ingate

Application Note

Startup Tool - Getting Started Guide

07 July 2008

Table of Contents

Tested versions: Ingate Firewall and SIParator version 4.6.2
Startup Tool version 2.4.0

Revision History:

Revision	Date	Author	Comments
	2008-07-07	Scott Beer	1st draft

1 Ingate Startup Tool

The Ingate Startup Tool is an installation tool for Ingate Firewall® and Ingate SIParator® products using the Ingate SIP Trunking module or the Remote SIP Connectivity module, which facilitates the setup of complete SIP trunking solutions or remote user solutions.

The Startup Tool is designed to simplify the initial "out of the box" commissioning and programming of the Network Topology, SIP Trunk deployments and Remote User deployments. The tool will automatically configure a user's Ingate Firewall or SIParator to work with the IP-PBX, SIP trunking service provider of their choice, and sets up all the routing needed to enable remote users to access and use the enterprise IP-PBX. Thanks to detailed interoperability testing, Ingate has been able to create this tool with pre-configured set ups for several of the leading IP-PBX vendors and ITSPs.

Download Free of Charge: The Startup Tool is free of charge for all Ingate Firewalls and SIParators. Get the latest version of the Startup Tool at http://www.ingate.com/startuptool.php

Make sure that you always have the latest version of the configuration tool as Ingate continuously adds new vendors once interoperability testing is complete. If you don't find your IP-PBX vendor or ITSP in the lists, please contact Ingate for further information.

The Startup Tool will install and run on any Windows 2000, Windows XP, Windows Vista, and Wine on Linux operating systems.

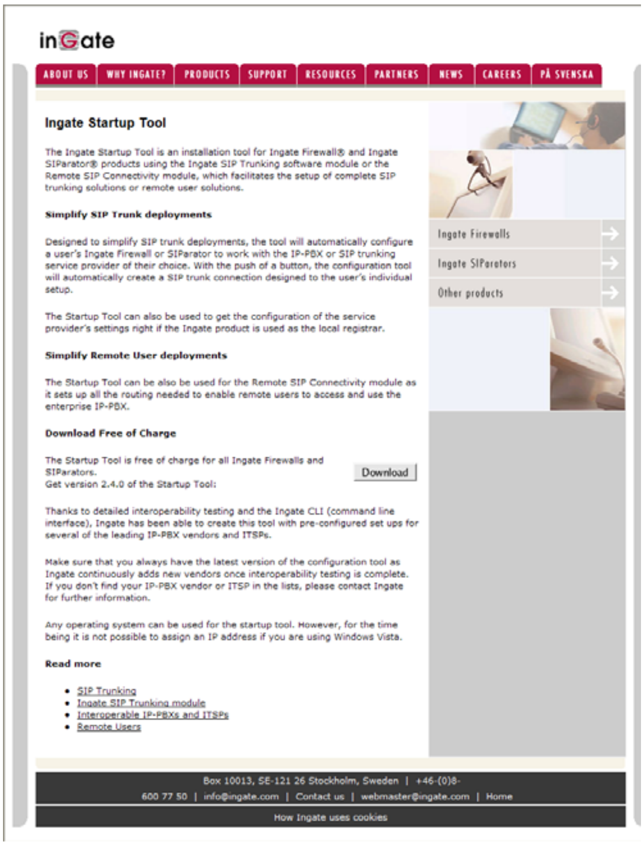
Keep in mind, this Ingate Startup Tool is a commissioning tool, not an alternate administration tool. This tool is meant to get an "out of the box" Ingate started with a pre-configured setup, enough to make your first call from IP-PBX to an ITSP. Additional programming and administration of this Ingate unit should be done through the Web Administration.

2 Startup Tool Installation

The following procedure will guide you through the download and installation of the Ingate Startup Tool on a Window XP operating system. There may be minor variances with other operating systems.

Download and Upgrade Steps:

1) Goto http://www.ingate.com/startuptool.php and click "Download" to begin the download process.



Ingate Startup Tool

The Ingate Startup Tool is an installation tool for Ingate Firewall® and Ingate SIParator® products using the Ingate SIP Trunking software module or the Remote SIP Connectivity module, which facilitates the setup of complete SIP trunking solutions or remote user solutions.

Simplify SIP Trunk deployments

Designed to simplify SIP trunk deployments, the tool will automatically configure a user's Ingate Firewall or SIParator to work with the IP-PBX or SIP trunking service provider of their choice. With the push of a button, the configuration tool will automatically create a SIP trunk connection designed to the user's individual setup.

The Startup Tool can also be used to get the configuration of the service provider's settings right if the Ingate product is used as the local registrar.

Simplify Remote User deployments

The Startup Tool can be also be used for the Remote SIP Connectivity module as it sets up all the routing needed to enable remote users to access and use the enterprise IP-PBX.

Download Free of Charge

The Startup Tool is free of charge for all Ingate Firewalls and SIParators.
Get version 2.4.0 of the Startup Tool:

Thanks to detailed interoperability testing and the Ingate CLI (command line interface), Ingate has been able to create this tool with pre-configured set ups for several of the leading IP-PBX vendors and ITSPs.

Make sure that you always have the latest version of the configuration tool as Ingate continuously adds new vendors once interoperability testing is complete. If you don't find your IP-PBX vendor or ITSP in the lists, please contact Ingate for further information.

Any operating system can be used for the startup tool. However, for the time being it is not possible to assign an IP address if you are using Windows Vista.

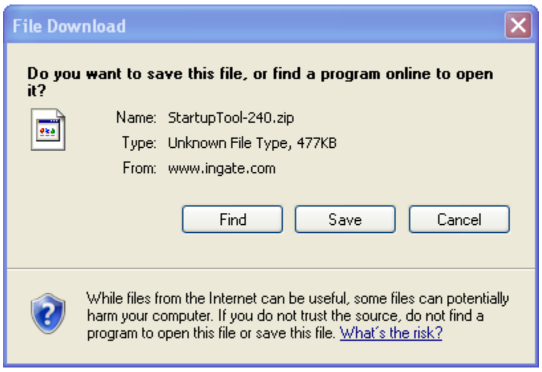
Read more

- SIP Trunking
- Ingate SIP Trunking module
- Interoperable IP-PBXs and ITSPs
- Remote Users

Box 10013, SE-121 26 Stockholm, Sweden | +46-(0)8-600 77 50 | info@ingate.com | Contact us | webmaster@ingate.com | Home

How Ingate uses cookies

2) Select "Save" to save the StartupTool-XXX.zip file to a location of your choice.

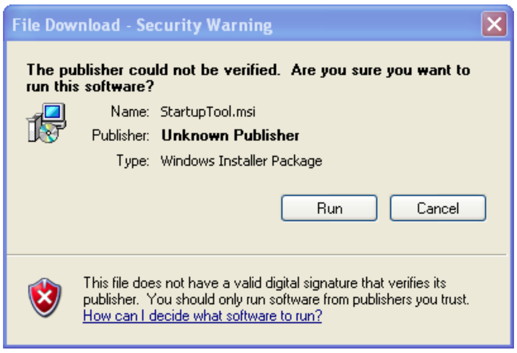


Do you want to save this file, or find a program online to open it?

Name: StartupTool-240.zip
Type: Unknown File Type, 477KB
From: www.ingate.com

While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not find a program to open this file or save this file. What's the risk?

3) In the StartupTool-XXX.zip, Open or Extract/Run the “StartupTool.msi” file. This will begin the software installation process.
4) Select “Run”, in the Windows - Security Warning window.

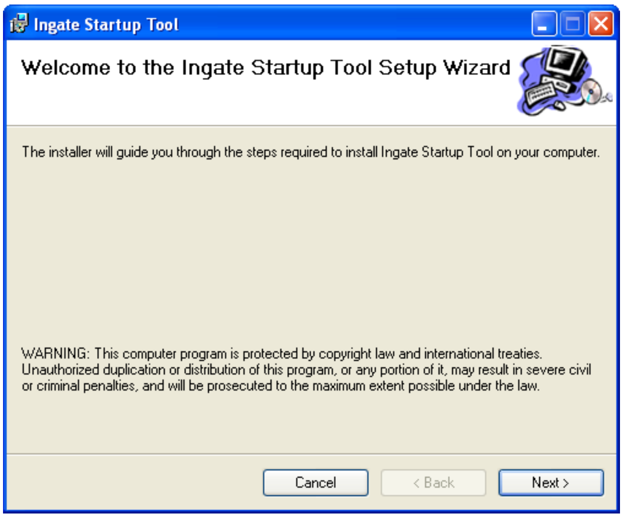


The publisher could not be verified. Are you sure you want to run this software?

Name: StartupTool.msi
Publisher: Unknown Publisher
Type: Windows Installer Package

This file does not have a valid digital signature that verifies its publisher. You should only run software from publishers you trust.
How can I decide what software to run?

5) Select “Next” to continue to install the Startup Tool.

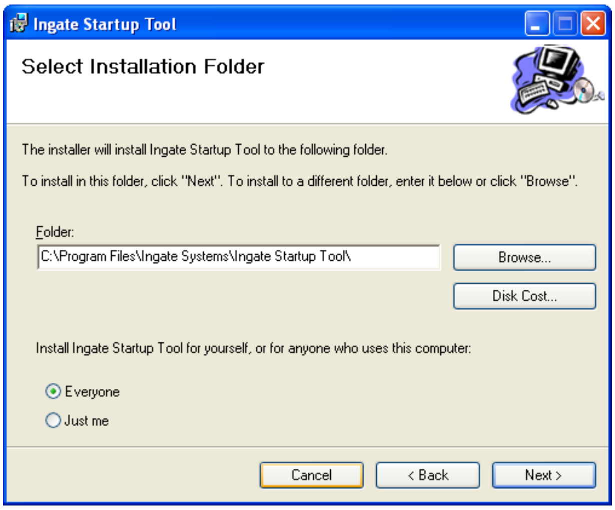


Welcome to the Ingate Startup Tool Setup Wizard

The installer will guide you through the steps required to install Ingate Startup Tool on your computer.

WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.

6) Define the installation folder location you wish to install the Ingate Startup Tool, who is allowed to use this Startup Tool, then select “Next” to confirm the entry.



Select Installation Folder

The installer will install Ingate Startup Tool to the following folder.

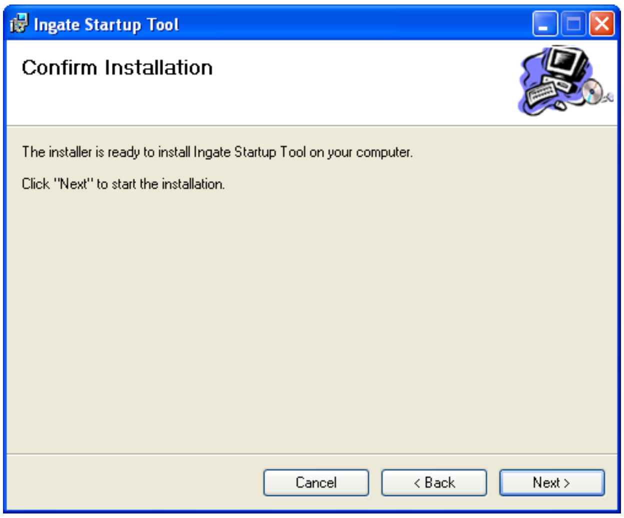
To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse".

Folder:
C:\Program Files\Ingate Systems\Ingate Startup Tool\

Install Ingate Startup Tool for yourself, or for anyone who uses this computer:

● Everyone
○ Just me

7) Select "Next" to confirm the installation.

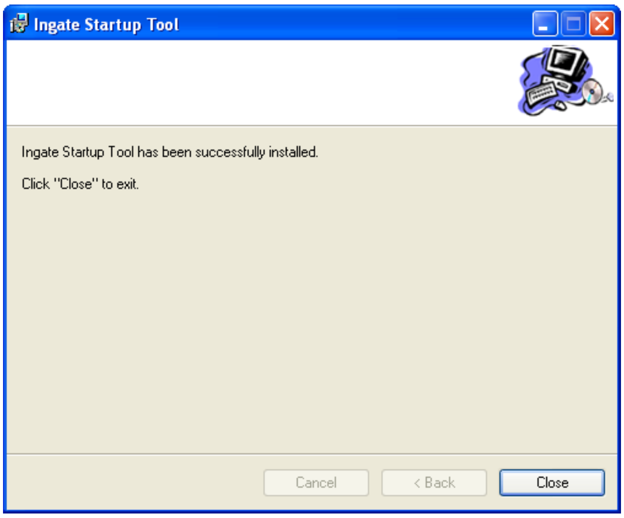


Confirm Installation

The installer is ready to install Ingate Startup Tool on your computer.

Click "Next" to start the installation.

8) Once the installation is complete, select "Close". Now the Startup Tool can be used. The Startup Tool can be found in the Start Menu, or a short-cut on the desktop.



Ingate Startup Tool has been successfully installed.

Click "Close" to exit.

3 Connecting the Ingate Firewall/SIParator

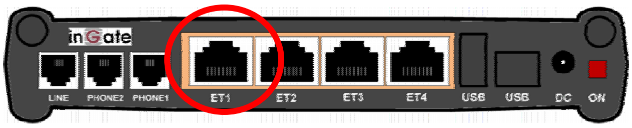
From the factory the Ingate Firewall and SIParator does not come preconfigured with an IP address or Password to administer the unit. Web administration is not possible unless an IP Address and Password are assigned to the unit via the Startup Tool or Console port.

The following will describe a process to connect the Ingate unit to the network then have the Ingate Startup Tool assign an IP Address and Password to the Unit.

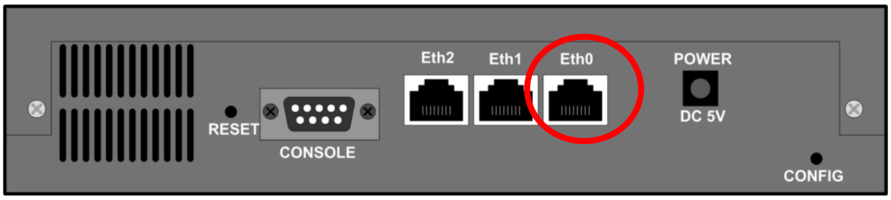
Configuration Steps:

1) Connect Power to the Unit.
2) Connect an Ethernet cable to “Eth0”. This Ethernet cable should connect to a LAN network. Below are some illustrations of where “Eth0” are located on each of the Ingate Model types. On SIParator SBE connect to “ET1”.

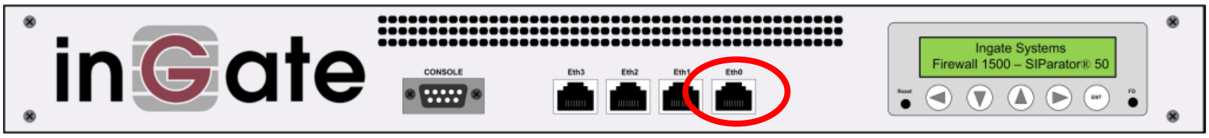
Ingate SIParator SBE (Back)



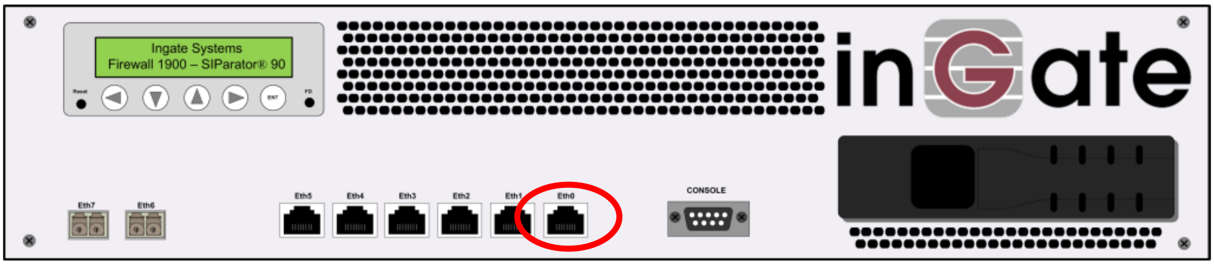
Ingate 1190 Firewall and SIParator 19 (Back)



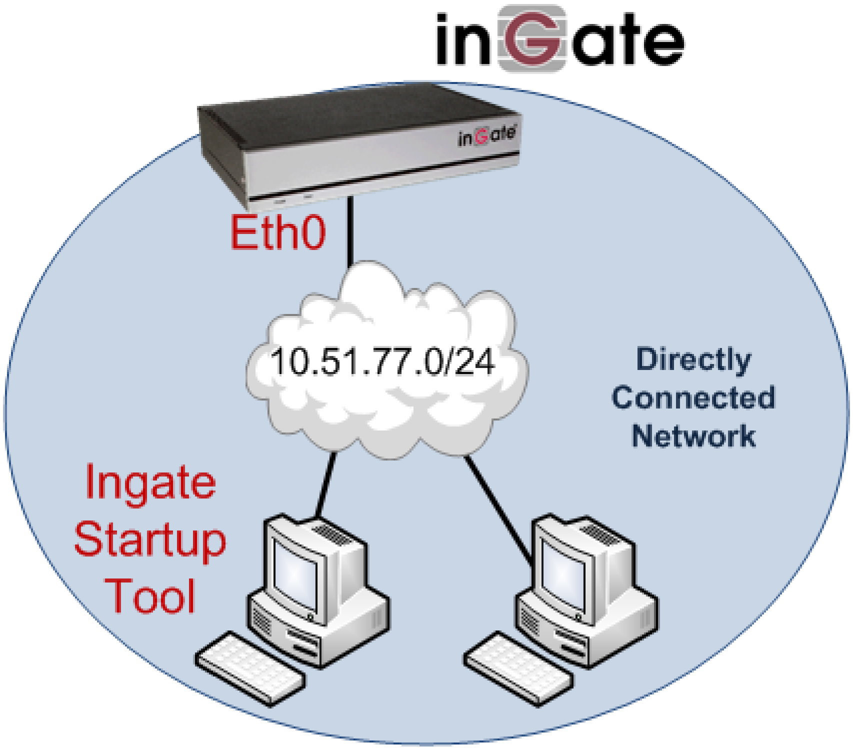
Ingate 1500/1550/1650 Firewall and SIParator 50/55/65



Ingate 1900 Firewall and SIParator 90



3) The PC/Server with the Startup Tool should be located on the same LAN segment/subnet. Preferably the Ingate unit and the Startup Tool are on the same LAN Subnet to which you are going to assign an IP Address to the Ingate Unit. **Note:** When configuring the unit for the first time, avoid having the Startup Tool on a PC/Server on a different Subnet, or across a Router, or NAT device, Tagged VLAN, or VPN Tunnel.



4) Proceed to Section 4: Using the Startup Tool for instructions on using the Startup Tool.

4 Using the Startup Tool

There are three main reasons for using the Ingate Startup Tool. First, the "Out of the Box" configuring the Ingate Unit for the first time. Second, is to change or update an existing configuration. Third, is to register the unit, install a License Key, and upgrade the unit to the latest software.

4.1 Configure the Unit for the First Time

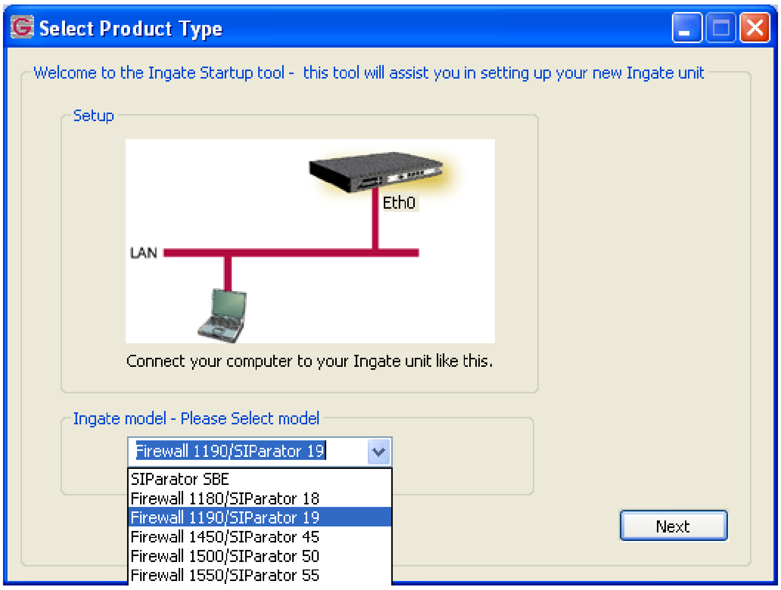
From the factory the Ingate Firewall and SIParator does not come preconfigured with an IP address or Password to administer the unit. Web administration is not possible unless an IP Address and Password are assigned to the unit via the Startup Tool or Console port.

In the Startup Tool, when selecting "Configure the unit for the first time", the Startup Tool will find the Ingate Unit on the network and assign an IP Address and Password to the Ingate unit. This procedure only needs to be done ONCE. When completed, the Ingate unit will have an IP Address and Password assigned.

Note: If the Ingate Unit already has an IP Addressed and Password assigned to it (by the Startup Tool or Console) proceed directly to Section 4.2: "Change or Update Configuration".

Configuration Steps:

1) Launch the Startup Tool
2) Select the Model type of the Ingate Unit, and then click Next.



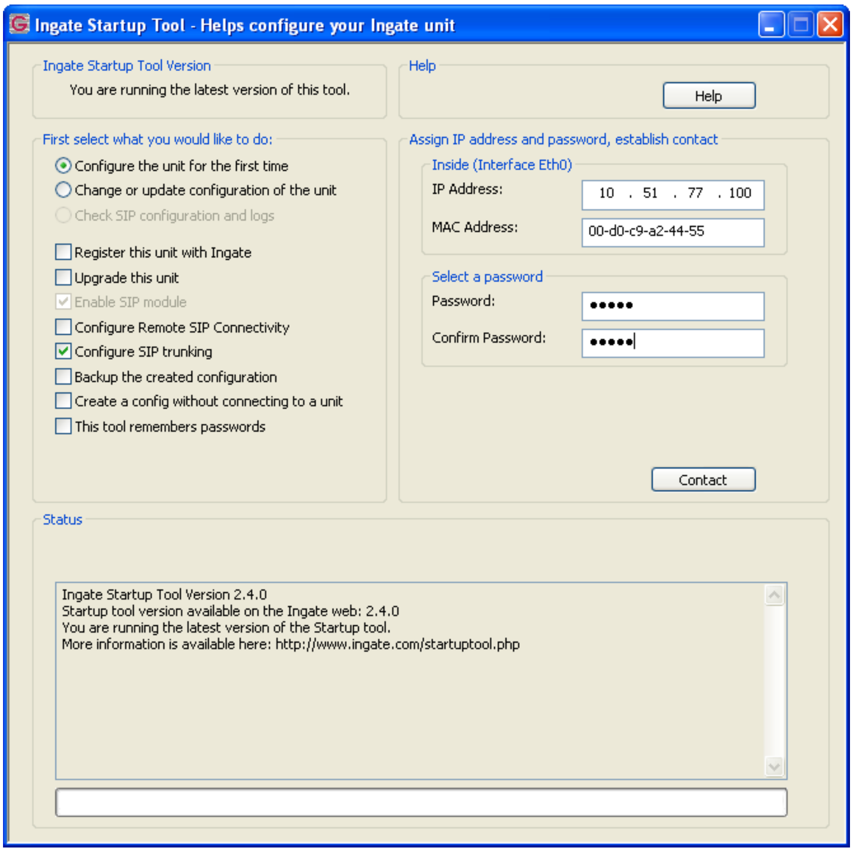
Welcome to the Ingate Startup tool - this tool will assist you in setting up your new Ingate unit

Connect your computer to your Ingate unit like this.

Ingate model - Please Select model: Firewall 1190/SIParator 19

Select Product Type
Setup
Eth0
LAN
SIParator SBE
Firewall 1180/SIParator 18
Firewall 1190/SIParator 19
Firewall 1450/SIParator 45
Firewall 1500/SIParator 50
Firewall 1550/SIParator 55
Next

3) In the "Select first what you would like to do", select "Configure the unit for the first time".



Ingate Startup Tool - Helps configure your Ingate unit

Ingate Startup Tool Version
You are running the latest version of this tool.

First select what you would like to do:
- ● Configure the unit for the first time
- ○ Change or update configuration of the unit
- ○ Check SIP configuration and logs
- □ Register this unit with Ingate
- □ Upgrade this unit
- ☑ Enable SIP module
- □ Configure Remote SIP Connectivity
- ☑ Configure SIP trunking
- □ Backup the created configuration
- □ Create a config without connecting to a unit
- □ This tool remembers passwords

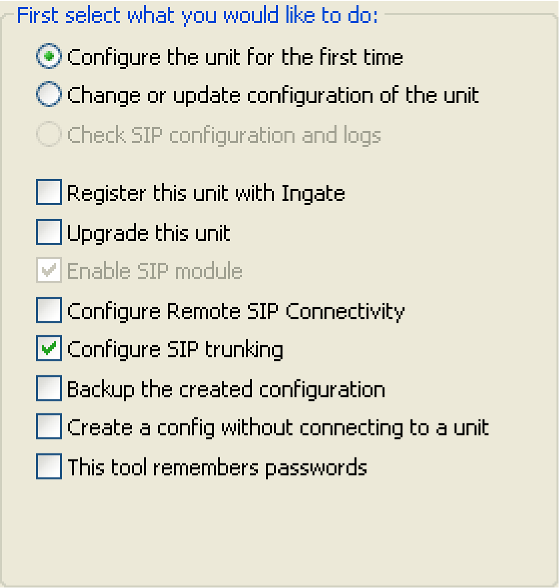
Assign IP address and password, establish contact

Inside (Interface Eth0)
IP Address: 10 . 51 . 77 . 100
MAC Address: 00-d0-c9-a2-44-55

Select a password
Password: •••••
Confirm Password: •••••

Status
```
Ingate Startup Tool Version 2.4.0
Startup tool version available on the Ingate web: 2.4.0
You are running the latest version of the Startup tool.
More information is available here: http://www.ingate.com/startuptool.php
```

4) Other Options in the "Select first what you would like to do",



First select what you would like to do:
- ● Configure the unit for the first time
- ○ Change or update configuration of the unit
- ○ Check SIP configuration and logs
- □ Register this unit with Ingate
- □ Upgrade this unit
- ☑ Enable SIP module
- □ Configure Remote SIP Connectivity
- ☑ Configure SIP trunking
- □ Backup the created configuration
- □ Create a config without connecting to a unit
- □ This tool remembers passwords

a. Select "Configure SIP Trunking" if you want the tool to configure SIP Trunking between a IP-PBX and ITSP.

b. Select "Configure Remote SIP Connectivity" if you want the tool to configure Remote Phone access to an IP-PBX

c. Select "Register this unit with Ingate" if you want the tool to connect with www.ingate.com to register the unit. If selected, see Section 4.3: Licenses and Upgrades.

d. Select "Upgrade this unit" if you want the tool to connect with www.ingate.com to download the latest software release and upgrade the unit. If selected, see Section 4.3: Licenses and Upgrades.

e. Select "Backup the created configuration" if you want the tool to apply the settings to an Ingate unit and save the config file.

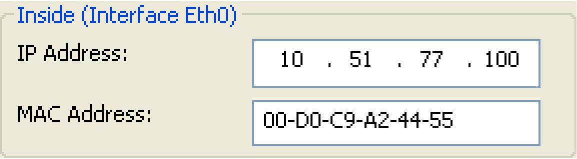
f. Select "Creating a config without connecting to a unit" if you want the tool to just create a config file.

g. Select "The tool remembers passwords" if you want the tool to remember the passwords for the Ingate unit.

5) In the "Inside (Interface Eth0)",

a. Enter the IP Address to be assigned to the Ingate Unit.

b. Enter the MAC Address of the Ingate Unit, this MAC Address will be used to find the unit on the network.

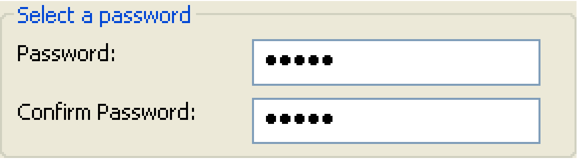


Inside (Interface Eth0)

IP Address: 10 . 51 . 77 . 100

MAC Address: 00-D0-C9-A2-44-55

6) In the "Select a Password", enter the Password to be assigned to the Ingate unit.

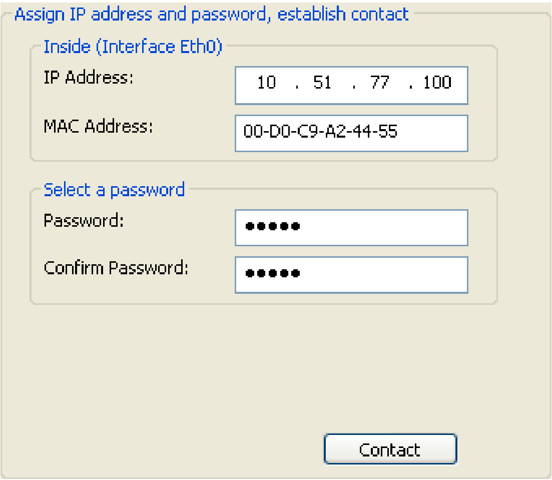


Select a password

Password: ●●●●●

Confirm Password: ●●●●●

7) Once all required values are entered, the "Contact" button will become active. Press the "Contact" button to have the Startup Tool find the Ingate unit on the network, assign the IP Address and Password.



Assign IP address and password, establish contact

Inside (Interface Eth0)

IP Address: 10 . 51 . 77 . 100

MAC Address: 00-D0-C9-A2-44-55

Select a password

Password: ●●●●●

Confirm Password: ●●●●●

8) Proceed to Section 4.4: Network Topology.

4.2 Change or Update Configuration

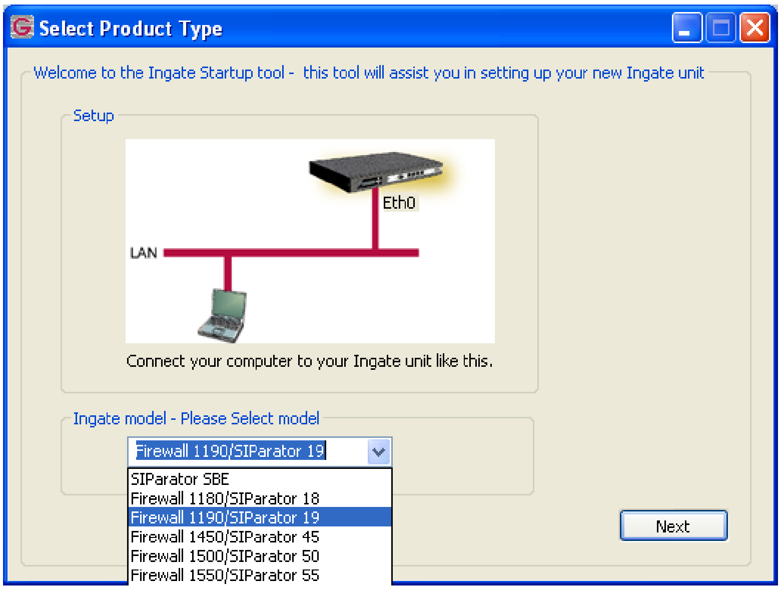
The "Change or update configuration of the unit" setting in the Startup Tool, the Ingate Unit must have already been assigned an IP Address and Password, either by the Startup Tool – "Configure the unit for the first time" or via the Console port.

In the Startup Tool, when selecting "Change or update configuration of the unit", the Startup Tool will connect directly with the Ingate Unit on the network with the provided IP Address and Password. When completed, the Startup Tool will completely overwrite the existing configuration in the Ingate unit with the new settings.

Note: If the Ingate Unit does not have an IP Addressed and Password assigned to it, proceed directly to Section 4.1: "Configure the Unit for the First Time".

Configuration Steps:

1) Launch the Startup Tool
2) Select the Model type of the Ingate Unit, and then click Next.

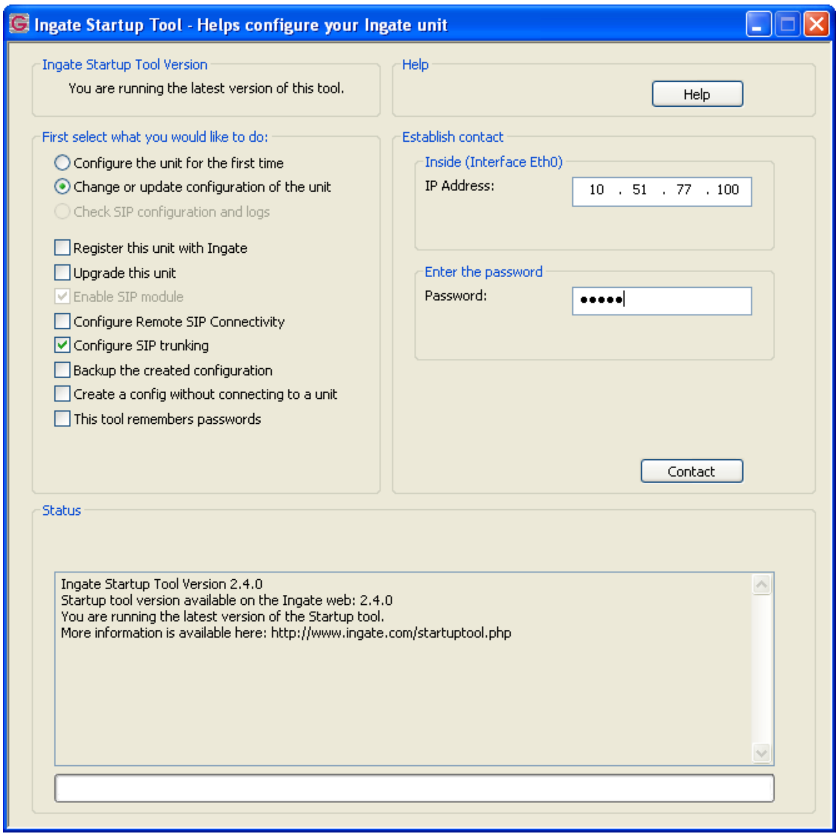

Select Product Type
Welcome to the Ingate Startup tool - this tool will assist you in setting up your new Ingate unit
Setup
Eth0
LAN
Ingate model - Please Select model
Next

Connect your computer to your Ingate unit like this.

Firewall 1190/SIParator 19

SIParator SBE
Firewall 1180/SIParator 18
Firewall 1190/SIParator 19
Firewall 1450/SIParator 45
Firewall 1500/SIParator 50
Firewall 1550/SIParator 55

3) In the "Select first what you would like to do", select "Change or update configuration of the unit".



Ingate Startup Tool - Helps configure your Ingate unit

Ingate Startup Tool Version

You are running the latest version of this tool.

Help

First select what you would like to do:

○ Configure the unit for the first time
● Change or update configuration of the unit
○ Check SIP configuration and logs

□ Register this unit with Ingate
□ Upgrade this unit
☑ Enable SIP module
□ Configure Remote SIP Connectivity
☑ Configure SIP trunking
□ Backup the created configuration
□ Create a config without connecting to a unit
□ This tool remembers passwords

Establish contact

Inside (Interface Eth0)

IP Address: 10 . 51 . 77 . 100

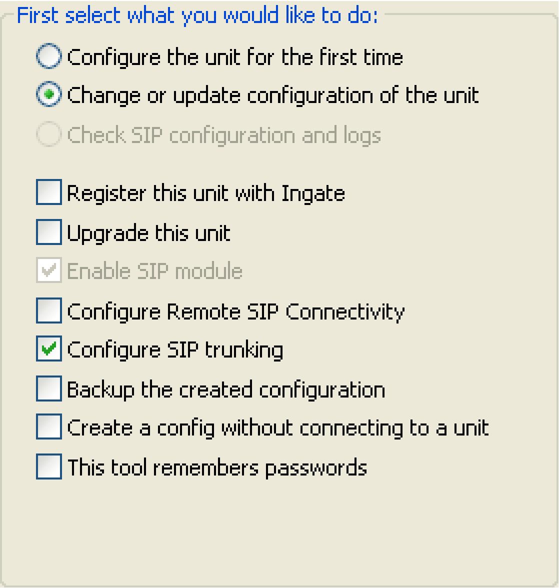
Enter the password

Password: •••••

Status

```
Ingate Startup Tool Version 2.4.0
Startup tool version available on the Ingate web: 2.4.0
You are running the latest version of the Startup tool.
More information is available here: http://www.ingate.com/startuptool.php
```

4) Other Options in the "Select first what you would like to do",



First select what you would like to do:

○ Configure the unit for the first time
● Change or update configuration of the unit
○ Check SIP configuration and logs

□ Register this unit with Ingate
□ Upgrade this unit
☑ Enable SIP module
□ Configure Remote SIP Connectivity
☑ Configure SIP trunking
□ Backup the created configuration
□ Create a config without connecting to a unit
□ This tool remembers passwords

a. Select "Configure SIP Trunking" if you want the tool to configure SIP Trunking between a IP-PBX and ITSP.

b. Select "Configure Remote SIP Connectivity" if you want the tool to configure Remote Phone access to an IP-PBX

c. Select "Register this unit with Ingate" if you want the tool to connect with www.ingate.com to register the unit. If selected, see Section 4.3: Licenses and Upgrades.

d. Select "Upgrade this unit" if you want the tool to connect with www.ingate.com to download the latest software release and upgrade the unit. If selected, see Section 4.3: Licenses and Upgrades.

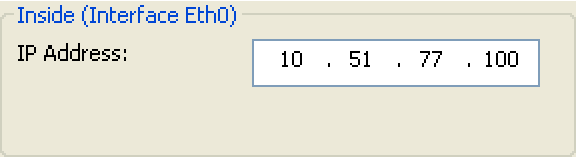
e. Select "Backup the created configuration" if you want the tool to apply the settings to an Ingate unit and save the config file.

f. Select "Creating a config without connecting to a unit" if you want the tool to just create a config file.

g. Select "The tool remembers passwords" if you want the tool to remember the passwords for the Ingate unit.

5) In the "Inside (Interface Eth0)",

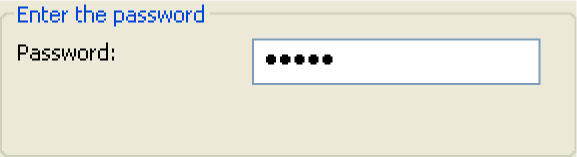
a. Enter the IP Address of the Ingate Unit.



Inside (Interface Eth0)

IP Address: 10 . 51 . 77 . 100

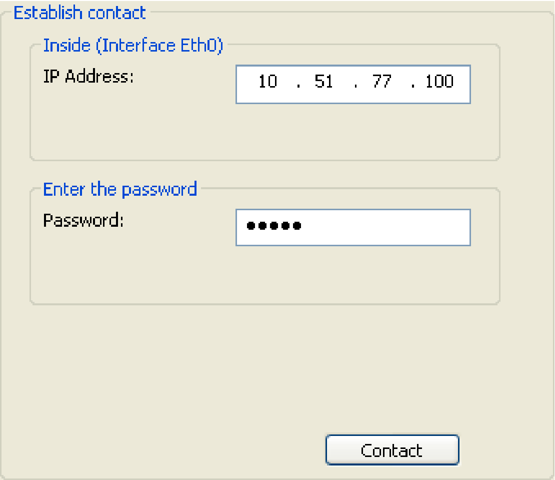
6) In the "Select a Password", enter the Password of the Ingate unit.



Enter the password

Password: •••••

7) Once all required values are entered, the "Contact" button will become active. Press the "Contact" button to have the Startup Tool contact the Ingate unit on the network.



Establish contact

Inside (Interface Eth0)

IP Address: 10 . 51 . 77 . 100

Enter the password

Password: •••••

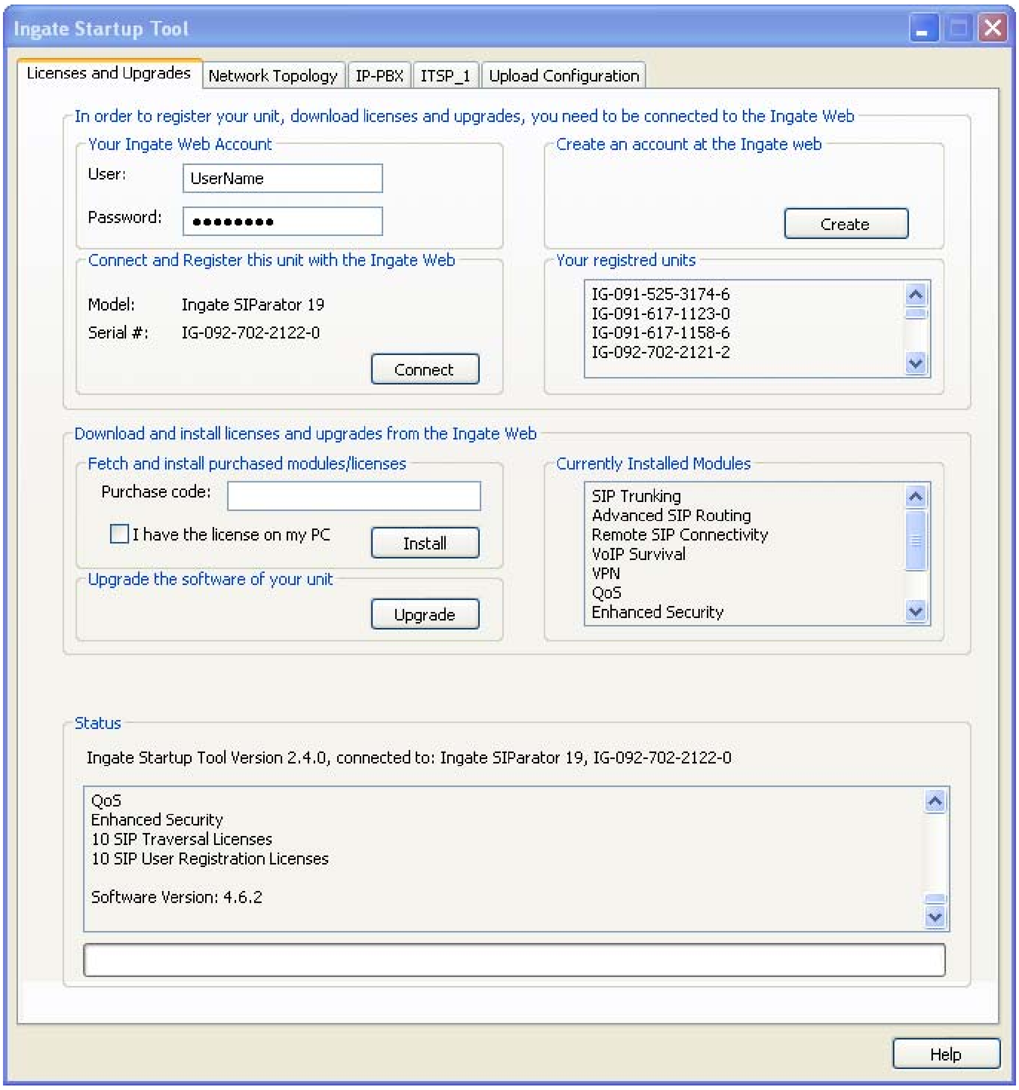
8) Proceed to Section 4.4: Network Topology.

4.3 Licenses and Upgrades

Available online at www.ingate .com, a customer, VAR, distributor can login (http://www.ingate.com/login.php) and register units, obtain software upgrades, register licenses, access documentation, and download information for the installation, configuration and use of Ingate products.

The Startup Tool can connect to the Ingate website to do the following:

1) Create an Account on the Ingate website
2) Register the Ingate unit with the Account
3) Display your current registered unit associated with the account
4) Display the currently install software modules and licenses of the Ingate unit
5) Obtain and Install the License File with your License Code, when adding Modules and Licenses
6) Download and Upgrade the software of the Ingate Unit



In order to register your unit, download licenses and upgrades, you need to be connected to the Ingate Web

Your Ingate Web Account

User: UserName

Password: ●●●●●●●●●

Create an account at the Ingate web

Connect and Register this unit with the Ingate Web

Model: Ingate SIParator 19

Serial #: IG-092-702-2122-0

Your registred units

IG-091-525-3174-6
IG-091-617-1123-0
IG-091-617-1158-6
IG-092-702-2121-2

Download and install licenses and upgrades from the Ingate Web

Fetch and install purchased modules/licenses

Purchase code:

□ I have the license on my PC

Upgrade the software of your unit

Currently Installed Modules

SIP Trunking
Advanced SIP Routing
Remote SIP Connectivity
VoIP Survival
VPN
QoS
Enhanced Security

Status

Ingate Startup Tool Version 2.4.0, connected to: Ingate SIParator 19, IG-092-702-2122-0

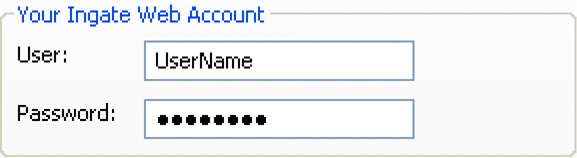
```
QoS
Enhanced Security
10 SIP Traversal Licenses
10 SIP User Registration Licenses

Software Version: 4.6.2
```

4.3.1 Creating an Account on Ingate.com

The Startup Tool will create an account on www.ingate.com to allow access to resources and upgrades. If you already have an account on the Ingate website please proceed to the Section 4.3.2: Connecting to Ingate.com.

Configuration Steps:

1) In the “Your Ingate Web Account” enter a Username and Password.

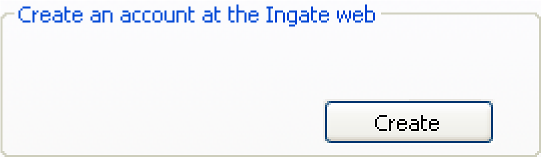


Your Ingate Web Account

User: UserName

Password: ●●●●●●●●●

2) In the “Create an account at the Ingate web”, press “Create”.



Create an account at the Ingate web

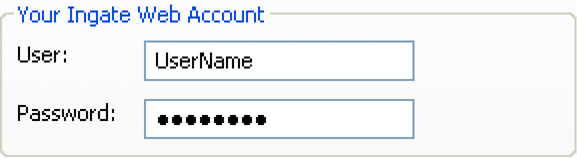
3) At this point the Startup Tool will connect and create an account at http://www.ingate.com/login.php.

4.3.2 Connect & Register the Unit with Ingate.com

The Startup Tool can login to the Ingate website with your Username and Password and Register the Unit to this account.

Configuration Steps:

1) In the “Your Ingate Web Account” enter a Username and Password.

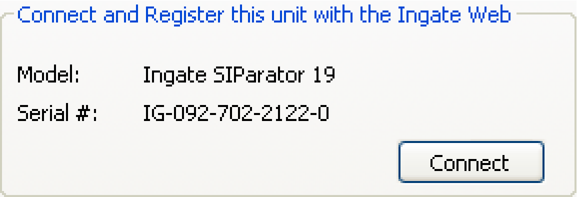


Your Ingate Web Account

User: UserName

Password: ●●●●●●●●●

2) In the “Connect and Register this unit with the Ingate Web” press “Connect”.



Connect and Register this unit with the Ingate Web

Model: Ingate SIParator 19

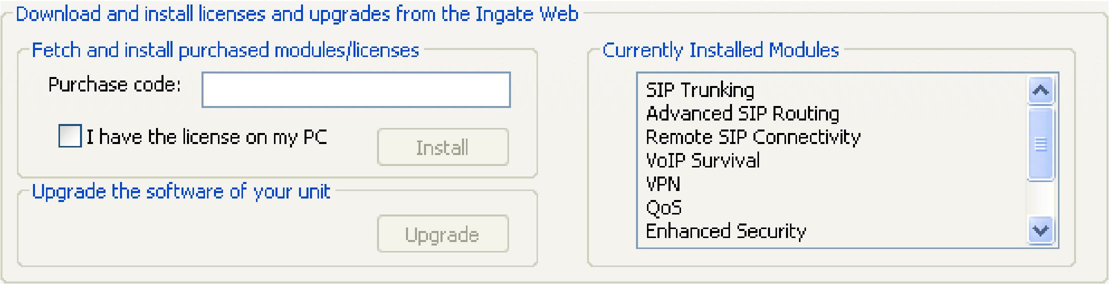
Serial #: IG-092-702-2122-0

4.3.3 Install Purchasable Modules and Licenses

Once connected to Ingate.com (previous step), you can provide the Startup Tool you License Code that is given to you when purchasing optional Modules or increasing your licenses. The Startup Tool will apply the Licenses to your Ingate unit and download the License file and install it onto your unit.

Configuration Steps:

1) Ensure you are connected to the Ingate web, as described in the previous section.
2) In the "Fetch and Install purchased modules/licenses", enter the 12 digit License Code in the Purchase Code area.


Download and install licenses and upgrades from the Ingate Web
Fetch and install purchased modules/licenses
Purchase code:
□ I have the license on my PC
Install
Upgrade the software of your unit
Upgrade
Currently Installed Modules

SIP Trunking
Advanced SIP Routing
Remote SIP Connectivity
VoIP Survival
VPN
QoS
Enhanced Security

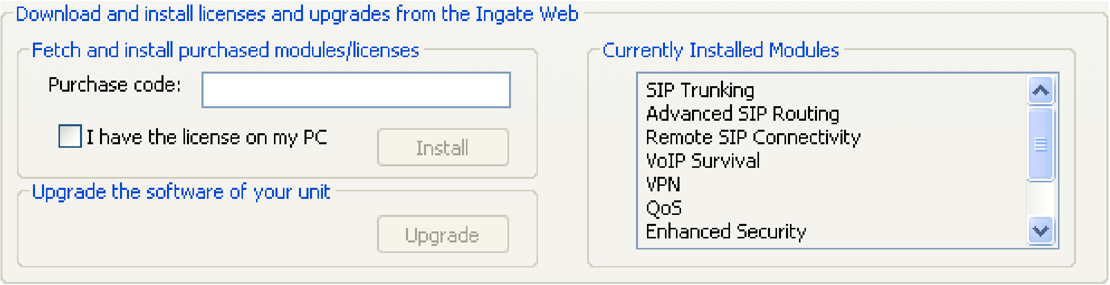
3) Optional: Or if you have gone to the Ingate web and have manually acquired the license file, you may select "I have the license on my PC", and then select the license file.
4) Press "Install" to have the Startup Tool install the license file onto your Ingate unit.

4.3.4 Upgrade the Software

Once connected to Ingate.com (Section 4.3.2), you can request the Startup Tool to upgrade the software version of your Ingate unit. The Startup Tool will adhere to the required upgrade path and download every required software version to correctly upgrade the Ingate unit to the latest software release. Once the software is downloaded the Startup Tool will apply the upgrade to your Ingate unit.

Configuration Steps:

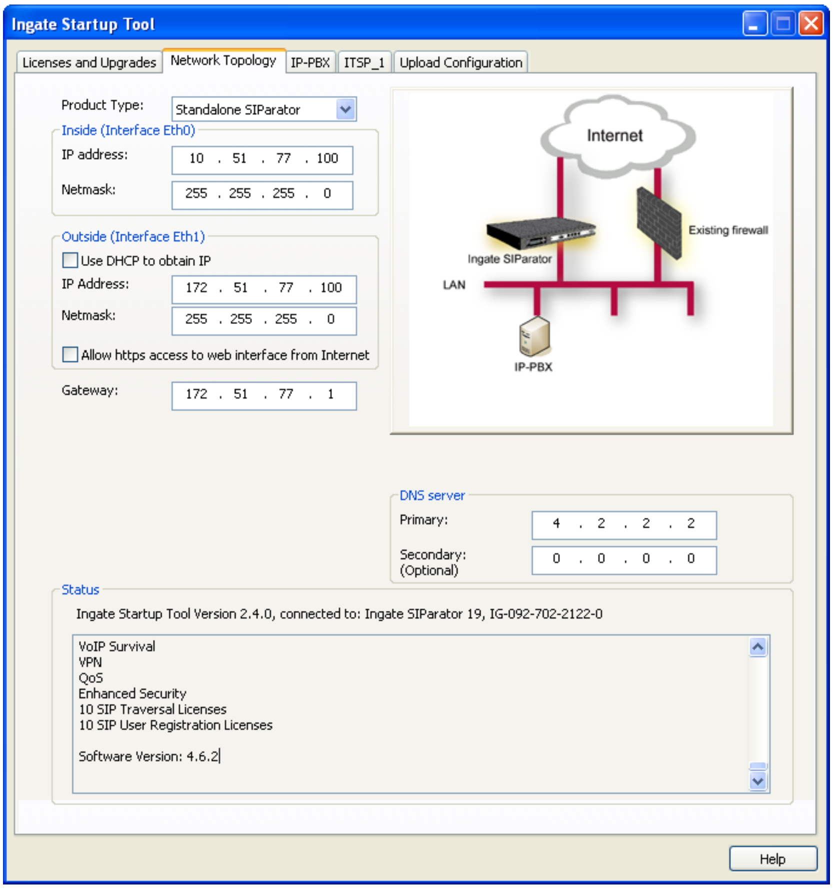
1) Ensure you are connected to the Ingate web, as described in the previous section.
2) In the "Upgrade the software of your unit", press "Upgrade".


Download and install licenses and upgrades from the Ingate Web
Fetch and install purchased modules/licenses
Purchase code:
□ I have the license on my PC
Install
Upgrade the software of your unit
Upgrade
Currently Installed Modules

SIP Trunking
Advanced SIP Routing
Remote SIP Connectivity
VoIP Survival
VPN
QoS
Enhanced Security

4.4 Network Topology

The Network Topology is where the IP Addresses, Netmask, Default Gateways, Public IP Address of NAT'ed Firewall, and DNS Servers are assigned to the Ingate unit. The configuration of the Network Topology is dependent on the deployment (Product) type. When selected, each type has a unique set of programming and deployment requirements, be sure to pick the Product Type that matches the network setup requirements.



Product Type: Standalone SIParator

Inside (Interface Eth0)

IP address: 10 . 51 . 77 . 100

Netmask: 255 . 255 . 255 . 0

Outside (Interface Eth1)

☐ Use DHCP to obtain IP

IP Address: 172 . 51 . 77 . 100

Netmask: 255 . 255 . 255 . 0

☐ Allow https access to web interface from Internet

Gateway: 172 . 51 . 77 . 1

DNS server

Primary: 4 . 2 . 2 . 2

Secondary: (Optional) 0 . 0 . 0 . 0

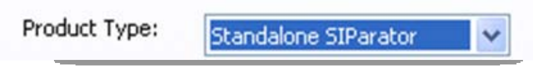
Status

Ingate Startup Tool Version 2.4.0, connected to: Ingate SIParator 19, IG-092-702-2122-0

```
VoIP Survival
VPN
QoS
Enhanced Security
10 SIP Traversal Licenses
10 SIP User Registration Licenses

Software Version: 4.6.2
```

Configuration Steps:

1) In the Product Type drop down list, select the deployment type of the Ingate Firewall or SIParator.



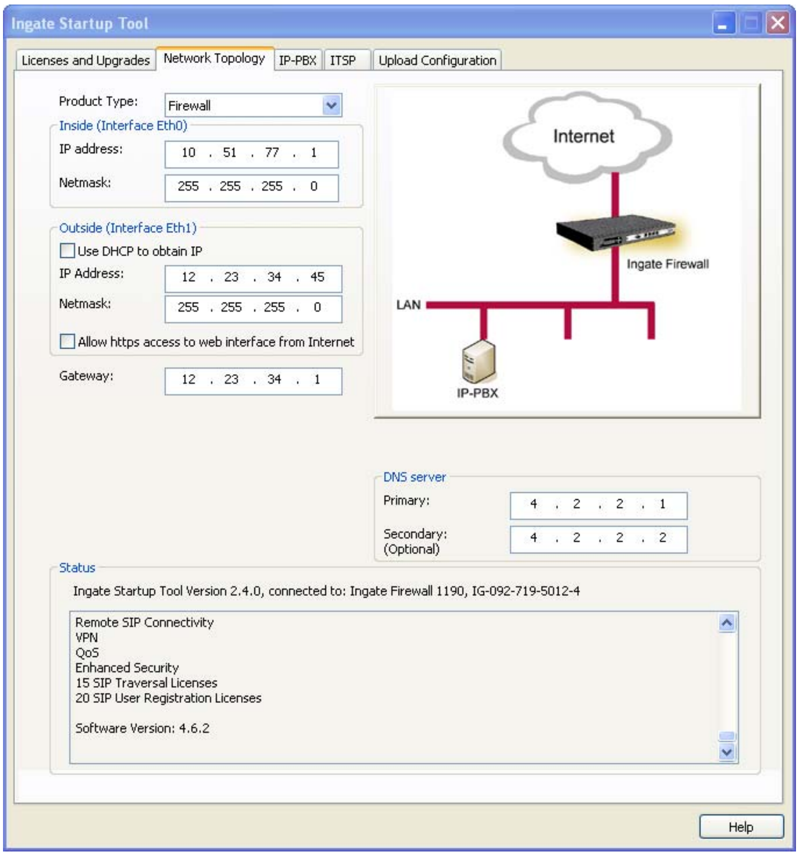
Product Type: Standalone SIParator

Hint: Match the picture to the network deployment.

2) When selecting the Product Type, the rest of the page will change based on the type selected. Go to the Sections below to configure the options based on your choice.

4.4.1 Product Type: Firewall

When deploying an Ingate Firewall, there is only one way the Firewall can be installed. The Firewall must be the Default Gateway for the LAN; it is the primary edge device for all data and voice traffic out of the LAN to the Internet.



Product Type: Firewall

Inside (Interface Eth0)

IP address: 10 . 51 . 77 . 1

Netmask: 255 . 255 . 255 . 0

Outside (Interface Eth1)

□ Use DHCP to obtain IP

IP Address: 12 . 23 . 34 . 45

Netmask: 255 . 255 . 255 . 0

□ Allow https access to web interface from Internet

Gateway: 12 . 23 . 34 . 1

DNS server

Primary: 4 . 2 . 2 . 1

Secondary: (Optional) 4 . 2 . 2 . 2

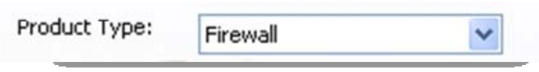
Status

Ingate Startup Tool Version 2.4.0, connected to: Ingate Firewall 1190, IG-092-719-5012-4

```
Remote SIP Connectivity
VPN
QoS
Enhanced Security
15 SIP Traversal Licenses
20 SIP User Registration Licenses

Software Version: 4.6.2
```

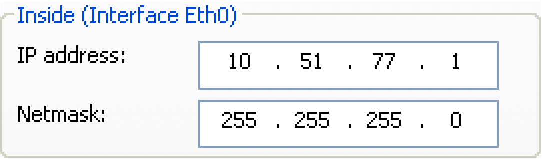
Configuration Steps:

1) In Product Type, select “Firewall”.



Product Type: Firewall

2) Define the Inside (Interface Eth0) IP Address and Netmask. This is the IP Address that will be used on the LAN side on the Ingate unit.

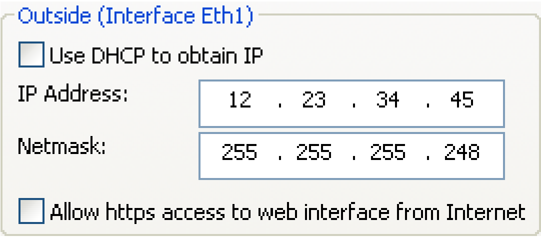


Inside (Interface Eth0)

IP address: 10 . 51 . 77 . 1

Netmask: 255 . 255 . 255 . 0

3) Define the Outside (Interface Eth1) IP Address and Netmask. This is the IP Address that will be used on the Internet (WAN) side on the Ingate unit.
   a. A Static IP Address and Netmask can be entered
   b. Or select “Use DHCP to obtain IP”, if you want the Ingate Unit to acquire an IP address dynamically using DCHP.



Outside (Interface Eth1)

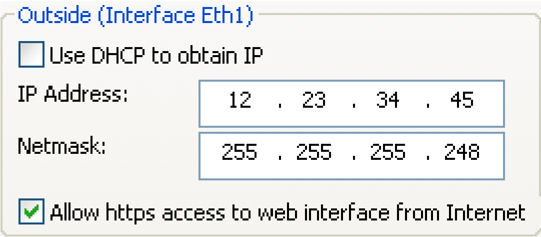
□ Use DHCP to obtain IP

IP Address: 12 . 23 . 34 . 45

Netmask: 255 . 255 . 255 . 248

□ Allow https access to web interface from Internet

4) **Optional:** To configure Secure Web (https) from the Internet to the Ingate Unit for remote administration,
   a. Select "Allow https access to web interface from Internet"



Outside (Interface Eth1)

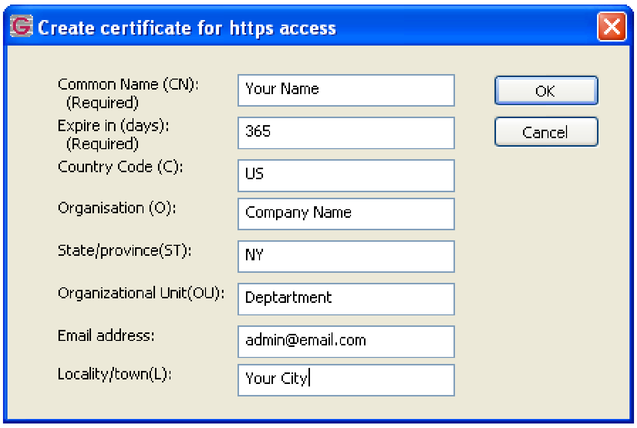
□ Use DHCP to obtain IP

IP Address: 12 . 23 . 34 . 45

Netmask: 255 . 255 . 255 . 248

☑ Allow https access to web interface from Internet

   b. Create a Private Certificate for https access, enter the corresponding information required to generate a certificate.



Create certificate for https access

Common Name (CN): (Required): Your Name

Expire in (days): (Required): 365

Country Code (C): US

Organisation (O): Company Name

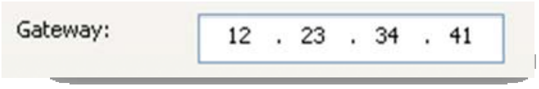
State/province(ST): NY

Organizational Unit(OU): Deptartment

Email address: admin@email.com

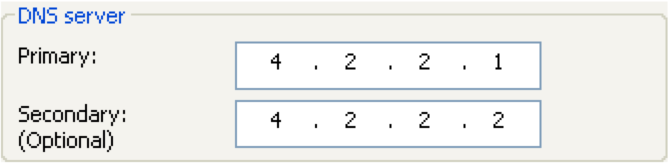
Locality/town(L): Your City

5) Enter the Default Gateway for the Ingate Firewall. The Default Gateway for the Ingate Firewall will always be an IP Address of the Gateway within the network of the outside interface (Eth1).



Gateway: 12 . 23 . 34 . 41

6) Enter the DNS Servers for the Ingate Firewall. These DNS Servers will be used to resolve FQDNs of SIP Requests and other features within the Ingate. They can be internal LAN addresses or outside WAN addresses.



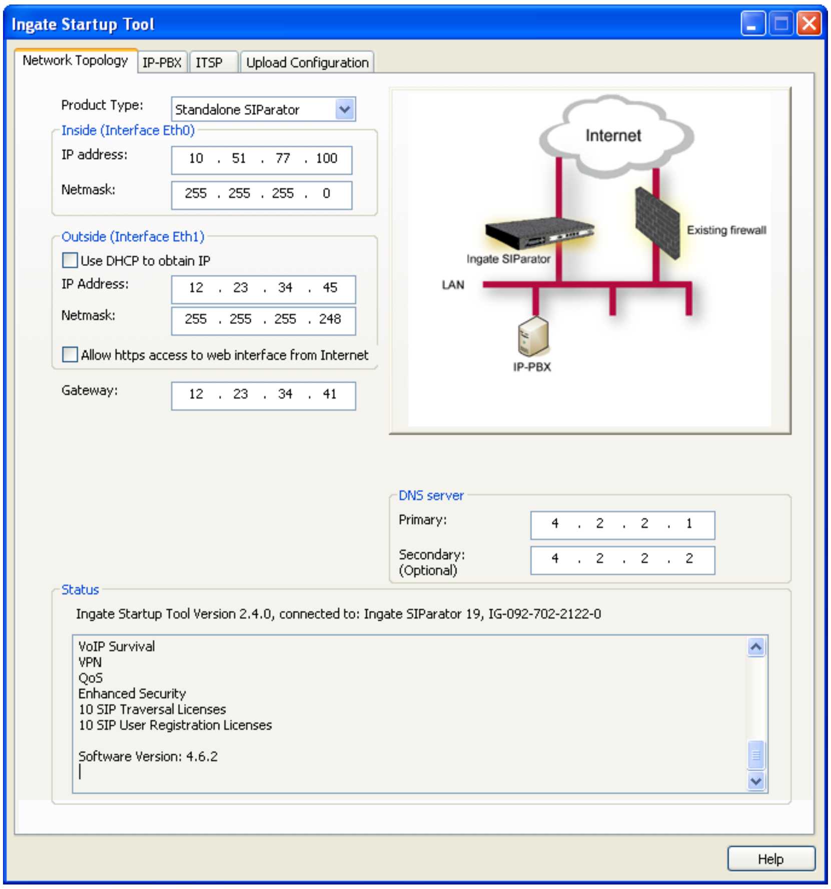
DNS server

Primary: 4 . 2 . 2 . 1

Secondary: (Optional) 4 . 2 . 2 . 2

4.4.2 Product Type: Standalone

When deploying an Ingate SIParator in a Standalone configuration, the SIParator resides on a LAN network and on the WAN/Internet network. The Default Gateway for SIParator resides on the WAN/Internet network. The existing Firewall is in parallel and independent of the SIParator. Firewall is the primary edge device for all data traffic out of the LAN to the Internet. The SIParator is the primary edge device for all voice traffic out of the LAN to the Internet.



Product Type: Standalone SIParator

Inside (Interface Eth0)

IP address: 10 . 51 . 77 . 100

Netmask: 255 . 255 . 255 . 0

Outside (Interface Eth1)

□ Use DHCP to obtain IP

IP Address: 12 . 23 . 34 . 45

Netmask: 255 . 255 . 255 . 248

□ Allow https access to web interface from Internet

Gateway: 12 . 23 . 34 . 41

DNS server

Primary: 4 . 2 . 2 . 1

Secondary: (Optional) 4 . 2 . 2 . 2

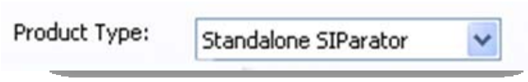
Status

Ingate Startup Tool Version 2.4.0, connected to: Ingate SIParator 19, IG-092-702-2122-0

```
VoIP Survival
VPN
QoS
Enhanced Security
10 SIP Traversal Licenses
10 SIP User Registration Licenses

Software Version: 4.6.2
```

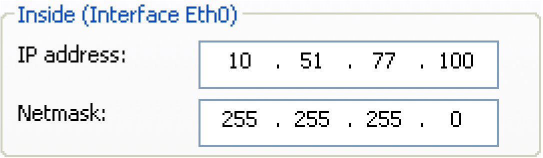
Configuration Steps:

1) In Product Type, select “Standalone SIParator”.



Product Type: Standalone SIParator

2) Define the IP Address and Netmask of the inside LAN (Interface Eth0). This is the IP Address that will be used on the Ingate unit to connect to the LAN network.

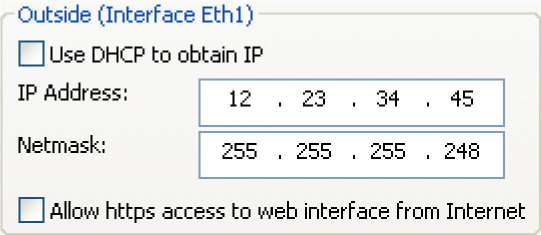


Inside (Interface Eth0)

IP address: 10 . 51 . 77 . 100

Netmask: 255 . 255 . 255 . 0

3) Define the Outside (Interface Eth1) IP Address and Netmask. This is the IP Address that will be used on the Internet (WAN) side on the Ingate unit.
   a. A Static IP Address and Netmask can be entered
   b. Or select "Use DHCP to obtain IP", if you want the Ingate Unit to acquire an IP address dynamically using DCHP.



Outside (Interface Eth1)

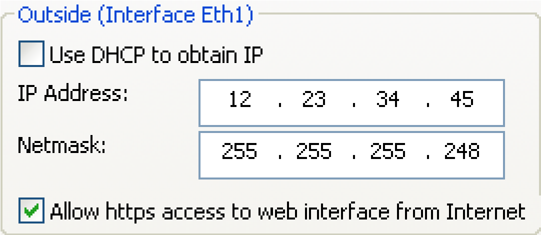
□ Use DHCP to obtain IP

IP Address: 12 . 23 . 34 . 45

Netmask: 255 . 255 . 255 . 248

□ Allow https access to web interface from Internet

4) **Optional:** To configure Secure Web (https) from the Internet to the Ingate Unit for remote administration,
   c. Select "Allow https access to web interface from Internet"



Outside (Interface Eth1)

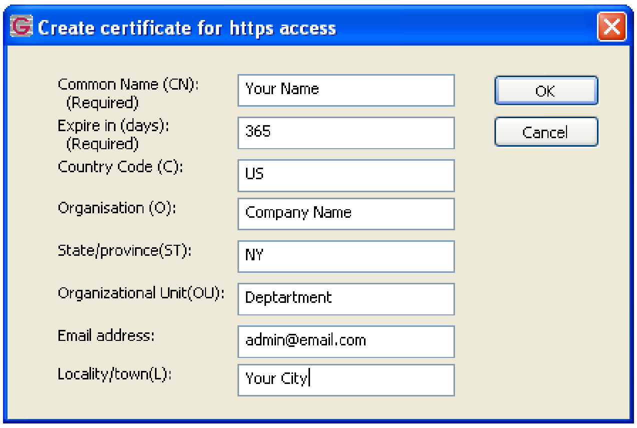
□ Use DHCP to obtain IP

IP Address: 12 . 23 . 34 . 45

Netmask: 255 . 255 . 255 . 248

☑ Allow https access to web interface from Internet

   d. Create a Private Certificate for https access, enter the corresponding information required to generate a certificate.



Create certificate for https access

Common Name (CN): (Required) Your Name

Expire in (days): (Required) 365

Country Code (C): US

Organisation (O): Company Name

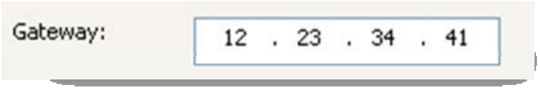
State/province(ST): NY

Organizational Unit(OU): Deptartment

Email address: admin@email.com

Locality/town(L): Your City

5) Enter the Default Gateway for the Ingate SIParator. The Default Gateway for the SIParator will be the existing Firewalls IP Address on the DMZ network.

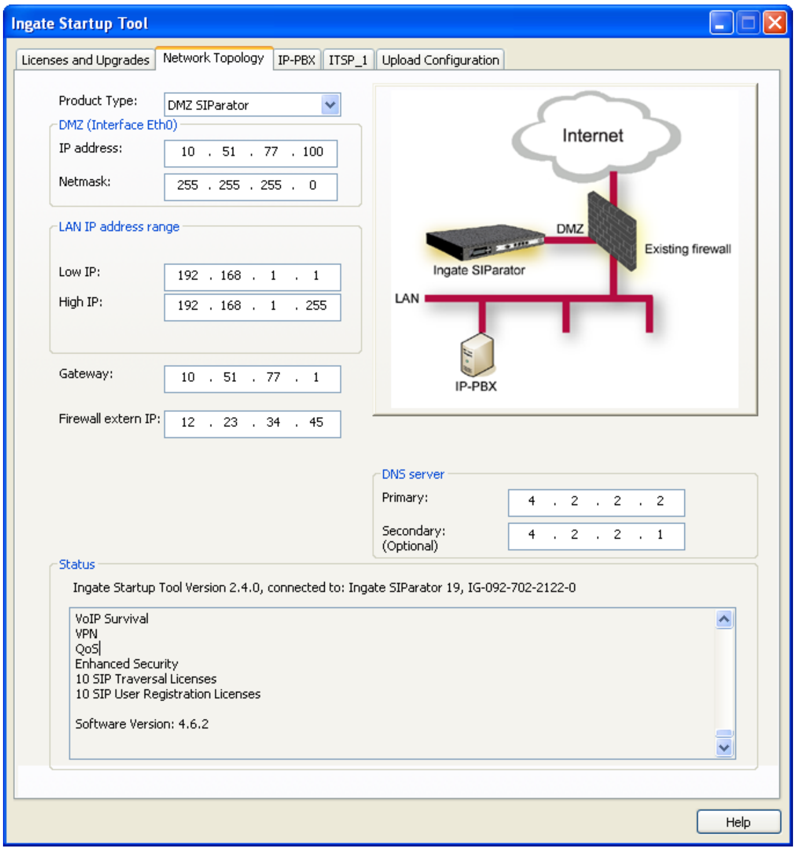


Gateway: 12 . 23 . 34 . 41

6) Enter the DNS Servers for the Ingate Firewall. These DNS Servers will be used to resolve FQDNs of SIP Requests and other features within the Ingate. They can be internal LAN addresses or outside WAN addresses.

4.4.3 Product Type: DMZ SIParator

When deploying an Ingate SIParator in a DMZ configuration, the Ingate resides on a DMZ network connected to an existing Firewall. This existing Firewall must be the Default Gateway for the DMZ network; the existing Firewall is the primary edge device for all data and voice traffic out of the LAN and DMZ to the Internet. SIP Signaling and Media must be forwarded to the Ingate SIParator, both from the Internet to the SIParator and from the DMZ to the LAN.



Product Type: DMZ SIParator

DMZ (Interface Eth0)

IP address: 10 . 51 . 77 . 100

Netmask: 255 . 255 . 255 . 0

LAN IP address range

Low IP: 192 . 168 . 1 . 1

High IP: 192 . 168 . 1 . 255

Gateway: 10 . 51 . 77 . 1

Firewall extern IP: 12 . 23 . 34 . 45

DNS server

Primary: 4 . 2 . 2 . 2

Secondary: (Optional) 4 . 2 . 2 . 1

Status

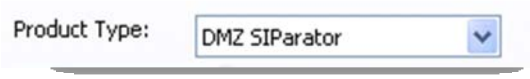
Ingate Startup Tool Version 2.4.0, connected to: Ingate SIParator 19, IG-092-702-2122-0

VoIP Survival
VPN
QoS
Enhanced Security
10 SIP Traversal Licenses
10 SIP User Registration Licenses

Software Version: 4.6.2

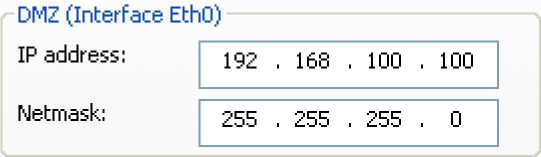
Configuration Steps:

1) In Product Type, select “DMZ SIParator”.



Product Type: DMZ SIParator

2) Define the IP Address and Netmask of the DMZ (Interface Eth0). This is the IP Address that will be used on the Ingate unit to connect to the DMZ network side on the existing Firewall.

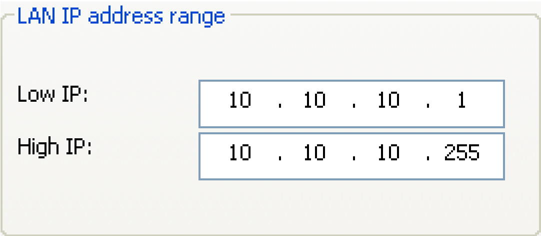


DMZ (Interface Eth0)

IP address: 192 . 168 . 100 . 100

Netmask: 255 . 255 . 255 . 0

3) Define the LAN IP Address Range, the lower and upper limit of the network addresses located on the LAN. This is the scope of IP Addresses contained on the LAN side of the existing Firewall.

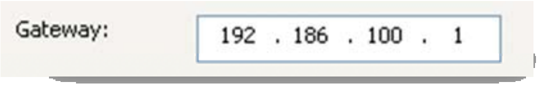


LAN IP address range

Low IP: 10 . 10 . 10 . 1

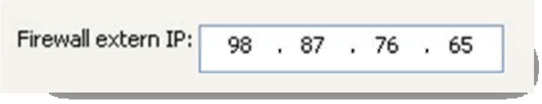
High IP: 10 . 10 . 10 . 255

4) Enter the Default Gateway for the Ingate SIParator. The Default Gateway for the SIParator will be the existing Firewalls IP Address on the DMZ network.



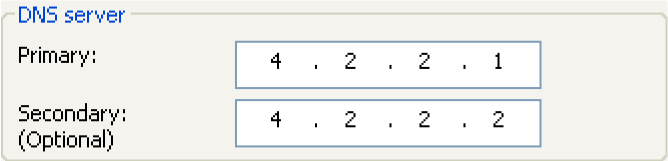
Gateway: 192 . 186 . 100 . 1

5) Enter the existing Firewall's external WAN/Internet IP Address. This is used to ensure correct SIP Signaling and Media traversal functionality. This is required when the existing Firewall is providing NAT.



Firewall extern IP: 98 . 87 . 76 . 65

6) Enter the DNS Servers for the Ingate Firewall. These DNS Servers will be used to resolve FQDNs of SIP Requests and other features within the Ingate. They can be internal LAN addresses or outside WAN addresses.



DNS server

Primary: 4 . 2 . 2 . 1

Secondary: (Optional) 4 . 2 . 2 . 2

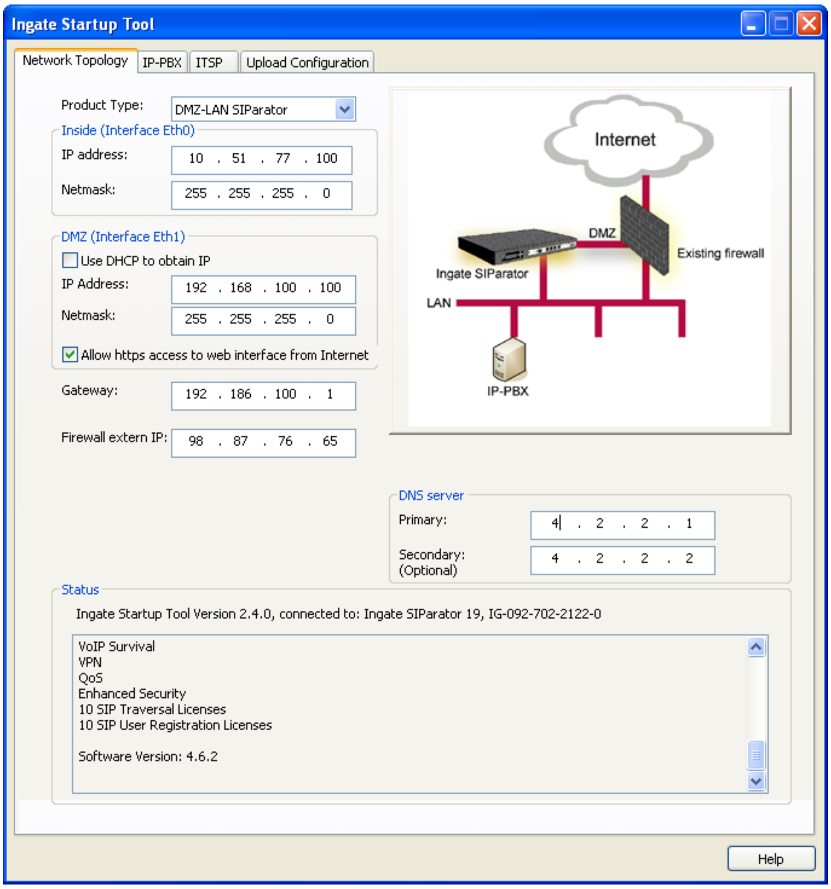
7) On the Existing Firewall, the SIP Signaling Port and RTP Media Ports need to be forwarded to the Ingate SIParator. The Ingate SIParator is an ICSA Certified network edge security device, so there are no security concerns forwarding network traffic to the SIParator.

On the existing Firewall:

a. Port Forward the WAN/Internet interface SIP Signaling port of 5060 with a UDP/TCP Forward to the Ingate SIParator
b. Port Forward the a range of RTP Media ports of 58024 to 60999 with a UDP Forward to the Ingate SIParator
c. If necessary; provide a Rule that allows the SIP Signaling on port 5060 using UDP/TCP transport on the DMZ network to the LAN network
d. If necessary; provide a Rule that allows a range of RTP Media ports of 58024 to 60999 using UDP transport on the DMZ network to the LAN network.

4.4.4 Product Type: DMZ-LAN SIParator

When deploying an Ingate SIParator in a DMZ-LAN configuration, the Ingate resides on a DMZ network connected to an existing Firewall and also on the LAN network. This existing Firewall must be the Default Gateway for the DMZ network; the existing Firewall is the primary edge device for all data and voice traffic out of the LAN and DMZ to the Internet. SIP Signaling and Media must be forwarded to the Ingate SIParator, from the Internet to the SIParator. The voice traffic from the LAN is directed to the SIParator then to the existing Firewall.



Product Type: DMZ-LAN SIParator

Inside (Interface Eth0)

IP address: 10 . 51 . 77 . 100

Netmask: 255 . 255 . 255 . 0

DMZ (Interface Eth1)

☐ Use DHCP to obtain IP

IP Address: 192 . 168 . 100 . 100

Netmask: 255 . 255 . 255 . 0

☑ Allow https access to web interface from Internet

Gateway: 192 . 186 . 100 . 1

Firewall extern IP: 98 . 87 . 76 . 65

DNS server

Primary: 4 . 2 . 2 . 1

Secondary: (Optional) 4 . 2 . 2 . 2

Status

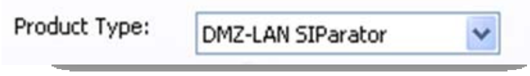
Ingate Startup Tool Version 2.4.0, connected to: Ingate SIParator 19, IG-092-702-2122-0

VoIP Survival
VPN
QoS
Enhanced Security
10 SIP Traversal Licenses
10 SIP User Registration Licenses

Software Version: 4.6.2

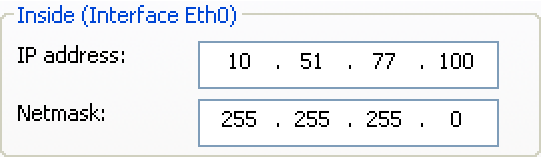
Configuration Steps:

1) In Product Type, select “DMZ SIParator”.



Product Type: DMZ-LAN SIParator

2) Define the IP Address and Netmask of the inside LAN (Interface Eth0). This is the IP Address that will be used on the Ingate unit to connect to the LAN network.

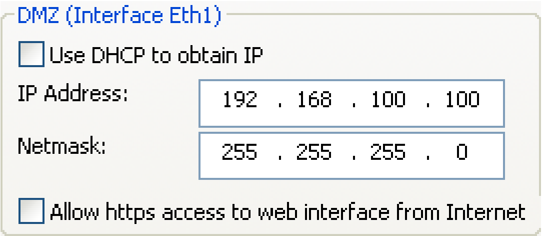


Inside (Interface Eth0)

IP address: 10 . 51 . 77 . 100

Netmask: 255 . 255 . 255 . 0

3) Define the IP Address and Netmask of the DMZ (Interface Eth1). This is the IP Address that will be used on the Ingate unit to connect to the DMZ network side on the existing Firewall.
   a. A Static IP Address and Netmask can be entered
   b. Or select "Use DHCP to obtain IP", if you want the Ingate Unit to acquire an IP address dynamically using DCHP.



DMZ (Interface Eth1)

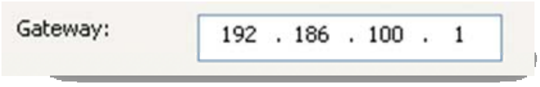
□ Use DHCP to obtain IP

IP Address: 192 . 168 . 100 . 100

Netmask: 255 . 255 . 255 . 0

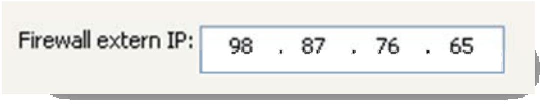
□ Allow https access to web interface from Internet

4) Enter the Default Gateway for the Ingate SIParator. The Default Gateway for the SIParator will be the existing Firewalls IP Address on the DMZ network.



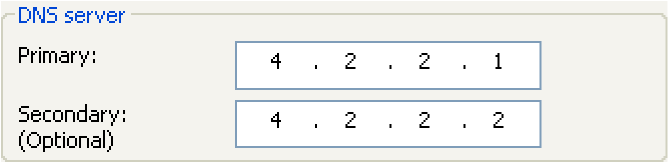
Gateway: 192 . 186 . 100 . 1

5) Enter the existing Firewall's external WAN/Internet IP Address. This is used to ensure correct SIP Signaling and Media traversal functionality. This is required when the existing Firewall is providing NAT.



Firewall extern IP: 98 . 87 . 76 . 65

6) Enter the DNS Servers for the Ingate Firewall. These DNS Servers will be used to resolve FQDNs of SIP Requests and other features within the Ingate. They can be internal LAN addresses or outside WAN addresses.



DNS server

Primary: 4 . 2 . 2 . 1

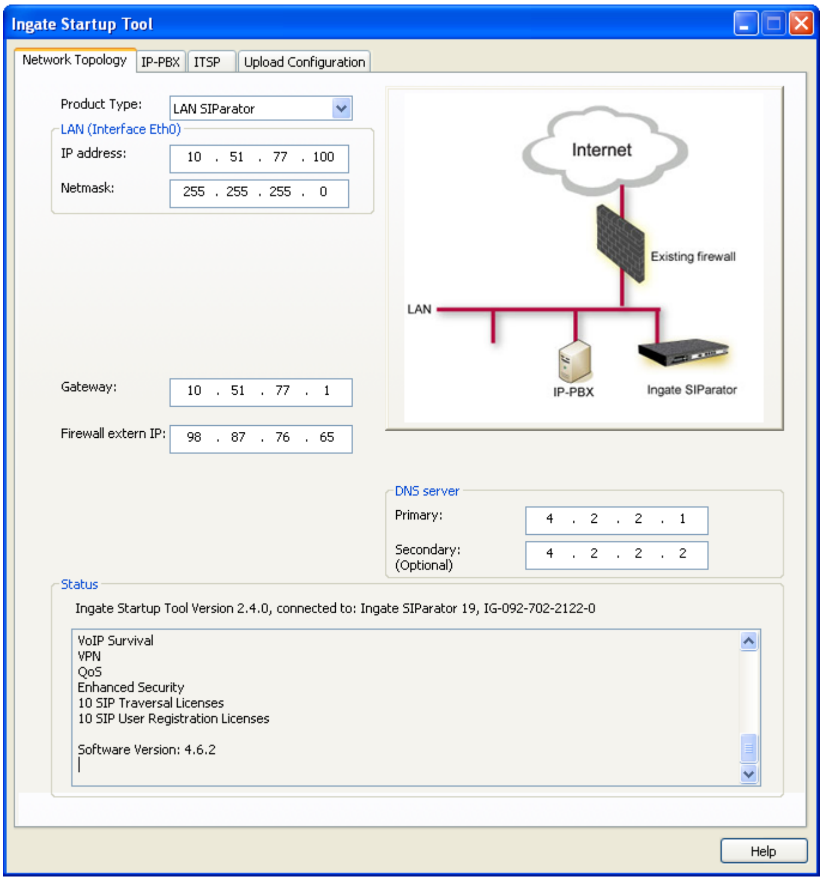
Secondary: (Optional) 4 . 2 . 2 . 2

7) On the Existing Firewall, the SIP Signaling Port and RTP Media Ports need to be forwarded to the Ingate SIParator. The Ingate SIParator is an ICSA Certified network edge security device, so there are no security concerns forwarding network traffic to the SIParator.

   On the existing Firewall:
   a. Port Forward the WAN/Internet interface SIP Signaling port of 5060 with a UDP/TCP Forward to the Ingate SIParator
   b. Port Forward the a range of RTP Media ports of 58024 to 60999 with a UDP Forward to the Ingate SIParator

4.4.5 Product Type: LAN SIParator

When deploying an Ingate SIParator in a LAN configuration, the Ingate resides on a LAN network with all of the other network devices. The existing Firewall must be the Default Gateway for the LAN network; the existing Firewall is the primary edge device for all data and voice traffic out of the LAN to the WAN/Internet. SIP Signaling and Media must be forwarded to the Ingate SIParator, from the Internet to the SIParator. The voice traffic from the LAN is directed to the SIParator then to the existing Firewall.



Product Type: LAN SIParator

LAN (Interface Eth0)

IP address: 10 . 51 . 77 . 100

Netmask: 255 . 255 . 255 . 0

Gateway: 10 . 51 . 77 . 1

Firewall extern IP: 98 . 87 . 76 . 65

DNS server

Primary: 4 . 2 . 2 . 1

Secondary: (Optional) 4 . 2 . 2 . 2

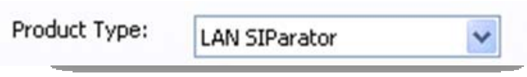
Status

Ingate Startup Tool Version 2.4.0, connected to: Ingate SIParator 19, IG-092-702-2122-0

```
VoIP Survival
VPN
QoS
Enhanced Security
10 SIP Traversal Licenses
10 SIP User Registration Licenses

Software Version: 4.6.2
```

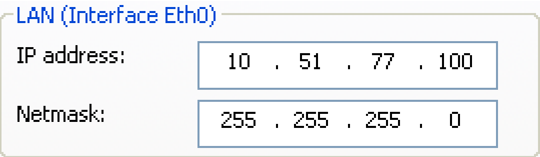
Configuration Steps:

1) In Product Type, select “LAN SIParator”.



Product Type: LAN SIParator

2) Define the IP Address and Netmask of the inside LAN (Interface Eth0). This is the IP Address that will be used on the Ingate unit to connect to the LAN network.

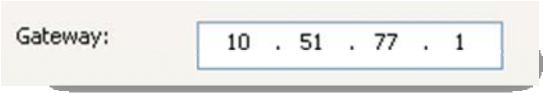


LAN (Interface Eth0)

IP address: 10 . 51 . 77 . 100

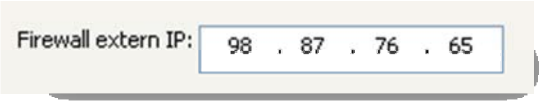
Netmask: 255 . 255 . 255 . 0

3) Enter the Default Gateway for the Ingate SIParator. The Default Gateway for the SIParator will be the existing Firewalls IP Address on the DMZ network.



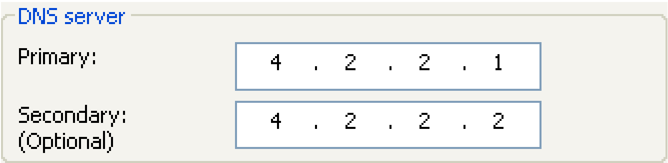
Gateway: 10 . 51 . 77 . 1

4) Enter the existing Firewall's external WAN/Internet IP Address. This is used to ensure correct SIP Signaling and Media traversal functionality. This is required when the existing Firewall is providing NAT.



Firewall extern IP: 98 . 87 . 76 . 65

5) Enter the DNS Servers for the Ingate Firewall. These DNS Servers will be used to resolve FQDNs of SIP Requests and other features within the Ingate. They can be internal LAN addresses or outside WAN addresses.



DNS server

Primary: 4 . 2 . 2 . 1

Secondary: (Optional) 4 . 2 . 2 . 2

6) On the Existing Firewall, the SIP Signaling Port and RTP Media Ports need to be forwarded to the Ingate SIParator. The Ingate SIParator is an ICSA Certified network edge security device, so there are no security concerns forwarding network traffic to the SIParator.

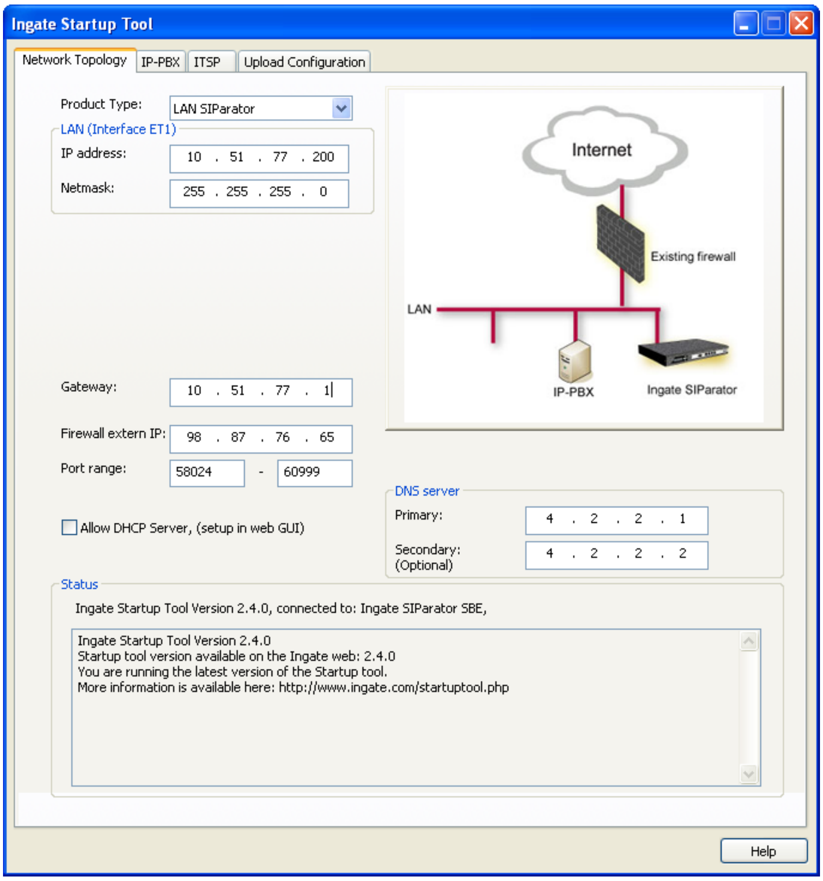
On the existing Firewall:

a. Port Forward the WAN/Internet interface SIP Signaling port of 5060 with a UDP/TCP Forward to the Ingate SIParator

b. Port Forward the a range of RTP Media ports of 58024 to 60999 with a UDP Forward to the Ingate SIParator

4.4.6 Product Type: LAN SIParator – "*SBE SIParator Only*"

This section is specific to the Ingate SBE SIParator when deploying in a LAN SIParator configuration, the Ingate SBE resides on a LAN network with all of the other network devices. The existing Firewall must be the Default Gateway for the LAN network; the existing Firewall is the primary edge device for all data and voice traffic out of the LAN to the WAN/Internet. SIP Signaling and Media must be forwarded to the Ingate SIParator, from the Internet to the SIParator. The voice traffic from the LAN is directed to the SIParator then to the existing Firewall.



Product Type: LAN SIParator

LAN (Interface ET1)

IP address: 10 . 51 . 77 . 200

Netmask: 255 . 255 . 255 . 0

Gateway: 10 . 51 . 77 . 1

Firewall extern IP: 98 . 87 . 76 . 65

Port range: 58024 - 60999

☐ Allow DHCP Server, (setup in web GUI)

DNS server

Primary: 4 . 2 . 2 . 1

Secondary: (Optional) 4 . 2 . 2 . 2

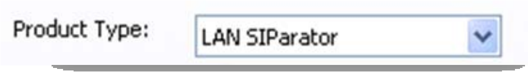
Status

Ingate Startup Tool Version 2.4.0, connected to: Ingate SIParator SBE,

```
Ingate Startup Tool Version 2.4.0
Startup tool version available on the Ingate web: 2.4.0
You are running the latest version of the Startup tool.
More information is available here: http://www.ingate.com/startuptool.php
```

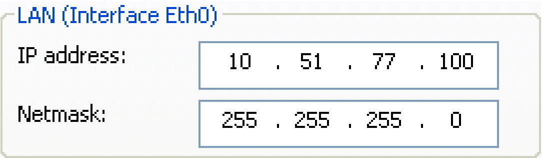
Configuration Steps:

1) In Product Type, select "LAN SIParator".



Product Type: LAN SIParator

2) Define the IP Address and Netmask of the inside LAN (Interface Eth0). This is the IP Address that will be used on the Ingate unit to connect to the LAN network.

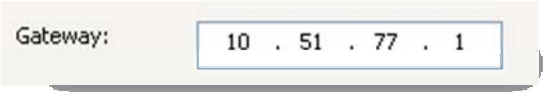


LAN (Interface Eth0)

IP address: 10 . 51 . 77 . 100

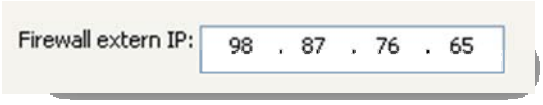
Netmask: 255 . 255 . 255 . 0

3) Enter the Default Gateway for the Ingate SIParator. The Default Gateway for the SIParator will be the existing Firewalls IP Address on the DMZ network.



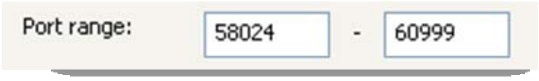
Gateway: 10 . 51 . 77 . 1

4) Enter the existing Firewall's external WAN/Internet IP Address. This is used to ensure correct SIP Signaling and Media traversal functionality. This is required when the existing Firewall is providing NAT.



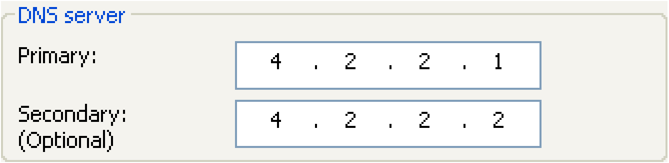
Firewall extern IP: 98 . 87 . 76 . 65

5) Enter a Port Range of media ports you need to configure the firewall to forward to the LAN SIParator



Port range: 58024 - 60999

6) Enter the DNS Servers for the Ingate Firewall. These DNS Servers will be used to resolve FQDNs of SIP Requests and other features within the Ingate. They can be internal LAN addresses or outside WAN addresses.



DNS server

Primary: 4 . 2 . 2 . 1

Secondary: (Optional) 4 . 2 . 2 . 2

7) On the Existing Firewall, the SIP Signaling Port and RTP Media Ports need to be forwarded to the Ingate SIParator. The Ingate SIParator is an ICSA Certified network edge security device, so there are no security concerns forwarding network traffic to the SIParator.

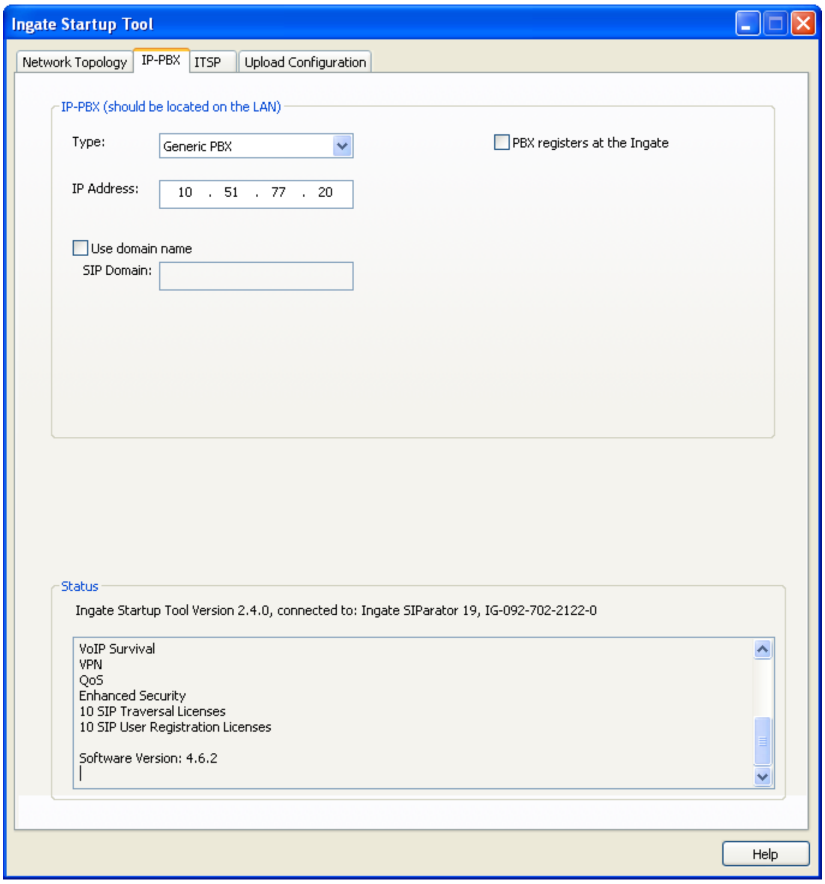
On the existing Firewall:

a. Port Forward the WAN/Internet interface SIP Signaling port of 5060 with a UDP/TCP Forward to the Ingate SIParator

b. Port Forward the a range of RTP Media ports of 58024 to 60999 with a UDP Forward to the Ingate SIParator

4.5 IP-PBX

The IP-PBX section is where the IP Addresses and Domain location are provided to the Ingate unit. The configuration of the IP-PBX will allow for the Ingate unit to know the location of the IP-PBX as to direct SIP traffic for the use with SIP Trunking and Remote Phones. The IP Address of the IP-PBX must be on the same network subnet at the IP Address of the inside interface of the Ingate unit. Ingate has confirmed interoperability several of the leading IP-PBX vendors.



Type: Generic PBX

☐ PBX registers at the Ingate

IP Address: 10 . 51 . 77 . 20

☐ Use domain name

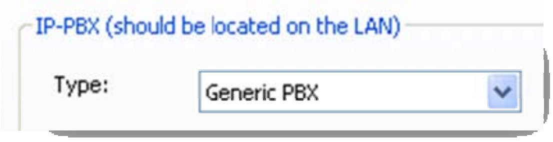
SIP Domain:

Ingate Startup Tool Version 2.4.0, connected to: Ingate SIParator 19, IG-092-702-2122-0

```
VoIP Survival
VPN
QoS
Enhanced Security
10 SIP Traversal Licenses
10 SIP User Registration Licenses

Software Version: 4.6.2
```

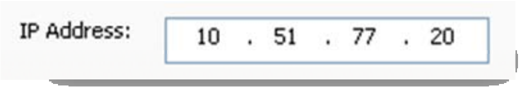
Configuration Steps:

1) In the IP-PBX Type drop down list, select the appropriate IP-PBX vendor. Ingate has confirmed interoperability several of the leading IP-PBX vendors, the unique requirements of the vendor testing are contained in the Startup Tool. If the vendor choice is not seen, select “Generic PBX”.



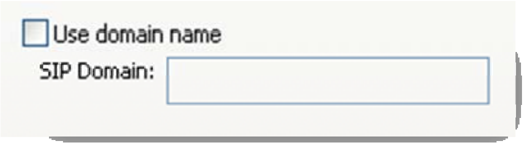
Type: Generic PBX

2) Enter the IP Address of the IP-PBX. The IP Address should be on the same LAN subnet as the Ingate unit.



IP Address: 10 . 51 . 77 . 20

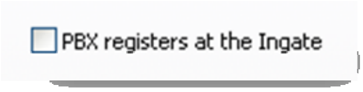
3) **Optional:** For some IP-PBX solutions they require a SIP Domain. This domain name is used to route SIP Requests to the IP-PBX associated with that domain. Select "Use domain name" and enter the FQDN



□ Use domain name

SIP Domain:

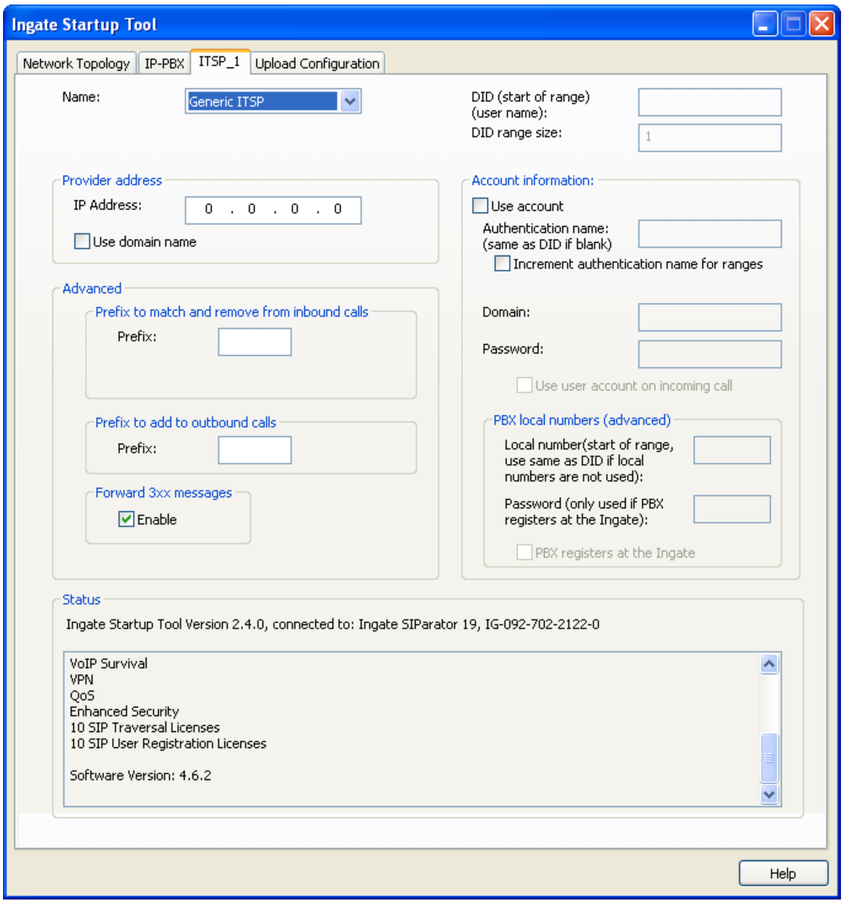
4) **Optional:** Only for when Generic PBX is selected, will this option become available. When is option is enabled, the Ingate Registrar is enabled, later on the ITSP configuration, Identities or Users are assigned on the Registrar and associated to the incoming call characteristics. So the PBX registers to the Ingate and the Ingate sends the incoming call to these registered users/identities.



□ PBX registers at the Ingate

4.6 ITSP

The ITSP section is where all of the attributes of the SIP Trunking Service Provider are programmed. Details like the IP Addresses or Domain, DIDs, Authentication Account information, Prefixes, and PBX local number. The configuration of the ITSP will allow for the Ingate unit to know the location of the ITSP as to direct SIP traffic for the use with SIP Trunking. Ingate has confirmed interoperability many of the leading ITSP vendors.



Name: Generic ITSP

DID (start of range) (user name):

DID range size: 1

Provider address

IP Address: 0 . 0 . 0 . 0

□ Use domain name

Account information:

□ Use account

Authentication name: (same as DID if blank)

□ Increment authentication name for ranges

Domain:

Password:

□ Use user account on incoming call

Advanced

Prefix to match and remove from inbound calls

Prefix:

Prefix to add to outbound calls

Prefix:

Forward 3xx messages

☑ Enable

PBX local numbers (advanced)

Local number(start of range, use same as DID if local numbers are not used):

Password (only used if PBX registers at the Ingate):

□ PBX registers at the Ingate

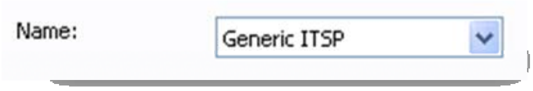
Status

Ingate Startup Tool Version 2.4.0, connected to: Ingate SIParator 19, IG-092-702-2122-0

```
VoIP Survival
VPN
QoS
Enhanced Security
10 SIP Traversal Licenses
10 SIP User Registration Licenses

Software Version: 4.6.2
```

Configuration Steps:

1) In the ITSP drop down list, select the appropriate ITSP vendor. Ingate has confirmed interoperability several of the leading ITSP vendors, the unique requirements of the vendor testing are contained in the Startup Tool. If the vendor choice is not seen, select "Generic ITSP".

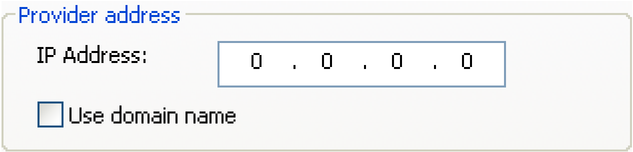


Name: Generic ITSP

When you select a specific ITSP vendor, the Startup Tool will have the individual connection requirements predefined for that ITSP, the only additional entries may be the specific site requirements.

2) Service Providers come in one of two flavors, either they have a trusted IP deployment or they require a Registration account.

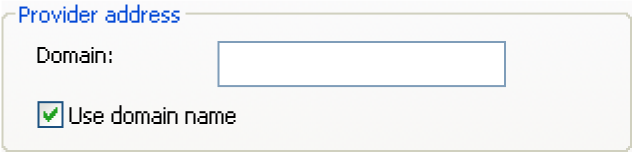
a. In the case where the Service Provider uses a Trusted IP deployment, all that is required is to enter the IP Address or Domain of the Service Providers SIP Server or SBC. Enter the IP Address here, or select "Use domain name" and enter the FQDN of the Service Provider.



Provider address

IP Address: 0 . 0 . 0 . 0

□ Use domain name

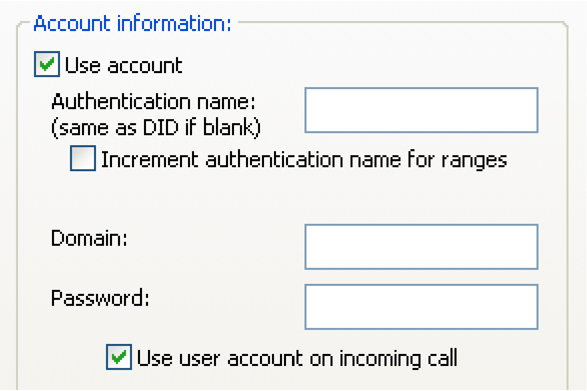


Provider address

Domain:

☑ Use domain name

b. In the case where the Service Provider requires the Ingate to Register with the Service Providers SIP Server or SBC, select "Use Account". When "Use Account" is selected, the Registration Account information from the Service Provider is required. Information such as Username/DID, Service Providers Domain, Authentication Username, and Authentication Password.



Account information:

☑ Use account

Authentication name:
(same as DID if blank)

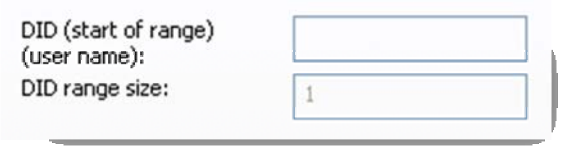
□ Increment authentication name for ranges

Domain:

Password:

☑ Use user account on incoming call

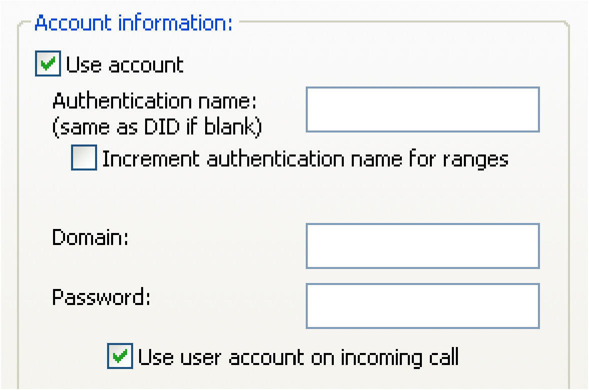
i. Enter a DID (Username) in which the Ingate will register with the Service Provider. The Startup Tool also has the ability to program a sequential range of DIDs.



DID (start of range)
(user name):

DID range size: 1

ii. Registrations often require the use of an Authentication Username and Password. Also enter the Domain or IP Address of the Service Provider.



Account information:

☑ Use account

Authentication name:
(same as DID if blank)

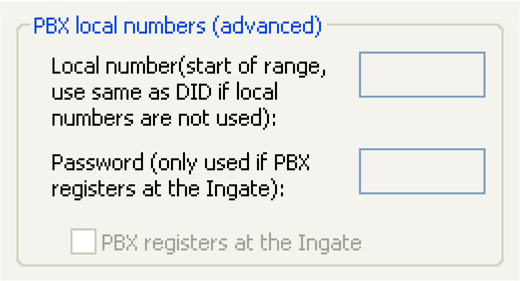
□ Increment authentication name for ranges

Domain:

Password:

☑ Use user account on incoming call

iii. **Optional:** Some IP-PBXs require the use of Ingate's Registrar, where the IP-PBX registers Local Identities/Numbers on the Ingate. The Ingate will direct calls to these registered users. Here enter the start of the range of Identity/Number being registered to the Ingate from the IP-PBX. (Iwatsu and Avaya QE are typical examples of this configuration)



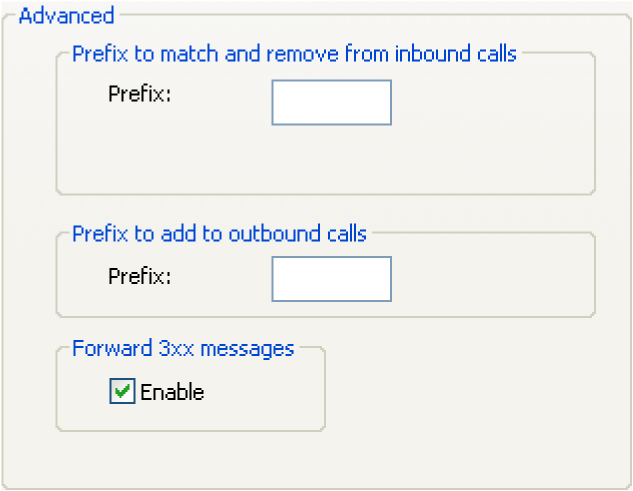
PBX local numbers (advanced)

Local number(start of range, use same as DID if local numbers are not used):

Password (only used if PBX registers at the Ingate):

□ PBX registers at the Ingate

3) The Ingate has the ability to add/remove digits and characters from the Request URI Header. A typical scenario is the addition/removal of ENUM character "+". Many IP-PBX and ITSPs either need to add or remove this character prior to sending or receiving SIP requests. Here you can enter values to Match and remove from the Request URI.



Advanced

Prefix to match and remove from inbound calls

Prefix:

Prefix to add to outbound calls

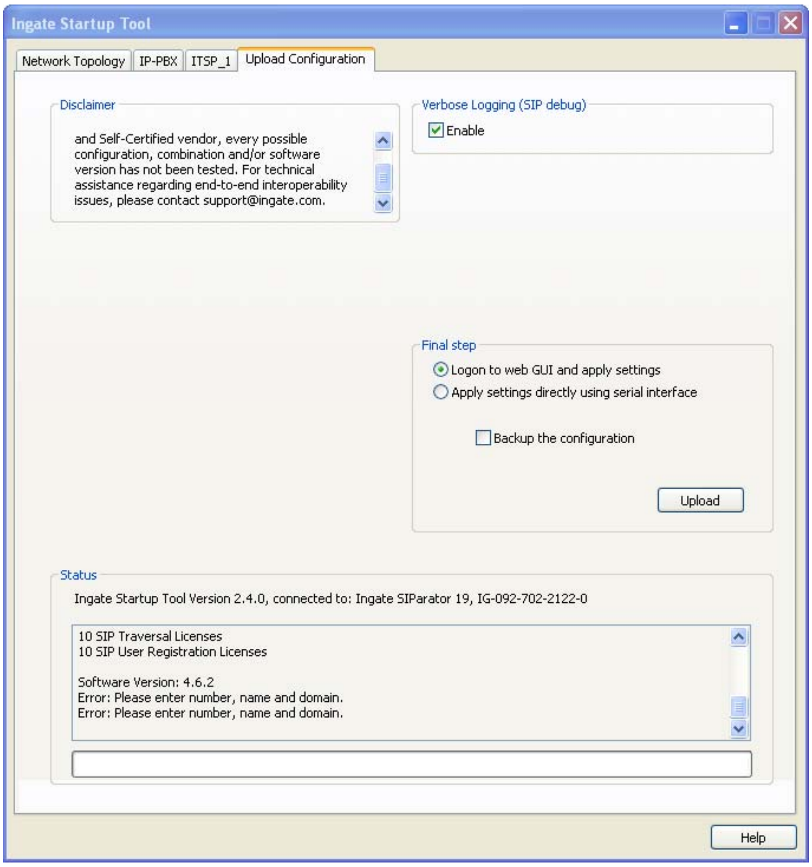
Prefix:

Forward 3xx messages

☑ Enable

4.7 Upload Configuration

At this point the Startup Tool has all the information required to push a database into the Ingate unit. The Startup Tool can also create a backup file for later use.



Disclaimer

and Self-Certified vendor, every possible configuration, combination and/or software version has not been tested. For technical assistance regarding end-to-end interoperability issues, please contact support@ingate.com.

Verbose Logging (SIP debug)

☑ Enable

Final step

● Logon to web GUI and apply settings

○ Apply settings directly using serial interface

□ Backup the configuration

Upload

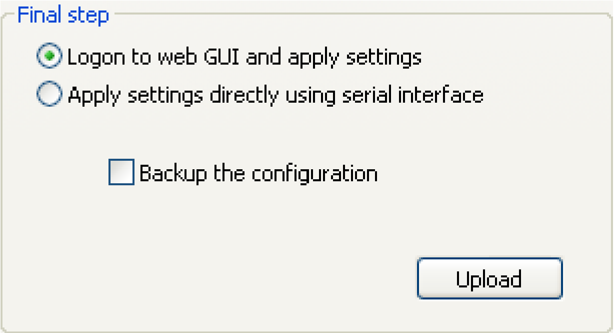
Status

Ingate Startup Tool Version 2.4.0, connected to: Ingate SIParator 19, IG-092-702-2122-0

```
10 SIP Traversal Licenses
10 SIP User Registration Licenses

Software Version: 4.6.2
Error: Please enter number, name and domain.
Error: Please enter number, name and domain.
```

Configuration Steps:

1) Press the “Upload” button. If you would like the Startup Tool to create a Backup file also select “Backup the configuration”. Upon pressing the “Upload” button the Startup Tool will push a database into the Ingate unit.



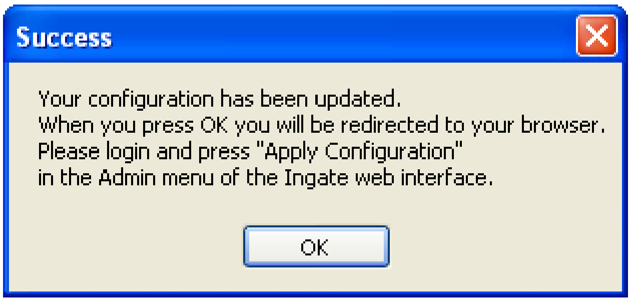
Final step

● Logon to web GUI and apply settings

○ Apply settings directly using serial interface

□ Backup the configuration

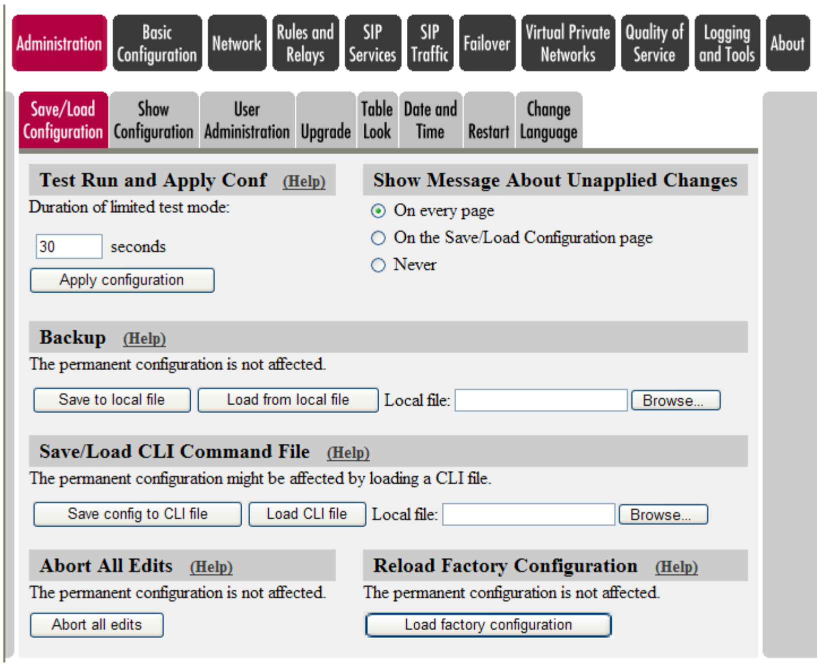
2) When the Startup has finished uploading the database a window will appear and once pressing OK the Startup Tool will launch a default browser and direct you to the Ingate Web GUI.



Success

Your configuration has been updated.
When you press OK you will be redirected to your browser.
Please login and press "Apply Configuration"
in the Admin menu of the Ingate web interface.

3) Although the Startup Tool has pushed a database into the Ingate unit, the changes have not been applied to the unit. Press "Apply Configuration" to apply the changes to the Ingate unit.



Test Run and Apply Conf (Help)

Duration of limited test mode:

30 seconds

Show Message About Unapplied Changes

● On every page
○ On the Save/Load Configuration page
○ Never

Backup (Help)

The permanent configuration is not affected.

Save/Load CLI Command File (Help)

The permanent configuration might be affected by loading a CLI file.

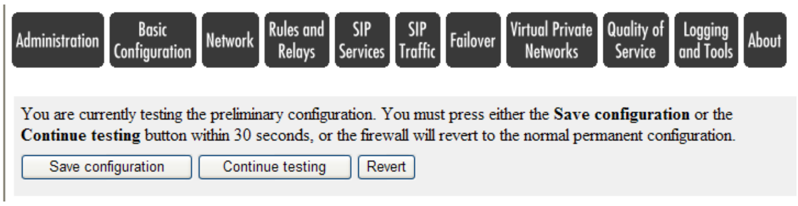
Abort All Edits (Help)

The permanent configuration is not affected.

Reload Factory Configuration (Help)

The permanent configuration is not affected.

4) A new page will appear after the previous step requesting to save the configuration. Press "Save Configuration" to complete the saving process.

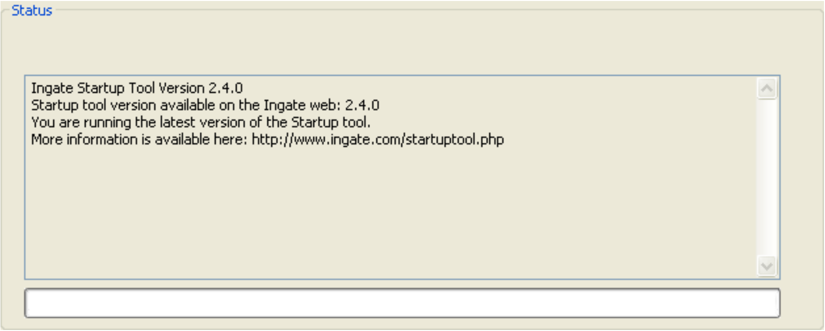


You are currently testing the preliminary configuration. You must press either the **Save configuration** or the **Continue testing** button within 30 seconds, or the firewall will revert to the normal permanent configuration.

5 Troubleshooting

5.1 Status Bar

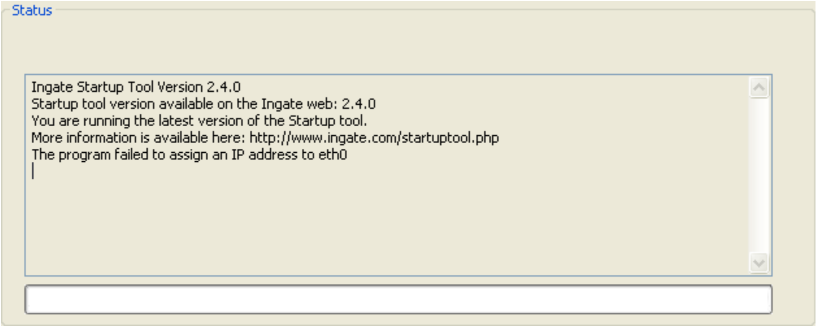
Located on every page of the Startup Tool is the Status Bar. This is a display and recording of all of the activity of the Startup Tool, displaying Ingate unit information, software versions, Startup Tool events, errors and connection information. Please refer to the Status Bar to acquire the current status and activity of the Startup Tool.



```
Ingate Startup Tool Version 2.4.0
Startup tool version available on the Ingate web: 2.4.0
You are running the latest version of the Startup tool.
More information is available here: http://www.ingate.com/startuptool.php
```

5.2 Configure Unit for the First Time

Right "Out of the Box", sometimes connecting and assigning an IP Address and Password to the Ingate Unit can be a challenge. Typically, the Startup Tool cannot program the Ingate Unit. The Status Bar will display **"The program failed to assign an IP address to eth0"**.



```
Ingate Startup Tool Version 2.4.0
Startup tool version available on the Ingate web: 2.4.0
You are running the latest version of the Startup tool.
More information is available here: http://www.ingate.com/startuptool.php
The program failed to assign an IP address to eth0
```

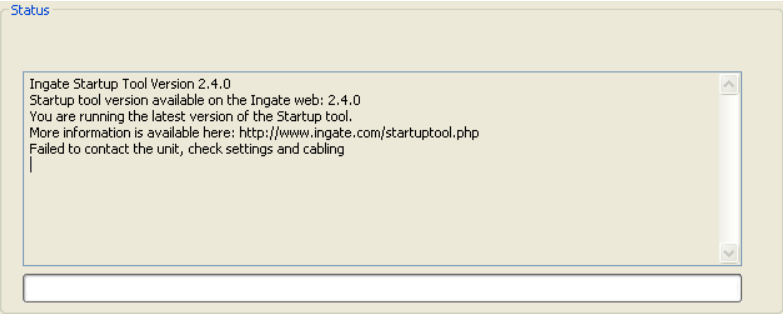
Possible Problems and Resolutions

Possible Problems	Possible Resolution
Ingate Unit is not Turned On.	Turn On or Connect Power (Trust me, I've been there)
Ethernet cable is not connected to Eth0.	Eth0 must always be used with the Startup Tool.
Incorrect MAC Address	Check the MAC address on the Unit itself. MAC Address of Eth0.

Possible Problems	Possible Resolution
An IP Address and/or Password have already been assigned to the Ingate Unit	It is possible that an IP Address or Password have been already been assigned to the unit via the Startup Tool or Console
Ingate Unit on a different Subnet or Network	The Startup Tool uses an application called "Magic PING" to assign the IP Address to the Unit. It is heavily reliant on ARP, if the PC with the Startup Tool is located across Routers, Gateways and VPN Tunnels, it is possible that MAC addresses cannot be found. It is the intension of the Startup Tool when configuring the unit for the first time to keep the network simple. See Section 3.
Despite your best efforts…	1) Use the Console Port, please refer to the Reference Guide, section "Installation with a serial cable", and step through the "Basic Configuration". Then you can use the Startup Tool, this time select "Change or Update the Configuration" 2) Factory Default the Database, then try again.

5.3 Change or Update Configuration

If the Ingate already has an IP Address and Password assigned to it, then you should be able use a Web Browser to reach the Ingate Web GUI. If you are able to use your Web Browser to access the Ingate Unit, then the Startup should be able to contact the Ingate unit as well. The Startup Tool will respond with **"Failed to contact the unit, check settings and cabling"** when it is unable to access the Ingate unit.



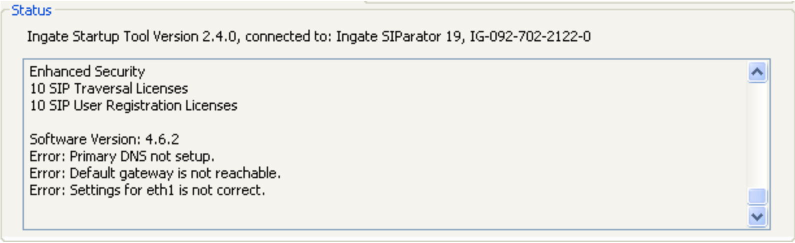
```
Ingate Startup Tool Version 2.4.0
Startup tool version available on the Ingate web: 2.4.0
You are running the latest version of the Startup tool.
More information is available here: http://www.ingate.com/startuptool.php
Failed to contact the unit, check settings and cabling
```

Possible Problems and Resolutions

Possible Problems	Possible Resolution
Ingate Unit is not Turned On.	Turn On or Connect Power
Incorrect IP Address	Check the IP Address using a Web Browser.
Incorrect Password	Check the Password.
Despite your best efforts…	1) Since this process uses the Web (http) to access the Ingate Unit, it should seem that any web browser should also have access to the Ingate Unit. If the Web Browser works, then the Startup Tool should work. 2) If the Browser also does not have access, it might be possible the PC's IP Address does not have connection privileges in "Access Control" within the Ingate. Try from a PC that have access to the Ingate Unit, or add the PC's IP Address into "Access Control".

5.4 Network Topology

There are several possible error possibilities here, mainly with the definition of the network. Things like IP Addresses, Gateways, NetMasks and so on.



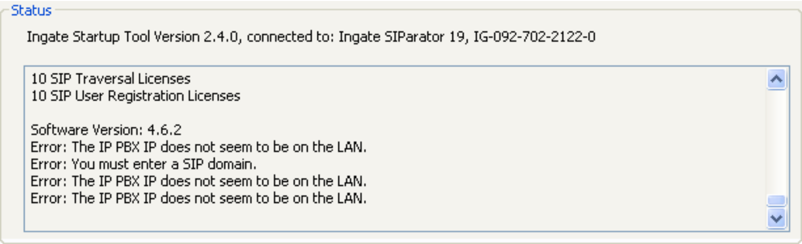
```
Ingate Startup Tool Version 2.4.0, connected to: Ingate SIParator 19, IG-092-702-2122-0

Enhanced Security
10 SIP Traversal Licenses
10 SIP User Registration Licenses

Software Version: 4.6.2
Error: Primary DNS not setup.
Error: Default gateway is not reachable.
Error: Settings for eth1 is not correct.
```

Possible Problems and Resolutions

Possible Problems	Possible Resolution
Error: Default gateway is not reachable.	The Default Gateway is always the way to the Internet, in the Standalone or Firewall it will be the Public Default Gateway, on the others it will be a Gateway address on the local network.
Error: Settings for eth0/1 is not correct.	IP Address of Netmask is in an Invalid format.
Error: Please provide a correct netmask for eth0/1	Netmask is in an Invalid format.
Error: Primary DNS not setup.	Enter a DNS Server IP address

5.5 IP-PBX

The errors here are fairly simple to resolve. The IP address of the IP-PBX must be on the same LAN segment/subnet as the Eth0 IP Address/Mask.



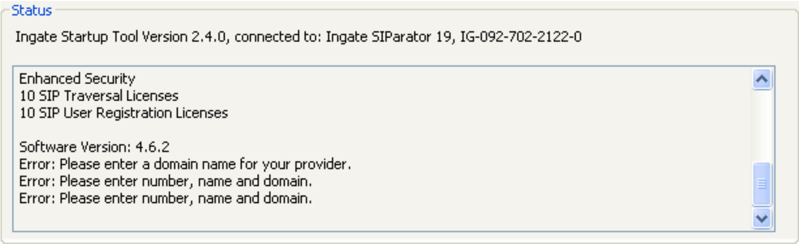
```
Ingate Startup Tool Version 2.4.0, connected to: Ingate SIParator 19, IG-092-702-2122-0

10 SIP Traversal Licenses
10 SIP User Registration Licenses

Software Version: 4.6.2
Error: The IP PBX IP does not seem to be on the LAN.
Error: You must enter a SIP domain.
Error: The IP PBX IP does not seem to be on the LAN.
Error: The IP PBX IP does not seem to be on the LAN.
```

Possible Problems and Resolutions

Possible Problems	Possible Resolution
Error: The IP PBX IP does not seem to be on the LAN.	The IP Address of the IP-PBX must be on the same subnet as the inside interface of the Ingate Eth0.
Error: You must enter a SIP domain.	Enter a Domain, or de-select "Use Domain"
Error: As you intend to use RSC you must enter a SIP domain. Alternatively you may configure a static IP address on eth1 under Network Topology	Enter a Domain or IP Address used for Remote SIP Connectivity. Note: must be a Domain when used with SIP Trunking module.

5.6 ITSP

The errors here are fairly simple to resolve. The IP address, Domain, and DID of the ITSP must be entered.



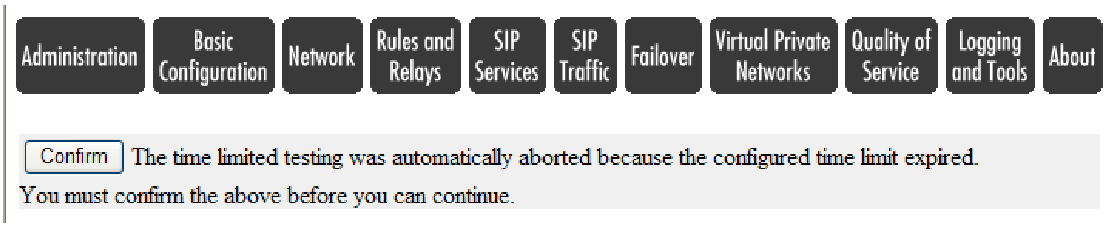
```
Ingate Startup Tool Version 2.4.0, connected to: Ingate SIParator 19, IG-092-702-2122-0

Enhanced Security
10 SIP Traversal Licenses
10 SIP User Registration Licenses

Software Version: 4.6.2
Error: Please enter a domain name for your provider.
Error: Please enter number, name and domain.
Error: Please enter number, name and domain.
```

Possible Problems and Resolutions

Possible Problems	Possible Resolution
Error: Please enter a domain name for your provider	Enter a Domain, or de-select "Use Domain"
Error: Please enter number, name and domain.	Enter a DID and Domain, or de-select "Use Account"

5.7 Apply Configuration

At this point the Startup Tool has pushed a database to the Ingate Unit, you have Pressed "Apply Configuration" in Step 3) of Section 4.7 Upload Configuration, but the "Save Configuration" is never presented. Instead after a period of time the following webpage is presented. This page is an indication that there was a change in the database significant enough that the PC could no longer web to the Ingate unit.



The time limited testing was automatically aborted because the configured time limit expired.

You must confirm the above before you can continue.

Possible Problems and Resolutions

Possible Problems	Possible Resolution
Eth0 Interface IP Address has changed	Increase the duration of the test mode, press "Apply Configuration" and start a new browser to the new IP address, then press "Save Configuration"
Access Control does not allow administration from the IP address of the PC.	Verify the IP address of the PC with the Startup Tool. Go to "Basic Configuration", then "Access Control". Under "Configuration Computers", ensure the IP Address or Network address of the PC is allowed to HTTP to the Ingate unit.