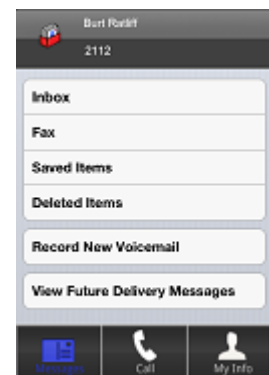


New Features Available In IPedge Software Release R1.5

IPedge Release 1.5 is now available and features several powerful enhancements, including: a new smartphone app, more features on SIP phones, voice mail survivability, simplified programming, gateway configuration and DN Export/Import for mixed IPedge and CIX networks.

The IPMobility App allows an iPhone or Android Smartphone to be make phone calls through the users extension, and manage voicemail and it is all included as part of the unified messaging feature on IPedge. Users make calls using the app which routes them through the host IPedge system, and displays the users business caller ID to the called party, rather than the users mobile number.



IPMobility also blends with the IPedge Follow Me/Twinning feature, allowing a single phone number for all inbound calls to reach the user on their mobile phone. In addition, IPMobility allows users to view, play, reply, and forward all of their voice and fax messages to their desk phone or another extension.

IPedge Release 1.5 includes several feature enhancements for Session Initiation Protocol (SIP) Phones and SIP Trunks. For SIP Phones, we added the ability to create a conference call. These enhancements now allow SIP devices (including wireless SIP Phones) to initiate a conference call and manage multiple calls simultaneously without the need for additional extension numbers or purchasing additional licenses.

Also included in Release 1.5 is a Voice Mail Survivability utility called Direct Cluster Networking (DCN). DCN allows the joining of two or more IPedge systems (nodes) into a cluster. These clusters act in unison to maintain the integrity of the entire network messaging database.

We have also simplified IPedge system programming by including new installation utilities. In this release we have created a set of IPedge “model databases.” The model databases may be downloaded from the [Toshiba FYI](#) website (under IPedge/VIPedge software), and installed using the “Data Restore” function from Webmin in Enterprise Manager. Based on dealer feedback, we have a template database with pre-programmed stations and trunks including all common programming options such as Call Forward, PDN, Phantom DN. The model database is available for IPedge EP, EC, and EM systems.

Enterprise Manager is equipped with the Adtran Gateway Configuration Wizard which creates a configuration file that is uploaded to the gateway. Once the SIP Trunk Channel Group and the Service Definition have been entered in the IPedge database, the wizard is able to create the configuration file.

We also developed an IPedge Network DN Import/Export Wizard. This wizard simplifies importing and exporting network DN tables from the IPedge system to the Strata CIX system, and from the Strata CIX system to the IPedge system.

New in this Release!

- [IPedge Messaging - "IPMobility Application for Android and iPhone"](#)
- [IPedge "Voice Mail Survivability with Multi-site Direct Cluster Networking \(DCN\)"](#)
- ["IPedge Model Database"](#)
- ["Enterprise Manager - Integrated Adtran Gateway Configuration Wizard"](#)
- ["IPedge Network DN Import/Export Wizard"](#)
- [Create "Conference Calls on the Toshiba IP4100 SIP Phone"](#)
- ["Conference Call | Call Waiting" on SIP Phones](#)
- ["Pickup" calls placed on hold by SIP Phones](#)
- ["Enhancements for SIP in IPedge Release 1.5 and the IP4100"](#)

IPMobility Application for Android and iPhone

The new IPMobility Application allows a mobile device to act as an extension of the office desk telephone, offering the following features:

- Support for IPedge Follow Me (Twinning) feature
- Outbound calling through the host IPedge system
- Visual Voice Mail

Note Using IPmobility to make or receive calls will use minutes on your wireless calling plan

Follow Me (Twinning)

IPedge Messaging's Follow Me (Twinning) feature enables a single phone number to reach a user's chosen devices, e.g., desk phone, mobile phone, or both (simultaneous ring). Once answered, IPMobility offers call management which provides users with the ability to transfer a call another extension or directly to voice mail. IPMobility also gives users the ability to designate incoming calls if busy or out of the office for an extended absence.

Important! The incoming call management features described above require mobile device support for simultaneous voice and data. Some carriers do not allow simultaneous use of a data connection and a voice connection on certain handsets. Check with your mobile carrier to confirm that they support simultaneous voice and data connections. Also, data charges may apply if your service plan does not include data as part of the monthly service plan.

Making Calls

For outgoing calls, Toshiba's IPMobility App uses the host IPedge System phone services to reach intended destinations. This feature allows the user to take advantage of the host system telephone service rates while displaying the IPedge system (office phone) number instead of the mobile number.

IPMobility uses either Callback or Call-thru process to set up the call:

Callback

- After a destination number is dialed, IPMobility sends a data signal to the IPedge system over the Internet. IPedge then calls the mobile device and asks the user to press 1 or # to accept the call. After confirmation the system will connect both calls.

Call-Thru

- After a destination number is dialed, IPMobility sends a data signal to the IPedge system over the Internet. IPMobility then dials a specific number into IPedge. The system then dials the destination number and connects both calls.

IPMobility does not conflict with the ability of the mobile device to make a phone call or access the service providers voice mail. Users may dial within the IPMobility application by typing in the phone number or extension directly or use the mobile phone's built-in contacts.

Visual Voice Mail

Users may also easily access key voice messaging functionality and manage their voice mailbox without dialing into the voice mail system and navigating key presses or voice commands. Now, users may view, play, forward, and reply to their voice and fax messages mail from the IPMobility App. Users may also:

- Manage mailbox personal greeting and name recordings
- Manage mailbox password
- Setup IPMobility's Make Call functionality, e.g. Callback and Call-thru

Caller ID

When IPMobility is used to make a call, the Calling Party Identification (CPID) that is delivered to the receiving party may be set in IPedge. The system administrator must configure the system for the correct number (commonly the DID of the user) for each user from the IPedge Enterprise Manager.

Mobile Device Support

The IPMobility Application is supported on Android OS versions; 2.x, 3.x, & 4.x, and has been tested on the following devices:

- HTC
 - with Android 2.2.2
 - EVO 4G LTE with Android 4.0.3
- LG-P350 with Android 2.2.2
- Motorola
 - Droid 2, 3, & X with Android 2.3.4
 - MB 520 with Android 2.2.1
- Samsung
 - Galaxy II with Android 2.3.5
 - SGH I997 with Android 2.2.1
- Sony Xperia™ E15i with Android 2.1

There are no material differences in the functionality of these devices requiring changes to the application. There are two known variances:

1. Automatic answer of Callback calls from IPedge is not available after Android 2.3.5
2. Not all devices allow override of the default answering screen with a custom answering screen (app call screening function). One example of this is the Samsung SGH I997 with Android 2.2.1.

Considering the array of differences among mobile devices in the marketplace, and including best practices for mobile application development - Toshiba elected to test the IPMobility application with a sampling of popular devices.

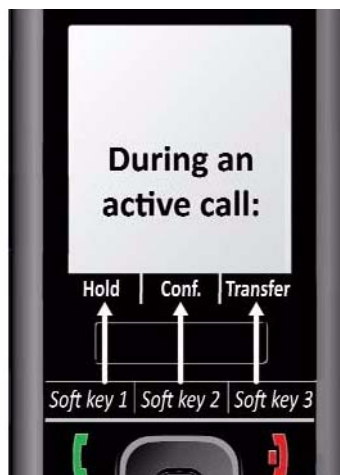
Enhancements for SIP in IPedge Release 1.5 and the IP4100

IPedge Release 1.5 includes several feature enhancements for Session Initiation Protocol (SIP) Phones and SIP Trunks. For SIP Phones, we added the ability to create a conference call (see [“Conference Call | Call Waiting”](#) and [“Pickup”](#) .) These enhancements now allow SIP devices (including wireless SIP Phones) to initiate a conference call and manage multiple calls simultaneously without the need for additional extension numbers or purchasing additional licenses. New firmware is also available for the Toshiba IP4100 SIP DECT (Digital Enhanced Cordless Telecommunications) telephone to support these new features.

For SIP Trunks, we have increased the number of programmable URIs to 3000, allowing larger systems to be configured with multiple direct inward dialing (DID) numbers per station.

Conference Call | Call Waiting

Conference Call and Call Waiting are natively supported by the SIP phone. The number of conference participants or simultaneous calls that a SIP station may support is phone-specific. There is a new feature setting for the number of simultaneous SIP calls that the endpoint may support accessible on the **Enterprise Manager Station > Assignment** configuration page. The default value is 1, however, for the Toshiba IP4100 this value should be changed to 2. For more information on the IP4100 setup procedure, please refer to the IP4100 Installation Manual.



Pickup

Any station with the appropriate Class of Service will now be able to answer a call on Hold from a SIP station. When SIP stations place calls on hold, the IPedge system will now treat that as “Line Hold” rather than “Consultation Hold” to allow the call to be picked up.

Conference Calls on the Toshiba IP4100 SIP Phone

This new release of software for the IP4100 supports Conference Call initiation.

Conference Support

IPedge Systems (R1.5 and later) support two SIP channels per station. This allows the IP4100 to receive a call (call waiting notification) while on a call. Additional licenses for the additional SIP channels are not required.

Base Station Configuration

The software profile of the IP4100 base station must be changed to support Conference Call features IPedge R1.5. Use the following procedure.

1. Determine IP address of IP4100-Base by using an IP4100-DECT handset IP Search Tool. To select Menu *IP* press the **Menu** key, then *47* keys.
2. Login to IP4100-Base web configuration GUI via a PC web browser.
3. Select the **Servers** page and click the appropriate Server (Server 1:<IP address>).
4. Change the **PBX type** to **IPedge**.
5. Click **Save**.

Note Do not exit the utility until you have tested the new features

The screenshot shows the Toshiba IP4100-Base 1 web configuration interface. The left sidebar contains navigation links: Home/Status, Extensions, Servers, Network, Management, Firmware Update, Time, Country, Web Security, Central Directory, Multi cell, Repeaters, and Configuration. The main content area is titled 'Servers' and shows two servers: Server 1 (192.168.10.100) and Server 2 (64.81.122.52). Below the server list are links for 'Add Server' and 'Remove Server'. The 'Server 1' configuration form is displayed, with the following fields: NAT Adaption (Disabled), Registrar (192.168.10.100), Outbound Proxy (empty), Reregistration time (s) (30), DTMF Signalling (RFC 2833), PBX (IPedge), and Codec Priority (G711U). The PBX dropdown menu is highlighted with a red circle. At the bottom of the form are buttons for 'Up', 'Down', 'Reset Codecs', 'Remove', 'Save', and 'Cancel'.

6. Make a test call with an IP4100 handset to ensure that the conferencing soft keys (**Conf** and **Swap**), now appear on the handset(s). In multi-cell systems this change only needs to be made in one base station. The parameter change will be sent to all of the other base stations.

If the conferencing features do not appear, click on the **Multi cell** link and click **Force reboot chain**.

Note: All calls will be disrupted during the reboot period.

Device Support

The following devices have been tested and will be supported with these new features on IPedge 1.5.

Wireless Telephones

- Toshiba IP4100
- Polycom™ SpectraLink® 8400 Series

Conference Telephone

- Polycom IP 6000
- Polycom IP 7000

Desk Telephones

- Polycom IP 321, IP 550

The updated IP4100 Admin Manual, Polycom 8440 Config Guide, and IPedge Accessories Guide contain instructions for configuring multiple call support on these devices.

Voice Mail Survivability with Multi-site Direct Cluster Networking (DCN)

The IPedge Messaging application may be licensed and configured with a new feature called Direct Cluster Networking (DCN). DCN allows joining the Messaging application of two or more IPedge systems (nodes) into a cluster. These clusters act in unison to maintain the integrity of the messaging database of the entire network. Each node configured in the cluster has a copy of the database of the other participating nodes. If one node fails and IPedge telephones register on another IPedge system (that is a node participant), all user greetings and messages are available.

Nodes may be geographically distributed in various configurations. Each node contains the complete database for the entire cluster, and the Messaging application residing on each node uses only the local copy of the database. Each node is identified by a NODE ID. In addition, all files including system greetings, user greetings and messages may be replicated to all nodes (standard cluster) or a designated subset (hybrid cluster), depending on cluster size and network capability.

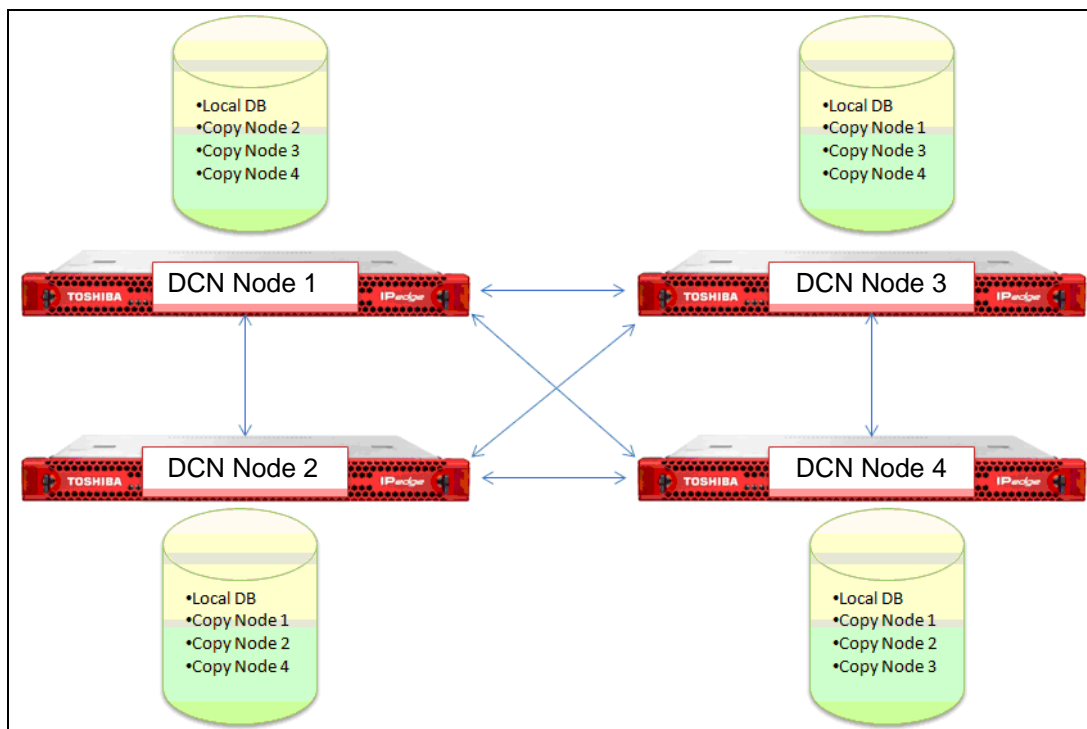


Figure 1 - Four Node System Configuration

Figure 1 illustrates how the DCN stores and synchronizes the clusters database in all systems that are licensed for DCN. Should one node fail, one of the other nodes may be used as a backup mailbox for the surviving IPedge telephones.

There is no license charge for the mailboxes that are replicated in the other nodes.

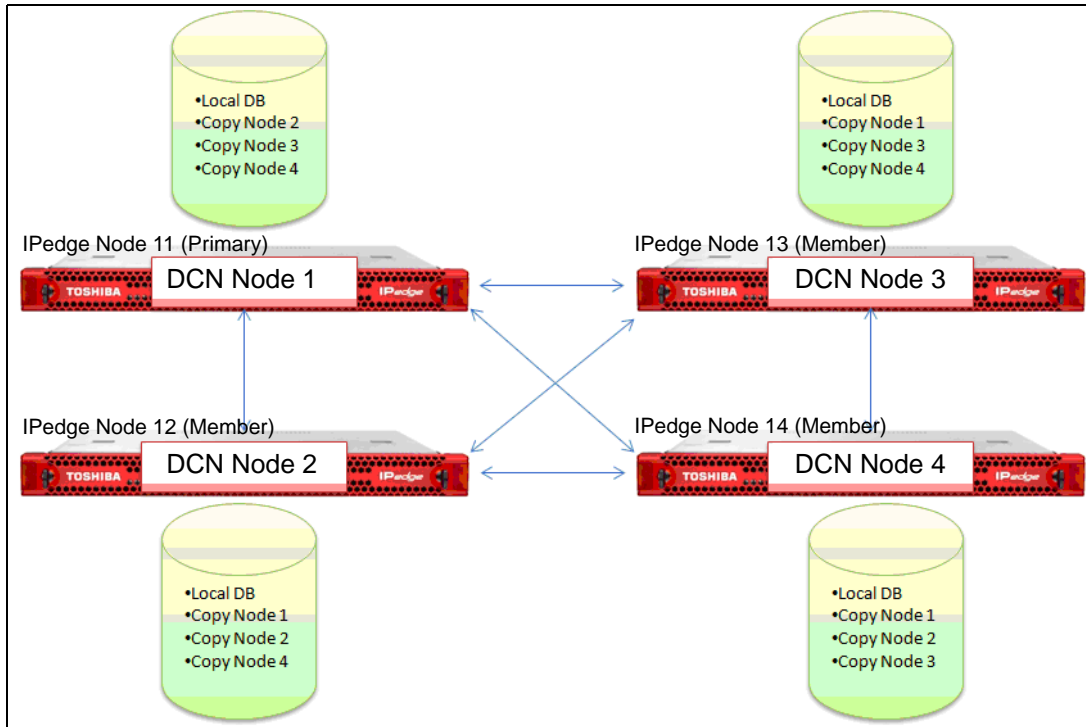


Figure 2 - DCN With Centralized Messaging

Figure 2 shows how DCN may work within a centralized voice mail configuration. Should IPedge Node 11 (DCN node 1) fail, Node 13 may use the replicated mailboxes on Node 12.

Functional Considerations

Although DCN provides a robust voice mail survivability solution, there are some functional considerations that need to be understood and communicated to customer users.

- If a telephone has a Message Waiting Indicator (MWI) illuminated, and the system that supports that telephone fails the MWI will not be reinstated until another new message is received. The telephone survives over to another system that is in the cluster and has its mailbox intact, but the Message Waiting light will not light until a new message is received.
- The voice mail hunt group pilot number should be the same on the different nodes. If the voice mail hunt group pilot number is different on the different nodes incorrect voice mail forwarding after a node failure will occur. For example, station 201 on IPedge Node 11 (DCN Node 1) is set to system call forward to voicemail hunt group pilot 300. The DNs on IPedge Node 12 (DCN Node 2) are set to system call forward to voicemail hunt group pilot 400. If IPedge Node 11 fails and station 201 re-registers with IPedge Node 12, station 201 will not properly forward to voicemail when a call is presented to it.

Note The Messaging application must be running on every IPedge system that will run DCN.

Pricing

A new license is required for enabling DCN on an IPedge system. There is one system-wide license part number for each IPedge model.

IPedge System	Toshiba Part # for DCN
IPedge EP system	I-MSG-DCN-EP
IPedge EC system	I-MSG-DCN-EC
IPedge EM system	I-MSG-DCN-EM

Pricing for these new part numbers may be found on the [Toshiba FYI](#) online price book.

Valcom Paging Systems

Due to popular dealer demand, Toshiba has tested the following Valcom paging devices with the IPedge system. For a complete set of instructions on how to configure the paging devices below, please refer to the IPedge Installation Guide located on the [Toshiba FYI](#) website.

VIP-201 SIP Paging Server

- 65,000 Speakers
- 256 Page Zones
- PoE 802.3af



VIP-801 Network Paging Zone Extender

- Provides audio for up to 40 Valcom 1-way amplified speakers



VIP-172L SIP Intercom/Door phone

- PoE802.3af
- Call button dials SIP Address
- Auto-talk-back VOX
- RJ45 ethernet jack



IPedge Model Database

Toshiba is committed to reducing the installation and administration time for IPedge Systems. We have developed “model databases” for the IPedge EP, EC, EM Systems. Model databases may be downloaded and installed using the Data Restore functionality from Webmin in Enterprise Manager. Below are examples of the model database programming data. These programs are in addition to the current default values. The default database files are available for download from the [Toshiba FYI](#) website.

- IPedgeEPModel_mmddyyyy.zip
- IPedgeECModel_mmddyyyy.zip
- IPedgeEMModel_mmddyyyy.zip

Once downloaded, extract/unzip the model database files - two files will be created. For detailed installation and programming instructions on how to get the model database operational, refer to the IPedge Installation Manual located on the [Toshiba FYI](#) website.

Pre-Programmed Data

Data	IPedge EP	IPedge EC	IPedge EM
# phones prog.	24 (Ext. 2100 ~ 2123)	96 (Ext. 2200-2295)	160 (2300-2459)
# SIP VM port	4	6	8
VM Directory #	Pilot = 2500 DN = 2501 ~ 2504	Pilot = 2500 DN = 2501 ~ 2506	Pilot = 2500 DN = 2501~2508
SIP Trunk ch.	4	16	32

Database Features

DB Feature	IPedge EP	IPedge EC	IPedge EM
Endpoint Stations	24	96	160
SIP Trunks	4	16	32
Media Resources	22	174	480
Messaging Ports	4	6	8

System IP Address

System IP Address	IPedge EP	IPedge EC	IPedge EM
IP Address	192.168.254.250	192.168.254.250	192.168.254.250
Subnet Address	255.255.255.0	255.255.255.0	255.255.255.0

Administration

Field	IPedge EP	IPedge EC	IPedge EM
Login Name	Administrator	Administrator	Administrator
First Name	Admin	Admin	Admin
Last Name	Administrator	Administrator	Administrator
Email Address	administrator@localhost.com		

Enterprise Manager - Integrated Adtran Gateway Configuration Wizard

Based on the positive feedback of the standalone Adtran Gateway Configuration Wizard, we have implemented this feature in Enterprise Manager. The wizard creates a configuration file that is uploaded to the gateway. Then, when the SIP trunk Channel Group and Service Definition have been entered in the IPedge database, the wizard creates the configuration file. This file is saved to the system administrator's PC (the PC used to access Enterprise Manager.)

The wizard is located in Enterprise Manager: **Trunk > SIP Trunking | Service Definition tab** - "Gateway Configuration"

For the Gateway Configuration button to be functional, create a new Service Definition Index or select one if there is a definition already created. The Gateway Configuration button will now be operational. When the Gateway Configuration button is selected, the window shown in [Figure 3](#) will be displayed. This window outlines the preparation steps to be aware of prior to starting the wizard.

Note Please pay particular attention to step #2 below.

Note The Adtran 908/908e gateway cannot support network-side T1 CAS only ISDN PRI.

Once you understand and verify all the preparation steps, click the OK button to start the gateway configuration wizard.

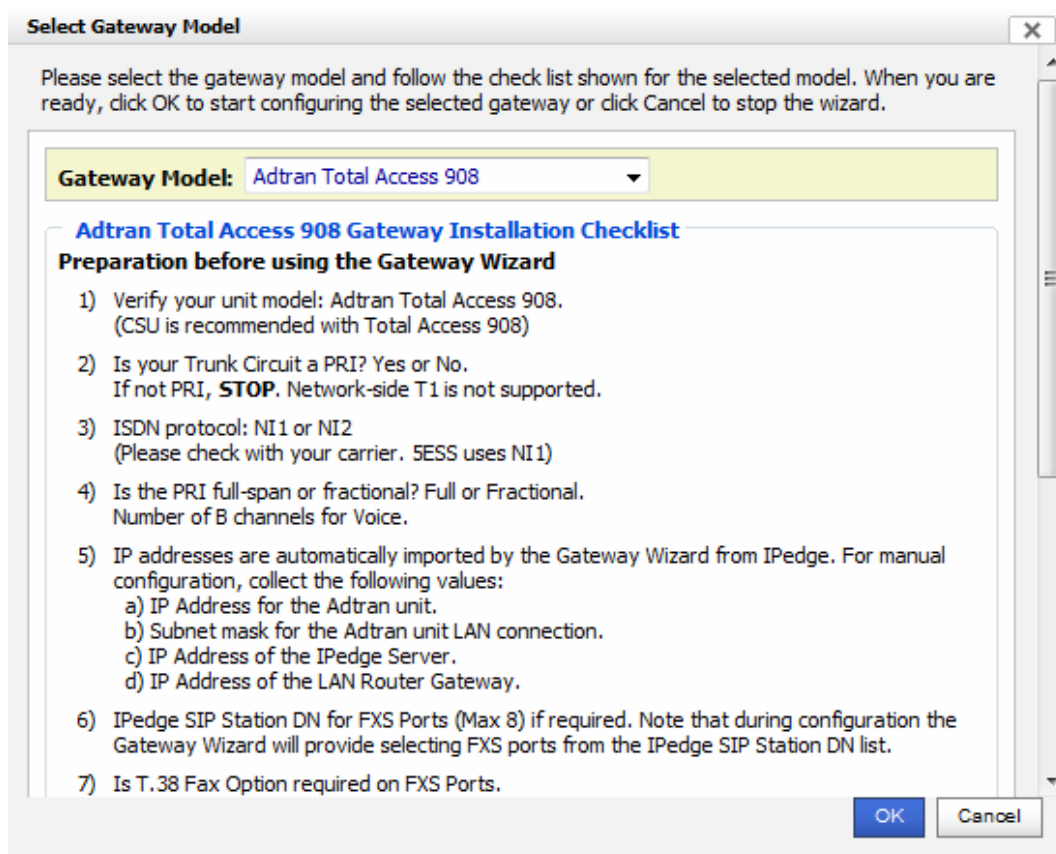


Figure 3 - Adtran Gateway Configuration Wizard

Please refer to the IPedge Installation Guide located on the [Toshiba FYI](#) website for detailed instructions on completing the wizard.

IPedge Network DN Import/Export Wizard

Part of the IPedge migration strategy includes adding an existing Strata CIX Strata Net environment. The to an IPedge System. The Network Directory Number (DN) list from each system in the IPedge Net/Strata Net network must be shared with other systems. IPedge systems running software releases prior to R1.5 have a Network DN export function that creates a comma-separated value (CSV) file. The limitation to the CSV is that this file format is not compatible with the Strata CIX system. Therefore, the only way to enter IPedge DNs to a Strata CIX system is manually.

For IPedge Systems running software version R1.5 and later, Toshiba has introduced a new feature which simplifies the Network DN import procedure from IPedge > CIX, and from CIX > IPedge. With the new IPedge Net Wizard in release 1.5, technicians may now export all the network DN information from all the IPedge servers configured together on an IPedge Net.

- The technician may export the Primary DN, Phantom DN, Group Hunt Pilot DN and Multiple Call Group DN
- The IPedge wizard will create one compressed (zip) file that will hold one or more separate export file specific to each server
- The default name for each file will be the name of the server in order to differentiate which file belongs to which server
- Import the file into Strata CIX - please see the Strata CIX programming guide for detail steps on importing Network DNs between Strata CIXs
- The Import/Export wizard is located under: IPedge Net > IPedge Net Wizard

The IPedge Net Wizard page has been modified to include a third option to import or export DNs to a network DN table as shown in [Figure 4](#) below.

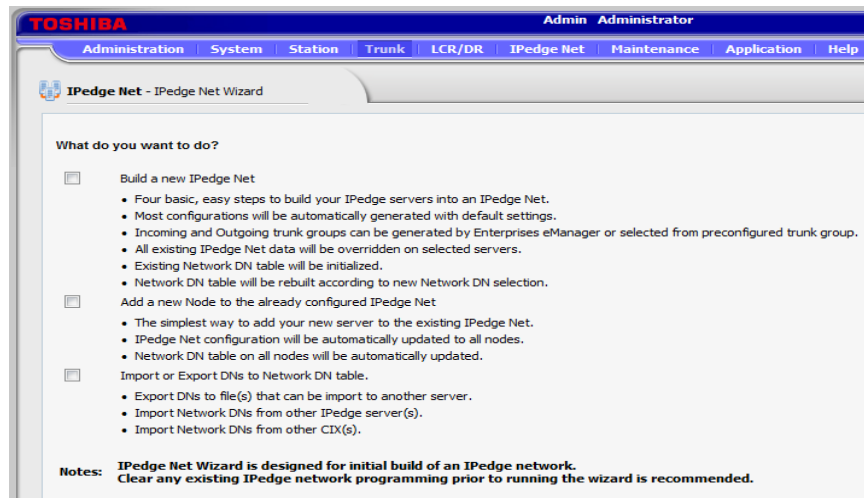


Figure 4 - Network DN Import/Export Wizard

For detailed instructions on using the IPedge Import/Export wizard, please refer to the IPedge Installation Manual on the [Toshiba FYI](#) website.

System Requirements

App	Version	Release Date
TGZ	1.5.1.11	12/12/2012
GCP	1.5.14-1	12/12/2012
GeM	1.5.0-04	10/19/2012
GeM Lang Pack	1.3.1-3	10/30/2012
GMS	1.0.1-2	6/15/2012
GNS	0.0.1-53	8/23/2012
GUM	10.5.4-23	11/26/2012
E911	1.1.1-03	9/2/2011
Webmin	1.491.16-4	10/19/2012
Bacula	5.0.2.21-2	6/19/2012
HMP	4.1.94-3	6/15/2012
GMMC	5.3-6p	11/16/2012
IPT	2.16.2-1 (or M2P2)	4/23/2012
GCM	8.0.0.8	11/28/2012
Polycom 8440	4.0.0.27000	9/21/2012
Toshiba/Uniden IP4100	Base: V0242_0009 Handset: V0242_0004	10/31/2012
IPMobility.apk (Android)	2.0.1b18	10/19/2012
IPMobility.ipa (iPhone)	2.0.2b36	11/9/2012
Default Database	10172012	10/19/2012

Documentation

Instructions on the licensing and programming of DCN have been added into the latest IPedge Messaging manual located on the [Toshiba FYI](#) website.

1.5 Program Update Preparation Procedure

Note Allow up two hours (depending on connection speed) to download the update file.

Public Numbering Plan

Determine and document the Public Numbering Plan for this customer at this location.

Upgrade To R1.5

Use these procedures to upgrade any IPedge system to R1.5 software.

New IPedge Systems

This procedure is for IPedge servers that will have a Model Database installed after the update to R1.5 software. Use this procedure only if you will be installing a Model Data base.

1. Refer to the IPedge Install manual to install (restore) the IPedge software from a DVD.
2. Refer to the IPedge Install manual to apply licenses and the Model Database.

Existing IPedge Systems

This process is for upgrading an IPedge system that has a customer database already programed.

Important! The System Numbering Plan will be deleted during this procedure. Determine and record the numbering plan for this location before starting.

1. Login to Enterprise Manager. Select **Maintenance > Licensing > License Information**. Verify that the **Software Maintenance** has not expired.

CAUTION! If the Software Maintenance license has expired the system will not update correctly. Do not continue until the license has been updated.

2. Select **Maintenance > System Maintenance > Core System Processes**.

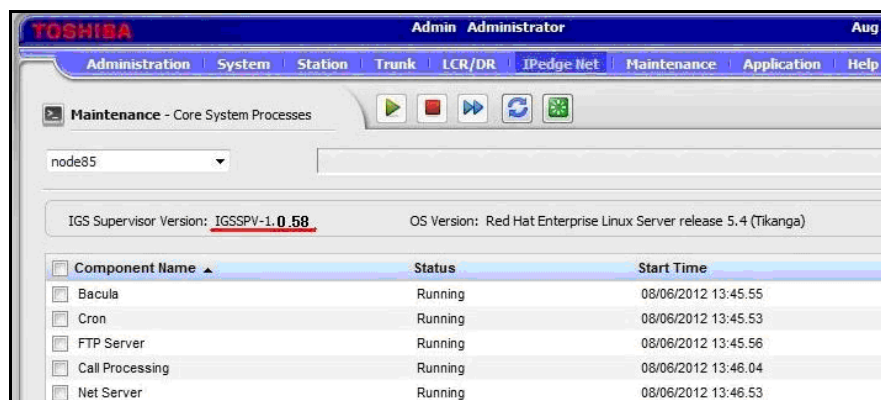


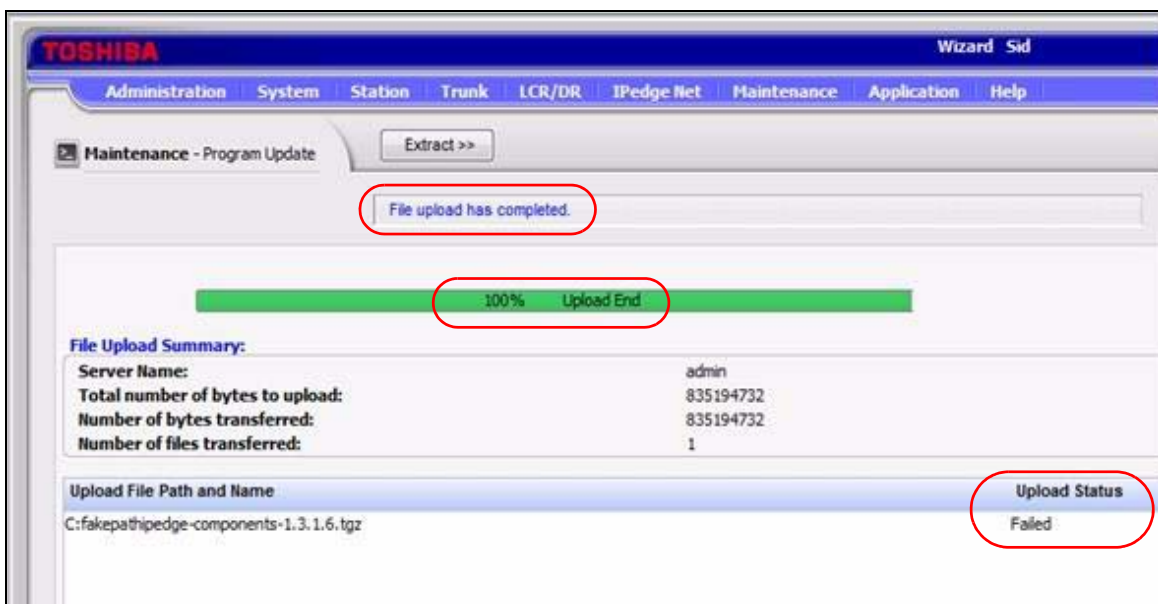
Figure 5 - Enterprise Manager | Maintenance: Core System Preferences

3. Backup the system Database and the Messaging Database. Store the backup files off of the IPedge server. Refer to the IPedge Install manual.
4. If the IGS Supervisor Version is 1.1.xx or earlier go to Step 5.
If Supervisor Version is 1.2.xx or later go to Step 9.
5. Ensure that you have backups of the IPedge database and the Messaging database. These backup files must be saved to another location, off of the IPedge server.
6. Refer to the Install Manual to use the recovery DVD to install (restore) the R1.5 software.

Note The recovery DVD will reformat the server hard disk drive then reinstall all operating software. All of the customer database will be deleted and overwritten. Use the Manual backup procedure to create a database backup and store the backup files off the server.

7. Refer to the IPedge Install manual to apply licenses and then restore the databases.
8. Go to Step 13.
9. In Enterprise Manager select **Maintenance > System Maintenance > Core System Processes**. Click on **Reboot System** then, type **OK**.
10. After the server reboot is complete wait at least 20 minutes after Call Processing starts before starting the R1.5 update.
 - a: Login to Enterprise Manager.
 - b: Select **Maintenance > System Maintenance > Core System Processes**.
 - c: Look for the start time of the Call Processing component. Refer to the screen shown in [Figure 5](#) above.
 - d: Wait at least 20 minutes after the Start Time shown.
11. Perform the Update procedure. Use the **ipedge-components-1.5.1.11.tgz** file available on the [Toshiba FYI](#) website. (IPedge/VIPedge > Software).

Note The Program Update Status shown below may display with some versions of Enterprise Manager. The File Upload will display; completed and the Upload End will show 100%. However, the Upload Status may display; Failed. If this occurs, please disregard the Upload Status Failed message, the upload has completed successfully, continue the update procedure.



12. When the update process is complete login to Enterprise Manager.
13. Select **System > Public Numbering Plan**. Enter the Public Numbering Plan data collected earlier.

For detailed software update information refer to the IPedge Installation Manual, available on the [Toshiba FYI](#) website.

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- End -