OPERATORS

You can use operators to compare data. This enables you to write expressions in your scripts that test for different conditions, and then perform a specific action depending on the condition. Use parentheses ( ) to define the initial order in which expressions are evaluated. The three types of operators listed below are evaluated in the order given, and from left to right within the expression.

Logical operators	NOT
	AND
	OR

| Mathematical operators | Multiplication * and Division / |
| | Addition + and Subtraction - |

Relational operators	Equal	=
	Not Equal	< >
	Greater Than	>
	Less Than	<
	Greater Than or Equal	> =
	Less Than or Equal	< =

DOs and DON'Ts

DO
- Always use the QUEUED intrinsic in a loop to check the condition of the call. This ensures that a call does not remain in the queue if all of the agents in a specified skillset log off before the call is queued.
- Follow a QUEUE TO command with a WAIT of at least two seconds.
- Use the LOG command only within an error handler; otherwise, it uses extensive system resources.
- If a call is queued to a skillset, agent, or NACD, then the use of the GIVE IVR command must be interruptible, so the call can be answered if an agent becomes available.
- Use NACD routing as a backup if a network skill-based routing command does not successfully route the call.
- Always provide a default method of handling the call within a conditional test, such as an IF or a WHERE EQUALS statement.
- Always determine if a skillset is in service before queuing a call to that skillset.
- When executing commands within a loop, always provide a method for the call to exit the loop. This ensures that the call is not lost in the queue.
- Always use a WAIT command when evaluating a condition within a loop. This allows the system time to evaluate the condition.

DON'T
- Use the QUEUED intrinsic within a loop to test if the call has been successfully queued after queuing a call to an NACD.
- Use any command after QUIT, unless the command is within a SECTION label that is referenced earlier in the script.
- Use the GIVE BUSY or GIVE OVERFLOW commands after providing treatment to a call, or after any command that generates an automatic ringback to the call.
- If you queue a call to an agent or a skillset, and then further commands are executed, it is not necessary to queue the call to the same agent or skillset a second time, unless you have determined the call is not in the queue.
- Use any of the following as the first command executed in a script:

WAIT	REMOVE FROM NETWORK SKILLSET
QUIT	CHANGE PRIORITY IN NACD
GIVE SILENCE	CHANGE PRIORITY IN NETWORK SKILLSET
REMOVE FROM SKILLSET	COLLECT DIGITS
REMOVE FROM AGENT	PLAY PROMPT VOICE SEGMENT
CHANGE PRIORITY IN AGENT	PLAY PROMPT NUMBERBYDIGIT
CHANGE PRIORITY IN SKILLSET	GET RESPONSE
REMOVE FROM NACD	

- Use any of the following commands or intrinsics in the network scripts or subscripts referenced by the network script:

QUEUE TO NETWORK SKILLSET	GIVE BUSY
QUEUE TO NACD	GIVE BUSY CONTROLLED
REMOVE FROM NETWORK SKILLSET	GIVE OVERFLOW
REMOVE FROM NACD	GIVE OVERFLOW CONTROLLED
CHANGE PRIORITY IN NETWORK SKILLSET	
CHANGE PRIORITY IN NACD	
PRIORITY IN NETWORK QUEUE (intrinsic)	

INTRINSICS

Intrinsics are words or phrases that serve as placeholders and retrieve information about skillsets, agents, time, traffic, and call type. Intrinsics enable you to query, but not modify, this information, and then use the returned value in formulas and decision-making statements.

Skillset intrinsics store information about skillsets. They can then be used in queuing commands and conditional expressions. Skillset intrinsics return skillsets, integer values, and agent IDs that can be evaluated in conditional expressions. When using skillset intrinsics, if you specify more than one skillset, the intrinsic returns the maximum or minimum skillset value, or the sum of all skillset values, depending on the intrinsic you choose.

SKILLSET INTRINSIC	DESCRIPTION
ANSWERED CALL COUNT	The total number of incoming calls for the specified skillset that have been answered during a specific time period. You can use the Real-Time Statistics property sheet to select the number of calls answered in the last 10 minutes of system activity, or the number of calls answered during a specific interval (for example, every 30 minutes).
AVERAGE SPEED ANSWER	The average speed a call for the specified skillset is answered based on the priority it is given when it enters the system. You can use the Real-Time Statistics property sheet to select the average speed calls are answered in the last 10 minutes of system activity, or the average speed calls are answered during a specific interval (for example, every 30 minutes).
EXPECTED WAIT TIME	The amount of time a call is expected to wait in the specified skillset queue before being presented to an agent.
IDLE AGENT	Determines if the specified agent is idle.
IDLE AGENT COUNT	The number of idle agents in the specified skillset.
LOGGED AGENT COUNT	The number of logged on agents in the specified skillset.
LOGGED OUT AGENT	Determines if the specified agent or agents are logged off.
LONGEST IDLE AGENT	The agent in the specified skillset who has been idle the longest. You can use the Global Settings window to select the longest idle agent since his or her last call was completed, since the agent's status changed, or since the agent logged on.
MOST LOGGED AGENTS	The skillset with the most logged agents.
OLDEST CALL	The age of the call that has waited longest in the specified skillset.
OUT OF SERVICE	Determines if the specified skillset or skillsets are out of service.
POSITION IN QUEUE	The position of the call in queue for the specified skillset.
PRIORITY IN QUEUE	The priority of the call in the queue.
PRIORITY IN NETWORK QUEUE	The priority of the call in the network queue.
QUEUED CALL COUNT	The number of calls queued to the specified skillset that are waiting to be answered.

Example
In the following example, the script performs a test to determine if there are enough agents logged on with the sales skillset to handle the current call volume. If not, the caller receives a busy tone.

```
IF (QUEUED CALL COUNT sales_sk) > (2 * LOGGED AGENT COUNT sales_sk) THEN
     GIVE BUSY
END IF
     QUEUE TO SKILLSET sales_sk
     WAIT 2
```

Time intrinsics store information about system time. Time intrinsics return specific times, days, months, and dates.

TIME INTRINSIC	DESCRIPTION
TIME OF DAY	The current time of day.
DAY OF WEEK	The current day of the week.
DATE	The current date.
DAY OF MONTH	The current day of the month.
MONTH OF YEAR	The current month of the year.

Example
In the following example, calls entering the call center after regular business hours receive a recorded announcement stating that the call center is closed.

```
IF (TIME OF DAY = closed_hours_gv) THEN
     GIVE RAN closed_ran_gv
END IF
```

Traffic intrinsics store information about system traffic. Traffic intrinsics return numerical values.

TRAFFIC INTRINSIC	DESCRIPTION
CALL RATE	The number of local calls and incoming network calls that have entered the system during a specific ten-minute period.
TOTAL ACTIVE CALLS	The total number of local calls and incoming network calls in the system.

Example
In the following example, if the number of calls in queue exceeds 200, then callers receive an "overflow" treatment, such as a fast busy tone. If the number of calls in queue is less than or equal to 200, then calls are queued to agents assigned to the service skillset.

```
IF (TOTAL ACTIVE CALLS > 200) THEN
     GIVE OVERFLOW
ELSE
     QUEUE TO SKILLSET service_sk
     WAIT 2
END IF
```

Call intrinsics are created and maintained automatically by Symposium Call Center Server. Call intrinsics store call-related information that is assigned immediately when the call enters the Meridian 1 switch. You can use call intrinsics to track the path a call follows as it is processed by Symposium Call Center Server.

CALL INTRINSIC	DESCRIPTION
AGE OF CALL	The age of the call.
CALL FORWARD	Determines if the call has been forwarded.
CALL FORWARD BUSY	Determines if the call has been forwarded because the phone at the original destination was busy.
CALL FORWARD DO NOT DISTURB	Determines if the call has been forwarded due to a do not disturb condition at the destination.
CALL FORWARD NO ANSWER	Determines if the call has been forwarded because no one answered the phone at the original destination.
CDN	The controlled directory number the current call entered.
CLID	The calling line identification number of the current call.
CONFERENCED	Determines if the call is a consultative call.
DIALED DN	The number that the caller originally dialed. This applies only to forwarded calls.
DIRECT CALL	Determines if the call is a direct call.
DNIS	The first number that the caller dialed to enter the system.
INTERNATIONAL CALL	Determines if the call is an international call.
LOC	The location code number of the call.
NETWORK CALL	Determines if the call is a network call.
NPA	The number plan area or area code of the call.
NXX	The local exchange code of the call.
NPANXX	The number plan area or area code as well as the local exchange code of the call.
ON HOLD	Determines if the call is on hold.
QUEUED	Determines if the call is queued in any local skillsets, network skillsets, agent queues, or an NACD queue.
ROUTE NUMBER	The route number of the call.
TRANSFERRED	Determines if the call is being transferred.

Example In the following example, the script performs a test to determine if the call has been queued. The script then performs a second test to determine if there are qualified agents available to answer the call. If the call is not queued or there are no qualified agents available to answer the call, the caller hears a recorded announcement, and then the caller is disconnected. Otherwise, the call is requeued to the sales skillset.

```
IF NOT QUEUED THEN
     IF OUT OF SERVICE sales_sk THEN
          GIVE RAN night_ran_gv
          DISCONNECT
     ELSE
          QUEUE TO SKILLSET sales_sk
          WAIT 2
     END IF
END IF
```

SCRIPT COMMANDS

Script commands perform distinct functions, such as routing a call to a specific destination, playing music or recorded announcements to a caller, or disconnecting a nuisance caller. Commands are made up of combinations of intrinsics, constants, variables, and expressions.

Basic General Commands perform simple functions, such as assigning values to variables, branching to subscripts, and performing conditional tests.

ELEMENT	PURPOSE
ASSIGN TO	Assign a value to a call variable.
EXECUTE	Branch to a section in the current script.
EXECUTE SCRIPT	Branch from one script to another.
IF-THEN-END IF	Execute script events based on conditional tests.
IF-THEN-ELSE-END IF	Execute script events based on conditional tests.
QUIT	Terminate the execution of the script.
SECTION	Define a section of commands.
WAIT	Suspend a script for a period of time before executing one or more commands.

Example
In the following example, if the number of calls queued to the sales skillset exceeds 20, then the caller receives a busy signal. If the number of calls queued to the sales skillset is less than or equal to 20, then the call is queued to the sales skillset.

```
IF (QUEUED CALL COUNT sales_sk > 20) THEN
     GIVE BUSY
ELSE
     QUEUE TO SKILLSET sales_sk
     WAIT 2
END IF
```

SCRIPT COMMANDS (continued)

Basic Call Processing Commands perform functions, such as queuing calls and providing treatments to calls.

ELEMENT	PURPOSE
CHANGE PRIORITY IN AGENT	Changes the priority of a call that is queued to the specified agent.
CHANGE PRIORITY IN SKILLSET	Changes the priority of a call that is queued to the specified skillset.
DISCONNECT	Disconnects a call.
GIVE BUSY	Provides a busy tone to a call before it is disconnected by the switch.
GIVE MUSIC	Plays music from a specified music route.
GIVE OVERFLOW	Provides an overflow tone to a call before it is disconnected by the switch.
GIVE RAN	Provides a recorded announcement to a call through the specified RAN trunk.
GIVE RINGBACK	Provides a ringback tone to a call.
GIVE SILENCE	Provides silence to a call.
QUEUE TO AGENT	Presents a call to a local agent.
QUEUE TO SKILLSET	Queues a call to a local skillset.
REMOVE FROM AGENT	Removes a queued call from the specified agent.
REMOVE FROM SKILLSET	Removes a queued call from a skillset or skillsets.
ROUTE CALL	Routes a call to a specific destination.

Example
In the following example, the script checks whether the number of idle agents assigned to the sales skillset is greater than 0. If so, then the call is queued to the sales skillset. If the number of idle agents assigned to the sales skillset is 0, then calls are queued to agents assigned to the service skillset.

```
IF (IDLE AGENT COUNT sales_sk > 0)  THEN
        QUEUE TO SKILLSET sales_sk
ELSE
        QUEUE TO SKILLSET service_sk
        WAIT 2
END IF
```

Advanced Scripts Commands The EVENT HANDLER and LOG commands listed below are used to give the script instructions to manage unexpected conditions that can occur during a call, such as the call being abandoned or a RAN response failure. The WHERE EQUALS command is used where a condition can have more than one expected result.

ELEMENT	PURPOSE
EVENT HANDLER	A command or group of commands used to manage unexpected conditions or failed events.
LOG	Logs a message to the Event Browser.
WHERE EQUALS	Tests for a condition that can have more than one expected result. The resulting action is based on which condition is met.

Example In the following example, if the caller does not enter a valid response after being prompted by a recorded announcement, then the failed response is logged in the Event Browser log.

```
EVENT HANDLER
    EVENT CALL ON HOLD: GIVE MUSIC pop_music_gv
    EVENT RAN RESPONSE FAIL: LOG "RAN failed in Master"
    END HANDLER
```

Network Routing Commands If you have purchased the Network Skill-Based Routing option, you can use these commands to route calls from one site to another.

ELEMENT	PURPOSE
QUEUE TO NACD	Queues a call to a single network ACD-DN.
CHANGE PRIORITY IN NACD	Changes the priority of a call queued to a network ACD-DN.
REMOVE FROM NACD	Removes a queued call to a network ACD-DN.
QUEUE TO NETWORK SKILLSET	Queues a call on a network-wide basis to specified skillsets.
CHANGE PRIORITY IN NETWORK SKILLSET	Changes the priority of a call queued to a network skillset.
REMOVE FROM NETWORK SKILLSET	Removes a call queued to a network skillset or skillsets.

Example In the following example, if the age of the call queued to the network skillset (service_sk) is greater than 60 seconds, then the priority of the call is increased to 1.

```
IF (AGE OF CALL > 60) THEN
CHANGE PRIORITY IN NETWORK SKILLSET service_sk TO PRIORITY 1
END I
```

Voice Processing Commands If your call center has an optional voice processing system, you can use these commands to communicate with callers using recorded announcements (RANs), interactive voice response (IVR) systems, broadcast announcements, and voice prompts.

ELEMENT	PURPOSE
GIVE IVR	Routes a call to a voice messaging system.
OPEN VOICE SESSION	Establishes control of a voice port on a voice processing system.
END VOICE SESSION	Terminates control of a voice port on a voice processing system.
PLAY PROMPT	Plays a voice prompt to the caller.
COLLECT DIGITS	Collects digits from the caller.
GIVE CONTROLLED BROADCAST ANNOUNCEMENT	Broadcasts an announcement to multiple callers at the same time.

Example In the following example, a voice session begins in which the caller is asked to enter his or her account number. The nine digits are collected into a call variable named "caller_acc_cv."

```
OPEN VOICE SESSION acctIvrDn
    PLAY PROMPT VOICE SEGMENT enter_acc_num_vs
    COLLECT 9 DIGITS INTO caller_acc_cv
END VOICE SESSION
```

Host Data Exchange Commands If your call center has an optional third-party IVR system, you can use these commands to connect to the application, so you can send data to, and receive data from, an external database.

ELEMENT	PURPOSE
SEND INFO	Sends information to a third-party application.
SEND REQUEST	Requests specific data from a third-party application.
GET RESPONSE	Retrieves data from the Send Request command sent to a third-party application.

Example This example shows how to access an account status from an external database.

```
SEND REQUEST application_ID caller_acc_cv
GET RESPONSE application_ID client_ID_cv, acc_status_cv
```

SCRIPTING KEYWORDS

The following keywords are reserved words within Symposium Call Center Server's scripting language and should not be used as user-defined names or labels.

ABANDON	DN	LOGGED	RESPONSE
ACD	DNIS	LONGEST	RETRIEVE
ACTIVE	DO	MAR	RETURN
AGE	END	MARCH	RINGBACK
AGENT	ENGLISH	MAY	RINGING
AGENTS	EQUALS	MONDAY	ROUTE
AHEAD	EVENT	MONTH	SATURDAY
ANNOUNCEMENT	EXECUTE	MOST	SCRIPT
ANSWER	EXPECTED	MUSIC	SECTION
ANSWERED	FAIL	NACD	SEGMENT
APPLICATION	FALSE	NAME	SEND
APR	FEB	NETWORK	SEP
APRIL	FEBRUARY	NIGHT	SEPTEMBER
ASSIGN	FOR	NO	SERVICE
ASSIGNED	FOREVER	NON	SESSION
AUG	FORWARD	NONCONTROLLED	SET
AUGUST	FRENCH	NOV	SILENCE
AVERAGE	FRIDAY	NOVEMBER	SKILLSET
BROADCAST	FROM	NPA	SPANISH
BUSY	GERMAN	NPANXX	SPEED
BY	GET	NUMBER	SUCCESS
CALL	GIVE	NUMBERBYDIGIT	SUNDAY
CALLS	HANDLER	NXX	TERMINATING
CDN	HOLD	OCT	THURSDAY
CHANGE	ID	OCTOBER	TIME
CHARACTER	IDLE	OF	TIMEOUT
CHINESE	IF	OLDEST	TIMER
CLID	IN	ON	TO
COLLECT	INCOMING	OPEN	TOTAL
CONFERENCED	INFO	OUT	TRANSFERRED
CONSULTED	INTER	OVERFLOW	TREATMENT
CONTINUOUS	INTERNATIONAL	PLAY	TRUE
CONTROLLED	INTERRUPTIBLE	PORTUGUESE	TUESDAY
COUNT	INTO	POSITION	TYPE
DATA	IVR	PRESENT	VALUE
DATE	JAN	PRIORITY	VOICE
DAY	JANUARY	PROMPT	WAIT
DEC	JAPANESE	QUEUE	WAITING
DECEMBER	JUL	QUEUED	WEDNESDAY
DEFAULT	JULY	QUEUES	WEEK
DEQUEUE	JUN	QUIT	WHERE
DIALED	JUNE	RAN	WHILE
DIGIT	LANGUAGE	RATE	WITH
DIGITS	LEAST	RECEIVED	YEAR
DIRECT	LOC	RELEASED	
DISCONNECT	LOCATION	REMOVE	
DISTURB	LOG	REQUEST	

NORTEL NETWORKS™
How the world shares ideas.

Symposium Call Center Server
M1 Scripting Quick Reference Card

For CPU Position Only

Release 3.0