



Customer Application and Cisco Internet Service Node (ISN) Validation Plan

The purpose of this document is to provide a test plan that can be used as a standard test in Cisco ISN deployments to demonstrate that all key elements of the system are working. This document lays out the architecture, configuration and scripts needed to complete the plan. The areas of the Cisco ISN this test plan covers are:

- Come on line with Cisco Intelligent Contact Management (ICM)
- Receive a call
- Play a prompt
- Collect digits
- Play data
- Navigate a menu
- Query an external database
- Transfer a call off Cisco ISN

The last two elements would only be tested if they were part of the customer's end solution.

1. Architecture

1.1 Cisco ISN

- Install core Cisco ISN nodes - voice browser, application server and media server, as documented.
- A port for the Cisco ICM peripheral gateway (PG) connection is needed (5000 by default)
- Define a range of port for new calls (trunk group (TG) 100) or translation routed calls (TG 200)
- Define incoming dialed numbers in the relevant TG
- Set the application Server in the voice Browser
- Set the wave file codec to G711a-law if this system is outside of Americas (leave G711u-law default otherwise).
- Create a simple SQL Server database if SQL Gateway is to be tested
- Add SQLLogin value in router registry
 - Populate database
 - Define the Script Table in Configure ICM
 - Define the Script Table Columns in Configure ICM

1.2 Cisco ICM

- Install a voice response unit (VRU) PG for the Cisco ICM system
- Define a type 2, 5 or 6 VRU in configure Cisco ICM
- Define the VRU within the peripheral setting in Configure ICM
- Define a call type
- Set the call type as default for the VRU Routing Client or Instance, or define dialed numbers and map them to call type in Call Type Manager.
- Enable and configure the ECC variables in Configure ICM



Enterprise Name	Description	Maximum Length	Array	Maximum Array Size	Expanded Call Variable ID	Enabled	ICM Provided	Deleted	Changestamp
user.media.id	Unique Call ID	36	N		5000	Y	N	N	1
user.microapp.currency	Currency type.	6	N		5001	Y	N	N	1
user.microapp.error_coc	Return status error code	2	N		5002	Y	N	N	0
user.microapp.locale	Locale	5	N		5003	Y	N	N	1
user.microapp.media_se	Media Server set (base URL)	30	N		5004	Y	N	N	0
user.microapp.play_data	Data for Play Data (PD)	40	N		5005	Y	N	N	0
user.microapp.select_la	Select nide substitution.	11	N		5006	Y	N	N	0
user.microapp.sys_medi	System media library.	10	N		5007	Y	N	N	0
user.microapp.app_med	Application media library	10	N		5008	Y	N	N	0
user.num.steps.execute	Tracks script progress	10	N		5009	Y	N	N	0
user.session.handled		5	N		5010	Y	N	N	0
user.task.id		19	N		5011	Y	N	N	0
user.connect.script.conl		40	N		5012	Y	N	N	0
user.connect.script.nam		40	N		5013	Y	N	N	0
user.connection.type		17	N		5014	Y	N	N	0
user.last.redirected.addr		40	N		5015	Y	N	N	0

1.3 Telephony Environment

- Cisco assumes that the telephony environment exists to route VOIP calls to the voice browser server.
- Ensure that Cisco IOS Gatekeeper is installed by customer, if call transfers from Cisco ICM are to be tested, register the voice browser to the gatekeeper

The next 2 sections define the VRU script definition for a call flow that goes like this:

1. Call answered. Play welcome message.
2. If a Caller ID (CLID) was received with the call the customer is prompted for a PIN.
3. If no CLID was received with the call or the CLID that was received was not in the customer database, the customer is prompted for a customer number and a PIN.
4. The CLID / Customer Number and PIN combination is validated. A customer is allowed up to three attempts being played the main menu (step 6) without option (4).
5. When the PIN is validated an account balance is played.
6. After the account balance is played the customer is offered a menu with a choice of Sales (1), Service (2), Returns (3), Account Balance (4) or General Enquiries (0). All other options are invalid.
7. If options (1), (2) or (3) are selected the option they selected is echoed back, a goodbye message is played and the call is disconnected.
8. If option (4) is selected the account balance is played again and the customer is returned to the main menu (step 6).
9. If option (0) is selected a wait for agent message is played and the call is transferred.

2 Cisco ISN Script Definition

- 2.1 Voice prompts – record the following voice prompts in G711u-law (for USA) or G711a-law (for all other countries):

File Name (*.wav)	Prompt
Welcome	Welcome to the Cisco ISN test application for ...
EnterPIN	Please enter your 4 digit personal identification number [followed by the # key]
EnterCustomerNumber	Please enter your [10 digit] customer number [followed by the # key]



InvalidNumber	The customer number and PIN you entered do not match. Please try again.
AccountBalance	The balance of your account is ...
WaitForOperator	We are about to transfer your call. Please hold the line for an operator.
MainMenu1	Please select one of the following options. For Sales press 1. For Service press 2. For Returns press 3. To hear your account balance again press 4. For all other enquiries press 0.
MainMenu2	Please select one of the following options. For Sales press 1. For Service press 2. For Returns press 3. For all other enquiries press 0.
MenuSelection	You pressed ...
ThankYou	Thank you for your call. Please call again soon. Goodbye.

- 2.2 Place all voice prompts in the "sys" directory of the media server
- 2.3 Configure the following VRU Scripts in Configure ICM:

VRU Script Name	Enterprise Name	Config Param
PM,Welcome.wav,A,1	Welcome	
GD,EnterPIN.wav,A,1	Enter_PIN	4,4,N,,,,Y,#
GD,EnterCustomerNumber	Get_Customer_Num	8,14,Y,,,,Y#
PM,InvalidNumber,1	Invalid_Number	N
PM,AccountBalance,A,0	Account_Balance_is	N
PD,Currency	Balance_value	
PM,WaitForOperator	Wait_For_Agent	N
M,MainMenu1.wav,A,1	Full_Menu	0-4,Y
M,MainMenu2,A,1	Partial_Menu	0-3,N
PM,MenuSelection,A,1	You_pressed	N
PD,Number,1	Option_selected	
PM,ThankYou,A,1	Thank_you	N

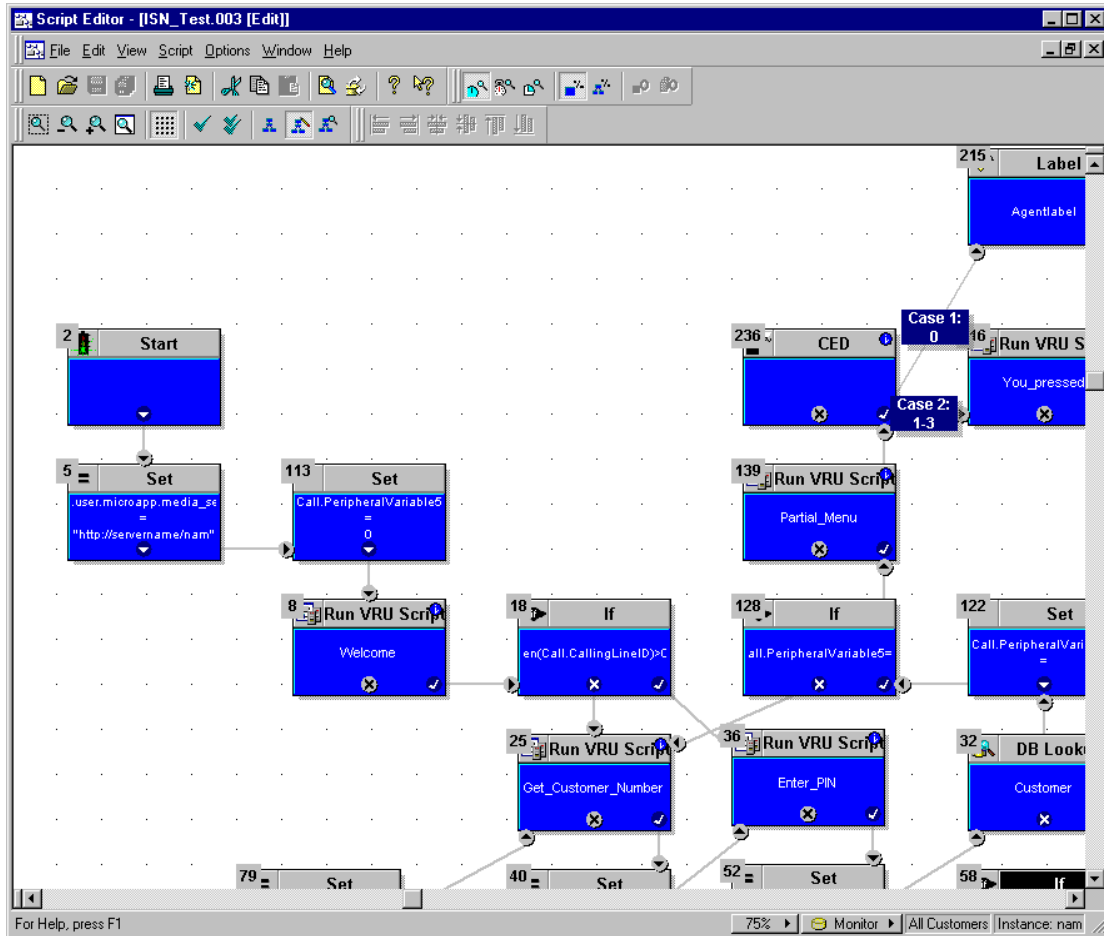
Network VRU Script ID	Enterprise Name	Description	CuDNher	Network Vru	Vru Script Name	Config Param
5000	Welcome		NAM	ISN_VRU	PM,Welcome,A,1	
5001	Enter_PIN		NAM	ISN_VRU	GD,EnterPIN.wav,A,1	4,4,N,,,,Y,#
5002	Get_Customer_Number		NAM	ISN_VRU	GD,EnterCustomerNumber	8,14,Y,,,,Y#
5003	Invalid_Number		NAM	ISN_VRU	PM,InvalidNumber,1	N
5004	Account_Balance_is		NAM	ISN_VRU	PM,AccountBalance,A,0	N
5005	Balance_value		NAM	ISN_VRU	PD,Currency	
5006	Wait_For_Agent		NAM	ISN_VRU	PM,WaitForOperator	N
5007	Full_Menu		NAM	ISN_VRU	M,MainMenu1.wav,A,1	0-4,Y
5008	Partial_Menu		NAM	ISN_VRU	M,MainMenu2,A,1	0-3,N
5009	You_pressed		NAM	ISN_VRU	PM,MenuSelection,A,1	N
5010	Option_selected		NAM	ISN_VRU	PD,Number,1	
5011	Thank_you		NAM	ISN_VRU	PM,ThankYou,A,1	N

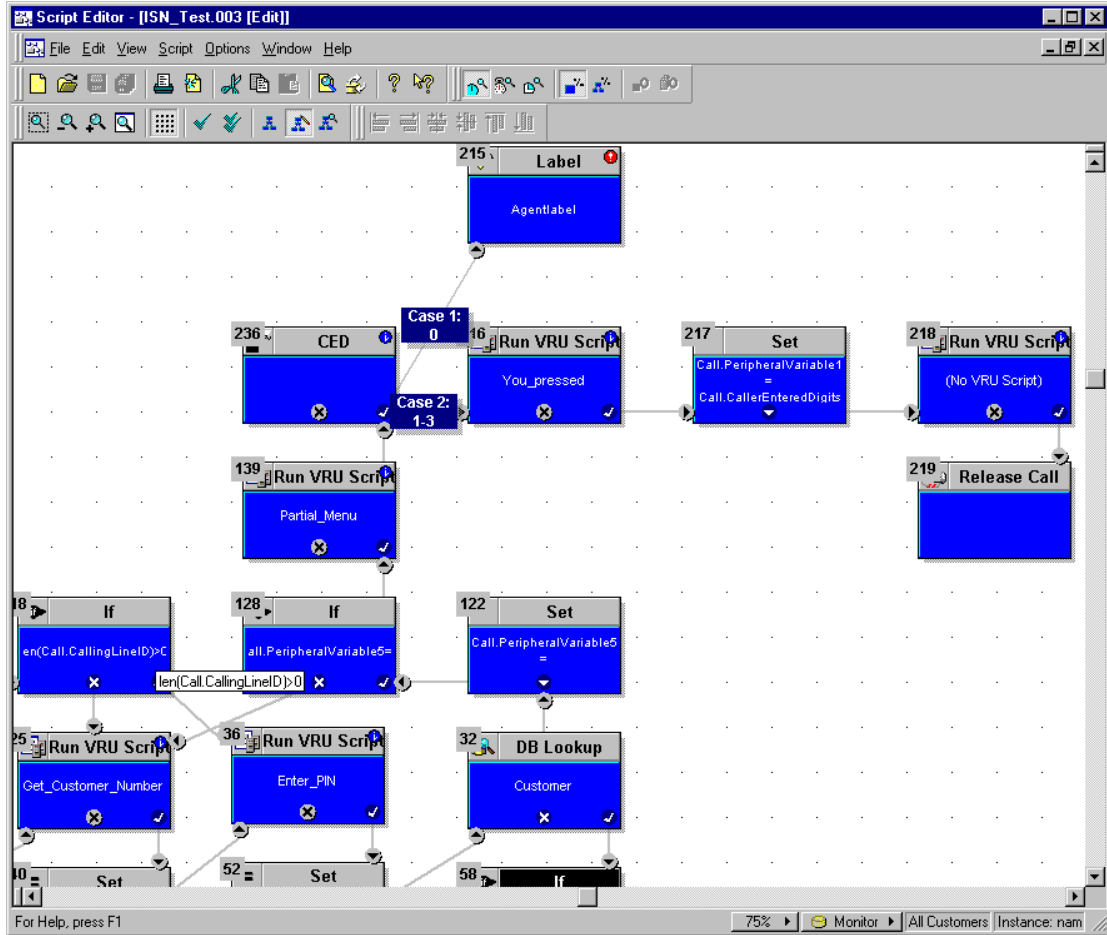


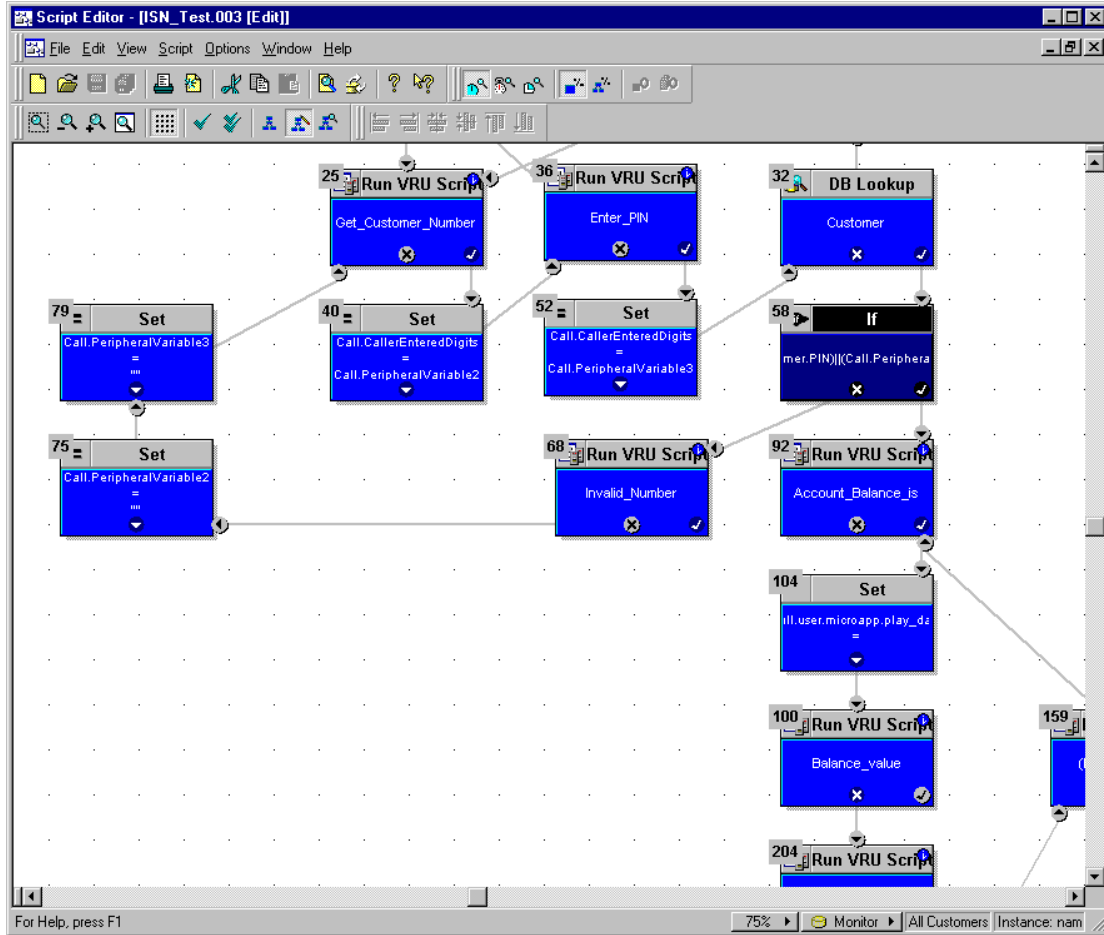
- 3 Cisco ISN Script Creation
- 3.1 Following are screen snapshots of a script to accompany the above configuration. Not that this script does not have any error handling built into it and would, in all practicality, be expanded into several different scripts. The exported ICM script has been embedded into this document for use as well.

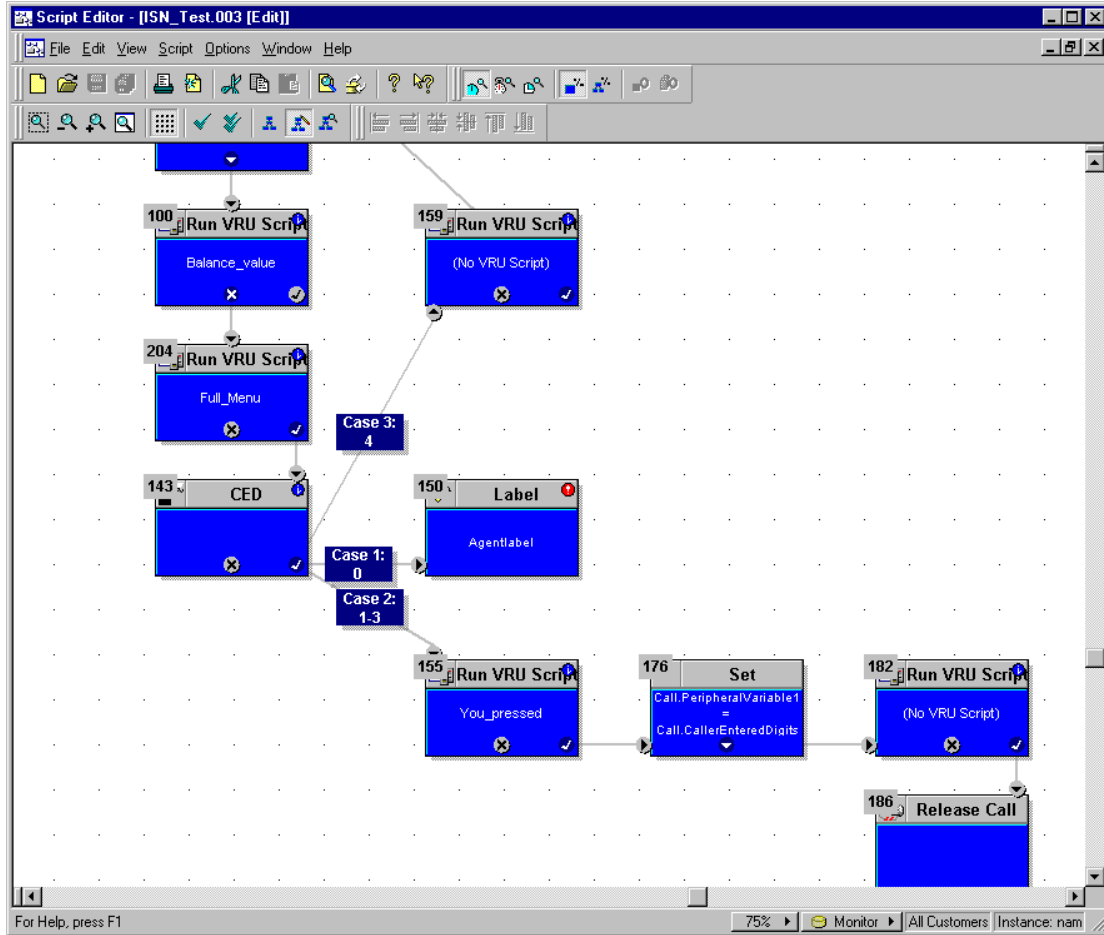
They have been screen captured as such:

1	2
3	4









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