Cisco Internet Service Node (ISN) Release Notes for Release 2.0

Internet Service Node (ISN) Version 2.0

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This document describes Cisco Internet Service Node (ISN), Release 2.0.

The user is expected to be familiar with the ISN solution and to have access to the ISN Release 2.0 documentation set.

Note: For the most up-to-date version of these release notes, as well as all other ISN 2.0 documentation, go to the Cisco Web page: http://www.cisco.com

1. Description

1.1. New Features Added since Release 1.0.1

- Ability to use ASR (Automatic Speech Recognition) and TTS (Text to Speech) services with ISN. The ICM script editor is used to configure the information required for ASR/TTS using a combination of VRU script configuration and ECC variables.
    - Note that if a call is to use ASR at any time, the ASR server must be used for all data input; the caller may provide that input via voice or DTMF. In "script editor" terms, you may not mix and match input type "B" and "D" in one call. This is a limitation of the Voice Gateway that may be removed in the future (no changes will be required in the ISN).
    - The ASR engines supported by this release require the voice channel to be G.711 ulaw. As a result, prompting (prerecorded prompts) must be G.711 ulaw if ASR is to be used for a call.
    - The logging tag used with the MRCP server is a form of the call's conference ID, which is also stored in one of the ECC variables for the ICM.
    - Characters such as ñ, é are passed to the ASR/TTS servers. They are supported with ISN 2.0 and will be part of the solution if also supported in the ASR/TTS server.
- Ability to perform IVR treatment at the Voice Gateway.
- Ability to connect and transfer calls which originate as IP calls. This also enables the ISN to be used as a queue point for Cisco Call Manager/IPCC local transfers.
- Support for additional Voice Gateways: 3640A, 3660, AS5350, AS5400, AS5400 HPX in addition to AS5300.
- Advanced load balancing and failover using Cisco Content Server Switch (in some deployment models)
- Support for Spanish grammars without the need for TTS. New locales include es-es and es-mx for Spanish in Spain and Mexico.
- Support for additional currencies without requiring the need for TTS: Euro, Peso, GB Pounds, Canadian dollars.

- Automated codec negotiation between ingress and egress gateway/endpoint during IP Transfer.
- Metrics have been added to the Application Server to measure it's internal response time and the ICM response time. Metrics have been added to the ISN Voice Browser to measure call arrival and transfer rates (cps). The transfer latency metrics in the ISN Voice Browser logs have been separated into the time to alerting and time to off-hook.
- The RNA timer for transferred calls is user configurable at the ISN Voice Browser.
- The Voice Browser and the Application Server may now be configured to not connect to SDDSN server.
- The call will be restarted if certain egress endpoints fail. Specifically, when a transfer has succeeded, and the egress is a Voice Gateway that fails, the call will be restarted rather than disconnecting the caller.
- The Voice Browser can now be configured to pass either the Dialed Number (DNIS) or Calling Line Identification (CLI) in the Calling Party Number parameter of the Setup message during IP Transfer.
- Support for ringback and other tones (like tone on hold) have been added during Supplementary services (like Transfer, Hold, and Conference) invoked at Cisco CallManager.

1.2. Changes from Release 1.0.1

- The default locale strings changed from en_US to en-us and from en_GB to en-gb to be compatible with current industry nomenclature. This affects the location for the media server system files used for built-in types such as numbers and currencies. The actual grammar definitions will work for both formats (en_US as well as en-us).
- If upgrading from a system where the locale default is used, move the existing media server system files (e.g., 1.wav) from …/en_US/… directory to …/en-us… directory.

  If the locale is not defaulted, there are three approaches:

  Option 1: Change the scripts to use en-us rather than en_US and move the existing media server system files (e.g., 1.wav) from …/en_US/… directory to …/en-us… directory.

  Option 2: Move the new prompt files (installed as part of the upgrade, e.g., USD_dollar.wav) from …/en-us/… directory to …/en_US… directory. This is the easiest approach, but will continue to be an issue with each release.

Option 3: Support both locale nomenclatures and gradually change scripts from en_US to en-us. In order to support both:

- Copy the new prompt files (installed as part of the upgrade, e.g., USD_dollar.wav) from …/en-us/… directory to …/en_US… directory
- Copy the existing media server system files (e.g., 1.wav) from …/en_US/… directory to …/en-us… directory.

- The prompts used when playing dollar currencies have changed from "dollar.wav" and "dollars.wav" to "USD_dollar.wav" and "USD_dollars.wav"
- The ISN Voice Browser detects when an Application Server is taken out of service, or overloaded, immediately and reroutes all subsequent calls to an alternate server (in 1.0.1 a few calls would try the server which was out of service first before being rerouted). .
- In release 1.0.1, there were numbers listed in the Voice Browser metrics which were incorrectly labeled as Media Server latencies; they have been removed for the 2.0 release.
- The ISN Voice Browser value "CalledPartyHangupTimeout" is changed from 8 seconds to 2. If upgrading from ISN 1.0.1, the value will be changed to 2 seconds regardless of its current setting. A message will not be printed in the ISN log(s) if the timeout occurs.
- The unused entries DC Directory Administration and DC Directory Server are no longer added to the start menu.
- When using the Comprehensive or Advanced Speech deployment models, the Get Digits and Menu microapps will only be able to collect the digits 0 through 9 as input. The # and * characters can be used as terminating characters with Get Digits; they cannot be used as characters to be collected. This differs from the Queuing and Transfer deployment model (which was the only model supported by release 1.0.1), where * and # are always collectable characters for Get Digits (GD) and Menu (M) microapps.

1.3. Release Caveats

- This version of the Application Server is not compatible with the ISN 1.0 or 1.0.1 Voice Browsers and vice versa.

2. User Documentation

The User Documentation consists of:

Title	Description	Where to find it
Cisco ISN Configuration and Administration Guide	Describes configuration and administration of ISN components.	File name : ISN_Conf.pdf
Cisco ISN Installation Guide	Describes how to install the ISN components and perform initial configuration.	File name : ISN_Install.pdf
Cisco ISN Product Description	Provides an overview of the features and benefits of the ISN software.	File name : ISN_ProdD.pdf
Cisco ISN Version 2.0 Release Notes	This document.	File name: ISN_RelN.pdf

2.1. Important Note Regarding User Documentation

Appendix C, "ISN Deployment," in the *Cisco ISN Configuration and Administration Guide*, was still under development when the ISN Documentation CD was released to manufacturing.

For the completed version of Appendix C, see the Cisco Web page: http://www.cisco.com.

2.2. User Documentation Corrections

The following issues were discovered in the *Cisco ISN Configuration and Administration Guide* after the ISN Documentation CD was released to manufacturing.

- The default for the user.microapp.input_type ECC variable was not explicitly stated anywhere in the guide. The default for this variable is **B** (both Voice and DTMF input); this information now appears in Chapter 2, "Using the NAM/ICM with the ISN IVR Solution," and Appendix C, "ISN Deployment" of the version of this guide posted to http://www.cisco.com.
- In Chapter 5, "Application Server Administration," on page 5-11, the defaults for load limiting were incorrectly stated:
  - The correct value for New Call Throughput Upper Threshold is 1000.
  - The correct value for Call Event Throughput Upper Threshold is 400.
  - The correct value for Call Event Throughput Lower Threshold is 200.

These corrections appear in Chapter 5 of the version of this guide posted to http://www.cisco.com.

3. Uninstall for SDDSN

ISN version 2.0.0 now supports uninstall for SDDSN (ISN 1.0 and 1.0.1 did not). The rest of this section applies to systems that had or have SDDSN 1.0.1 installed on them.

If you have version 1.0.1 of SDDSN installed, then run the 2.0.0 upgrade. New files are overlaid on top of the old files. Configuration is unchanged; you do not have to reconfigure SDDSN.

If you later uninstall this upgrade (to 2.0.0), you will be left with a non-functioning partial SDDSN (which has no uninstall because it is remnant of 1.0.1). You can then run a new upgrade which will give you a new functional SDDSN with configuration still intact.

If you want to completely remove SDDSN, the only option is to reformat the disk. This is because there was no uninstall for ISN 1.0.1 SDDSN.

4. ASR and TTS Engine Support

ISN Version 2.0's support for ASR and TTS is defined by the functionality supported by the ASR and TTS engines that are used in the solution. ISN Version 2.0 has been tested with the Nuance and Speechworks versions listed in Cisco Internet Service Node (ISN) Data Sheet on Cisco Connect Online (CCO) at http://www.cisco.com.

During that testing, the following differences between these two products were identified by the ISN Team:

- The only currency supported for ASR is U.S. Dollars in Nuance 8.0.
- Play Data (PD) as Char (where char is a list of digits) is not supported in Nuance Vocalizer 1.0 but is supported in Vocalizer 2.0.
- PD as ETime is not supported in Nuance Vocalizer 1.0 but is supported in Vocalizer 2.0.
- PD as TOD is not supported in Nuance Vocalizer 1.0 but is supported in Vocalizer 2.0.
- PD as Date is not supported in Nuance Vocalizer 1.0 but is supported in Vocalizer 2.0.
- PD as Currency is not supported in Nuance Vocalizer 1.0 but is supported in Vocalizer 2.0.
- Nuance Vocalizer 2.0 supports only English.
- The Nuance ASR engine does not buffer voice or DTMF input before the recognizer is ready to listen.
- Built-in type: Currency in Nuance ASR returns in the format UUUmmm.mm, where UUU is the three character currency indicator.

- When using external VXML with Nuance ASR, specifying an invalid locale will cause the default locale to be used, and the recognizer will not return an error.
- ISN was not tested with the Speechworks TTS product.
- Built-in type: Currency in Speechworks ASR returns in the format mmm.mm, with no currency indicator prefix.

5. Known Defects

This section provides concise descriptions of the problems which have been identified up to the date the software was released. This list does not include the known problems in the ISN 1.0.1 release.

5.1. Known ISN 2.0 Defects (ordered by severity)

Identifier	Severity	Headline	Release-note Enclosure
CSCma24545	2	0.5% of IP-originated calls terminate abnormally under load	Symptom: Call that originates from IP phone may be prematurely terminated after the call is transferred to VXML gateway in Comprehensive mode. Condition: When a call originates from an IP phone in ISN Comprehensive mode, the caller can be prematurely disconnected 0.5% of the time 8 seconds after being transferred to the VXML gateway for IVR treatment. Workaround: None
CSCma09258	3	VRU network transfer: Rare exception in SetVXMLElementList	This memory exception occurs rarely during a network transfer operation. It does not impact the functioning of the Voice Browser as a whole. It may adversely affect the individual call, such as premature disconnect.
CSCma09752	3	Rarely, AS times out waiting for VB	Rarely, the Application Server will time out waiting for the Voice Browser. In lab conditions under load, this is seen in <0.01% of calls placed to the voice browser under load.
CSCma11974	3	Exception reading memory copy of registry if in/out of service: rare	On very rare occasions when the Voice Browser goes in or out of service, there can be an exception which causes the Voice Browser to be restarted. In lab conditions, this has been seen once in hundreds of times of testing this scenario.

Identifier	Severity	Headline	Release-note Enclosure
CSCma12977	3	Very rarely in lab conditions with high transfer rate, ISN can drop call	Symptom: Voice Browser prints log errors for "Invalid sequence number" during transfer. When these occur it happens almost always at the time of call disconnect, so there is no effect to the caller (since they are already gone). However, very rarely this error may occur while the call is active. In such cases, the caller will be abnormally disconnected. Conditions: This very rarely occurs, and seems to be only under lab conditions when a transfer load through the Voice Browser is excessively high. Workaround: None
CSCma13959	3	Timed out from Voice browser error shouldn't happen	In very rare circumstances, there is an unexplained error in the Application Server log files. The log reports that the Application Server "Timed out waiting for Call Result from Voice Browser". This error shouldn't happen. There aren't any workarounds for this problem.
CSCma20970	3	ISN is not supported with NIC in VRU Type 7 call flow	The ISN does not respond to an ICM release if it is busy with another script node. When the ISN is acting as a Type 7 Network VRU and the call needs to be taken away from the VRU to be connected to an agent, it should release the call for a transfer but does not, which means the call cannot be transferred. When the ISN is acting as the switch (routing client) in a VRU Type 7 call flow, the ISN does not respond to the ICM release, but sees the VRU leg hang up. If the caller does not hang up within 2 seconds (ISN Release 2.0), the ISN will hang up. It should be noted that in the presence of ICM defect CSCma18392 (release 4.6.2), the ICM does not send a release message to the IVR leg of the call when using a VRU Type 7 call flow. As a result, in the presence of both of these problems, the behavior is the same as described above even when the ISN is not busy with another script node. Additionally if the VRU leg does not release the call, the ISN acting as the switch will restart the call if configured to do so and the caller has not yet hung up.

Identifier	Severity	Headline	Release-note Enclosure
CSCma23427	3	1-minute-24-second delay for restart when AS network cable is pulled	For calls in progress, the Call Restart feature on the ISN Voice Browser has a very long delay (almost a minute and a half) before the call is restarted on the next Application Server in the AppServer list. This occurs when the Application Server loses network connectivity. Any new calls will go to an alternate App Server. Workaround: Contact Technical Support for a workaround to this issue.
CSCma23629	3	No critical media when GK down for existing call before transfer	Symptoms: Caller does not hear the critical error message before being disconnected in the case where they cannot be routed to an agent due to Gatekeeper failure. Conditions: When the ISN is unable to reach the Gatekeeper, it takes itself out of service. Any calls in progress before the difficulty was detected cannot be routed to an agent. The defect is that they are simply disconnected rather than hearing the critical error message and then being disconnected. Workaround: none
CSCma23742	3	A complete failover of Media Server causing 10 second delay before playing announcements	Symptoms: If the IIS service on one of two Media Servers is stopped, there is an acceptable failover to the other MS and announcements are played. If, however, there is a complete failure of one Media Server then all calls routed to that MS will delay by 10 seconds before playing the announcement on the second MS. This is not just a one-off 10-second failover issue as every call received on the failed MS will have a 10 second delay prior to prompts and announcements being played, which is unacceptable to the customer. Conditions: When there is a complete failure of one Media Server then all calls routed to that MS will delay by 10 seconds before playing the announcement on the second MS. Workaround: A content switch may be an appropriate solution, since it also provides load balancing. There is a workaround available from the operating system vendor; contact Technical Support for further information.

Identifier	Severity	Headline	Release-note Enclosure
CSCma23943	3	30 ms packetization doesn't work for Call Transfer with ISN VB	Symptom: With ISN Voice Browser, packetization is 20ms even if gateways are configured for 30ms. Conditions: Using ISN Comprehensive or queue and transfer deployment models with ingress and egress gateway both configured for 30 ms, the packetization used during IVR treatment and for IP Transfer is 20ms. Workaround: None
CSCma24354	3	Reporting for IVR time is not available (ServiceID isn't configured)	Peripheral Service reports cannot be generated for ISN calls, which means that reporting is not available for the time spent in the IVR. The ISN Application server sets the Service ID to -1 (not used); it should put a configurable value in the field so the user may set different values for different Application Servers and get reports that distinguish between them.
CSCma04922	4	Sometimes getting null.wav file on first call after AS restart	After the Voice Browser and Application Server start up, the first call occasionally fails to play the first prompt in the application. The Voice Browser logs an error that it is unable to retrieve the null.wav media file, and an error is returned to the ICM application.
CSCma05340	4	Component Selection dialog screen shows incorrect diskspace required	During installation of an Application Server, the user will see an erroneous number for disk space required. The user is protected by underlying software that compares the actual disk space required to the available disk space and alerts the user.
CSCma05595	4	If transfer fails, ISN hangs up; should play error	Without router requery enabled on the ICM, when an attempted IP transfer fails, the ISN simply disconnects the caller; it should playing the critical error media before disconnecting. The workaround (and better solution all around) is to use router requery so the script determines the proper action when a transfer fails.
CSCma05858	4	Very rarely, AS receives corrupted http messages; VB retry works	On rare occasions, a delay is experienced by the caller because the HTTP message is corrupted between the Voice Browser and the AppServer. The AppServer logs the error since it is unable to respond; the Voice Browser times out and retries the message, which succeeds. In lab conditions, the problem has been seen approximately once every 60000 requests.

Identifier	Severity	Headline	Release-note Enclosure
CSCma05957	4	Unknown MicroApp needs to return an error code to the ICM	In the ICM configuration manager "Network VRU Script List", if the "VRU script name" contains an invalid MicroApp name, the error code returned to the ICM is not correct. In the ScriptEditor, call execution will continue out of the "X" branch of the RunScript node, but the ECC variable user.microapp.error_code will be unchanged. A workaround is to make sure the MicroApp name used in the "VRU script name" field is correct.
CSCma06146	4	When VB retry for call with ICM error, retried answer is different	On rare occasions when a call processing error is encountered (e.g. DNIS not configured), the caller will simply be disconnected rather than hearing the critical error message. This happens when the message from the Application Server to the Voice Browser is not received and the Voice Browser retries.
CSCma06721	4	AS engine leaks memory when there is no call traffic	The AppServer leaks around 20M in 3 months, even when there is no call activity. There is no workaround except to restart the AppServer if the system available free memory in use gets low
CSCma07496	4	If no GK configured and try to transfer, should play critical error	Theoretically, if the customer wants to use IP transfer, they will have configured a gatekeeper for the VB. However, if they forget and an IP transfer request comes to the Voice Browser from the ICM without a gatekeeper configured, we hang up the caller without playing a critical error message.
CSCma08681	4	callerId=NULL:shows callerId=0 on IP transfer if sending DNIS to GK	The caller ID appears to called party as "0" instead of NULL when caller Id is either NULL or Blocked and the Voice Browser is configured to pass DNIS to H.323 Gatekeeper for billing.
CSCma08711	4	MS on same machine with VB takes a long time to fetch media using host name	When media server and Voice Browser are on the same machine it takes longer to fetch the media than if the media server is on a separate machine; if the media server URL is defined as a host name rather than an IP address, then it takes even longer. The increase in time is dependent on the call load on the server. The preferred mechanism for this environment is to fetch the media files directly from the file system using a base URL "file:" rather than "http:".

Identifier	Severity	Headline	Release-note Enclosure
CSCma08819	4	When AS List changed, calls accepted before communication established anybody	If the list of application servers configured on the Voice Browser is changed from one which has at least one server which is serving calls to a list where none are serving calls (e.g. a misconfiguration), a few seconds can elapse where calls are accepted at the voice browser but cannot be serviced. The safest method for removing app servers from the app server list is to take the voice browser out of service and let all calls in progress finish, then change the app server list to the desired settings and bring voice browser back into service.
CSCma09802	4	Going Into Service during AS startup does not work; alarm status bad	If the application server is manually put back in service during its initialization, it does not go into service. The status is correctly displayed in AppAdmin, but the alarm that had been set for it being out of service is cleared. This sequence occurs when the user manually takes the App Server out of service, then restarts it, then immediately requests that it go in service (during initialization). The prevention and work around is to wait until the application server has fully initialized before going into service.
CSCma10402	4	Call object not found message should be printed only when true problem	Occasionally, the error message "Failed finding a call Object with call ID: XXXXXXX" appears in the Voice Browser logs. Most times, this is an informational message only, not an error and should be ignored.
CSCma10677	4	AppServer won't startup if machine off network (directory issue)	App Server will not start up if off the network. The symptom is that it starts a window then crashes. This repeats as Node manager attempts to restart it. This may be confirmed by checking the W2K Services window, where the DC Director service will appear in state "Starting" (normal state is either "Started" or <blank>). The solution is to put the system on the network and reboot the machine.
CSCma11987	4	Occasionally see empty VXML from long poll	Rarely, the Voice Browser logs an error "Out of Band communication received an empty VXML instruction set". This has no system effect, as the message is not call related, and a retry succeeds.

Identifier	Severity	Headline	Release-note Enclosure
CSCma12008	4	At startup AS logs incorrect message: Adding new Voice Browser: 127.0.0.1	In the Application Server start up logs there is an entry "Adding new Voice Browser: 127.0.0.1" which is incorrect (there is no such Voice Browser). The message is benign.
CSCma13750	4	MS error detected after call transferred causes call to disconnect	Symptom: If a prompt is being fetched for queuing and an agent becomes available, the call is transferred. If there is a prompt fetch error after the transfer, the caller is disconnected. Workaround: None
CSCma14416	4	DTMF not always relayed through bridged call to second VB	When the Voice Browser transfers a call to a second Voice Browser, DTMF that is entered by the caller is not consistently passed through to the second Voice Browser. There is no workaround.
CSCma16217	4	Need to be able to adjust Q.931 Call type value via configuration settings	Problem: The Q.931 call type defaults to "National" in the Voice Browser for outgoing calls and is not configurable. Conditions: This can cause outgoing call failures on the voice gateway if the dial plan types do not support national. Workaround: On the Voice gateway, use the "isdn map" command to remap a 'National' call type to 'Unknown' call type.
CSCma17711	4	ISN as Type3 VRU with NIC logs errors with queuing deployment model	When the ISN is deployed in the "queue and transfer" deployment model (same as the 1.0 release deployment model) as a Type 3 VRU with a NIC as the routing client, errors will be logged for each call which transfers to an agent as a result of a "Run VRU script" result. Workaround: Use the Advanced Speech deployment model.
CSCma20628	4	Critical media isn't played when no AS avail in Advanced Speech deployment	Symptom: For an "Advanced Speech" deployment (GW Voice Browser ISN App Server), when a call cannot proceed because no App Servers are available to process the call, the caller is simply disconnected; the caller should hear the critical media file flash:error.wav before the call is disconnected. Workaround: None.

Identifier	Severity	Headline	Release-note Enclosure
CSCma20667	4	Null pointer exception in AS warning message	Rarely, the following error message will appear in the Application Server logs: 824: Oct 09 17:33:43.718 EDT %ISN-SS_HTTP-4-WARNING:Error in interval 420:java.lang.NullPointerException. The problem occurs in dormant internal metrics calculations, and have no impact on call processing or customer-visible metrics reliability. The system contains the error, and continues processing calls in a normal manner.
CSCma21100	4	App Server install, password isn't validated until reboot/won't come up	During the ISN Application Server installation, if you enter the same invalid password twice for the associated NT Administrator login, validation does not occur. An error will occur after Reboot during DC Directory schema update. The error is "System error 1069 has occurred. The service did not start due to a logon failure." and is seen on the command window entitled "--Cisco User Preferences Support--". The work around is to run the AppServer Reboot.exe from the Application Server directory after your system has been rebooted from the initial install.
CSCma21961	4	VB doesn't support Fast Start Inbound Option on Call Manager	Note that this limitation does not change the actual setup time, i.e., there is no adverse effect. If H225FastStartInbound = true in Service Parameters of Cisco Call Manager, the call is dropped when routed via ISN to Cisco Call Manager. Workaround : Set H225FastStartInbound = false (default setting) in Service Parameters of Cisco Call manager.
CSCma22180	4	Queuing for consultative transfers does not work until CCM 3.3	Call is dropped with 3.2.x Call Manager if queuing at ISN for consultative transfer. Workaround: None
CSCma23584	4	Very Rare: Empty VXML Instruction Error in VB logs	Very rarely, the ISN Voice Browser will log an error message: ERROR INTERNAL: Empty VXML instruction set... The call is disconnected. This has been seen in laboratory conditions on less than one call in 100000. There is no workaround.

Identifier	Severity	Headline	Release-note Enclosure
CSCma23587	4	VB may return RNA for other transfer failure conditions	The ISN VB is incorrectly sending a RingNoAnswer result for some transfer failures which occur for reasons other than RingNoAnswer. This has been seen in laboratory conditions with misconfigured target Voice Gateways causing some type of general transfer failure. This may create confusion when trying to diagnose transfer failure causes.
CSCma23684	4	ISN Voice Browser does not support Play Media with no prompt	If the "Play Media" script node is given with no media file, the ISN Voice Browser will generate an error. This should not be an error condition; it should simply do nothing and return "success".
CSCma23749	4	When printing metrics, rarely get incorrect counts in snapshot stats	Symptom: Rarely, doing a "ShowSnapshotStatistics" from VBadmin or looking at snapshot statistics in VB metrics will show an incorrect count of calls. Conditions: Unknown Workaround: None
CSCma23928	4	GW-Overload ERROR:Cannot receive ReEstablishChannel in CWaitInOLCAck	When the Voice GW is overloaded, it may not be able to properly accept or reject calls, and the ISN Voice Browser creates the following log message: ERROR:Cannot receive ReEstablishChannel in state CWaitInOLCAck. Conditions: This has been seen only in laboratory conditions where a defect in another product flooded the GW. Workaround: Do not overload the voice gateway beyond its quoted rating.
CSCma23959	4	Negative values reported for Call Throughput Latencies	The App Server occasionally computes and reports negative values for the Call Throughput Latencies.
CSCma24085	4	DTMF is not relayed for CCM originated calls	DTMF is not relayed from outbound call leg to inbound when call originates from IP phone on CCM and terminates on IP phone at CCM. This is because when the DTMF is relayed, it is always proxied using alphanumeric.
CSCma24096	4	TransferCLI and SetupCLI should be configured independently	Symptom: If customer chooses to pass the caller id in the ARQ request to the gatekeeper, they cannot choose to pass DNIS in the setup message on the transfer - they can only pass caller id. Workaround: None

Identifier	Severity	Headline	Release-note Enclosure
CSCma24166	4	Call gets stranded in VB during rare combination of events	Symptom: In ShowActiveCalls from VBAdmin, call is in "Transferred" state for days. Conditions: The exact sequence necessary to create the problem is: 1. Caller is queued and prompt finishes. Request is sent to the App server for instructions. 2. Asynchronous transfer instruction arrives at VB while waiting for response from step 1. 3. Caller hangs up after asynchronous transfer is received but before App server responds to step 1. Workaround: None
CSCma24315	4	AS as Type 3 VRU gets error with asynch disconnect from VB or GW new call	Rarely, if the caller is transferred or disconnects while waiting for the very first run script command in a type 3 VRU configuration, the Application Server will generate a benign error. The call is then cleaned up properly.
CSCma05001	5	If log files are in subdirectory, they aren't displayed in AppAdmin	The AppAdmin is designed to look for log files in the directory where the AppServer is installed. If user configures the log files to be written to another directory, the log files won't be visible in AppAdmin.
CSCma05076	5	AppServer Not Refreshing screen after user disconnects call manually	The "Active Calls" page on the Web UI may not refresh after deleting a call during high call volumes.
CSCma07035	5	H323 Id length is limited to 100, should be 256 as per to H.323 spec	H323 Id length is limited to 100 characters.
CSCma09898	5	VB active call list:New Calls show Critical Error VXML for Last AS	Show Active Calls from VBAdmin displays "Last Application Server" as "Critical Error VXML" when it has not yet contacted the Application Server.
CSCma13770	5	Shouldn't poll App Servers forever after removing from list	When an Application Server is removed from the list configured on the Voice Browser, the Voice Browser will continue to monitor the Application Server, since there may be calls still using it. There is no problem with this behavior, but it should be changed to stop monitoring as soon as all the calls using that server are complete.
CSCma23014	5	Unfriendly message appears in the AS Log when locale is not set for TTS	The error message is not clear when the locale specified is not recognized by the TTS server. The message logged is "WARNING:Locale: null is not supported for call:"

Identifier	Severity	Headline	Release-note Enclosure
CSCma23753	5	Wrong VB error message if no file found when using file: to access	If fetching media files using "file:..." and the file is not present, the resulting error message in the ISN voice browser is not correct. The message says "ERROR: Media Server ../<locale>/<library>/<file> Host Name cannot be resolved : Unknown Host : "
CSCma23883	5	Max Sim Call Count is greater by one than actual in Total Statistics	The count of the maximum number of simultaneous calls in the ISN Voice Browser is off by one.
CSCma23919	5	Small timing holes in caller DTMF entry can cause errors in AS logs	Symptom: Rarely, an error message referring to an unexpected 'ERROR_NONE' message appears in app server logs Condition: Caller enters DTMF digits when not being prompted to do so, such as when a call is being restarted in comprehensive deployments due to an error on the IVR leg. Most of the time the entering of such digits is not a problem, but rarely it can cause this symptom. Workaround: None necessary
CSCma24201	5	Application Server uninstall leaves some IIS virtual root directories	After the ISN Application Server is uninstalled, the following IIS default web site directories erroneously remain: AppAdmin C:\inetpub\wwwroot\AppAdmin ApplicationServer C:\Cisco\ISN\ApplicationServer No bad side effects occur from this problem. A new ISN install or upgrade correctly overwrites these virtual root directories. Work Around: none required, but if cleanup is desired, go to Start-->Settings-->Control Panel-->Administrative Tools. Double click on Internet Services Manager. Double click on the ISN host name. Double click on default web site. Right click on AppAdmin and select Delete. At the prompt to delete, click on Yes. Do the same for Application Server.

5.2. Significant Defects in Other Components which Affect ISN Solution (ordered by severity)

Identifier	Comp.	Severity	Headline	Release-note Enclosure
CSCea34215	GW	1	Gateway crash in rtsplib_set_session_timeouts	Symptoms: Although a Cisco AS5400 gateway has a light traffic load of 50 calls and has run for only a few minutes, it may reload after tracebacks are generated. Conditions: This symptom is observed while using a voice extensible markup language (VXML) application for Automatic Speech Recognition (ASR) and Text-to-Speech (TTS) with third-party vendor servers. This will happen only if the same IP address is used to access the ASR and TTS servers in the VXML application. Workaround: Use different host names for ASR and TTS servers even if they are pointing to the same physical machine or address.
CSCdz75532	GW	2	Need rtp-nte for ASR; originating call may not supply	Symptom: DTMF tones are not detected by ASR Server. Conditions: DTMF tones are needed inband on the audio stream in order to be detected by ASR servers. Not all call originating equipment (e.g. Cisco Call Manager) can provide DTMF inband. Workaround: Callers may use voice input.
CSCea11844	GW	2	“Nonbargeinable” prompt is barged-in with speech	Symptom: The "Non-Bargeinable” prompt can be barged-in with speech input. This problem does not occur with dual tone multifrequency (DTMF) input. Condition: When a speech input is entered while playing the prompt having attribute bargein=False, The prompt is interrupted and not spoken. Workaround: None
CSCea16138	GW	2	GW doesn’t stop ringback tone after call is connected: one-way voice	Symptom: One-way voice and caller continuously hears ringback tone on a connected call. Conditions: Call originating from IOS gateway (5350 Ver 12.2(14.5)T) and terminates on another H.323 endpoint which use the H225 Info message with Signal IE (value) = 1 and Signal IE (value) = 63 to start and stop the ringback tones. Workaround : None

Identifier	Comp.	Severity	Headline	Release-note Enclosure
CSCdw39759	CCM	3	INFO message should be used for ringback tone generation for IP phone call transfer	Problem Description: When a call coming from IOS gateway and terminates to IP phone and is being transferred, the caller is not hearing the second ring back tone (cscds11354). Change has been made in both call manager and IOS gateway to use h225 user info message to send the q931 signal IE to request the IOS Gateway to turn on and off the ring back tone. But it turns out that the older version of H.225 standard (dated 02/98) had typo error in session 7.3.6 which stated User Information message should be used, and the latest H.225 standard (dated 11/00) corrects the error by stating that Information message should be used. In order to correct this problem, both Call Manager and IOS gateway needs to make the change at the same time to use the correct message type, there is a ddts cscdw39337 opened to keep track of this problem for the IOS gateway, therefore these two ddts are dependent on each other. Since the user information message is being only used between Call Manager and Cisco IOS Gateway at this time, there is no immediate impact on the original functionality and the functionality of both products, but we should use the correct message in the near future. Workaround: None. This has been fixed in CCM 3.3
CSCdx26761	GW	3	Need CLI to disable h225 TCP keepalive timeouts	Currently IOS enables TCP keepalives on the H225 VoIP call control session. This cannot be disabled. These keepalives, zero byte tcp packets, are sent each minute and will tear down the tcp session after 4 attempts which clears the call. The noticed symptom is that calls in progress are dropped after 5 minutes if these keepalives are not acknowledged. The TCP keepalives may be blocked in certain circumstances such as: - while running the VoIP gateway in SRST mode and the WAN link to the CallManager fails - traversing firewalls which may be blocking the TCP keepalives In the latter case, this should not occur but has been noticed in some cases. Workaround: None

Identifier	Comp.	Severity	Headline	Release-note Enclosure
CSCea03950	GW	3	FetchTimeout not working	Symptom: The HTTP response timeout does not timeout as specified in vxml script. Workaround: None.
CSCma21753	ICM	3	Router never disconnects on just Release Node after Network Transfer	Symptom: Router is not sending a Release message to any routing client or VRU if the script after network Transfer just immediately Released the call without even running a "Run VRU Script". Conditions: The attempt to network Transfer will never succeed and call will never be released. Router will however report that route request is complete. Workaround: None.
CSCma24039	ICM	3	Agent app shows call after ring no answer via ISN network transfer	Symptom: Call is ringing at agent A but cannot answer. "Call identifier is invalid" Condition: ISN 2.0 IPCC 5.0 Ring No Answer had been triggered. The call is with agent B. Workaround: Set the script node to re-query In the Agent Desk Setting: Set the Ring No Answer timeout = ISN RNA Timeout - 2 (Suggested) Set the Ring No Answer Dialed Number = <None>
CSCea60562	IP Phone	3	Choppy or missing voice when using multiple SSRCs in a call	Symptom: Call originating from a 7960 IP Phone and terminating on an IOS Voice Gateway doing both TTS and playing prerecorded prompts does not hear all IVR prompts or hears some very crackly prompts. Conditions: This occurs when the call originates from a 7960 and terminates on an IOS Voice Gateway performing IVR treatment that includes both TTS prompts and pre-recorded prompts (.wav files). Very often the caller will mot hear the .wav files that play after the TTS prompt. Gateway logs clearly show the RTP packets leaving the gateway with proper sequence numbers and timestamps. Suspected to be related to the fact that multiple SSRC's are included in the call. Workaround: None
CSCma23310	ICM	5	ICM shouldn't return DIALOG_FAIL/UNSPEC for ReqInstr with abandoned call	When using a type 3/7 network VRU, if a call is abandoned immediately after/during an explicit/implicit SendToVRU node, an error message about UNSPECIFIED_FAILURE from ICM is logged by ISN.

5.3. ISN 1.0.1 Defects Fixed in ISN 2.0 (ordered by ID)

Identifier	Severity	Headline	Release-note enclosure
CSCma06207	4	AF port update is not consistent	Changing the Alarms Forwarder (AF) port on the App Server does not work, and causes the communication to break. If left as the default, it works correctly.
CSCma06906	6	Caller does not hear ringing during transfer to CCM before answer	When a call is being transferred to Call Manager, the caller hears only silence while the outgoing call is being connected.
CSCma08761	4	dumplog installed with VB Administration alone doesn't work	If you have installed ISN "Voice Browser Administration" without a Voice Browser, Application Server, or SDDSN, dumplog doesn't work for ISN logfiles (local or remote). The workaround is to uninstall ISN, then reinstall "Voice Browser Administration" along with "Update External SDDSN Components".
CSCma08953	5	Voice Browser occasionally retries messages to AppSvr (Tomcat)	The Voice Browser occasionally needs to retry it's communication message to the Application Server. This results in a delay in responding to the caller for that step of the IVR.
CSCma11283	4	Benign invalid grammar message upon startup	On rare occasions at startup, the Application server logs an error "invalid grammar" for a single call; the ICM script error handling from that node will be used to process the call.
CSCma15111	5	Document that outbound alternative endpoints should not be used	Outbound alternate endpoints should not be used for the egress leg of the call (to the agent), as the retries invokes may take longer than the time for which the agent is reserved. This is not documented adequately in the user manuals.
CSCma16835	3	AS does not handle ICM VRU Script timeout	If the ICM is misconfigured with a VRU script timeout which is shorter than the amount of time required for the script execution, the ISN will not correctly respond to the timeout. It will continue with the existing script until it ends or the caller hangs up. If the ICM script has reached a RELEASE node, the following error message will be listed in the App Server logs: Timed out waiting for Call Result from Voice Browser, timeout is: 10 seconds The symptom for this problem may be observed by monitoring the path the call takes in the script.

Identifier	Severity	Headline	Release-note enclosure
CSCma16843	4	Ports not set for prerouted calls will cause AS to go Out of Service	If the preroute ports are not set, the first prerouted call will make the AS go Out of Service indefinitely. Possible Solution: Restart the Application Server and add the necessary ports.
CSCma17032	4	IP address of GW is passed when the ANI is blank by the VB	When the VB receives a blank ANI, VB substitutes the GW's IP address in the ANI field. This should not happen. The VB should pass the ANI field unchanged.
CSCma17495	3	GD and Menu should repeat the prompt during an invalid or no entry	GD and Menu should repeat the prompt (or menu prompt) when there is an invalid entry or no entry timeout. Currently an error message would be played out to the caller to repeat the entry, however the menu prompt is not repeated to the caller.
CSCma17676	2	VB send out of resource RAS message to GK after 1 call	Symptom: Some Voice Browsers can process no more than 1 or 2 simultaneous calls. Conditions: When you use ISN inbound call routing via gatekeeper, the ISN voice browser sends 'out-of-resources' indication to the gatekeeper after processing 1 call. When all the voice browsers show 'out-of-resources', the gatekeeper will still (successfully) send all calls to 1 of the voice browsers, even though it shows out of service. This bug decreases the capacity of your ISN to ((1/numberOfVoiceBrowsers)*100) percent. Workaround: Use gateway dial-peer inbound call routing instead of gatekeeper inbound call routing.
CSCma17693	3	Digit buffer should be flushed when call transferred	The digits collected by the Voice Browser should be flushed when it transfers a call. Otherwise when the call is taken back for IVR treatment, they start acting on the new IVR script. Workaround is to do a "get digits" to collect and throw away any left over entries, using a "no entry timeout" of 0.
CSCma18166	4	Media library type=N is not supported	The user documentation describes a setting "N" for the media library type; it is not supported.

Identifier	Severity	Headline	Release-note enclosure
CSCma19209	4	PD locales for simultaneous calls may be intermixed	Under rare conditions, and only for customers that use multiple locales, simultaneous calls running the PD script may inadvertently have their locales changed in the middle of a prompt. For example, a caller hearing a long number string being played back, may hear the beginning of the number starting with a male voice from a eng_US locale (w/US accent), and end the same number with a female voice from a eng_GB locale (w/British accent). Customers that use a single locale will not be impacted. There is no workaround.
CSCma19965	2	ERROR_NONE is an invalid return code during MONITOR state	Symptom: "ERROR_NONE is an invalid return code from voice browser while monitoring a transferred call" appears in app server logs. Condition: Typically happens when DTMF digits arrive at the Voice Browser at unexpected times, such as when a transfer to an agent is being set up. There should be no impact to the caller. Workaround: None
CSCma20553	3	ISN disconnects call when it gets unknown facility msg;should ignore	Symptoms: Call coming from PSTN Siemens EWSD switch sends a particular Facility Message over a standard PRI configuration to a AS5400 gateway running IOS 12.2(11)T which transfers to ISN. Conditions: ISN does not recognize this Facility Message and it disconnects the call instead of ignoring it. Workaround: Turn off this message at the TDM source. Long term solution is to have ISN ignore message instead of disconnecting.
CSCma20919	3	Sometimes reserve agent for ghost call if caller HU just before connect	Symptom: An agent may be reserved if the caller hangs up in node which precedes the node to connect the caller to an agent. The agent may be reserved for a ghost call, and returned to the end of the agent pool at the end of the reserve time. Workaround: None

Identifier	Severity	Headline	Release-note enclosure
CSCma22502	3	VB does not relay the DTMF from the outbound leg to the inbound leg	Symptom: DTMF digits entered from an IP phone cause the caller to be disconnected when the transfer is bridged via the Voice Browser. Conditions: When an agent enters DTMF on their hard phone while talking to a caller, two problems occur. First, the digits should be relayed back to the switch via the VB so that an outpulse transfer can occur. Second, the caller is instead disconnected. Workaround: Agent would need to be retrained to do a Transfer to a number that would trigger a CTI route point that would trigger an outpulse transfer from an ICM script to the VB.
CSCma22508	3	AppServer filling up if VB does not get RELEASE_COMP from switch/GW	Symptoms: App server ports fill up if VB does not get release from GW. Condition: Using Transfer connect (e.g. *8###) and switch does not release the call with the expected time of 8 seconds. Workaround: If the release is simply delayed, contact Technical Support for information on how to increase the expected time. If the release does not happen, manually delete the call from the Application Server or wait for it to time out (2 hours) and delete itself.
CSCma22627	4	Years in first decade are spoken poorly in English	Years in first decade are spoken poorly in English, for example, 2002 is spoken as two-thousand-oh-two rather than two-thousand-two.
CSCma22747	4	Rarely, VB hangs when printing metrics	Symptom: In the VB logs, the metrics stop printing right before the snapshot statistics. Node Manager restarts the Voice Browser eventually. Conditions: This problem occurs very rarely because of the very low probability of all timing dependencies. Workaround: None
CSCma22749	4	Occasional ERROR INTERNAL:Call not idle but trying to delete call	Symptom: The following error occasionally appears in the VB logs: "ERROR INTERNAL: Call not idle but trying to delete call object" Conditions: This should have no effect on the caller. It will occur when a DTMF key is entered in the same millisecond that a prompt finishes playing. Workaround: None

Identifier	Severity	Headline	Release-note enclosure
CSCma23779	2	VB can't load media file with long duration on local machine	Symptom: Caller gets dead air indefinitely waiting for prompt to play. Condition: This occurs when using the file: media file access method in the Voice Browser and the prompt file is larger than 20K. Workaround: Use http: file server instead of file: method.
CSCma23865	3	Don't collect DTMF digits input by caller while transfer in progress	Symptom: ERROR_NONE error messages appear in app server log Condition: Occurs when DTMF is input by the caller during the time the Voice Browser is setting up the transfer to the agent. Workaround: Don't enter DTMF during an agent transfer.

6. Obtaining Documentation

The following sections provide sources for obtaining documentation from Cisco Systems.

6.1. World Wide Web

You can access the most current Cisco documentation on the World Wide Web at the following sites:

- http://www.cisco.com
- http://www-china.cisco.com
- http://www-europe.cisco.com

6.2. Documentation CD-ROM

Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or as an annual subscription.

6.3. Ordering Documentation

Cisco documentation is available in the following ways:

- Registered Cisco Direct Customers can order Cisco Product documentation from the Networking Products MarketPlace:
  http://www.cisco.com/cgi-bin/order/order_root.pl

- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:
  http://www.cisco.com/go/subscription
- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco corporate headquarters (California, USA) at 408 526-7208 or, in North America, by calling 800 553-NETS(6387).

6.4. Documentation Feedback

If you are reading Cisco product documentation on the World Wide Web, you can submit technical comments electronically. Click **Feedback** in the toolbar and select **Documentation**. After you complete the form, click **Submit** to send it to Cisco.

You can e-mail your comments to bug-doc@cisco.com.

To submit your comments by mail, use the response card behind the front cover of your document, or write to the following address:

Attn Document Resource Connection
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

7. Obtaining Technical Assistance

Cisco provides Cisco.com as a starting point for all technical assistance. Customers and partners can obtain documentation, troubleshooting tips, and sample configurations from online tools. For Cisco.com registered users, additional troubleshooting tools are available from the TAC website.

7.1. Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information and resources at anytime, from anywhere in the world. This highly integrated Internet application is a powerful, easy-to-use tool for doing business with Cisco.

Cisco.com provides a broad range of features and services to help customers and partners streamline business processes and improve productivity. Through Cisco.com, you can find information about Cisco and our networking solutions, services, and programs. In addition, you can resolve technical issues with online technical support, download and test software packages, and order Cisco learning materials and merchandise. Valuable online skill assessment, training, and certification programs are also available.

Customers and partners can self-register on Cisco.com to obtain additional personalized information and services. Registered users can order products, check on the status of an order, access technical support, and view benefits specific to their relationships with Cisco.

To access Cisco.com, go to the following website:

http://www.cisco.com

7.2. Technical Assistance Center

The Cisco TAC website is available to all customers who need technical assistance with a Cisco product or technology that is under warranty or covered by a maintenance contract.

Contacting TAC by Using the Cisco TAC Website

If you have a priority level 3 (P3) or priority level 4 (P4) problem, contact TAC by going to the TAC website:

http://www.cisco.com/tac

P3 and P4 level problems are defined as follows:

- P3—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- P4—You need information or assistance on Cisco product capabilities, product installation, or basic product configuration.

In each of the above cases, use the Cisco TAC website to quickly find answers to your questions.

To register for Cisco.com, go to the following website:

http://www.cisco.com/register/

If you cannot resolve your technical issue by using the TAC online resources, Cisco.com registered users can open a case online by using the TAC Case Open tool at the following website:

http://www.cisco.com/tac/caseopen

Contacting TAC by Telephone

If you have a priority level 1(P1) or priority level 2 (P2) problem, contact TAC by telephone and immediately open a case. To obtain a directory of toll-free numbers for your country, go to the following website:

http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml

P1 and P2 level problems are defined as follows:

- P1—Your production network is down, causing a critical impact to business operations if service is not restored quickly. No workaround is available.
- P2—Your production network is severely degraded, affecting significant aspects of your business operations. No workaround is available.