ingate

Startup Tool TG - Getting Started Guide

For Classic Ingate SIParator® Version 5.0.10 or later Document revision 17B, February 20, 2017



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0 Quick Start

The Ingate Startup Tool TG is designed to simplify the initial "out of the box" configuration of your Ingate Unit. The tool will automatically configure your Ingate Firewall or SIParator to work with the IP-PBX, SIP trunking service provider of your choice, and sets up all the routing needed to enable remote users to access and use the enterprise IP-PBX.

The Ingate Startup Tool TG is free of charge for all Ingate Firewalls and SIParators. Get the latest version of it at <u>http://www.ingate.com/Startup_Tool_TG.php</u>

Install the Ingate Startup Tool TG on your PC. Connect PC Ethernet port to Ingate Unit's ETH0, E0 or Gb0 (depending upon model) port with an Ethernet cable. If installing through network try keeping network simple without routers, NAT devices, tagged VLAN or VPN



tunnels.

Ingate Unit's default IP address is 192.168.1.1, and admin password is "admin" but the Ingate Startup Tool TG can change them. See chapter 4.1 for details.

Before using the Ingate Startup Tool TG to configure a new Ingate unit for the first time you must install your licenses into the Ingate unit. See chapter 4.2 for details.

After licenses has been installed start the Ingate Startup Tool TG and:

- Select Model "Ingate Firewall/SIParator" (see chapter 4.4) NOTE: If Ingate Startup Tool TG fails to start (reports missing runtime) please install required runtime library by opening the folder Ingate Starup Tool TG was installed in and double-click on vcredist_x86.exe in it.
- 2. Connect to your Ingate Unit (see chapter 4.4)
- 3. Select product type and describe your network topology (see chapter 4.5)
- 4. Select your IP-PBX from list (or select "Generic" if missing) (see chapter 4.6)
- 5. Select your ITSP provider from list (or select "Generic") (see chapter 4.7)
- 6. Upload the generated configuration to your Ingate Unit (see chapter 4.8)
- 7. Log in to Ingate Unit's Web Administration interface to apply changes and finetune your configuration (see chapter 4.8)

Keep in mind, this Ingate Startup Tool TG 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.



1 Ingate Startup Tool TG

The Ingate Startup Tool TG 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 TG is designed to simplify the initial "out of the box" commissioning and programming of the Network Topology, SIP Trunk deployments and Remote User deployments. "TG" in its name stands for Trunk Groups. 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 TG is free of charge for all Ingate Firewalls and SIParators. Get the latest version of the Startup Tool TG at http://www.ingate.com/Startup Tool TG.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 TG will install and run on any Windows operating system and on Wine on Linux.

Keep in mind, this Ingate Startup Tool TG 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.

NOTE: The Ingate Startup Tool TG (SUT TG) replaces the older Ingate Startup Tool (SUT). SUT TG should be used in all new installations unless instructed otherwise.



2 Startup Tool TG Installation

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

Download and Upgrade Steps:

1) Goto <u>http://www.ingate.com/Startup_Tool_TG.php</u> and click "Download Startup Tool TG" to begin the download process.

PRODUCTS SOLUTIONS PARTNERS	SUPPORT	RESOURCES	NEWS	ABOUT US in Cate
Ingate Startup Tool TG - SUT TG	Nev	v!		DOWNLOAD
The Ingate Startup Tool is an installation tool for 1	Ingate Firewall®	and Ingate SIParato	or®	Startup Tool TG
products using the Ingate SIP Trunking software i module, which facilitates the setup of complete SI	module or the R IP trunking solut	emote SIP Connectiv ions or remote user	ity	Startup Tool guide
solutions.	-			SIP Trunking Using the SIP Trunk Page
This new Startup Tool TG (Trunk Groups) uses the in version 4.9.x of the Ingate software. It gives a	e new Trunk Gro richer and more	up page that was intr e structured SIP Trun	oduced king	READ MORE
support and will be the Startup Tool where new P Not all IP-PBXs and ITSPs included in the old Star	BXs and ITSPs v tup Tool (SUT) a	vill be added and mai are yet supported by	ntained. the new	SIP Trunking Solutions
SUT TG. If you do not find your combination in th check the old SUT.	e new SUT TG, y	ou could download a	nd	SIP Trunking Module
Requirements				Interoperable IP-PBXs and ITSPs
Microsoft Windows XP or later				Remote Users
 Both x86 and x64 windows require the Mic <u>C++ 2005 Redistributable Package.</u> 	rosoft x86 (32bi	t - vcredist_x86.exe)	<u>Visual</u>	
Simplify SIP Trunk deployments				
Designed to simplify SIP trunk deployments, the Ingate Firewall or SIParator to work with the IP-P choice.	tool will automat BX and SIP trun	ically configure a use king service provider	er's r of their	
Simplify Remote User deployments				
The Startup Tool TG can be also be used for the F all the routing needed to enable remote users to	Remote SIP Con access and use	nectivity module as it the enterprise IP-PBX	sets up (.	
Free of Charge				
The Startup Tool TG is free of charge for all Ingat	e Firewalls and S	SIParators.		
The tool can be used when first using a new Inga configuration to enable a SIP Trunking scenario o	te product or to r a Remote User	modify the existing scenario.		
Thanks to detailed interoperability testing and the has been able to create this tool with pre-configur ITSPs.	Ingate CLI (cor red set ups for n	nmand line interface nany IP-PBX vendors), Ingate and	
Ensure that you always run the latest version of t adds new vendors once interoperability testing is vendor or ITSP in the lists, please contact Ingate	he configuration complete. If you for further infor	tool as Ingate contin J don't find your IP-P mation.	uously BX	
Development Kit for adding new PBXs and IT	SPs (SDK)			
Having Ingate SIParator and SIP Trunking compe ITSP configurations to be included in the SUT TG. add vour configuration to the SUT TG. You will the	tence, you can c Please contact i en receive docur	levelop your own PB: Ingate Support if you nentation and XML-fil	X and want to es to	
The Startup Tool TG can be also be used for the F all the routing needed to enable remote users to Free of Charge The Startup Tool TG is free of charge for all Ingat The tool can be used when first using a new Inga configuration to enable a SIP Trunking scenario o Thanks to detailed interoperability testing and the has been able to create this tool with pre-configur ITSPs. Ensure that you always run the latest version of t adds new vendors once interoperability testing is vendor or ITSP in the lists, please contact Ingate Development Kit for adding new PBXs and IT Having Ingate SIParator and SIP Trunking compe ITSP configurations to be included in the SUT TG, add vour configuration to the SUT TG. You will the	temote SIP Conn access and use I access and use I te product or to r a Remote User Ingate CLI (cor red set ups for n the configuration complete. If you for further infor SPS (SDK) tence, you can co Please contact i en receive docur	ectivity module as it the enterprise IP-PB> SIParators. modify the existing scenario. nmand line interface; nany IP-PBX vendors tool as Ingate contin a don't find your IP-P mation. develop your own PB: Ingate Support if you nentation and XML-fil	; sets up (,), Ingate ; and uuously BX X and want to es to	

- 2) Save the file to a location of your choice, and run it to begin installation.
- 3) Follow the on-screen instructions. Once the installation is complete, select "Close". Now the Startup Tool TG can be started from the start menu or the desktop short-cut.

NOTE: If Startup Tool TG fails to start (reports missing runtime) please install required runtime library by opening installed folder and double-click on vcredist_x86.exe



3 Connecting the Ingate Firewall/SIParator

When delivered from the factory, the Ingate Firewall and SIParator come with preconfigured IP address 192.168.1.1 and Password "admin". To configure the unit, you need to either set your PC's IP address to be on the 192.168.1.0 network or use the Startup Tool TG's "change unit's IP address" feature to assign a suitable IP address.

Connect an Ethernet cable between port "ETH0", "E0" or "Gb0" (depending upon model) of your Ingate unit and your PC. Connect power to the unit and turn it on.

If not using a direct cable connection the PC running the Startup Tool TG and the Ingate unit should be on the same LAN segment/subnet. Avoid connections across routers, NAT devices, tagged VLAN or VPN tunnels. Keep the network Simple.

4 Using the Startup Tool TG

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

Before using the Ingate Startup Tool TG to configure a new Ingate unit for the first time you <u>must</u> install your licenses into the Ingate unit.

If your PC is on the same 192.168.1.x subnet as the default IP address of the Ingate unit then you can open 192.168.1.1 in your browser.



If you can open the above log in page please log in as "admin", password "admin" and continue reading chapter 4.2

Otherwise continue reading chapter 4.1 below about how to change Ingate unit's IP address.



4.1 Change unit's IP address

From factory, the Ingate Firewall and SIParator comes with preconfigured IP address 192.168.1.1. If that IP address does not suit you (your PC is on some other subnet) the Ingate Startup Tool TG can change the Ingate unit's IP address using a technique called magic ping.

To change unit's IP address connect your PC with an Ethernet cable to Ingate unit's ETH0 port (also called "E0" or "Gb0" on some units) and perform the following:

- Launch the Ingate Startup Tool TG on your PC NOTE: If Ingate Startup Tool TG fails to start (reports missing runtime) please install required runtime library by opening the folder Ingate Starup Tool TG was installed in and double-click on vcredist_x86.exe in it.
 - Select Product Type Welcome to the Ingate Startup tool TG - this tool will assist you in setting up your new Ingate unit Setup Eth0 LAN Connect your computer to your Ingate unit like this.

 \sim

2) Select Model "Ingate Firewall/SIParator", and click Next.

Ingate Firewall/SIParator



×

Next

3) **Make sure** none of the checkboxes "Configure Remote SIP Connectivity", "Configure SIP trunking", "Backup the created configuration" or "Create a config without connecting to a unit" are enabled!

Ingate Startup Tool TG- Helps configure your Ingate	unit		-		×
Ingate Startup Tool TG Version You are running the latest version of this tool.	Help		Help		
First select what you would like to do: O Change unit's IP address O Change or update configuration of the unit O Check SIP configuration and logs	Establish contact Inside (Interface Eth0) IP Address:	192 . 1	68 . 1 .	1	
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	Enter the password Password:	[
Status			Contac	t	
Ingate Startup Tool TG Version 1.1.6 Startup tool version available on the Ingate web: 1.1.4 You are running the latest version of the Startup tool. More information is available here: http://www.ingate.	6 .com/startuptool.php			^	
				~	



4) Select "Change unit's IP address".

🦉 Ingate Startup Tool TG- Helps configure your Ingate	unit	_		Х
Ingate Startup Tool TG Version You are running the latest version of this tool.	Help	Help		
First select what you would like to do: Change unit's IP address Change or update configuration of the unit Check SIP configuration and logs	Assign IP address and pass Inside (Interface Etho) IP Address: MAC Address:	word, establish contact 192 . 168 . 1 . 00-d0-c9-b7-60-ef	1	
Enable SIP module Configure Remote SIP Connectivity Configure SIP trunking Reduct the predicted are for any former.	Select a password Password: Confirm Password:			
Backup the created configuration Create a config without connecting to a unit This tool remembers passwords	Interface of your PC	Contact	✓ t	

- 5) Fill in:
 - the IP address you would like to assign to the Ingate unit's ETH0 port
 - the Ingate unit's MAC address (as stated on its bottom sticker)
 - the password you would like to assign to the Ingate unit
 - the PC interface Ethernet cable is attached to
- 6) Once all required values are entered, the "Contact" button will become active. Press the it to have the Startup Tool TG find the Ingate unit, configure its new IP address and password, and connect to it.
- 7) Now you can use your browser to access the Ingate unit at the IP address you have selected at step 5 above.



8) Log in as "admin" using the password you have selected at step 5 above.



4.2 Install licenses onto Ingate unit

In the web configuration interface of the unit select "Administration", "Upgrade".



Select the license file you have received for the unit and click on "Upgrade" to install it on your Ingate unit.

After licenses have been installed your Ingate unit is ready to be configured using the Ingate Startup Tool TG.

4.3 Configure Ingate unit using Ingate Startup Tool TG

The Startup Tool TG is designed to simplify the initial "out of the box" commissioning and programming of the Network Topology, SIP Trunk deployments and Remote User deployments. Keep in mind, this Ingate Startup Tool TG 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.



4.4 Launch Ingate Startup Tool TG

- Launch the Ingate Startup Tool TG on your PC NOTE: If Ingate Startup Tool TG fails to start (reports missing runtime) please install required runtime library by opening the folder Ingate Starup Tool TG was installed in and double-click on vcredist_x86.exe in it.
- 2) Select Model "Ingate Firewall/SIParator", and click Next.

🜀 Select Proc	duct Type	_		×
Welcome to t	the Ingate Startup tool TG - this tool will assist you in setting u	up your nev	v Ingate u	nit
Setup				
	LAN			
	Connect your computer to your Ingate unit like this.			
Please	Select model			
			Next	



3) Select "Change or update configuration of the unit".

Make sure checkboxes "Configure Remote SIP Connectivity" and "Configure SIP trunking" are enabled.

Ingate Startup Tool TG- Helps configure your Ingate	e unit		-		>
Ingate Startup Tool TG Version You are running the latest version of this tool.	Help		Help		
First select what you would like to do: O Change unit's IP address O Change or update configuration of the unit O Check SIP configuration and logs	Establish contact Inside (Interface Eth0) IP Address:	192 . 1	68 . 1 .	1	
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	Enter the password Password:				
Status			Contac	t	
Ingate Startup Tool TG Version 1.1.6 Startup tool version available on the Ingate web: 1.1 You are running the latest version of the Startup too More information is available here: http://www.ingat	1.6 il. e.com/startuptool.php			^	
				×	

Other options:

Backup the created configuration: apply settings both to the unit and save them to file. Creating a config without connecting to a unit: just create a config file, no changes will be made to connected Ingate unit.

The tool remembers passwords: startup tool will remember all entered passwords.

- 4) Enter Ingate unit's IP address and password (default 192.168.1.1 and "admin")
- 5) Once all required values are entered, the "Contact" button will become active. Press the "Contact" button to have the Startup Tool TG find the Ingate unit and connect to it.



4.5 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.

	PBX ITSP	Upload Configuration		
Product Type:	Firewall	~		\frown
Inside (Interface	Eth0)			Internet
IP address:	192 .	168 . 1 . 1		internet
Netmask:	255 .	255 . 255 . 0		
Outside (Interfac	ce Eth 1)			
Use DHCP to	obtain IP			Innate Firewall
Allow https at	ccess to web	interface from Internet	LAN IP-PBX	
			DNS server	
			DNS server Primary: (0.0.0.0 = DHCP)	0.0.0.0
			DNS server Primary: (0.0.0.0 = DHCP) Secondary: (Optional)	0.0.0.0
Status			DNS server Primary: (0.0.0.0 = DHCP) Secondary: (Optional)	0 . 0 . 0 . 0
Status Ingate Startup Startup tool ver You are running More informatio	Tool TG Vers rsion availabl 9 the latest v n is available	ion 1.1.6 le on the Ingate web: 1.1. ersion of the Startup tool. e here: http://www.ingate	DNS server Primary: (0.0.0.0 = DHCP) Secondary: (Optional) 6 6. .com/startuptool.php	
Status Ingate Startup Startup tool ver You are running More informatio	Tool TG Vers sion availabl the latest v n is available	ion 1.1.6 ie on the Ingate web: 1.1.1 ersion of the Startup tool. here: http://www.ingate	DNS server Primary: (0.0.0.0 = DHCP) Secondary: (Optional) 6 6	

Configuration Steps:

1) In the Product Type drop down list, select the deployment type of the Ingate Firewall or SIParator. When selecting the Product Type, the rest of the page will change based on the type selected.

Product Type:	Standalone SIParator	~

Hint: Match the picture to the network deployment.

- **Firewall:** The Ingate unit is 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.
- **Standalone SIParator:** The Ingate unit 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.

- DMZ-LAN SIParator: The Ingate unit resides on a DMZ network connected to an existing firewall, but also on the LAN network. The Ingate needs to know the Public IP Address of the 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, from the Internet to the SIParator. The voice traffic from the LAN is directed to the SIParator then to the existing Firewall.
- **DMZ SIParator:** The Ingate unit resides on a DMZ network connected to an existing Firewall. The Ingate needs to know the Public IP Address of the 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.
- LAN SIParator: The Ingate unit 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.
- 2) Interface Eth0 is the inside interface in all product types except DMZ SIParator. It is the interface you are currently connected through.

Inside (Interface E	h0)	
IP address:	192 . 168 . 1 .	1
Netmask:	255 . 255 . 255 .	0

3) Interface Eth1 is the outside interface connected to the Internet in all product types except in DMZ, DMZ-LAN and LAN SIParator types. You can either enter a static global IP address or specify it to be configured using DHCP.

Outside (Interface	Eth1)	Create certificate for https access	×
Use DHCP to ob	tain IP		
IP Address:	0.0.0.0	Common Name (CN): Your Name (Required)	ОК
Netmask:	0.0.0.0	Expire in (days): (Required) 365	Cancel
		Country Code (C):	
Allow https acce	ess to web interface from Internet	Organisation (O): Company Name	
Gateway:	0.0.0.0	State/province(ST): NY	
		Organizational Unit(OU): Department	
		Email address: admin@email.com	
		Locality/town(L): Your City	

"Allow https access to web interface from Internet" allows remote configuration of Ingate unit from anywhere on the Internet. Enabling it opens the Create certificate window that can be used to create a self-signed certificate for https access.

"Gateway" is the default gateway to reach Internet through.



4) Product type DMZ SIParator requires the LAN IP address range.

LAN IF duuless fai	ige						
Low IP:	0		0		0		0
High IP:	0	•	0	•	0	•	0
Gateway:	0	÷	0	÷	0	÷	0

The LAN IP Address Range is the lower and upper limit of network addresses located on the LAN. This is the scope of IP Addresses contained on the LAN side of the existing Firewall. "Gateway" is the existing firewall's IP Address on the DMZ network.

5) Product types WAN and LAN SIParator require the Firewall extern IP

Firewall extern IP: 0 . 0 . 0 . 0

The Firewall extern IP is the global IP address the existing Firewall can be reached from the Internet on.

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.

When using DHCP to obtain Eth1 address (step 3 above) you can enter DNS server address 0.0.0.0 to use DNS server values obtained through DHCP.

DNS server							
Primary:	0	•	0	•	0		0
Secondary: (Optional)	0	•	0	•	0	•	0

7) Product types LAN-, DMZ- and DMZ-LAN SIParators require the Existing Firewall to forward SIP Signaling Port and RTP Media Ports 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 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



4.6 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.

🥃 Ingate Startup Tool TG	×
Network Topology IP-PBX ITSP Upload Configuration	
IP-PBX (should be located on the LAN)	
Type: Generic IP-PBX Enable PBX registration settings	
IP Address: 192 . 168 . 1 . 100 PBX SIP Address:	
Use domain name SIP Domain: Username:	
Password:	
- Stahus	
Ingate Startup Tool TG Version 1.1.6 Startup tool version available on the Ingate web: 1.1.6 You are running the latest version of the Startup tool. More information is available here: http://www.ingate.com/startuptool.php	
~	
Hjäl	2

Configuration Steps:

 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 IP-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	6
SIP Domain:		
		л

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.



5) **Optional:** Some IP-PBX solutions may display additional fields.



4.7 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.

work lopology IP-PBX	ITSP_1	Upload Configuration		
Name:	Generic (n	o register) 🗸 🗸	DID (start of range) (user name): DID range size: PBX local numbers (start of range):	
Provider address			(same as DID if empty)	
IP Address:	0.0	0.0.0		
Use domain nam	e		Authentication name: (same as vuv ir empty)	
			Increment authentic	ation name for ranges
Advanced			Password:	
Prefix to match Prefix:	and remov	e from incoming calls		
Prefix to add to	outgoing	alls		
Status				
				^
				~
				~

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 (no register)".

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	0	0	,	0	0]	_
📃 Use domain nan	ne					-	
Provider address Domain:	ne]	

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:
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 ir blank)	
Domain:	
Password:	

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.

Prefix:	
Prefix to add to Prefix:	o outbound calls
Forward 3xx m	essages -

4) Some ITSP solutions may display additional fields.



4.8 Upload Configuration

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

e Startup Tool	-
ork Topology IP-PBX ITSP_1 Upload Configuration	
Disclaimer and Self-Certified vendor, every possible configuration, combination and/or software version has not been tesed. For technical assistance regarding end-to-end interoperability issues, please contact support@ingate.com.	-Verbose Logging (SIP debug) I Enable
	 Final step Logon to web GUI and apply settings Apply settings directly using serial interface Backup the configuration
∼ Status	Upload
Ingate Startup Tool Version 2.4.0, connected to: Ingate S	5IParator 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:

 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 the configuration into the Ingate unit.

 Final step Logon to web GUI and apply settings Apply settings directly using serial interface
Backup the configuration
Upload



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



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

Administration Basic Configuration Network Rules and Relays	SIP Services SIP Failover Virtual Private Quality of Logging Networks Service and Tools About
Save/Load Show User Configuration Administration Upgrade	Table Date and Change Look Time Restart Language
Test Run and Apply Conf (Help)	Show Message About Unapplied Changes
Duration of limited test mode:	On every page
30 seconds	On the Save/Load Configuration page
Apply configuration	○ Never
Backup (Help)	
The permanent configuration is not affected.	
Save to local file Load from local file	Eccal file: Browse
Save/Load CLI Command File (He	elp)
The permanent configuration might be affected b	by loading a CLI file.
Save config to CLI file Load CLI file	Local file: Browse
Abort All Edits (Help)	Reload Factory Configuration (Help)
The permanent configuration is not affected.	The permanent configuration is not affected.
Abort all edits	Load factory configuration

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

Administration	Basic Configuration	Network	Rules and Relays	SIP Services	SIP Traffic	Failover	Virtual Private Networks	Quality of Service	Logging and Tools	About
You are curr Continue te Save con	ently testing th s ting button v figuration	e prelimin vithin 30 s Contir	ary configu econds, or uue testing	the firew	'ou must /all will r ert	press ei evert to	ther the Save of the normal period	c onfigura ti nanent con	ion or the figuration.	



5 Troubleshooting

5.1 Ingate Startup Tool TG fails to start – missing runtime

If Ingate Startup Tool TG fails to start (reports missing runtime) please install required runtime library by opening the folder Ingate Starup Tool TG was installed in and doubleclick on vcredist_x86.exe in it.

5.2 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 You are running the latest version of the Startup	2.4.0 tool.	
More information is available here: http://www.ir	gate.com/startuptool.php	
		~

5.3 While Configuring Unit for the First Time

Sometimes using the "Change unit's IP address" to connect to and assigning an IP Address and Password to the Ingate Unit can be a challenge. The Status Bar may display **"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 must always be used with the
Eth0.	Startup Tool.
Incorrect MAC Address	Check the MAC address on the Unit
	itself. MAC Address of Eth0.



Possible Problems	Possible Resolution
Ingate Unit already configured	"Change unit's IP address" only works on unconfigured (factory default) Ingate Units. Once you have configured the unit you need to use the "Change or update configuration of the unit" option of the Ingate Startup Tool TG to access the Ingate Unit.
Incorrect Password	Default password of the Ingate Unit is "admin" – unless you have changed it using option "Change unit's IP address" of the Ingate Startup Tool TG or using the Ingate Unit's web configuration interface.
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.
Despite your best efforts	Change your PC's IP address to be on the 192.168.1.x subnet, and use the "Change or update configuration of the unit" option of the Ingate Startup Tool TG to access the Ingate unit at its factory default IP address 192.168.1.1 See chapter 4.3

5.4 Can't Apply Configuration

As the Ingate Startup Tool TG attempts to configure Trunk Groups it is vital that the Ingate unit being configured have the required Trunk Group licenses. Please make sure you have installed all required licenses, see chapter 4.2

