TOSHIBA
Leading Innovation

IPedge® System Product Bulletin

PB-0242
Jan. 25, 2017

IPedge Software Release 1.7.4

This latest version of software adds many powerful applications and features for the Toshiba IPedge system.

What's New

- Dongle Offline Licensing Support
- Meet Me Audio Conference scheduler enhancement
- Auto Attendant Dialing
- IPedge Messaging Storage encryption
- Enterprise Manager QoS troubleshooting tool
- Enterprise Manager DID search function
- Enterprise Manager LCR/DR enhancements
- Enterprise Manager Static Route
- Security Certificate for HTTPS
- IPedge EP server rack mount option

In response to dealer requests, the new license dongle allows the customer or dealer to license an IPedge or IPedge App Server without the need of internet access. This is especially useful in government and hospital scenarios where public internet access may not be allowed for security reasons. With the offline license dongle, the license is secured and yet does not require constant connection to the licensing server. As the dongle option has an additional cost it is only recommend where the end user requires off line as a condition of the sale.

Conference Scheduler has been added to Meet Me Audio Conference. In addition Conference View can now be accessed before starting the conference.

IPedge Messaging now allows the ability to dial an extension through the Auto Attendant without the purchase of a mailbox. This reduces cost and is extremely useful when dialing shared phones such as conference room phones and users who do not need a voicemail box.

Starting with IPedge 1.7.4, IPedge Messaging has the option to encrypt stored voice and fax messages. When implemented, encryption of messages, considered "resting data" enhances an organizations ability to show HIPAA compliance.

The new Enterprise Manager built-in QoS tool provides the technician a view of the QoS (Quality of Service) for each completed call. This is very useful in troubleshooting call quality.

A new DID search function has been implemented in the DID table of latest version of IPedge 1.7.4 Enterprise Manager. The Search allows the administrator to compose a query on multiple columns of the DID table to find DID records quickly, similar to the search function in the Stations table.

The Dell® 7040M is the new IPedge EP class server. Toshiba has a new, customized rack mount option for this new server.

Together with our Tech Support, Sales App and Sales Engineering team, valuable feedback have been gathered on how to better lay out the LCR/DR programming screens. The LCR (Least Cost Routing) and DR (Destination Restriction) advanced programming has been optimized to allow the technician to navigate faster between the programming screens.

Toshiba America Information Systems, Inc.
Telecommunication Systems Division
9740 Irvine Blvd., Irvine, CA 92618-1697 (949) 583-3700
www.telecom.toshiba.com

The static route option has been moved from its original location in Webmin to Enterprise Manager where it is more secure. The static route option allows the technician to configure the IPedge system to go out on an alternate network route to reach a specific destination. This is required in installations with SIP trunks located on a route different than IPedge-Net, remote phones or internet access.

IPedge system software release 1.7.4 and later support SSL Certificates from a Certificate Authority (CA). The R1.7.4 and later IPedge systems no longer support Self Certification.

Dongle Offline Licensing

Currently, Toshiba's virtual licensing service requires internet access for initial licensing and the weekly 'call home' to maintain licensing validation. Enterprise Manager will run in limited-functionality mode for IPedge and App Servers without internet access or systems that do not have a static public IP address and cannot communicate with the licensing service.

The new dongle offline licensing option in IPedge release 1.7.4 eliminates the need for internet access or a static IP address by binding the license to the dongle. Once the license is bound to a dongle, the dongle must be plugged into the IPedge server at all times. If the license dongle is unplugged, a notification voicemail will immediately be sent to the person in the notification list. After 24 hours, all calls, except 911, will be prohibited until the license dongle has been plugged back in. **Note:** Dongle offline licensing works on IPedge virtual systems, it is not applicable on Toshiba branded IPedge servers.

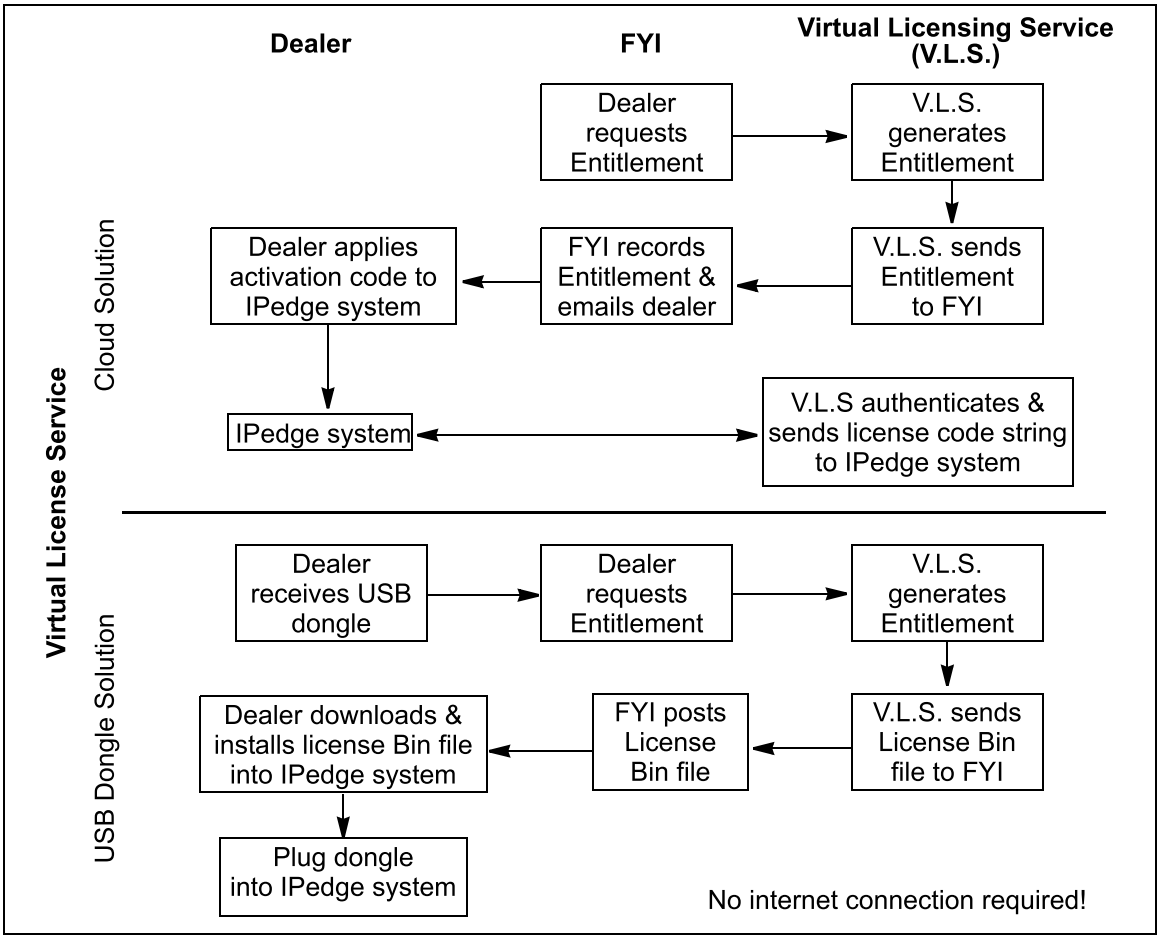


Figure 1 Comparison of Cloud Licensing and Dongle Offline Licensing.

Dongle Part Number	Description
H-VID-LIC-EP	EP Dongle (blue) for IPedge 1.7.4 and later
H-VID-LIC-EC	EC Dongle (blue) for IPedge 1.7.4 and later
H-VID-LIC-EM	EM Dongle (blue) for IPedge 1.7.4 and later

Change from On-line Virtual License to Off-line Dongle License

To change existing IPedge systems to Dongle licensing the server must be upgraded to IPedge release 1.7.4 software. The IPedge software release 1.7.4 dongles are blue in color. License transfer from a Toshiba branded server to a virtual server using a license dongle will not be available until early March 2017.

This procedure is for installed IPedge systems with a virtual license. For new systems that have not been licensed refer to the IPedge Virtual Server install manual.

Important! Order the license dongle **before starting this process**. You must have the license dongle to complete the license upgrade procedure.

Important! The IPedge server must have internet access for this procedure.

1. Login to Toshiba's FYI web site
2. Select **License Codes > IPedge Virtual Licensing**.
3. Enter the System Number of the installed system.
4. Select the **Customer Name**.
5. The sites and system names for this customer will be listed.
6. Click on the **Create New System** button. You are adding a new system to this customer.
7. Complete all of the required fields (*) to create the new system. Use a unique name for the new system This will be the new name of the installed system. Click the **Submit** button.
8. The new system name is added to the list of systems for this customer.
9. Select **License Codes > System Upgrade** then, click on **Create New**.
10. On the System Upgrade Quote page, complete all of the required fields.
    Use the pull-down list to specify the Target System (select a -V Dongle)
    For the Serial #/System # field enter the new system number created in Step 6.
    The Virtual Dongle ID is the number of the license dongle that was ordered for this upgrade.
11. Click on the **Continue** button. on the new system upgrade quote screen the new customer number (created in Step 6) will show as the **Target System #**.
12. In the Source System field use the pull-down list to select the existing system.
13. In the Source Serial #/System # field enter the system number of the existing system.
14. In the Process Disposition field select **Keep (Non-branded)**.
15. Click on **Continue**.
16. Verify that the licenses and quantities are correct, click on **Continue**.
17. Check-mark the **I Agree** to the above … box then, click on the **Finalize** button.
18. The EULA will be sent to the customer contact email address.
19. When the EULA has been accepted the license BIN file to be generated then sent to the dealer contact email address.

20. If the license dongle number was not entered in Step 10 an error message dialog will open. click on Continue, go to Step 10, enter the dongle number, follow the remaining steps to finish.

USB Pass-through Setup

Existing IPedge virtual servers using the virtual licensing service that are upgrading to Off-line (dongle based) licensing require USB port pass-through setup. This setup procedure allows the virtual server VMware® to recognize the license dongle when it is plugged into a USB port on the server.

1. Ensure that the IPedge server has a connection to the internet.
2. Launch vSphere client on the administrator PC.
3. Login to the IPedge server.
4. Select the **Getting Started** tab.
5. Select the IPedge server from the list on the left side of the screen.
6. Click on **Shut down the virtual machine**.
7. Plug the license dongle into a USB port on the IPedge server.
8. Wait for the system to shutdown, about 2 minutes.

Important! The IPedge virtual machine must be completely shut down. To view the shutdown progress select the **Console** tab.

9. In the Getting started tab click on **Edit virtual machine settings**.
10. Go to the **Hardware** tab then, click on the **Add** button.
11. In the Device Type dialog select **USB Device** then click on the **Next** button.
12. Select **Aladdin Knowledge Sentinel HL**.
13. Click on **Next**.
14. In the Ready to Complete dialog click on **Finish**.
15. In the Hardware screen you will see the New USB Device, click on **OK**.
16. In the **Recent Tasks** at bottom of the screen wait for this task to complete before continuing.

Note This procedure maps one USB port for license dongle pass-through. Toshiba recommends that you map all of the USB ports for license dongle use. Move the USB dongle to the next available USB port. Repeat Step 7 through Step 16 for each of the USB ports.

17. When all of the USB ports are complete, continue to Step 18.
18. Select **Edit virtual machine settings**.
19. Click on **Edit virtual machine** on the getting started tab in the basic tasks.
20. Click on **Power on the virtual machine**.
21. Allow the IPedge virtual machine to run for two the five minutes to allow all of the processes to startup.
22. Login to Enterprise Manager on the IPedge server.
23. Select **Maintenance > Licensing > License Control**. The system will show **Not licensed**.

Off-line Licensing

Licenses are purchased through the Toshiba FYI web site. Use the following procedure to update or add new licenses. The license dongle serial number is entered during the license generation process on the FYI website.

Download License File

After the licenses upgrade is complete a license file will be sent to the contact email address. Download the license file to the Administration PC. The file can be saved to any file storage unit on a network that the administration PC and the IPedge server can access. Use the following procedure to apply the license file to the IPedge server.

Upload and Apply License

1. Plug in the license dongle.
2. Login to the Enterprise Manager on the Primary IPedge server.
3. Select **Maintenance > Licensing > License Control**.
4. Select the server to be licensed.
5. Click on the **Upload License** file icon.
6. Enter the location and name of the license file or click on the Browse button to locate the license file.
7. Click on **OK**.
   The license file name, server MAC address and the server name will be displayed. Verify that the MAC address is the correct address for this server. Double click on this line for a detailed list of the licenses.
8. Click to check-mark the uploaded file then, click on the **Apply** icon.
9. After the license is applied, the license result should show “Successful”.
10. Then check “**Yes, I want to reboot the system now**” and click on **OK**. Reboot can take several minutes.

Display License Information

To display the items and quantities licensed on the server.

1. Login to the Enterprise Manager on the Primary IPedge server.
2. Select **Maintenance > Licensing > License Information**.
3. Select the server to display.

To display detailed information about a specific license.

1. Login to the Enterprise Manager on the IPedge server you are going to license.
2. Select **Maintenance > Licensing > License Control**.
3. A list of all the licenses on the server will be displayed.
4. Click to check-mark a license then, click on the **View** icon.
5. After the IPedge server has restarted, login to Enterprise Manager.
6. In Enterprise Manager select **Administration > Enterprise > Servers**.
7. Check the Server Name box and click the **Server Synchronization** icon.
8. The Enterprise - Servers Status screen displays. Check the Table Name box then click on the “**Order database synchronization**” icon.
9. A confirmation dialog window will display. Click on **OK** to start the database synchronization. Wait for the database synchronization to finish. This will take a few minutes.

Enterprise Manager Static Route

In our constant efforts to enhance system security in every aspect of the IPedge system, we have disabled the static route functionality in Webmin and moved the functionality to IPedge Enterprise Manager where it is more secure. A new section in the Enterprise Manager System Setup/Network configuration page has been for Static Routes as shown in Figure 2.

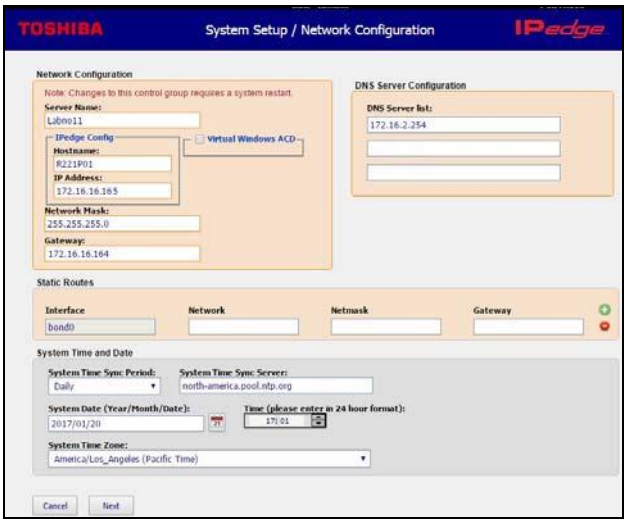


Figure 2 Static IP Address

Enterprise Manager QoS Troubleshooting Tool

New with IPedge 1.7.4 is the ability for the dealer technician to view a completed call's MOS score (Mean Opinion Score) to assist the technician in troubleshooting call quality issues.

The QoS report also provides a Search option to easily filter the report to target and find specific calls based on any of the column names. The QoS report can be downloaded as a CSV file. The file can be viewed and sorted using a spreadsheet program such as Microsoft® Excel®.

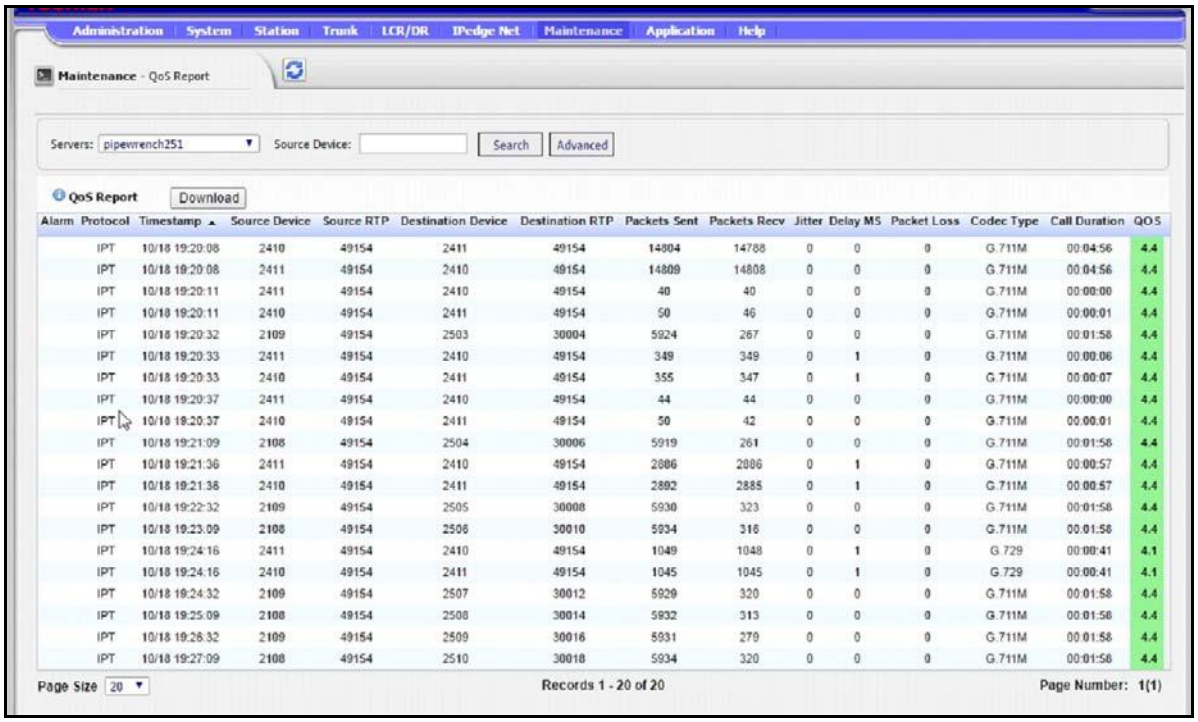
For every finished call, the technician will be able to view valuable metrics such as:

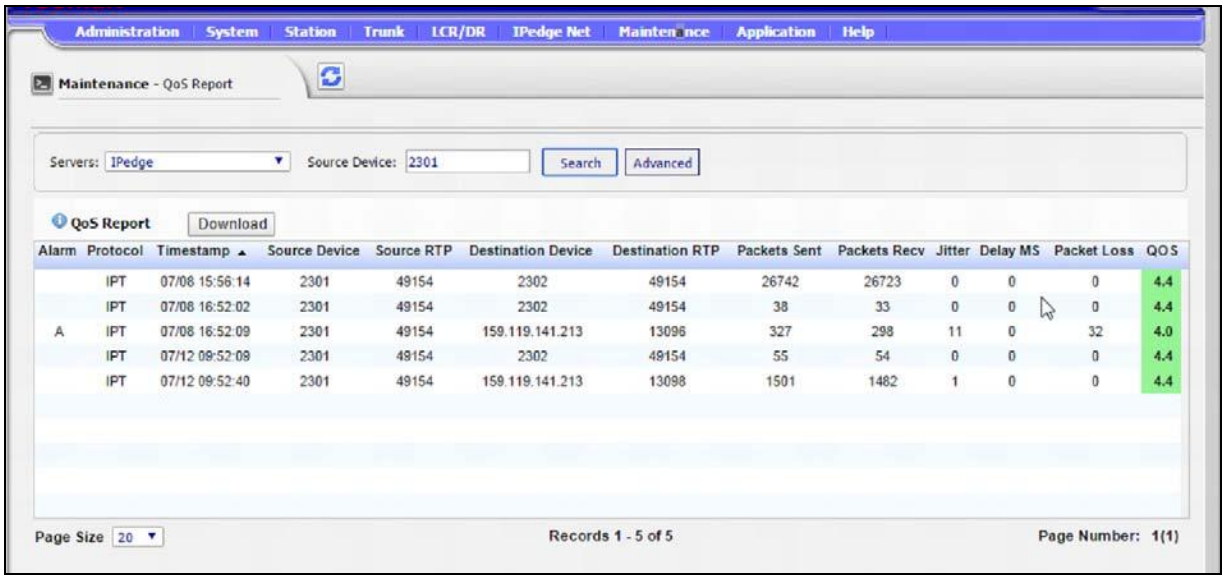
- Source and Destination ports
- Packets Sent and Received
- Jitter
- Delay
- Packet Loss
- CODEC

Quality Of Service Values

Range	User Experience
4.3 or above	Very Satisfied
4.0 – 4.2	Satisfied
3.6 – 3.9	Some users Dissatisfied
3.1 – 3.5	Many users Dissatisfied
2.6 – 3.0	Nearly all users Dissatisfied
1.0 – 2.5	Not recommended for use

Note The maximum achievable score for G711 is 4.4.
The maximum achievable score for G729 is 4.1.


Administration System Station Trunk LCR/DR IPedge Net Maintenance Application Help
Maintenance - QoS Report
Servers: pipewrench251 Source Device: Search Advanced
QoS Report Download
Alarm Protocol Timestamp Source Device Source RTP Destination Device Destination RTP Packets Sent Packets Recv Jitter Delay MS Packet Loss Codec Type Call Duration QOS
IPT 10/18 19:20:08 2410 49154 2411 49154 14804 14788 0 0 0 G.711M 00:04:56 4.4
IPT 10/18 19:20:08 2411 49154 2410 49154 14809 14808 0 0 0 G.711M 00:04:56 4.4
IPT 10/18 19:20:11 2411 49154 2410 49154 40 40 0 0 0 G.711M 00:00:00 4.4
IPT 10/18 19:20:11 2410 49154 2411 49154 50 46 0 0 0 G.711M 00:00:01 4.4
IPT 10/18 19:20:32 2109 49154 2503 30004 5924 267 0 0 0 G.711M 00:01:58 4.4
IPT 10/18 19:20:33 2411 49154 2410 49154 349 349 0 1 0 G.711M 00:00:06 4.4
IPT 10/18 19:20:33 2410 49154 2411 49154 355 347 0 1 0 G.711M 00:00:07 4.4
IPT 10/18 19:20:37 2411 49154 2410 49154 44 44 0 0 0 G.711M 00:00:00 4.4
IPT 10/18 19:20:37 2410 49154 2411 49154 50 42 0 0 0 G.711M 00:00:01 4.4
IPT 10/18 19:21:09 2108 49154 2504 30006 5919 261 0 0 0 G.711M 00:01:58 4.4
IPT 10/18 19:21:36 2411 49154 2410 49154 2886 2886 0 1 0 G.711M 00:00:57 4.4
IPT 10/18 19:21:38 2410 49154 2411 49154 2892 2885 0 1 0 G.711M 00:00:57 4.4
IPT 10/18 19:22:32 2109 49154 2505 30008 5930 323 0 0 0 G.711M 00:01:58 4.4
IPT 10/18 19:23:09 2108 49154 2506 30010 5934 316 0 0 0 G.711M 00:01:58 4.4
IPT 10/18 19:24:16 2411 49154 2410 49154 1049 1048 0 1 0 G.729 00:00:41 4.1
IPT 10/18 19:24:16 2410 49154 2411 49154 1045 1045 0 1 0 G.729 00:00:41 4.1
IPT 10/18 19:24:32 2109 49154 2507 30012 5929 320 0 0 0 G.711M 00:01:58 4.4
IPT 10/18 19:25:09 2108 49154 2508 30014 5932 313 0 0 0 G.711M 00:01:58 4.4
IPT 10/18 19:26:32 2109 49154 2509 30016 5931 279 0 0 0 G.711M 00:01:58 4.4
IPT 10/18 19:27:09 2108 49154 2510 30018 5934 320 0 0 0 G.711M 00:01:58 4.4
Page Size 20 Records 1 - 20 of 20 Page Number: 1(1)


Administration System Station Trunk LCR/DR IPedge Net Maintenance Application Help
Maintenance - QoS Report
Servers: IPedge Source Device: 2301 Search Advanced
QoS Report Download
Alarm Protocol Timestamp Source Device Source RTP Destination Device Destination RTP Packets Sent Packets Recv Jitter Delay MS Packet Loss QOS
IPT 07/08 15:56:14 2301 49154 2302 49154 26742 26723 0 0 0 4.4
IPT 07/08 16:52:02 2301 49154 2302 49154 38 33 0 0 0 4.4
A IPT 07/08 16:52:09 2301 49154 159.119.141.213 13096 327 298 11 0 32 4.0
IPT 07/12 09:52:09 2301 49154 2302 49154 55 54 0 0 0 4.4
IPT 07/12 09:52:40 2301 49154 159.119.141.213 13098 1501 1482 1 0 0 4.4
Page Size 20 Records 1 - 5 of 5 Page Number: 1(1)

Messaging Storage Encryption

IPedge Messaging provides an option to encrypt all voicemail and fax messages stored in the system. The system wide option is provided to enable or disable the encryption. When enabled, the voicemail or the fax mail messages are encrypted and stored in the system when a message is stored.

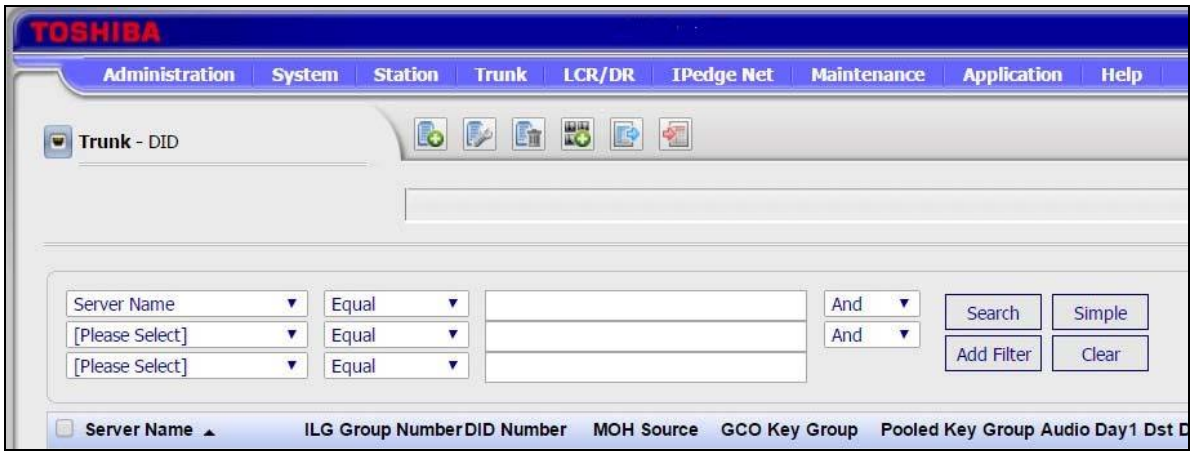
The system administrator can enable or disable the encryption. When it is changed, IPedge Messaging will restart and automatically encrypt or decrypt all of the stored voicemail and fax messages. When encryption is enabled, voicemail and fax messages in the backup data are also encrypted. If the encrypted data is restored to the system which disables the encryption, IPedge Messaging will automatically decrypt and restore the data (refer to the note). If the data is restored to the system which enables the encryption, it is automatically encrypted when it is restored.

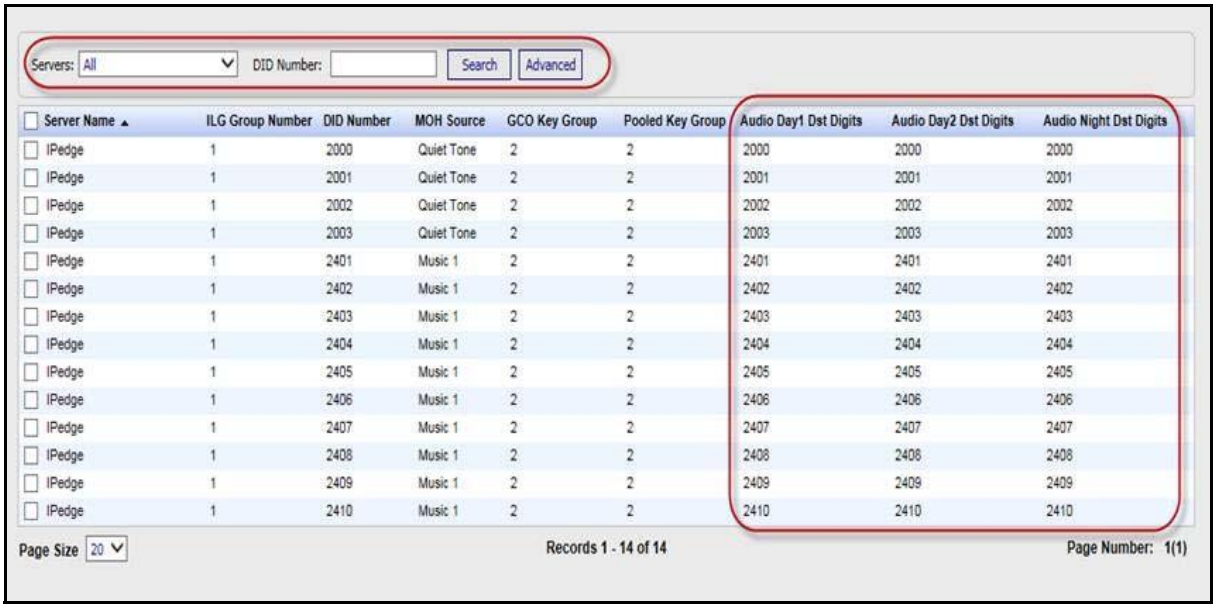
Only the stored voicemail and Fax messages are encrypted, and the operation is transparent to users when leaving a message or playing back.

CAUTION! Disabling the encryption and/or restoring the data to the system with encryption disabled requires the encryption key. The administrator must retain the key provided when enabling the encryption. If the key is missing the encrypted data cannot be decrypted.

DID Search Enhancement

A DID search function has been implemented in the DID table. The Search allows the administrator to compose a query on multiple columns of the DID table to find DID records quickly, similar to the search function in the Stations table.

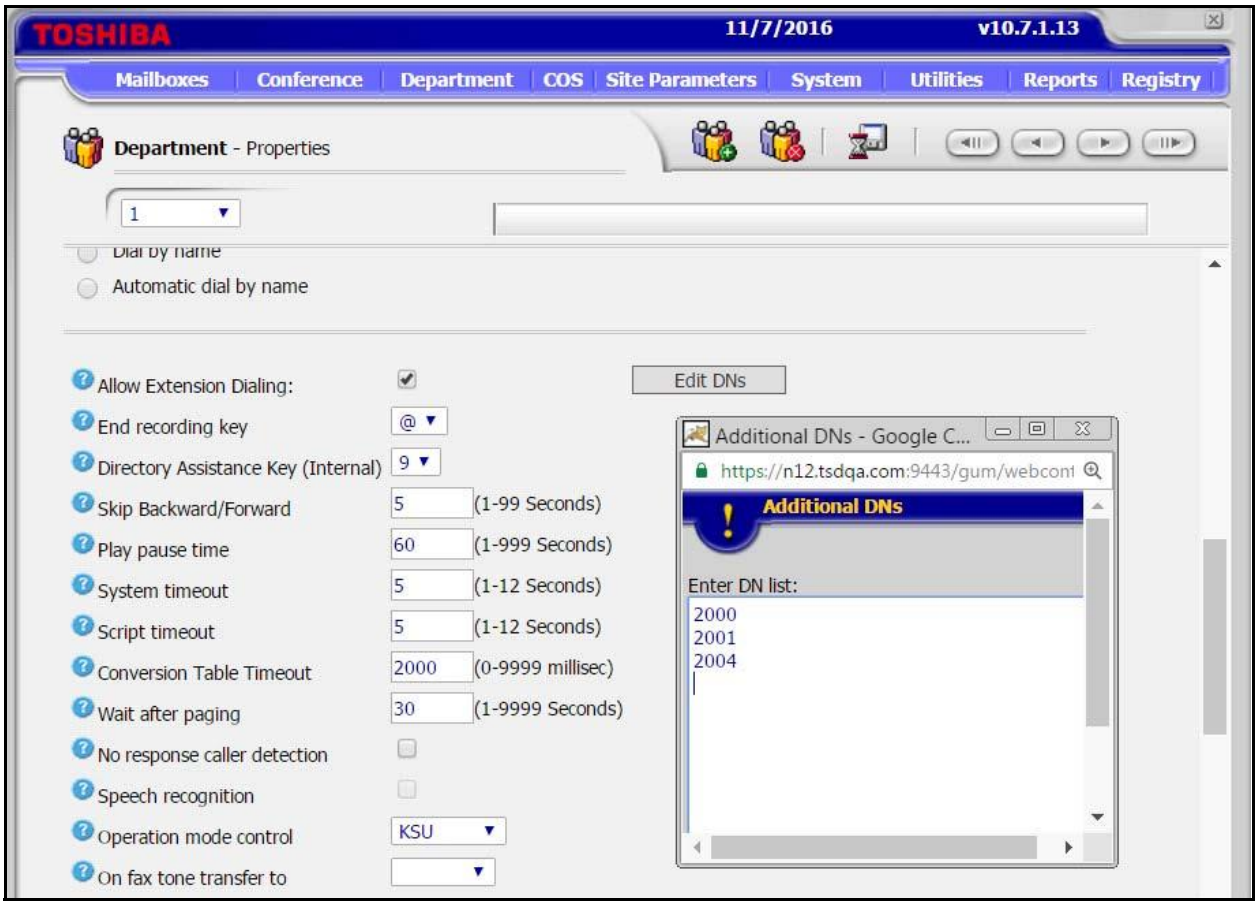




Auto Attendant Dialing

IPedge Messaging now provides customers with an option to allow dialing an extension without a mailbox. This is extremely useful when dialing shared phones such as conference room phones and users who do not need a voicemail box.

The system can be set to allow the auto-attendant to dial any station. For increased security to auto-attendant can be limited to dialing only the stations on a white list.



Security Certificate for HTTPS

IPedge system software release 1.7.4 and later support SSL Certificates from a Certificate Authority (CA). The R1.7.4 and later IPedge systems do not support Self Certification. Supported Certificate Authorities include:

- GoDaddy®
- Verisign®
- Thawte®
- Comodo®

The Enterprise Manager HTTPS page supports the certificate from a CA and notifies the other IPedge system components when a new or updated certificate is available. The CA Certificate tab in the Enterprise Manager HTTPS page is used to manage the CA certificate; loading the private key, the certificate, the chain certificate (if there is one), and the optional CSR file. The certificate must be PEM format. If requested, select a certificate for Apache Tomcat (not Tomcat).

Meet Me Audio Conference Enhancement

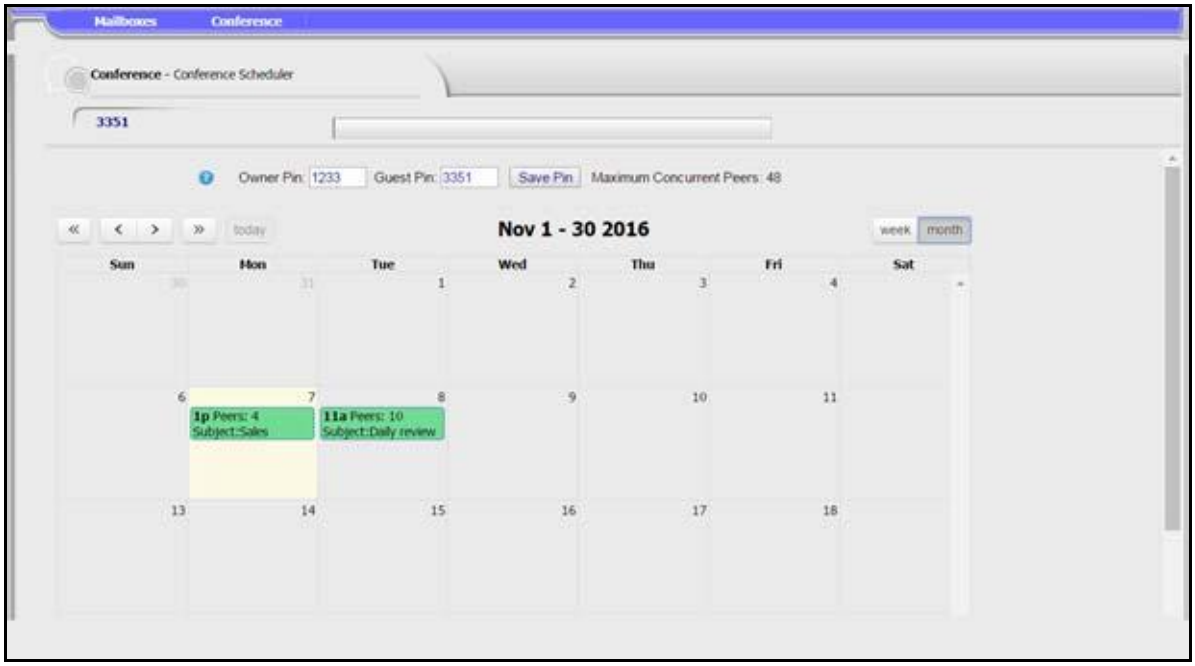
IPedge 1.7.4 enhances the Conference View and Scheduler in Meet Me Audio Conference.

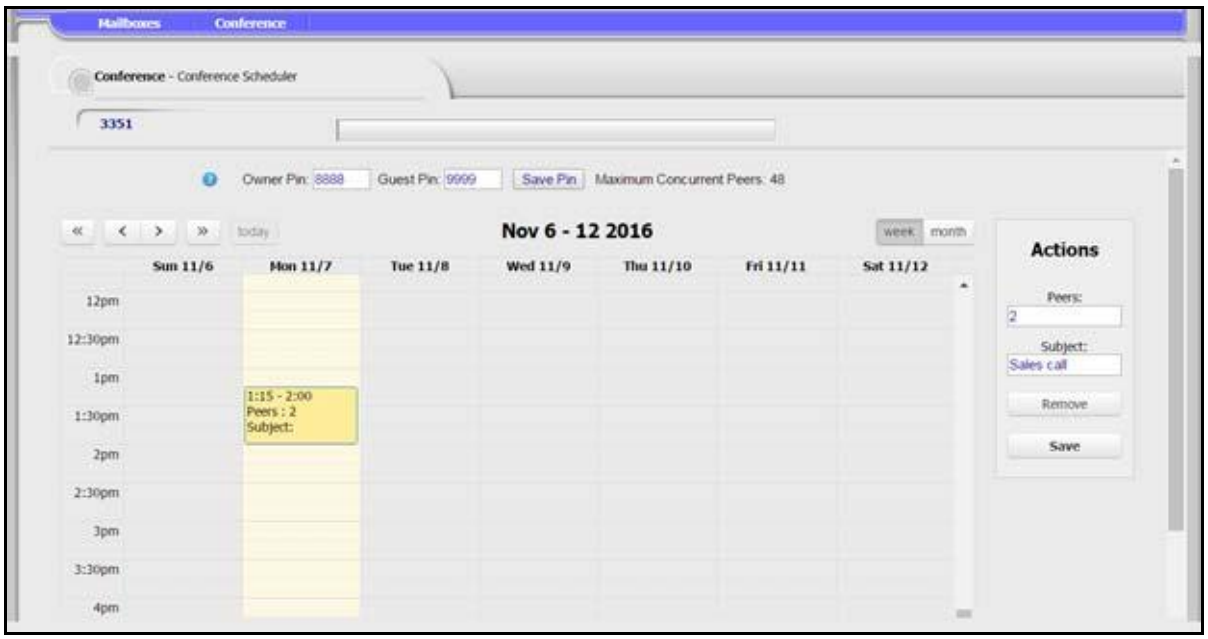
Conference view

In the older version, Conference view is only accessible after the conference began. Now, it allows the user to access the Conference View at any time so that the user can view the list of participants before starting the conference.

Conference Scheduler

In order to schedule and view the conference more easily, the Conference Scheduler is now based on the calendar. The Monthly view allows the user to quickly find the availability of the conference, and in the Weekly view, the user can drag the time slot for the conference and add the number of total channels and subject to schedule a conference call.





Rack mount Shelf for the Dell 7040M Chassis

The optional 7040M rack mount shelf allows the server to be mounted in standard 19 inch racks.

The 7040M chassis is secured in the box with a screw (included) and the cables secured with cable ties (included) to the slots in the rear edge of the shelf.

Availability

IPedge 1.7.4 software is available now for download from Toshiba's FYI web site.

Trademarks