Mizutech VoIP Tunneling and Encryption
Quick Setup

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About

The Mizu VoIP tunneling solution is a set of client and server side software capable to bypass voip blockades, firewalls, NAT's, STUN and HTTP proxies.

For a detailed presentation please visit this link: http://www.mizu-voip.com/Software/VoIPTunnel.aspx

Technical details: http://www.mizu-voip.com/Portals/0/Files/MizuTunnelingGuide.pdf

All configuration and management can be done by Mizutech support. However you can use this guide and the softswitch admin guide to manage the VoIP tunneling server yourself.

Once the server is installed, you will usually need to perform only a few management tasks which are the followings:

- edit your registrar, inbound and outbound server(s) settings (all these settings can point to a single server)
- monitoring (running calls, CDR records, statistics)
- backup and cloning

Server requirements

- OS: Windows Server 2003 or 2008 (Windows XP, Vista or 7 for testing)
- CPU: depending on the usage (the server can take advantage from up to 32 cpu core)
- RAM: depending on the usage (minimum 1 GB for 200 simultaneous calls)
- Disk: 40 GB with logs turned off and or 192 GB for maximum trace level
- Network: ~10 Mbit/s for 300 simultaneous calls (depending on the transport protocol and the codec used)

Typical recommended configuration for VoIP service providers between 500 and 5000 simultaneous calls: 2 servers with 4 or 8 CPU core, 4 GB RAM, and 256 GB disk space. By using 2 servers you can separate the application server from the database server and also you will have a hot backup.

Install

Most of the install and configuration steps are similar as described in the Mizu VoIP Server tutorial: http://www.mizu-voip.com/Portals/0/Files/mizu_voip_server_tutorial.pdf

Download the server install package from the MizuTech webpage: http://www.mizu-voip.com/webinstaller/MizuVoIPServer.exe. Launch the install wizard and follow the instructions.

Once the install is finished you should download the last fixes from here: http://www.mizu-voip.com/F/serverupgrade.zip

Unpack the zip file and overwrite the existing files with the new ones.

The latest MizuManage install package is always available from here: http://www.mizu-voip.com/Portals/0/Files/MizuManagement_Setup.exe

Verify

When the install wizard is ready you should check the followings:

✓ The database is installed correctly. Otherwise you can download the express edition from here. Make sure to install with mixed mode authentication and enable the TCP/IP access from the SQL Server Configuration Manager on port 1433 or 2223.

✓ Create a database using the MS SQL Management Studio. You can name it to "mserver" than create the basic database structure with the MDBSetup.exe tool or by running the mserverscript.sql script.

- ✓ mserver is registered as a windows service (otherwise run "mserver.exe /install" from the command prompt). Make sure that the service startup type is set to automatic.
- ✓ Enable the mserver.exe if you have enabled the windows built-in firewall.
- ✓ For remote administration you need to enable also the database engine executable (sqlservr.exe)
- ✓ Server basic configuration: Edit the [database] section in mizuserver.ini configuration file. Add the newly created database access here (ip, port, database name, username, password)
- ✓ Start or restart the Mizu VoIP service (stop/start.bat or from Services)
- ✓ Check the log file if any startup error exists. (Open the last "log_xxx.dat" files near the mserver.exe with notepad or TotalCommander F3 or using the logviewer application from the Tools directory if you have installed it). Search for "CRITICAL", "ERROR", "catch" and "WARNIG" messages.

MizuManage

Install and start the admin client software on the server or on any remote PC. It is part of the server install package or a separate install can be found at http://www.mizu-voip.com/Portals/0/Files/MizuManagement_Setup.exe

Login to MizuManage:

- App server: ip address of the server (database port followed after a comma if not using the default port)
- DB server: type "default" if you are running the sql server on the same server with the VoIP application server. Otherwise the IP address of the database server (database port followed after a comma if not using the default port)
- DB: database name ("mserver" by default)
- Username: database username ("sa" by default)
- Password: database password ("srEgtknj34f" by default)

  Example:

  App server: mserver (127.0.0.1,1433)
  DB server: default
  DB: mserver
  Username: sa
  Password: srEgtknj34f

Basic settings

Launch Tools -> Server setup -> Configuration wizard if not already started. Don't change any setting that you don't fully understand (leave default values) and click on Finish.

Take care of the following settings:

- **Enable "VoIP tunneling" on the "Roles and features" tab**
- On the company tab use your company name and fill in the admin username and password to receive a daily report about the usage
- On the network tab enter the IP address you wish to use if your server has multiple interfaces. Use the bindip to restrict the usage to only one interface. Enable the tcp and http tunneling. Enable private ip / local ip if your outbound server(s) are located on the same server/LAN
- On the "Tunneling" page enter your upper server details (where the traffic is sent and accepted)

Tunneling specific settings

The voip tunneling specific configuration options are the followings (Configurations form -under the "Other" section):

- Fwdregistrations=2 //0=no,1=only from alternate port, 2=always
- fwdregistrations_domain=registrar sip domain
- fwdregistrations_ip=registrar ip or FQDNS
- fwdregistrations_port=registrar port
- autocreatereguser=1 //0=no,1=when fwd authenticated ok register, 2=always (when we receive the register)
- Forwardauthentifications=1 //will forward invite (regarding routing setup)
- Alternatelocalport=xxx (use any port except 5060 which is the standard SIP signaling port)
- Alternatelocalportencrypt=3
- normalize_clean=1
- normalizenumbers=0
- usehttp=true
- usetcptunnel=true

- localtcpport=443
- localhttpport=80
- alloweuserusercalls (true or false) whether to allow local calls to bypass your server
- autonewusersencrypt (optional)

These settings are already preconfigured by the configuration wizard so no further actions are required unless for specific needs.

Inbound/outbound routing
- Open the Users and Devices form and add your existing server(s) as "SIP Server" and "Traffic sender" user(s)
- Open the Routing form and add your server(s) to the default routing pattern.

Monitoring
You can use your old favorite tools for server monitoring since all traffic is sent to your existing servers.
However if you wish to monitor only the tunneling server instances, then you will find all the tools within the MizuManage remote admin client:
- running calls
- CDR
- various statistics (SL, ASR, ACD, etc by peer, by time, etc)
- disconnect reasons
- etc

Detailed trace files can be found in the server directory (*debuglog.dat files). The amount of the logs can be controlled with the "loglevel" global configuration option.

Backup
Reload the configuration or restart the server.
The VoIP tunneling server will store it's configuration in a MS SQL database. For a complete backup you need to save the followings:
- the application files (all files required are found in the program directory. The mizu VoIP server doesn't install any file in the system directory and there are no registry settings)
- the database backup file: to backup the database you can use the MS SQL Studio. You can also setup periodic and differential backups.

Use the cloning guide for more details: http://www.mizu-voip.com/Portals/0/Files/Cloning_Mizu_VoIP_server.pdf

FAQ

How can I change my tunneling server address
Whenever you change the IP address for the tunneling server, open the Configuration form and make sure that the following entries are set up correctly:

  -LocalIP
  -InternalIP
  -bindip
  -autodetectlocalip

How can I change my upper server address
  For this you have to modify the following settings:
  1. Change the registrar address:
  Open the Configuration form then search for "fwd". Change the value for the following settings accordingly:
  fwdregistrations_domain, fwdregistrations_ip, fwdregistrations_port

2. From the Users and Devices form modify the settings for both your SIP server an Traffic sender (ip, port and domainname fields)

Make sure that your SIP server is selected in the routing (Routing form)

How can I force a codec from the server side

Fill in the "choosecodecs" field for your Traffic Sender and SIP Server users with the desired payload type(s).

For example 0 for PCMU, 18 for G729 or 0,18 for PCMU and G729

More help

For more details, please consult the Admin Guide and other server related documentations on our website.

Install, configuration and support services are included with each license plan. Contact serversupport@mizu-voip.com