

TOSHIBA

Toshiba IPedge Installation Manual

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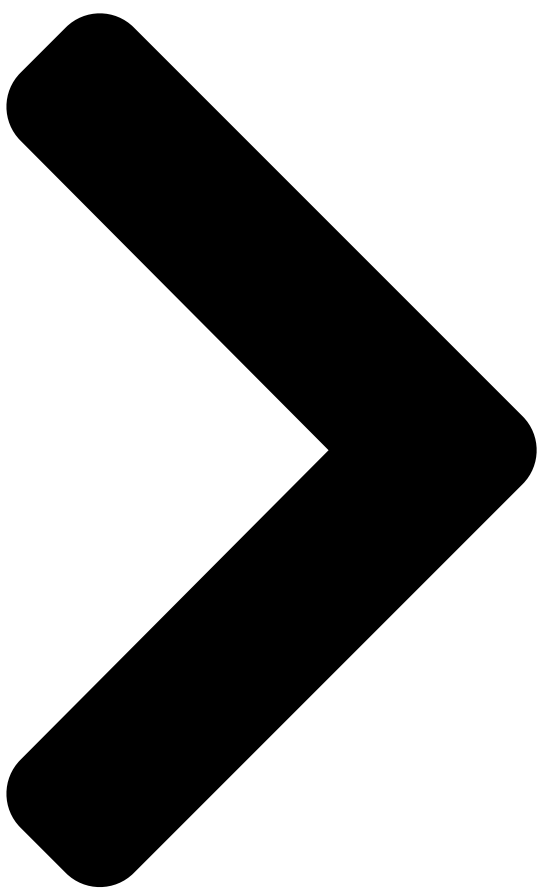
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TOSHIBA

Telecommunication Systems Division

Installation Manual

June 2011

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Summary of Contents for Toshiba IPedge

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TOSHIBA Telecommunication Systems Division Installation Manual Title Page June 2011...

[Page 2](#) To view the latest version of this or other documents please refer to the Toshiba FYI web site. Toshiba America Information Systems shall not be liable for any commercial losses, loss of revenues or...

[Page 3](#) General End User Information FCC Requirements Means of Connection: The IPedge

does not connect directly to the telephone network. All direct connections are made to a gateway. Please refer to the gateway manufacturer's documentation Radio Frequency Interference Warning: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the manufacturer's instruction manual, may cause interference to radio...

[Page 4](#) In the event of a power failure or network availability outage the IPedge system's SIP service will be disabled. The user understands that in the event of a power or network outage the IPedge system will not support 911 emergency services and further, that such services will only be available via user's regular telephone line not connected to the IPedge system or gateway.

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IPedge Call Processor Database (All Nodes).....

[Page 12](#) IPedge SERVER SETUP

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[Page 16](#) IPedge RECOVERY DISK

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[Page 19: Chapter 1 - Introduction](#)

The IPedge™ System is an advanced unified communications systems. It consists of an Integrated IPedge Solutions server running multiple applications. A single system could be made up of one or more IPedge Servers. Multi-node IPedge Net Systems consist of multiple IPedge Solutions servers connected via IPedge Net to appear as a single large system.

[Page 20: System Topology](#)

Site Within this document, the term Site refers to the physical location where the IPedge or CIX systems are installed. At a site, the systems can be Stand-Alone, one or more Nodes or an IPedge Net Enterprise System. IPedge NODES In every Enterprise and Networked IPedge system there will be one Primary Node and any remaining nodes will be Member Nodes.

[Page 21: Detached Node](#)

Figure 1-2 IPedge Enterprise System IPedge Net IPedge Net Networked Systems – A collection of two or more IPedge or CIX systems interconnected by IPedge Net. These systems can be physically collocated within a LAN or geographically dispersed across wide area networks.

[Page 22](#) ENTERPRISE SYSTEMS IPedge Net All of the nodes share a numbering plan and, for the most part, appear to a user as a single system. All systems are managed using a Single Point of Management. The system administrator accesses all systems, branches, node, sites by logging into a single, web-based administration program on the Primary Node.

[Page 23: System Administration](#)

SYSTEM ADMINISTRATION IPedge Net SYSTEM Only one source can issue changes to database. That one source (the ADMINISTRATION Command Source) is the Primary node. Each node has the IP address of the Command Source. If an SNMP command received has a different source IP address, the command is not accepted.

[Page 24: Single Page View Management](#)

Database backup for the entire system is run from the central location. The central location is the Enterprise Manager on the Primary node. IPedge APPLICATIONS The IPedge server in each node is referred to as the Integrated IPedge server. This server includes these IPedge Applications: • IPedge Core •...

[Page 25: Detached Node](#)

Manager in the primary node. When a node is detached it can still be connected to the rest of the Enterprise System via IPedge Net but is no longer part of the central administration. The database copy is no longer maintained at the central node.

[Page 26: Database And Data Classifications](#)

- User Data IPedge Call Processor An IPedge Call Processing database exists on each node. The Call Database (All Nodes) Processing database is the local call processing DB. It is a non-MySQL database, independent of Enterprise Manager DB. This database contains the local operations for call processing in it's own node.

[Page 27: Call Processing Database \(Primary Node Only\)](#)

When Bacula runs a backup job a copy of the call processing database (backup.dat) for every node is saved in the Bacula Store. All applications other than IPedge Call Processing have their own database. The information is kept locally within a node. The Primary Node DB does not contain application information other than the applications running on the Primary.

[Page 28: Database Synchronization](#)

Member Node Call Processor DB then, updated in the Primary Node Enterprise Manager DB. When a Member Node is attached to an IPedge Net Enterprise System for the first time its

IPedge Call Processor DB will be read directly by the Primary Node Enterprise Manager to update the Primary Node DB.

[Page 29: Enterprise Manager Single View, Single Page](#)

The two networks are separate and independent. The loss of one network connection to a node does not mean the other connection will stop. For example, it may be necessary to change a member node in an IPedge Network enterprise system to a stand-alone primary. In this event the node is detached from the enterprise system.

[Page 30: Centralized Management](#)

CENTRALIZED MANAGEMENT Single Point of Management CENTRALIZED IPedge Enterprise Manager allows access to all of nodes in a network MANAGEMENT from a single login at a central terminal. Single Point of A Single Point of Management offers the user a convenient, single...

[Page 31](#) Detached Node Figure 1-4 Two IPedge Nodes and One Strata CIX Node A Strata CIX system can be connected to an IPedge system via IPedge Net. When the databases, IPedge and CIX, are programmed correctly calls will be processed from one system to the next. This means that an IPedge system can be added to an existing CIX system.

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[Page 33: Chapter 2 - Ipedge Hardware](#)

IPedge SERVERS The IPedge hardware platform is available in two configurations. The IPedge EC serving up to 200 users and the IPedge EM serving up to 1000 users. The servers are both 1U rackmount chassis. Refer to Figure 2-1.

[Page 34: Input Power](#)

Figure 2-3 IPedge EC Server Rear Panel Connections EC Front Panel The front panel of the IPedge EM server has push-button switches and LED indicators. The disk drive is accessible from the front. The power supply is accessed through the rear panel. All cable connections are on the rear panel.

[Page 35: Ec Rear Panel Connections](#)

- IPMI EM SERVER For IPedge systems of up to 1000 users. This server has two, front access 3 GB hard disk drives. RAID 1 configuration is available as an option. The IPedge EM server supports IPMI (Intelligent Platform Management Interface) 2.0.

[Page 36: Em Front Panel](#)

EM SERVER EM Front Panel EM Front Panel The front panel of the IPedge EM server has push-button switches and LED indicators. the hot-swappable disk drives are accessible from the front. The redundant power supplies are accessed through the rear panel.

[Page 37: Rear Panel Connections](#)

UID Button HDD 0 HDD 1 Figure 2-4 IPedge EM Server Hardware - Front View Rear Panel Connections The rear panel connectors and indicators are described below. AC power - Each of the two power supply modules has an AC power cord connector.

[Page 38: Em Server Power Supplies](#)

INSTALLATION racks and cabinets. EC SERVER RACKMOUNT The IPedge EC Server is 15 inches (381 mm) deep. Rails are not included with the server chassis. The optional mounting rails are designed for installation in two-post or four-post racks. Installation Manual...

[Page 39](#) EC SERVER RACKMOUNT Power Supply Failure 1. Attach the inner rails to the sever. 2. Attach the outer rails to the front of the rack mount cabinet. 3. Install the server chassis by sliding the inner rails into the outer rails. Slide the chassis in until the front chassis brackets contact the outer rail bracket.

[Page 40: Em Server Rack Mount](#)

EM SERVER RACK MOUNT Rack Mount Kit Installation EM SERVER RACK The IPedge EM Server is

25.6 inches (650 mm) deep. The included MOUNT mounting rails are designed for installation in four-post racks and cabinets. Rack Mount Kit The rack mounting kit consists of two sections: an inner fixed chassis rail...

[Page 41: Installing The Outer Rails To The Rack](#)

EM SERVER RACK MOUNT Installing the Outer Rails to the Rack 3. Secure the chassis with two screws as illustrated. 4. Repeat steps 1-3 for the other inner rail extension. Figure 2-7 Inner Rack Extension Installing the Outer Rails 1. Attach the short bracket to the outside of the long bracket. You must to the Rack align the pins with the slides.

[Page 42: Installing The Chassis Into A Rack](#)

EM SERVER RACK MOUNT Installing the Chassis into a Rack Figure 2-8 Outer Rail Assembly Installing the Chassis into 1. Confirm that chassis includes the inner rails (A) and rail extensions a Rack (B). Also, confirm that the outer rails (C) are installed on the rack. Refer to Figure 2-9 Figure 2-9 Four Post Rack Installation...

[Page 43: Bezel Installation](#)

Figure 2-10 Server Chassis Install BEZEL INSTALLATION The IPedge bezel is an option. Order a bezel kit for the server model on which it will be installed. • For the EC Server order part number I-EC-BZL-1A •...

[Page 44: Em Server Bezel](#)

BEZEL INSTALLATION EM Server Bezel 1. After the chassis has been secured to the rack place a key into the slots on each end of the bezel. 2. Rotate the keys 90 degrees. 3. Place the bezel on the front of the chassis. 4.

[Page 45: Power Requirements](#)

POWER REQUIREMENTS EM Server Bezel POWER REQUIREMENTS The IPedge server should have a dedicated AC power circuit. The specific input voltage and current requirements for each server is listed the specifications for each model. Toshiba recommends an uninterruptible power supply (UPS) with power RECOMMENDATIONS conditioning for the IPedge server.

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[Page 47: Chapter 3 - Network Requirements](#)

Chapter 3 – Network Requirements The following list is the IPedge network characteristics required for a successful system implementation. Important! Toshiba recommends a through network assessment using Pathview, AppCritical or similar tool. During and after installation setup network monitoring with a tool such as What's up Gold, Solarwinds or, IPSLA.

[Page 48: Voip Requirements Remote Users](#)

LAN REQUIREMENTS VoIP Requirements Remote Users VoIP Requirements • Network Reliability – 99.99% Remote Users • Layer 3 voice prioritization recommended – Layer 3: DiffServ: Enabled / ToS Type:DSCP / DSCP for Voice: • 88kbps (G.711 audio) in each direction per simultaneous call –...

[Page 49: Voip Requirements Wifi Users](#)

LAN REQUIREMENTS VoIP Requirements WiFi Users The IPedge communication system is an IP system. At each site all of the system components are connected via a LAN. The IPedge server, on-site IPTs, gateways, other servers communicate over the site LAN. Other devices connect over a WAN or the Internet.

[Page 50](#) VoIP Requirements WiFi Users Figure 3-1 Enterprise Network with Strata CIX System A Strata CIX system can be connected to an IPedge system via IPedge Net. When the databases, IPedge and CIX, are programmed correctly calls will be processed from one system to the next. This means that an IPedge system can be added to an existing CIX system.

[Page 51: Broadcast Address](#)

BROADCAST ADDRESS Calculation Example BROADCAST ADDRESS A broadcast address is used to indicate that the information being sent should be delivered to every client on the local area network. These addresses are always the highest number possible in a particular network

address or subnet.

[Page 52](#) BROADCAST ADDRESS Calculation Example 4. Note the value for the broadcast address calculated by the application. Installation Manual June, 2011...

[Page 53: Chapter 4 - System Installation](#)

Before starting this procedure the following information is required for each IPedge server. • Two Static IP addresses – IPedge server LAN – IPedge Server IPMI connection • Netmask • Broadcast address • Network Time Protocol source •...

[Page 54: Installation](#)

Primary node first. 1. Install the IPedge server in a rack or equipment cabinet. 2. Connect the IPedge server to a LAN or connect directly to a PC with a 'cross-over' cable. 3. Power up the IPedge server. Set the rear panel power switch to 1 (on) then, press the front panel power button.

[Page 55: System Summary Information](#)

System Summary Information 4. Login to Enterprise Manager on the IPedge server using the default IP address, User ID and Password. System Summary 5. The System Summary information must be entered. The first screen Information shown after login is the System Summary. Click on the Edit icon.

[Page 56](#) System Summary Information 2. The Webmin information screen will appear. Advanced IPedge 3. On the Webmin page select Networking > Network Configuration then click on the Network Interfaces icon, select the Activated at Boot tab. In the list of interfaces double-click bond0.

[Page 57: Set Default Gateway](#)

22. Click on Return to network configuration. 23. On the Network Interfaces page click on Apply Configuration. 24. Close the Webmin window. 25. Close the Enterprise Manager browser window. 26. Login the Enterprise Manager using the new IP address of IPedge server. Installation Manual June, 2011...

[Page 58](#) 29. Scroll to the bottom of the page. Click on Reboot System. Note: System reboot may take several minutes. WARNING! Anytime the IPedge Hostname, IP Address or, the Hostname file is changed the server must be rebooted. If the you do not reboot the server after you change the Host name some functions and applications will not function correctly.

[Page 59: Set System Time](#)

6. In the Change timezone tab set the local time zone. 7. In the Time server sync tab enter the Timeserver hostname. Use an NTP pool. Toshiba recommends that the system sync to an NTP pool once each day. In the example below a local region NTP pool (north-...

[Page 60: Real Time Clock Hardware](#)

NAME EACH SERVER Assign a unique descriptive name to each IPedge server. 1. Login to Enterprise Manager on the server to be named. 2. Select Administration > Enterprise > Servers.

[Page 61](#) NAME EACH SERVER Real Time Clock Hardware 3. Click on the Edit icon. 192.168.254.250 Edit icon 4. Enter the new: Server Name - A unique descriptive name (same as the Host name for this server) and Community Name - (default is communityName) this name is use as authentication by some internal processes.

[Page 62](#) 8. Check-mark the Table Name box to select all of the tables then, click on the synchronize database icon. Check-mark Table Name box then, Click on the green Sync icon. The IPedge server is installed as a stand-alone system. 4-10 Installation Manual June, 2011...

[Page 63: License](#)

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. Login to the Enterprise Manager on the IPedge server you are going to license. 2. Select Maintenance > Licensing > License Control.

[Page 64: Change Root Password](#)

Privacy-release, ACD monitor, etc. Note that the IPedge system will not use mixing functions inside terminals. The media server is involved in audio processing in the IPedge system. The three basic audio processing functions are; to play, record, and mix audio streams.

[Page 65: Media Server Channel Guide](#)

Media Server Channel Guide utilization needs to be considered when engineering the bandwidth requirements between endpoints and the IPedge server. In the IPedge system, signaling information flows from the IPedge server to the endpoints, and audio streams flow between the endpoints. However,...

[Page 66: Restart The Media Server](#)

4. Click on the Restart button. Repeat this setup for each IPedge server. IPMI/BMC IP ADDRESS The IPedge server has an embedded Baseboard Management Controller (BMC). This controller provides remote hardware monitoring and remote access/console via IPMI. Refer to Chapter 15 – Maintenance for detailed information.

[Page 67: Meeting Conference](#)

1. Login in to Enterprise Manager, select Applications > Webmin > Setup Network Configuration > Host Addresses. 2. Select Add new host address enter the IP address of the IPedge server then add: admin.SERVER_NAME (enter the name of your IPedge server).prv webconf.SERVER_NAME (enter the name of your IPedge server).prv...

[Page 68: Meeting Ip Address Change Procedure](#)

MEETING INITIAL CONFIGURATION MEETING IP Address Change Procedure MEETING IP Address 1. In to Enterprise Manager, select Applications > Meeting > IPedge. Change Procedure 2. In the Welcome Screen, select System Configuration the screen below will display. Enter the following: System Name - The Meeting service name Server Name - The meeting admin server name.

[Page 69: Https Certificate](#)

HTTPS CERTIFICATE MEETING IP Address Change Procedure 6. Enter the IP Address of the IPedge server in the Circuit Group Address field. IPedge Server Addr IPedge Server Addr This is the end of the Meeting initial configuration. HTTPS CERTIFICATE If you are going to use https secure connection to the Enterprise Manager create the https certificate.

[Page 70: Assign Member Node](#)

Complete this procedure for one node. Then, complete this procedure for the next node. 1. Login to Enterprise Manager on the IPedge server that you want to be a member of an enterprise. Use the IP address of the server to access Enterprise Manager on that node.

[Page 71: Add Member Node](#)

ADD MEMBER NODE MEETING IP Address Change Procedure 8. Repeat this process for each Member Node. ADD MEMBER NODE The following process adds then, attaches the member nodes to the primary node. 1. Login to the primary node Enterprise Manager. 2.

[Page 72: System Security](#)

When the database synchronization is done the node is connected. SYSTEM SECURITY All IPedge systems ship with the same User Name and Password. When the initial installation is complete change the default Enterprise Manager login name and password. 4-20...

[Page 73: Detach A Member Node](#)

After the node is detached it will not accept programming changes from any other node. If the node was a member of an IPedge Network, it will continue to function as a part of the network. Note that any changes made to other nodes in the network that effect network operation will also need to be made to the detached node.

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[Page 75: Chapter 5 - Enterprise Manager](#)

Mozilla Fire Fox version 5 or later LOGIN In the address bar of your internet browser enter the IP address of the IPedge server to which you wish to connect, Enterprise Manager uses port 8080. Note: When an IPedge server is installed behind a firewall ports 8080 (Enterprise Manager) and 10000 (Webmin) must be open.

[Page 76: Roles](#)

Each role is defined as a list of permission items (access rights) that determine the user's access level in Enterprise Manager. The IPedge system has four technician roles and two telephone user roles defined when shipped. These roles cannot be changed. New roles can be added to create custom definitions.

[Page 77: Phone User](#)

USERS Phone User Role Name - Select the name of the role that defines the permissions for this user. Email Address - This entry is required but not used at this time. 5. Click on the Save icon. Phone User To add phone user: 1.

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[Page 79: Chapter 6 - Webmin](#)

Chapter 6 - Webmin Webmin is a graphical user interface used to simplify Linux operating system management. Webmin lets you perform these tasks through a web interface, and automatically updates all of the required configuration files. Webmin is accessed through Enterprise Manager, select Application > Webmin.

[Page 80: Shutdown System](#)

SHUTDOWN SYSTEM SHUTDOWN SYSTEM 1. Select Application > Webmin. 2. In the Webmin screen select System > Bootup and Shutdown. 3. Click on the Shutdown System button. Important! Do not change the start At boot flag for any service. Installation Manual June, 2011...

[Page 81: Chapter 7 - IPedge System Backup](#)

Chapter 7 - IPedge System Backup BACULA The IPedge system backup process is controlled by Bacula, a Client/ Server based backup program. Bacula is a set of programs that manage the backup, recovery, and verification of the IPedge configuration database for a stand alone system or every node on an enterprise network.

[Page 82: Backup Schedule](#)

Tuesday. An incremental backup is run Wednesday through Monday. Change Backup Use the following procedure to change the IPedge backup schedule. Schedule 1. Navigate the to the Bacula main screen (Application > Webmin, click on Backup and Restore).

[Page 83: Create A New Backup Schedule](#)

Tuesday at 2:30 a.m. 7. Select the schedule you want then, click on the OK button. Create a New Backup Use the following procedure to create a new the IPedge backup schedule. Schedule 1. Navigate the Bacula main screen.

[Page 84: Verify Backup Job Status](#)

Restore from Job field select the specific job you wish to restore. 6. In the Options for the Target select the IPedge server to restore. 7. Click on the Restore button. 8. Bacula will display an output file that shows the status of the Restore.

[Page 85: Manual Backup](#)

PC the system administrator is using. Manual Backup This creates a backup as a file in the backup section on the IPedge Procedure server. 1. Login to Enterprise Manager. Select Application > Webmin.

[Page 86: Download Backup File](#)

MANUAL RESTORE Download Backup File Download Backup File This process copies the backup file on the IPedge server to any location the PC the administrator is using can access. 1. Login to

Enterprise Manager. Select Application > Webmin. 2. If this is a multi-node system select the Primary server.

[Page 87: Restore The Server](#)

1. Login to Enterprise Manager. Select Application > Webmin. 2. If this is a multi-node system select the Primary server. 3. In the Webmin screen select IPedge > Backup and Restore. Click on the Restore icon. 4. In the Restore from Files tab select the server to restore.

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[Page 89: Chapter 8 - Https Configuration](#)

All of the servers in a network must be operating in HTTPS, otherwise some features will fail. • The IPedge server host names and server names must be configured and registered with a DNS server. Important! Create the https certificate for the Primary server. Add the certificate to your browser's 'trusted sites.'...

[Page 90: Root Certificate Download](#)

4. Click on the Import button and follow the on screen prompts to import the primary server root certificate. 5. When completed close all browser windows. 6. Launch the browser, the IPedge server certificate is now trusted on this PC. Login to Enterprise Manager as usual. Note:...

[Page 91](#) TURN HTTPS OFF Trust the Certificate URL when accessing Enterprise Manager. The default is: http:// serverName:8080/oamp. Installation Manual June, 2011...

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[Page 93: Chapter 9 - Ipt Software Update](#)

Chapter 9 – IPT Software Update INTRODUCTION Toshiba IPT5000-series telephones can connect to IPedge servers. For the telephones to fully function with the IPedge features the telephone software must be updates to the latest version. The following procedure details the steps to update your existing IPT5000-series telephone software for connection to an IPedge server.

[Page 94](#) Browse button to navigate to the files. Then, click on Upload. Note: If a USB drive plugged into the IPedge server was used to load the update software remove the USB device as soon as the upload is complete. If the USB device is left in the server cannot reboot.

[Page 95](#) INSTALLATION IP Telephone Hardware 10. The screen will show the update process status. NorthTower012 NorthTower012 NorthTower012 NorthTower012 NorthTower012 Update successful The indicators and control icons for the IP Phone software update process are shown below. Abort Updating Phones Then Stop Update Process Let Updating Phones Finish Then Stop Update Process Update Process Not Started...

[Page 96](#) This page is intentionally left blank.

[Page 97: Chapter 10 - Network Address Translation](#)

21000 ~ 22999 21000 ~ 22999 MEDIA RELAY SERVER Enter the Public IP address of the IPedge server. Enter the port range to SETUP be used for calls. Each call requires two UDP ports for the audio streams (one port out bound, one port inbound).

[Page 98: Network Security](#)

NETWORK SECURITY IPedge Configuration NETWORK SECURITY After the IPedge system is installed, the SIP Trunks and/or Remote IP Telephones working, it is the responsibility of the installer and system user to setup the firewall to help prevent unauthorized access. While this can be accomplished in many ways one basic method is using lists.

[Page 99: Cisco](#)

FIREWALL SETUP Cisco Cisco 1. Verify that the Cisco firewall software is up to date. 2. Add the TCP and UDP ports to the Manage Ports list. Add the following ports: • 1100 to 1105 TCP (Systems connecting with unifier) •...

[Page 100](#) FIREWALL SETUP Cisco 3. In Configuration > Enable Traffic Through ... > Translation Rules. Select Use NAT the, enter the Inside (IPedge private) Address and the Outside (IPedge public) Address. IPedge Private IP Address IPedge Public IP Address 10-4 Installation Manual...

[Page 101](#) FIREWALL SETUP Cisco 4. In the Edit Access Rule dialog Select permit as the action, enter the IPedge private IP address as the Destination Host/Network. Under Protocol and Service select TCP. Click on OK. IPedge Private Addr Private Addr Installation Manual...

[Page 102](#) FIREWALL SETUP Cisco 5. In the Edit Access Rule dialog Select permit as the action, enter the IPedge private IP address as the Destination Host/Network. Under Protocol and Service select UDP. Click on OK. IPedge Private Addr Private Addr 10-6...

[Page 103: Sonicwall Setup](#)

SONICWALL SETUP 1. Login to the SonicWALL firewall. 2. In the menu along the left side of the screen select Network > Address Objective. Add the name of the IPedge server and the IP address of the IPedge server. 192.168.254.250 3.

[Page 104](#) SONICWALL SETUP 4. Ports 1718 ~ 1719 UDP (Remote IP Telephones set registration) 5. MRS (Media Relay Server) RTP 21000 ~ 22999 UDP (Remote IPT or SIP phone audio) Installation Manual June, 2011...

[Page 105](#) 7. When using Unifier add a service: 1100 to 1105 TCP (Only use for systems connecting with unifier. Example Network ACD/CM to a CIX or IPedge that is outside the firewall) 8. Create a group with the services you just added.

[Page 106](#) SONICWALL SETUP Check-mark the Enable NAT Policy and Create a reflexive policy boxes. 10. Select Firewall > Access Rules. Click on WAN to LAN. Click on Add Service. Installation Manual June, 2011...

[Page 107: Nat/Firewall Settings](#)

SONICWALL SETUP NAT/Firewall Settings: 11. Select the group you created above in the Service field. Ensure that the Allow radio button is selected. Click on OK. NAT/Firewall Settings: 1. When using a Sonicwall SIP Transformations will need to be enabled. Select VoIP->Settings.

[Page 108](#) SONICWALL SETUP NAT/Firewall Settings: 2. Check mark Enable consistent NAT. 3. Check mark Enable SIP Transformations. 4. Check mark Permit non SIP packets on signaling port. 5. Ensure that no other check-boxes on this screen are checked. Installation Manual June, 2011...

[Page 109: Chapter 11 - Sip Trunk Configuration](#)

PRI-like services from an Internet Telephony Service Provider using SIP. A SIP trunk allows an IPedge system to connect internal voice and private data traffic to the outside public network (PSTN and public data) via IP. When a user dials a call that will be sent over the PSTN, the call routing is sent over the WAN to the Internet Telephony Service Provider (ITSP) that is providing the SIP trunk.

[Page 110: Capacities](#)

CAPACITIES CAPACITIES The IPedge system can support up to 1000 URI entries. Refer to Table 11-1. Table 11-1 Trunk Capacities Trunks EC Server EM Server IPedge Net IP channels SIP Trunk channels Total Analog, T1, and ISDN trunk channels connected by gateways.

[Page 111: Sip Trunk Example](#)

Softswitch Internet Access Customer Premise There are many ways to set up a public IP address for the IPedge system. A common Firewall way is to use a NAT Firewall. IPedge Figure 11-1 IPedge System with SIP Trunking Installation Manual...

[Page 112: Sip Trunk Group Programming](#)

The additional digits will be ignored. All of the received digits must be in the URI table. Note: Toshiba recommends that you enable Intercept and program destination in Trunk > DID Intercept. Programming the In the Outgoing tab set the parameters for outgoing calls on this

trunk Outgoing Line Group group.

[Page 113: Olg Flexible Access Code Programming](#)

When a Channel Group is selected for a SIP trunk that Channel group number cannot be used for IPedge Net. 3. In the SIP Trunk Channels box select the TOTAL number of ports to be dedicated to the SIP trunk channel group.

[Page 114: Service Assignment](#)

OLG FLEXIBLE ACCESS CODE PROGRAMMING Service Assignment Service Assignment 1. SIP trunk Channel Group = Channel Group tab number (Use the Channel group created above.) 2. Service number = Row number (Enter the digit 1 for the first assignment. Increment for each new assignment.) 3.

[Page 115: Sip Trunk Configuration Patterns](#)

SIP TRUNK CONFIGURATION PATTERNS Service URI SIP TRUNK The following tables show the typical SIP trunk configuration patterns. CONFIGURATION The tables show the data entered in to the IPedge database using PATTERNS Enterprise Manager. Pattern A Registered With or Without Authentication...

[Page 116](#) SIP TRUNK CONFIGURATION PATTERNS Service URI Pattern B No Registration and No Authentication Parameter Entry Trunk > SIP Trunking > Service Definition Registration Mode None Domain Name SIP Provider IP address or domain name SIP Server Use an OutBound proxy if the SIP Provider requires Primary Voice Packet Configuration Primary Audio Codec...

[Page 117](#) SIP TRUNK CONFIGURATION PATTERNS Service URI Registration with or without Authentication and Pattern C Port may be different then 5060 or no SRV records Parameter Entry Trunk > SIP Trunking > Service Definition Registration Mode Client Domain Name IP or domain name SIP Server IP or domain name: 5060 (Your SIP provider may use a differen port)

[Page 118](#) SIP TRUNK CONFIGURATION PATTERNS Service URI Pattern D No Reg No Authentication and Port may be different then 5060 or no SRV records Parameter Entry Trunk > SIP Trunking > Service Definition Registration Mode None Domain Name IP or domain name SIP Server IP or domain name: 5060 (Your SIP provider may use a differen port)

[Page 119](#) SIP TRUNK CONFIGURATION PATTERNS Service URI Pattern E - No Registration With Authentication On Parameter Entry Trunk > SIP Trunking > Service Definition Registration Mode None Domain Name SIP Provider IP address or domain name SIP Server Use an OutBound proxy if the SIP Provider requires Primary Voice Packet Configuration Primary Audio Codec...

[Page 120](#) SIP TRUNK CONFIGURATION PATTERNS Service URI Other Different Than Patterns A ~ F Parameter Entry Trunk > SIP Trunking > Service Definition Registration Mode Domain Name SIP Server Primary Voice Packet Configuration Primary Audio Codec Secondary Voice Packet Configuration Secondary Audio Codec Consult with your SIP Trunk provider.

[Page 121: Chapter 12 - Gateways](#)

IPedge as SIP stations then, the gateway is setup to act as a SIP to Analog station interface. Analog trunks are programmed in the IPedge as SIP trunks then, the gateway is setup to act as an interface. The VoIP/Analog gateways currently offered are shown in Table 12-1.

[Page 122: Audiocodes Mp118 Fxo](#)

AUDIOCODES MP118 FXO AUDIOCODES MP118 FXO This section is for setting up an AudioCodes MP118 as an FXO gateway. To setup FXS operation refer to "AUDIOCODES MP118 FXS" on page Chapter 12 - 10 This is for MP118 release 5.8 or later. The AudioCodes MP118 defaults: •...

[Page 123: Set Network Time](#)

UPGRADE SOFTWARE Set Network Time 5. Click on submit. 6. Click on the Burn icon at the top of the screen to save the settings. 7. Log in using the new IP address. Set Network Time Set the Network Time Protocol server addaress. 1.

[Page 124: Download Ini File](#)

Proxy Sets Table 8. Select Protocol Configuration > Protocol Definition > Proxy Sets Table. 9. In

the the Proxy Address table enter the IP address of the IPedge server in position one. 10. Set the Transport Type = UDP. 11. Click on Submit.

[Page 125](#) MP118 MEDIA SETTINGS Load INI file to the Gateway Coders 12. Select Protocol Configuration > Protocol Definition > Coders 13. Ensure the following: Coder Name G.711 mu-law Packetization Time = 20 Rate = 64 Silence Suppression = Disabled Coder Name G.729 Packetization Time = 20 Rate = 8 Silence Suppression = Disabled...

[Page 126](#) Ensure that you make these entries in the FXO ports. Endpoint Settings 23. This value will be inserted into the SIP invite request. Refer to the IPedge URI table. This value must appear in the URI table. Select Protocol Configuration > Endpoint Settings > Automatic Dailing. 12-6...

[Page 127: Endpoint Numbers](#)

25. Select Protocol Configuration > Endpoint Number > Endpoint Phone Number. In the Channel number column enter (the same as the FXO Port number) Phone number = The number assigned in the IPedge URI table (4001 for example) Hunt Group ID = 1 Tel Profile ID = 0...

[Page 128: Ipedge Configuration](#)

IPedge CONFIGURATION Endpoint Numbers IPedge CONFIGURATION The next steps program the IPedge SIP trunk group to route the calls received through the gateway. Login to Enterprise Manager for the following. Set Up Trunk ILG 1. Select Trunk > Trunk Groups then, click on the New icon.

[Page 129](#) Chapter 11 -SIP Trunk Configuration. The IPedge system treats all incoming SIP trunk calls as DID. 1. Select Trunk > DID. Click on the New icon. 2. Set: ILG Group Number = The trunk group number of the SIP trunks DID Number = The last 4 ~ 7 digits of the dialed digits (Set in the trunk group asdsignments above.)

[Page 130: Audiocodes Mp118 Fxs](#)

5. Click on the Submit button. 6. Select Protocol Configuration > Protocol Definition > Proxy Sets Table. In the Proxy Address table enter the IPedge server IP address Set Transport Type to UDP. 7. Click on the Submit button. 8. Select Protocol Configuration > Protocol Definition > Coders. Set...

[Page 131](#) Dest IP Address = IP address of the IPedge server 14. Select Protocol Configuration > Routing Tables > Ip To Trunk Group Routing. This is IPedge SIP station to analog device routing. Note: If this gateway was setup as an FXO gateway there will be entries on line 1.

[Page 132: Ipedge Configuration For Fxs](#)

22. When the setup is complete Click on the Device Action icon. Click on Reset. IPedge CONFIGURATION 1. Set up a SIP Station in the IPedge server for each analog station for FXS connected through the gateway. Select Station > Station Assignment.

[Page 133: Audiocodes Mediant1000 Pri](#)

Set IP Address in single IP settings Upgrade software to Select Management > Software Update > Software Upgrade Wizard 5.8.xxxx 1. Click on Start Software Upgrade. 2. Select 5.8 CMP file. Click on Next. 3. Select the Toshiba provided INI file. Installation Manual June, 2011 12-13...

[Page 134: Mediant1000 Configuration](#)

14. Log into the Mediant 1000 and begin configuration. MEDIANT1000 This section covers the configuration of the AudioCodes Mediant 1000 CONFIGURATION gateway as a TI or PRI to Toshiba IPedge system gateway. 1. Login to the Mediant 1000 gateway. 2. Click on Configuration. Select the FULL radial. Note: To configure Trunks (T1 or PRI trunks) or FXO on the Mediant 1000 the FXO module is required.

[Page 135: Trunk Protocol And Configuration](#)

MEDIANT1000 CONFIGURATION Trunk Protocol and Configuration 4. Click on the Apply Trunk Setting button. A screen alert may pop up to inform you must reboot/Reset. Ignore the the message. 5. Click on the BURN icon. A green light may appear on the screen or T1 port after reset to indicate that Layer 1 and Layer 2 are up.

[Page 136: IPedge Configuration](#)

Src Trunk Group = * Dest Phone Prefix = * Source phone Prefix = * Dest IP Address = 192.168.254.254 (IP address of the IPedge server) 11. Select Protocol Configuration > Routing Tables > IP To Trunk Group Routing Dest Host Prefix = *...

[Page 137](#) IPedge CONFIGURATION Trunk Protocol and Configuration For more detail about IPedge data refer to "IPedge CONFIGURATION" on page Chapter 12 - For detailed SIP trunk configuration information refer to Chapter 11 -SIP Trunk Configuration. Installation Manual June, 2011 12-17...

[Page 138: Audiocodes Mediant1000 T1](#)

AUDIOCODES MEDIATE1000 T1 Trunk Protocol and Configuration AUDIOCODES This section is for setting up an AudioCodes Mediant 1000 as a T1 MEDIATE1000 T1 gateway. Refer to "BASIC CONFIGURATION" on page Chapter 12 - 13 for the administrative and software version setup. MEDIATE 1000 1.

[Page 139: IPedge Configuration](#)

Src Trunk Group = * Dest Phone Prefix = * Source phone Prefix = * Dest IP Address = 192.168.254.254 (IP address of the IPedge server) 16. Select PROTOCOL CONFIGURATION > ROUTING TABLES > IP TO TEL ROUTING Dest Host Prefix = *...

[Page 140](#) MEDIATE 1000 CONFIGURATION IPedge Configuration 12-20 Installation Manual June, 2011...

[Page 141: Chapter 13 - Net Server](#)

Net Server is pre-installed on the IPedge system and can be activated using IPedge Enterprise Manager. Add Net Server to Enterprise Manager and configure the IO port in the IPedge system. After applying the license, Net Server is ready to be used. If further configuration of Net Server is...

[Page 142: Setup The I/O Port](#)

Net Server administration needs to be used. To access Net Server Using Enterprise Manager, go to Application > Net Server menu. NET SERVER MENU Net Server menu provides access to the basic setup for Net Server application on IPedge server. 13-2 Installation Manual June, 2011...

[Page 143: Status](#)

NET SERVER MENU Status Status The Status sub menu provides real time information on the Net Server. Clients Tab Clients tab shows the status of all the client applications that are connected to the Net Server. It includes all the component applications that are parts of Net Server and all the client Call Manager applications that are connected to the Net Server.

[Page 144: Setup](#)

NET SERVER MENU Setup Setup Setup sub menu allows the administrator to manage client users, service components, applications, and groups. Users tab is used to manage the login information of the client applications. Clients can be automatically added (see Net Server Property menu) or can be added/modified from this tab.

[Page 145](#) NET SERVER MENU Setup When you Add or Edit a checked entry, data can be entered from the following screen. Name Description User Name Name of the user to use for Net Server login Password Password used for Net Server login Extension Directory Number (DN) of extension that the user controls Service Access...

[Page 146](#) NET SERVER MENU Setup Services Tab Use the Services tab to manage the component services running under Net Server. It defines which services are on the server and what clients can use them. Services are automatically defined when they are installed, and do not need to be modified.

[Page 147](#) NET SERVER MENU Setup Field Description Name Service name which must be unique in the system Password Password for the service to login to Net Server. Typically, it should not be changed. Description Description of the service Service Level Service Level determines which clients can access this service. Each client has a service level access number,

and a client will have access to all services whose Service Level is less than or equal to the client's service level access number.

[Page 148](#) NET SERVER MENU Setup Application Tab The Application tab defines the users for each application and allows you to assign a policy based on the user or the group. Please see Group tab section for the specific information on the group policies. See the "Server Based Call Manager Configuration"...

[Page 149](#) NET SERVER MENU Setup Field Description Application Name Name of the application User or Group Usually, the client name of the user is shown (see Clients). When it is set to <Default> (or leaving it blank) the settings for the Default User can be defined.

[Page 150](#) NET SERVER MENU Setup Field Description Group Admin Privilege#1/2 Determines if this user can perform functions for the group (unique to each application). (value: 4/8) Other App Privilege#1/2 Determines if this user can perform other functions (unique to each application). (value: 16/32) User Groups Tab User Groups tab defines the group of users to apply the common settings to multiple users.

[Page 151](#) NET SERVER MENU Setup Field Description Group Name Name of the group Users in Group List of users that are currently included in the group. A user can be removed from the group by selecting the user and clicking Remove. Other users List of users that are not currently in the group.

[Page 152](#) Dial Plan, Level2OAI. When un-checked, it only shows the Call Manager Users, and Admin Accounts. Force update of IPedge Whether to upgrade the Call Manager installed on the client with the one Call Manager to Version in the server.

[Page 153: Level 2 Menu](#)

LEVEL 2 MENU Level2 menu allows the administrator to configure various items managed by Level2 which processes the Computer Telephony Integration with the IPedge system. Devices Menu Device menu manages the device table which provides an Extension Directory for Call Manager.

[Page 154](#) LEVEL 2 MENU Devices Menu Canned Presence Canned Presence (Message) menu enables the administrator to define (Message) messages used by Call manager for the additional information on the presence status. System standard default messages are defined, and the administrator can change them. Twenty different messages are possible. 13-14 Installation Manual June, 2011...

[Page 155: Logging](#)

Logging Logging menu can control the level of trace information for the problem investigation. All items are checked by default and do not have to be changed unless instructed to so by Toshiba Technical Support. Installation Manual June, 2011 13-15...

[Page 156: Dial Rule Menu](#)

Dial Rule Menu Dial Plan Dial Rule Menu allows the administrator to define the dialing rule to be applied automatically when the application such as Call Manager makes a call. Dial Plan Dial Plan sub menu defines how the system interprets the dialing string. When the Use SERVER Dial Plan is checked in the Preference in Call Manager, dialing digits from Call Manager are interpreted based on the rule defined in the Dial Plan.

[Page 157: Calling Within My Home Area Code](#)

Dial Rule Menu Calling Within My Home Area Code Calling Within My Home • Home Area Code – Set this to the Area code where the phone is Area Code located. This will be used by Call Manager to determine which dialed calls are within your home area code and when searching a contact manager (reverse screen-pop) the dialed number will need the area code included, i.e.

[Page 158: Calling Outside The Home Area Code](#)

Dial Rule Menu Calling Outside the Home Area Code • Add+1 – Check the box if you need to dial a leading 1 before the number for calls within your Home Area Code. • Dial Area Code Plus the Number – Check the box when the home area code is also to be dialed.

[Page 159: Server Based Call Manager Configuration](#)

Server Based Call Manager Configuration Create User Groups • For Long Distance Calls add +1
– Check the box when you need to have a leading one (1) added when making long distance calls outside your home area code. • Click Save when done.

[Page 160: Assign Users To Call Manager Application](#)

Server Based Call Manager Configuration Assign Users to Call Manager Application Assign Users to Call By assigning Groups to the Call manager application enables you to Manager Application assign a common “Class of Service” and “Configurations” for all users in a group.

[Page 161](#) Server Based Call Manager Configuration Assign Users to Call Manager Application 14. Repeat the preceding steps to add any remaining Call Manager user groups. 15. Default in User or Group can be used to setup the default settings for all users that are not included in any group or individual. 16.

[Page 162: Assign Users To User Groups](#)

Server Based Call Manager Configuration Assign Users to User Groups Assign Users to User Use this procedure to Assign Users as Call Manager Administrators . Groups 1. Use Net Server menu > Setup, then Users tab. 2. Check the user who needs to be a Call Manager administrator and click Edit icon.

[Page 163](#) Server Based Call Manager Configuration Assign Users to User Groups To assign Users as Call Manager Users 1. Check the user who is a Call Manager user and click Edit icon. 2. Place a checkmark in the User group only as is shown in the following screen: 3.

[Page 164](#) Server Based Call Manager Configuration Assign Users to User Groups Create Configuration Files 1. Restart the Administrator’s Call manager if it is running using Admin Call Manager 2. Set up the buttons, Call Handler rules, skins, etc. as you would like the users’...

[Page 165](#) Server Based Call Manager Configuration Assign Users to User Groups Installation Manual June, 2011 13-25...

[Page 166: Server Based Call Manager Upgrade](#)

Installation The Call Manager upgrade software is provided as an rpm file from Toshiba FYI, and it needs to be stored in the PC that can connect to IPedge through Webmin from Enterprise Manager. From the PC, launch Enterprise Manager and run Webmin. In the Webmin, select Software Packages menu under System menu.

[Page 167](#) Server Based Call Manager Upgrade Installation After clicking install, the following progress bar is shown to indicate the progress of the file upload to the server. When the upload is completed, the following screen displays. Please use the default value for all the settings. Click Install to start installing the Call Manager software upgrade to the server.

[Page 168: Net Server Configuration](#)

In the Net Server admin screen, select Properties menu from Net Server tab. Then, check “Force update of IPedge Call Manager to version V7.2.19.0” and click Save to enable the Server Based Call Manager upgrade. To disable the Server Based Call Manager upgrade, deselect it and click Save.

[Page 169: Chapter 14 - Messaging](#)

Chapter 14 – Messaging Messaging is pre installed on the IPedge system and can be activated using IPedge Enterprise Manager. Once the Messaging license is activated, add the Messaging application to Enterprise Manager and then Messaging, then configure the application using the Application menu in Enterprise Manager.

[Page 170: Setup The I/O Ports](#)

SETUP THE I/O PORTS SETUP THE I/O PORTS 1. From the System menu, select I/O Device. 2. Click the New icon. 3. Configure the I/O SMDI#0 for the Logical Device No. 4. Set the Application Type to Client 5. The Client IP address is 127.0.0.1 6.

[Page 171: Assign The Voicemail Sip Stations](#)

ASSIGN THE VOICEMAIL SIP STATIONS ASSIGN THE VOICEMAIL 1. From the Station menu, select Station Assignment. SIP STATIONS 2. Click the New icon. 3. Enter the Prime DN that matches the appropriate numbering plan. 4. The Type should be SIP VM 5.

[Page 172: Add Stations To A Station/Hunt Group](#)

ADD STATIONS TO A STATION/HUNT GROUP ADD STATIONS TO A 1. Using Enterprise Manager, add the voicemail ports to the Hunt STATION/HUNT GROUP Groups by going to Station > Station Groups. 3090 Make the following selections: Hunt is Distributed Hunt Pilot Number should be the one used in the Numbering scheme Example: When the Message button is pressed, it dials 3090.

[Page 173: Program Messaging](#)

DNs assigned for messaging. 12. Click on the Insert button. 13. Assign SIP PBX Address with <IPedge system IP address>. Assign SIP PBX Port as 5060 (default setting). 14. Assign VM SIP Port as 5070 (default setting). Click Save.

[Page 174: To Restart Messaging](#)

To Restart Messaging 16. Click on System > Channel Definition. Depending on the port licenses may or may not be populated. Received calls should be set to Yes. Beyond eight ports, the received calls display as No. Change them all to Yes. 17.

[Page 175](#) To Restart Messaging 5. Scroll down and click the Restart button. The Restart status screen displays (shown below). Installation Manual June, 2011 14-7...

[Page 176: Disk Full Notification](#)

DISK FULL NOTIFICATION DISK FULL NOTIFICATION Under some conditions the server disk can become full. Use the following procedure to setup an email alert to the system administrator when the disk is 80% full. 1. Using Enterprise Manager, select Applications > Messaging. In the Messaging administration screen select Registry >...

[Page 177: Chapter 15 - Maintenance](#)

Chapter 15 – Maintenance INTRODUCTION The Toshiba IPedge system is an all IP telephone system running on an IP network. When troubleshooting consider that problems may be with the network as well as with the server. Use the following as a check list to help identify voice quality problems.

[Page 178: Ipmi / Bmc Ip Address](#)

4. Click on the Save icon. 5. Connect the BMC to the LAN or WAN. 6. Connect IPedge Server (BMC LAN adapter, not eth0 or eth1) and the PC to the WAN/LAN. 7. Launch a java-enabled browser (e.g. Internet Explorer) on the PC and access http://BMC LAN IP address (e.g.

[Page 179: Alarm Notification](#)

ALARM NOTIFICATION Temperature Failure ALARM NOTIFICATION The IPedge server can generate SNMP messages in response to specified alarm conditions. • Server Component stopping automatically • Server Component stopped manually • Server Component restart • Server chassis fan failure (Low fan speed) •...

[Page 180: Hardware Monitoring](#)

Click on the Reset icon to reset the BMC processor on the IPMI card in the IPedge server. This should be done only on the advice of a Toshiba engineer. The BMC takes a few minutes to reset. While the reset is processed there is no monitoring by the BMC.

[Page 181: Ipedge Recovery Disk](#)

EM Servers - Click on Remote Control > Launch Console The IPedge server console is displayed on the remote PC. 3. Insert the recovery DVD into the IPedge server DVD drive. 4. Reboot the server: For EC servers: Click on Power Down wait for the server to power down then, click on Power On.

[Page 182](#) IPedge RECOVERY DISK Recovery Procedure 9. When the BIOS Setup Utility screen

use the cursor control keys to select Advanced > IPMI and press the Enter key. 10. Use the cursor control keys to highlight OS Boot Watch Dog then, press the Enter key.

[Page 183](#) 20. When the disk is out of the drive press the Enter key on the keyboard. 21. After rebooting the server, you will see the server restarting in the remote console screen on the remote PC. 22. For IPedge EC servers go to Step For IPedge EM servers go to Step 23.

[Page 184: Restore Database](#)

4. Access the restored server from the Primary server Enterprise Manager. 5. Apply all licenses. 6. Restore the database. Refer to Chapter 7 – IPedge System Backup in the “MANUAL RESTORE” on page 7-6 section. 7. Synchronize the database.

[Page 185: Ec Server Fan Replacement](#)

“SHUTDOWN SYSTEM” on page 6-2. Remove Server Power After the IPedge server has shutdown set the power switch to OFF. Then unplug the power cord. WARNING! Remove the power cords before continuing this procedure. 4. Unplug the fan cable from the server board and remove the failed fan from the chassis.

[Page 186: Em Server Fan Replacement](#)

“SHUTDOWN SYSTEM” on page 6-2. Remove Server Power After the IPedge server has shutdown set both rear panel power switches to OFF. Then unplug the power cords. WARNING! Remove the power cords before continuing this procedure. 4. Unplug the fan cable from the server board and remove the failed fan from the chassis.

[Page 187](#) EM SERVER FAN REPLACEMENT Power UP Server Figure 15-2 EM Server Fan Location Installation Manual June, 2011 15-11...

[Page 188: Em Server Disk Drive Replacement](#)

EM SERVER DISK DRIVE REPLACEMENT Power UP Server EM SERVER DISK DRIVE The IPedge EM server ships with two Hard Disk Drives (HDD) in a RAID 1 REPLACEMENT configuration. In the event of a HDD failure the failed drive can be replaced without data loss or server down-time.

[Page 189](#) EM SERVER DISK DRIVE REPLACEMENT Power UP Server If the Target on ID is #5, the HDD in Slot 0 should be replaced. If the Target on ID is #8, the HDD in Slot 1 should be replaced. Important! If both Target on ID #5 and #8 were displayed, please call Tech-Support.

[Page 190: Dvd-Rom Drive Installation](#)

“SHUTDOWN SYSTEM” on page 6-2. Remove Server Power After the IPedge server has shutdown set the power switch to OFF. On the EM server set both rear panel power switches to OFF. Then unplug the power cord(s). 15-14 Installation Manual...

[Page 191: Remove Chassis Cover](#)

DVD-ROM DRIVE INSTALLATION Remove Chassis Cover Remove Chassis Cover 1. Grasp the two handles on either side and pull the unit straight out of the rack until it locks (you will hear a “click”). 2. Depress the two buttons on the top of the chassis to release the top cover and at the same time, push the cover to the rear of the cabinet until it stops.

[Page 192: Program Update](#)

A Local Program Update is preformed while on site, with physical access PROCEDURE to the IPedge server. Local means that the update files are on a USB drive connected to the IPedge server. Program Update can update the IPedge core software, the Linux operating system and the Media Library.

[Page 193: Remote Update Procedure](#)

5. When the file extraction is complete the Run update button will appear. Click to run the update. If the update file is not a newer file than what is already on the IPedge server the Run update button will not appear.

[Page 194: Program Rollback](#)

Remote Update - The update files have been extracted onto an IPedge server in the network. 3.

Select the IPedge server that has the extracted update files available. 4. Click on the Download File button. 5. When the file download is complete the Run update button will appear.

[Page 195: System Reboot](#)

This feature supports DESI Telephone Labels, Inc. products only and requires DESI Print Engine 2.74 software or later and Toshiba format Keystrip paper. DESI keystrip paper is available for all Toshiba IP5000-series telephones DSS consoles and Add-On-Modules. To order DESI Software and Keystrip paper for Toshiba telephone products go to www.DESI.com or call 1-800-814-3922.

[Page 196](#) THIS IS THE END OF THE DOCUMENT.