7) controls the deflection of calls from the ACD queue or the CTI queue to the diverttee position. The diverttee position is set by the *diversion -i* command.

Prerequisites

-

Execution

Key the command *ACPAC* with ACDNUM=7 to state whether to deflect the calls from the ACD queue or the CTI queue to the diverttee position.

Key the command *ACPAP* to verify the result.

6.5 ACD GROUP

6.5.1 INITIATING THE ACD GROUP

General

The ACD group must be placed in the LIM where the majority of the group members will be initiated.

Prerequisites

The number to be initiated as the ACD group number must be a free directory number within the extension number series.

Execution

Key the command *ACGRI* to initiate the ACD group number and its category data.

Key the command *ACGCP* to verify the result.

6.5.2 ALTERING ACD GROUP CATEGORY DATA

General

Some of the ACD group's categories can be changed without removing the whole ACD group.

Prerequisites

-

Execution

Key the command *ACGCC* to alter the possible categories.

Key the command *ACGCP* to verify the result.

6.5.3 REMOVING THE ACD GROUP

General

The ACD group is to be removed.

Prerequisites

All the members in the ACD group must be removed. All DNIS numbers affiliated to the ACD group must be removed. If the ACD group is a backup group for another ACD group, the backup must be removed.

Execution

Key the command *ACGRE* to remove an ACD group.

Key the command *ACGCP* to verify the result.

6.5.4 PRINTING DATA FOR THE ACD GROUP

General

The ACD group category data can be printed for verification.

Prerequisites

-

Execution

Key the command *ACGCP* to obtain a print.

6.6 ACD MEMBER

6.6.1 INITIATING GROUP MEMBERS

General

Members are to be initiated for the ACD groups.

Prerequisites

The ACD group must be initiated.

Directory numbers that are to be initiated as members in the group must be ADNs and have an ACD category.

Execution

Key the command *ACGMI* to initiate group members with or without clerical time, and with or without individual queue or selection priority.

Key the command *ACGMP* to verify the result.

6.6.2 ALTERING CLERICAL TIME AND INDIVIDUAL QUEUE OR SELECTION PRIORITY FOR GROUP MEMBERS

General

Values for group member clerical time, or individual queue or selection priority, or both can be changed.

Prerequisites

-

Execution

Key the command *ACGMC* to alter the clerical time, or the individual queue or selection priority, or both for group members.

Key the command *ACGMP* to verify the result.

6.6.3 REMOVING GROUP MEMBERS

General

Members of an ACD group are to be removed.

Prerequisites

-

Execution

Key the command *ACGME* to remove a group member from the ACD group.

Key the command *ACGMP* to verify the result.

6.6.4 PRINTING ACD MEMBERS

General

Group member data can be printed for verification.

Prerequisites

-

Execution

Key the command *ACGMP* to print data for a group member.

6.7

ACD OPTIONS

6.7.1

INITIATING A COMMON ABBREVIATED NUMBER

General

A common abbreviated number must be initiated before an external number can be initiated as an overflow position. The common abbreviated number is translated to an external destination.

Prerequisites

-

Execution

Key the command *ADCOI* to initiate the common abbreviated number.

Key the command *ADCDP* to verify the result.

6.7.2

INITIATING THE OVERFLOW POSITION

General

Calls to ACD groups can have overflow permitted or rejected. It can be programmed to occur either when the queue is full, or when there are no available ACD members, or both.

Note: To avoid a lockup of external lines when using external overflow, make sure that the overflow position does not have overflow or external follow me back to the same ACD group.

Prerequisites

An overflow category must be initiated for the ACD group.

When the overflow position is an external number (but not a network number), an abbreviated number must be initiated. The abbreviated number is used as a value for the diversion destination parameter in the command *diversion -i*.

See 6.7.1 Initiating a Common Abbreviated Number on page 14Initiation of Common Abbreviated Number.

Execution

Key the command *diversion -i* to initiate an overflow position for the ACD group.

Key the command *diversion -p* to verify the result.

6.7.3

INITIATING NAME DISPLAY FOR ACD GROUPS

General

A name with unicode characters can be assigned to an ACD group. See the operational directions for *NAME IDENTITY*.

Prerequisites

-

Execution

Key the command *name -e* to remove the name associated with the ACD group.

Key the command *name -i* to assign a name to the ACD group.

Key the command *name -p* to verify the result.

6.7.4

ACD GROUP DO NOT DISTURB

General

The agents can be prevented from receiving calls from a specific ACD group with the group do not disturb function.

Prerequisites

-

Execution

Key the command *GDNDI* to initiate all the members of an ACD group as members of a group do not disturb group.

Key the command *GDNDP* to verify the result.

6.8

ACD BACKUP GROUP

6.8.1

INITIATING A BACKUP GROUP FOR AN ACD GROUP

General

Any ACD group can be a backup group for any other ACD group as long as the two groups are not in the same LIM.

Prerequisites

The ACD group and its backup group, which is also another ACD group, have been initiated and are in different LIMs.

Execution

Key the command *ACBGI* to initiate a backup group for an ACD group.

Key the command *ACBGP* to verify the result.

6.8.2

REMOVING THE BACKUP GROUP FOR AN ACD GROUP

General

The backup group for an ACD group is to be removed.

Prerequisites

A backup group has been initiated for the ACD group.

Execution

Key the command *ACBGE* to remove the backup group for an ACD group.

Key the command *ACBGP* to verify the result.

6.8.3

PRINT THE BACKUP GROUP FOR AN ACD GROUP

General

The backup group information for an ACD group can be printed for verification.

Prerequisites

-

Execution

Key the command *ACBGP* to obtain a printout.

6.9

PRINTING THE CURRENT STATUS OF THE ACD

General

A print of the current status of the ACD will be obtained.

Prerequisites

-

Execution

Key the command *ACCSP* to obtain a print.

6.10

DNIS FOR THE ACD

For information about the handling of the commands for DNIS (*ACTNE*, *ACTNI*, and *ACTNP*), see the operational directions for *DNIS*.

7 EXECUTION - CTI GROUP

7.1 CSTA APPLICATION

For information on how to configure a CSTA application, such as MiContact Center Enterprise, see operational directions for *COMPUTER SUPPORTED TELECOMMUNICATIONS APPLICATIONS (CSTA)*, CS.

7.2 CTI GROUP

7.2.1 INITIATING THE CTI GROUP

General

The CTI group must be placed in the LIM where the majority of the group members will be initiated.

Prerequisites

The number to be initiated as a CTI group number must be a free directory number within the extension number series.

Execution

Key the command *ACGR/* to initiate the CTI group number and its category data.

Key the command *ACGCP* to verify the result.

7.2.2 ALTERING THE CTI GROUP CATEGORY DATA

General

Some of the categories of the CTI group can be changed without removing the whole CTI group.

Prerequisites

-

Execution

Key the command *ACGCC* to alter the possible categories.

Key the command *ACGCP* to verify the result.

7.2.3 REMOVING THE CTI GROUP

General

The CTI group is to be removed.

Prerequisites

All the members in the CTI group must be removed. All the DNIS numbers affiliated to the CTI group must be removed. If the CTI group is a backup group for another CTI group, the backup must be removed.

Execution

Key the command *ACGRE* to remove an CTI group.

Key the command *ACGCP* to verify the result.

7.2.4

PRINTING DATA FOR THE CTI GROUP

General

The CTI group category data can be printed for verification.

Prerequisites

-

Execution

Key the command *ACGCP* to obtain a print.

7.2.5

AGENT POSITION

The following extensions types can be initiated as agent positions:

- ATS
- DTS
- CXN
- IPeX (H.323 and SIP)
- RXN

For more information on how to initiate each individual extension type as an agent position, refer to the appropriate operational directions.

7.2.6

DNIS FOR THE CTI GROUP

For information about the handling of the commands for DNIS (*ACTNE*, *ACTNI*, and *ACTNP*), see the operational directions for *DNIS*.

8

TERMINATION

If the exchange data has been altered and no more commands are to be entered, a dump to a backup media must be performed.