



# **Cloud Contact Centre**

## **IVR Reference Guide**

Issue 1.0

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## 1. INTRODUCTION

NEC Agent 99 is a cost-effective, flexible customer contact solution that combines phone, email, live Web chat, and customer records together in an easy-to-use interface.

It is a fully featured hosted solution that delivers the functionality and benefits of a contact centre without requiring additional hardware, software or capital expenditure, Agent 99 is on demand and highly scalable.

NEC Agent 99 is self provisioning and easy to configure, including queues, agents, IVR, call recording, and CRM functions. As long as Agents have an Internet connection and a phone, they can login and accept transactions from anywhere in Australia, as if they are all sitting in the same office.

Every contact – phone, email and web – is presented in one clear view to agents and combined with the functionality to prioritise, route and track contacts, Agent 99 provides the ability to deliver consistent, end-to-end customer service.

### 1.1. PURPOSE

The purpose of this document is to describe how to build an IVR script through NEC Agent99 Configuration Manager, and to define each object type that can be used in IVR scripting.

### 1.2. SCOPE

This document targets first time IVR configurations, and can also be used as a reference when making IVR changes.

### 1.3. AUDIENCE

The intended audiences of the document are NEC Clients that will be required to configure the NEC Agent 99 IVR and NEC Training. This document is intended to be used by:

- NEC Clients: to provide a user guide explaining the functionality of the NEC Agent99 IVR.
- NEC Training: to provide a reference guide to assist with the training of the NEC Agent 99 IVR.

### 1.4. DEFINITIONS / ABBREVIATIONS

The following abbreviations will be used throughout this document:

- Client NEC Clients who use the NEC Agent99 IVR application;
- NEC NEC Australia Pty Ltd;
- SI Systems Integration.

## 2. IVR SCRIPT

IVR scripts are built by configuring and adding objects. Objects are executed sequentially from top to bottom (except when using Label/Goto objects).

The current version of the interface allows: adding and deleting, but does not allow duplicating, moving or inserting objects. Also note that there isn't any verification between the script objects and the resources it uses. For example: if a "Play" object is set to play a custom audio file, and the audio file is deleted, then the IVR script will skip the object, as it is not able to locate the audio message to play.

Note:	Remember to click on the Save Button each time a modification is made to the system, otherwise the information is lost.
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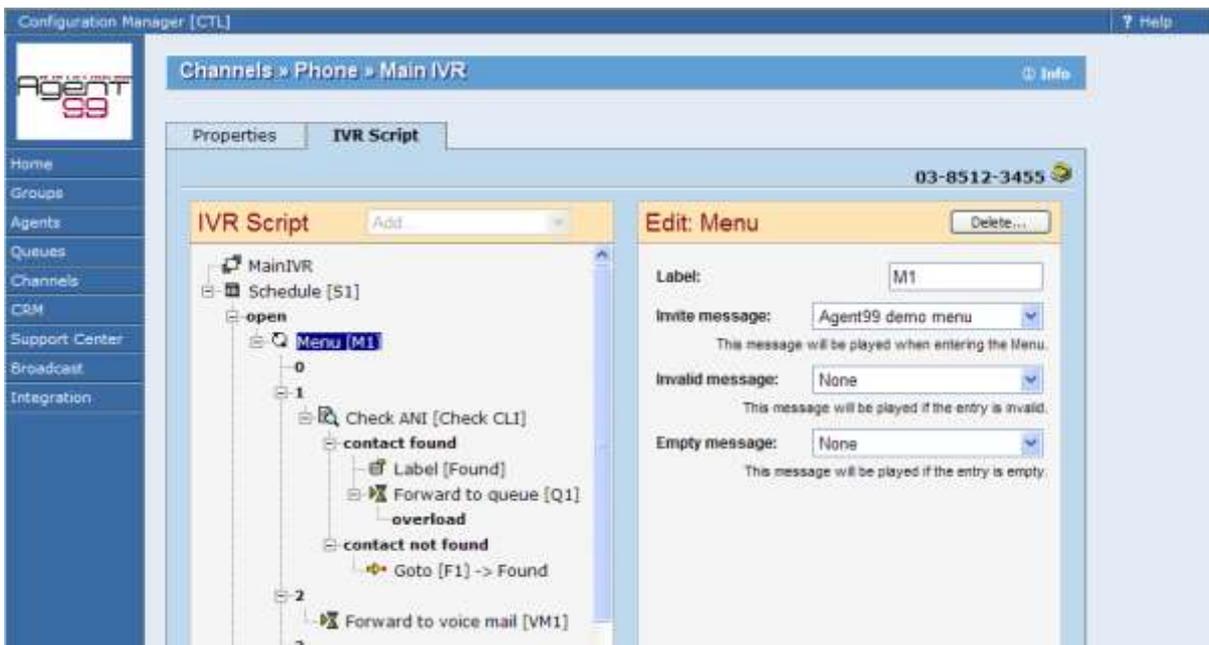


FIGURE 1: IVR SCRIPT

## 2.1. “SCHEDULE” OBJECT

The Schedule object is used to dictate IVR script behaviour depending on the time of a call. The Schedule object is typically used as the first object of an IVR script.

### Parameters:

Feature	Description
Label	Label to identify object in the graphical tree.
Schedule	The name of the schedule to be used. Refer to section 5.4.4 Schedules Tab in the NEC Agent99 Configuration Guide.

### Exit Points:

Feature	Description
Open	Customer is calling during opened hours.
Closed	Customer is calling during closed hours.
#1	Customer is calling during a time set as “Exception #1” in the schedule object.
#2 - #6	Customer is calling during a time that is set as “Exception #2” through #6, in the schedule object.

Note:	Any object can be connected to an object exit point. If an object exits on an exit point with no object connected, the IVR hangs up.
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## 2.2. “CHECK CLI” OBJECT

Check CLI object is used to store the calling number (CLI) into interaction context. Interaction context is then used by the application to look-up the customer from NEC Agent99 CRM or an external application (when configuring Screen-pop feature with CLI parameter). The Check CLI object should always be used at the beginning of an IVR script (right after Schedule object). This object must be used to:

- Display the associated Customer information in the Online Control Panel
- Passed the information to the screen-pop URL

### Parameters:

Feature	Description
Label	Label to identify the object in the graphical tree.

### Exit Points:

Feature	Description
Contact Found	Customer was successfully found in NEC Agent99 CRM.
Contact not found	Customer was not found in NEC Agent99 CRM. Only the caller’s CLI will show in the Online Control Panel.

Note:	Any object can be connected to an object exit points. If an object exits on an exit point with no object connected, the IVR hangs up.
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### 2.3. “LABEL” AND “GOTO” OBJECTS

Label and Goto objects are used to direct IVR processing. They can be used to limit duplicating sections of a script. For instance, to have the same processing occur after a Check CLI object, whether the customer is found or not, configure the IVR as follows:

- Add the Label object to the “**contact found**” exit point. The Label Object must immediately follow the “contact found” exit point.
- Add a Goto object to the “**contact not found**” exit point to redirect processing to Label “found”.

Label Object Parameters:

Feature	Description
Label Object	Label to identify object in the graphical tree.

Goto Object Parameters:

Feature	Description
Goto Object Label	Label to identify object in the graphical tree.
Destination	Label to redirect processing to.

**Exit Points:**

The Label and Goto objects do not have a specific exit point. Once processing of an object completes the object exits to the following object in the tree.

Note:	Any object can be connected to an object exit point. If an object exits and there is no object under it, the IVR hangs up.
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## 2.4. “PLAY” OBJECT

Play object is used to play an audio message to the customer.

Parameters:

Feature	Description
Label	Label to identify object in the graphical tree.
Played Message	Pre-recorded or custom user message to play.

Exit Points:

The play object does not have a specific exit point. Once processing completes the object exits to the following object in the tree.

Note:	Any object can be connected to object exit points. If object exits on an exit point with no object connected, the IVR hangs up.
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## 2.5. “HANG UP” OBJECT

The Hang up object is intended to specifically hang up the call. It is typically used at the end of a processing branch (exit point) when too many invalid entries have occurred. This object is provided for clarity, it is not required, as the IVR automatically hangs up the call at this exit point.

Parameters:

Feature	Description
Label	Label to identify object in the graphical tree.

Exit Points:

The Hang up object does not have an exit point as processing stops after the calls disconnects.

## 2.6. “MENU” OBJECT

Menu object plays an invite audio message, and then waits for the customer to press a number (0 to 9), ‘\*’, ‘#’ or an agent extension. For more information on how to use the agent extension feature, please see the: “Forward to agent” object description.

Parameters:

Feature	Description
Label	Label to identify object in the graphical tree.
Invite Message	Audio message played when entering the menu.
Invalid Message	Audio message played when entry is invalid.
Empty Message	Audio message played when entry is empty.

Exit Points:

Feature	Description
0 to 9	Customer typed a number.
*	Customer typed ‘*’.
#	Customer typed ‘#’.
Extension	Customer entered an extension.
Empty	Customer didn’t press anything for 3 seconds after invite message was played.
Too Many Invalid	Customer made 3 mistakes Invalid choice Invalid extension Empty entry

Connection with Other Objects:

<p>Note:</p>	<p>If an exit point <b>0 to 9</b> is not connected to an object, and a caller enters one of these values the IVR expects an agent extension (3 numbers followed by '#'). If after 3 seconds the customer has not entered another number, then the IVR assumes it is an invalid choice.</p> <p>The IVR will play a configured empty message if an <b>empty</b> exit point is not connected to an object, and the caller doesn't enter anything for 3 seconds. If an <b>empty</b> exit point is connected to an object, then the IVR exits on that exit point.</p> <p>The IVR allows 3 seconds to type a choice (0 to 9, * or #), 10 seconds to type an agent extension (with 3 seconds maximum between each DTMF entered).</p> <p>After 3 invalid entries (invalid choice, invalid extension and/or empty entry) IVR always exits on the <b>too many invalid</b> exit point. If the exit point is not connected, then the IVR hangs up.</p>
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**2.7. "GETVALUE" OBJECT**

GetValue object is used to prompt the caller to enter a numerical value. The user must press # for the value to be recognized.

It can be:

- A Customer account ID.
- A Case number.
- Any numerical Customer or Case custom field.
- An "external variable" (entry stored into one of two available external variables, later passed to the screen-pop URL for looking up an object in an external application).

For all but "external" variables, if a Customer or Case number is found in the NEC Agent99 CRM, the appropriate record is displayed on the Online Control Panel when the call is offered to an Agent.

Parameters:

Feature	Description
Label	Label to identify object in the graphical tree.
Invite Message	Audio message played when entering the GetValue.
Invalid Message	Audio message played when entry is invalid.
Empty Message	Audio message played when entry is empty.
Data to Collect	CRM field to search for looking up Customer or Case, or external variable to store customer entry in.
Entry is Mandatory	If not checked, IVR exits on found <b>exit</b> point whether or not the entry was found in the CRM. If checked, then the IVR requires an existing value.

Exit Points:

Feature	Description
Found	[If entry is set to mandatory]: entry was found in NEC Agent99 CRM. [If entry is not set to mandatory]: object always exits on found exit point. [If data to collect is an external variable]: object always exits on found exit point.
Empty	[Only if entry is set to mandatory]: customer didn't press anything for 3 seconds after invite message was played.
Too many Invalid	[Only if entry is set to mandatory]: customer made 3 mistakes <ul style="list-style-type: none"> <li>• Invalid choice</li> <li>• Invalid extension</li> <li>• Empty entry</li> </ul>

Connection with Other Objects:

Note:	<p>The IVR plays a configured empty message if an empty exit point is not connected to an object, and the caller doesn't enter anything for 3 seconds.</p> <p>If an empty exit point is connected to an object, then the IVR exists on that exit point.</p> <p>IVR IVR allows 10 seconds to type an entry (with 3 seconds maximum between each DTMF entered).</p> <p>After 3 invalid entries (invalid choice and/or empty entry) the IVR always exits on too many invalid exit points. If the exit point is not connected, then the IVR hangs up.</p>
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**2.8. "CHECK PICKLIST" OBJECT**

The Check Picklist object is used for testing a customer found characteristic against a NEC Agent99 CRM Customer custom field. This object can be used to route a Premium customer to a Premium queue for instance.

Parameters:

Feature	Description
Label	Label to identify object in the graphical tree.
Data to test	A specified Customer CRM field.
Operator	Operations to perform.
Values	Values to test.

Exit Points:

Feature	Description
Matched	Customer matched the test.
Not Matched	Customer did not match the test.

Connection with Other Objects:

Any object can be connected to object exit points. If object exits on an exit point with no object connected, the IVR hangs up.

## 2.9. “FORWARD TO QUEUE” OBJECT

The “Forward to Queue” object is used to route calls to a phone queue. It is possible to configure this object to perform alternative processing depending on the load of the queue, such as sending the call to a different Phone Queue or to a Voice Mail queue.

Parameters:

Feature	Description
Label	Label to identify object in the graphical tree.
Queue Name	Phone queue to forward the call to.
Check Load	If selected then the Maximum number of calls and Maximum estimated wait time are audited to determine if the IVR flow should exit on the <b>overload</b> exit point.
Maximum number of calls	If “Check load of queue” is selected then the IVR checks the number of calls currently waiting in the queue before forwarding the call. If the number of calls is greater or equal to the value set for the parameter, then the script processes <b>overload</b> exit point.
Maximum estimated time	If “Check load of queue” is selected then the IVR checks the current estimated wait time of the queue before forwarding the call. If current wait time is greater or equal to the value set for that parameter, then the script processes <b>overload</b> exit point.

Note:	Only one of the conditions set on the overload (ie. Maximum number of calls and Maximum estimated time) need to be true for the IVR to process the object on the <b>overload</b> exit point.
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Exit Points:

Feature	Description
Overload	The queue is overloaded based on the value of Maximum number of calls and Maximum estimated wait time. If Check load of the queue is not checked, then overload exit point is never used.

Note:	Any object can be connected to the overload exit points. If the object exits on an exit point with no object connected, the IVR will hang up. Script processing stops when the call is forwarded to the queue.
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## 2.10. “FORWARD TO VOICE MAIL” OBJECT

The “Forward to voice mail” object is used to route calls to a Voice Mail queue. It can also be used on the **overload** exit point of the “Forward To Queue” object, which provides callers with an option to either leave a voice mail, or wait for an agent.

Parameters:

Feature	Description
Label	Label to identify object in the graphical tree.
Invite Message	Audio message played when entering the Forward to voice mail object.
Queue Name	Voice mail queue to forward the call to.
Access to Voice Mail is Mandatory	Only taken into account when used on the overload exit point of the Forward To Queue object. If checked then the customer won't be allowed to be routed back to a Phone queue. If not checked, customer can press '*' to be routed to the Phone Queue set in the Forward To Queue object.

Exit Points:

This object does not have an exit point. Processing stops after the call is forwarded to the Voice Mail queue.

## 2.11. “FORWARD TO EXTERNAL NUMBER” OBJECT

The “Forward to external number” object is used to route the call to any phone number. It can be used as a link to another IVR, a front-desk, etc.

### Parameters:

Feature	Description
Label	Label to identify object in the graphical tree
Phone Number	Phone number to forward the call to. It should contain only numbers (no ‘-’, ‘()’, etc. accepted) and should start with the area code. For instance to forward calls to (03) XXXX-XXXX, that parameter should be set to 03XXXXXXXX

### Exit Points:

This object does not have an exit point. Processing stops after the call is forwarded to the configured external number.

## 2.12. “FORWARD TO AGENT” OBJECT

The “Forward to Agent” object is used to bypass the ACD and forward a call directly to an Agent using the Direct Agent Access feature. An Agent does not need to be logged into the NEC Agent99 interface to receive calls from a Forward to Agent object.

Refer to Section 6.2.3 Access Tab in the NEC Agent99 Configuration Manager Reference Guide.

Note:	The Forward to agent object should be used on the <b>extension</b> exit point of the Menu object.
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### Parameters:

Feature	Description
Label	Label to identify object in the graphical tree.
Message	If an Agent doesn’t answer the call, the customer is forwarded to the Agent’s voice mail. If this parameter is set, then the audio message is played to ask the caller to press ‘*’ to leave a voice mail. If the customer doesn’t press ‘*’ then IVR processing continues at the resume exit point.
Invalid Extension Message	Audio message played when the number entered by the caller is an invalid extension.

Exit Points:

Feature	Description
Resume	If the customer doesn't press '*' when asked to leave a voice mail after 10 seconds.
Too Many Invalid	Customer made 3 mistakes (invalid extension and empty entry are mistakes).



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