



Orientation and Installation Guide for the Ingate SBC and E-SBC SIParator® / Firewall® for NEC SVR3 Blade

For the Ingate SIParators using software release 6.3.0 or later
February 28th, 2020

Ingate SIParator®/Firewall® for NEC® SVR3 Blade

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1 Ingate SIParator®/Firewall® for NEC® SVR3 Blades

Since version 4.10.1 and later of the Ingate SIParator/Firewall can be installed and run on third party approved hardware or virtual machines with x86 and x64 architecture. This description is for the current software release 6.3.0 and later. Customers/developers/testers can, Using the appropriate Bootable USB/CD, can burn the software image from the bootable device into the SVR3 SSD following this instructions. Since release 6.0.1 SIParator is fully built on x64 architecture and support for x86 was end of life. You will also need a license code to be able to use the software and active it after installed.

Please note:

- You are assumed to be familiar with NEC SVR3 architecture and specifications. Ingate may not be able to support or take responsibility for that part.
- With high number of simultaneous calls, an SBC like the Ingate SIParator is routing intensive. With the right hardware, network and driver support, you can use the Ingate SIParator to what the native hardware which is beyond 20 000 concurrent calls (with voice media through the SIParator). In the case of NEC SVR3, there is enough horsepower to escalate beyond 240 Simultaneous Calls either with SVR3 Atom E3845 or Celeron N2807.
- The software can also run directly on x64 hardware *without any hypervisor*, but Ingate makes no guarantee of performance and working on other than Ingate's own appliances and 3rd party certified vendors. NEC SVR3 has been tested and certified in our lab to perform as by our specs and requirements.
- The provided Master Installer for NEC SVR3 can be used to deploy as many units as needed. The initial licensing is provided by ingate or NEC Sales Organization and is the only way to finally activate the installed unit and assign a unique serial number.
- Ingate's licensing prohibits the use of cloning. Each unit must be properly installed, including the licensing procedure. Adding more memory or CPUs to host machine is no problem as far as NEC provides a path for such upgrades.
- Your account and license information will be displayed on the About page in the SIParator GUI, once you have completed the Licensing Install.

2 Getting Up and Running – In Short

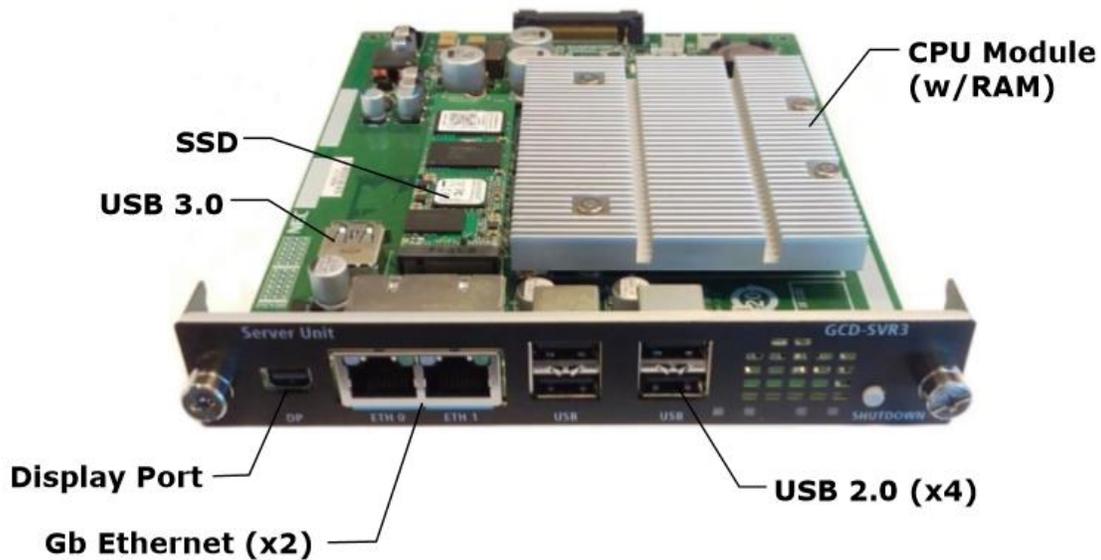
These are the steps to get a SIParator/Firewall for NEC SVR3 up and running. A description of each step follows in this short list. The Ingate web referred to in this description is <http://www.ingate.com>.

- 1) Create an account at the Ingate web, http://www.ingate.com/Register_Account.php, in case you don't already have one. This step is required to activate the unit and licenses.
- 2) Get a License Code from Ingate or NEC to activate an instance including the capacities needed.
- 3) You will need to have the "Ingate Master Installer USB for NEC SVR3"
- 4) Insert the USB on any of the USB available ports on the SVR3.
- 5) Make sure the NEC SVR3 has a Display connected to the mini display port as well as a USB keyboard.
- 6) Turn on or reboot the SVR3 and press F7 a few times during the boot process.
- 7) A menu will pop up for you to select from which device you want to boot. Select USB device
- 8) Follow on screen instructions to complete the process.
- 9) Eject the USB and reboot the SVR3 unit
- 10) You will see the recently installed Image in action, ending up with a Login Prompt.
- 11) The initial user name is "admin" and the initial password will be assigned during the ISO Install process.
- 12) Proceed with basic configuration to assign an IP address. If you don't do this step, the default IP 192.168.1.1 will be assumed.
- 13) Once you assign IP addresses, having the SVR3 connected to the LAN, you should be able to access the GUI from any browser in the network. (<http://<ipaddress>>)
- 14) Surf into the web GUI of the SIParator/Firewall – Only the "**Administration>Upgrade**" page will be shown.
- 15) Proceed to install the base license. See in next sections how to do so. This will also register the machine in your Portal Account.
- 16) At this point you should be ready to start your first configuration.

3 NEC SVR3 Blade specs

Here the most relevant specifications for the blade:

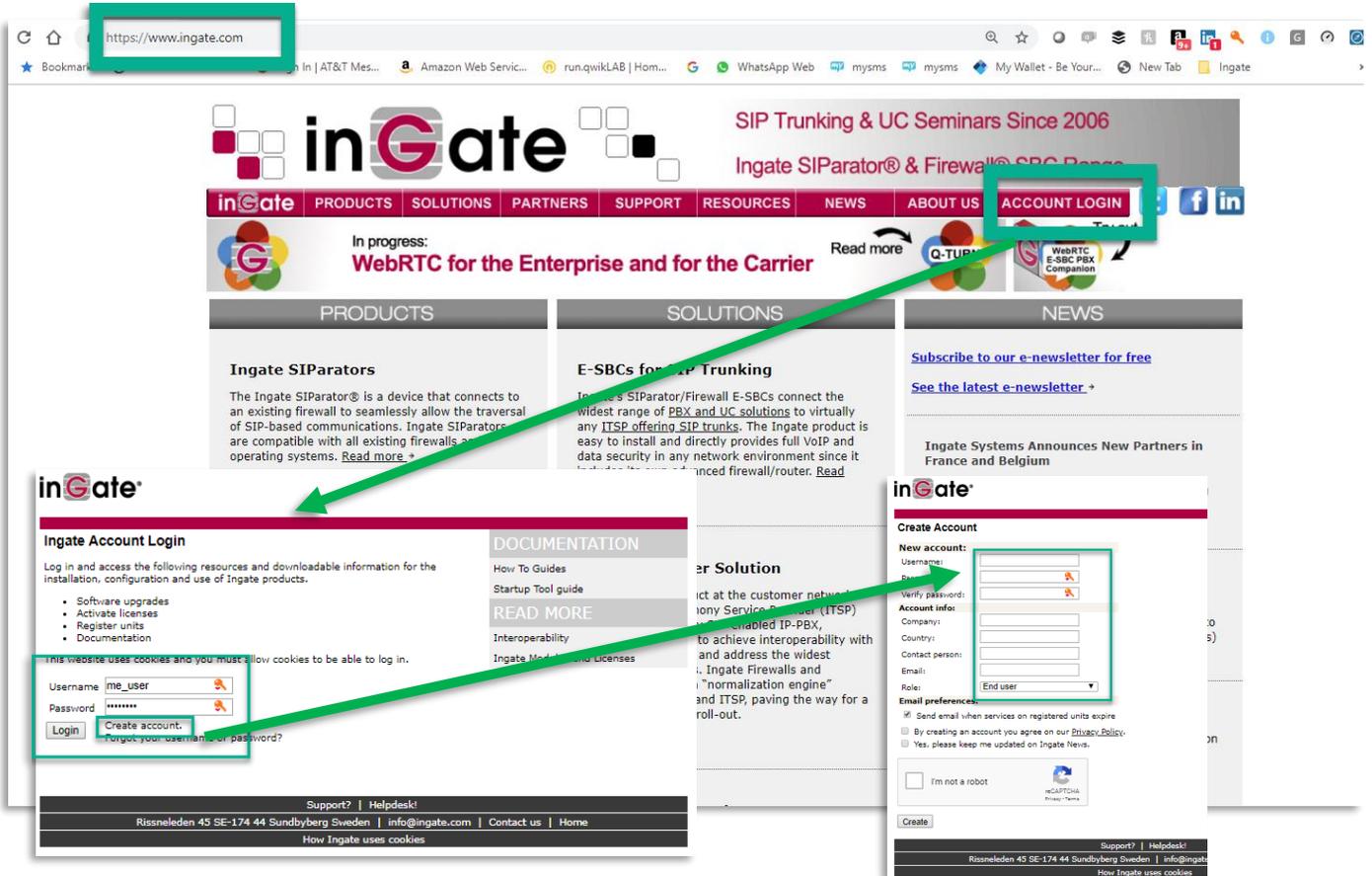
- For SV9100 Chassis or any other compatible chassis
- Intel Celeron N2807 dual core or Atom E3845 quad core
- 4 GB DDR3L RAM
- 60 GB SATA III Solid State Drive (SSD)
- Display Port 1920x1080 (Mini DP connector)
- Intel HD Graphics Gen 7
- 10/100/1000 Ethernet (x2)
- USB 2.0 (x4), USB 3.0 (x1)
- Weight: 12 oz. (without packaging), 16 oz. (with packaging)



4 Installing the SIParator®/Firewall® on NEC SVR3 (Detailed Explanation)

4.1 Create an Account at the Ingate Web

Create an account at the Ingate web site <http://www.ingate.com>. You will get confirmation via email.



4.2 Get a License Code from Ingate

Reading this document, you have probably already got a License Code from Ingate or NEC. Otherwise, contact sales at NEC or Ingate to get the License code including the capacities you need. The License code has the form XXXX-XXXX-XXXX and is required after installing the Master Image software. It includes a base license and typically CCS (Concurrent Calls SIP Trunk Session) licenses for how many simultaneous calls with media that can pass the SBC. It can also include Registrar and Remote Users.

4.3 Obtain Master USB/CD Image with the SIParator®/Firewall®

The Master Image is provided by NEC Americas to authorized NEC channels either as a USB Memory Stick or a CD media.

There are 2 requirements to be able to install the initial license:

- 1) From your PC or laptop have connectivity to the SVR3 GUI.

- 2) From your PC or Laptop have Internet connectivity to be able to access your portal account. There is no need to have internet connectivity from the SVR3.

At this point you should have the license key provided by NEC or Ingate (A code like XXXX-XXXX-XXXX).

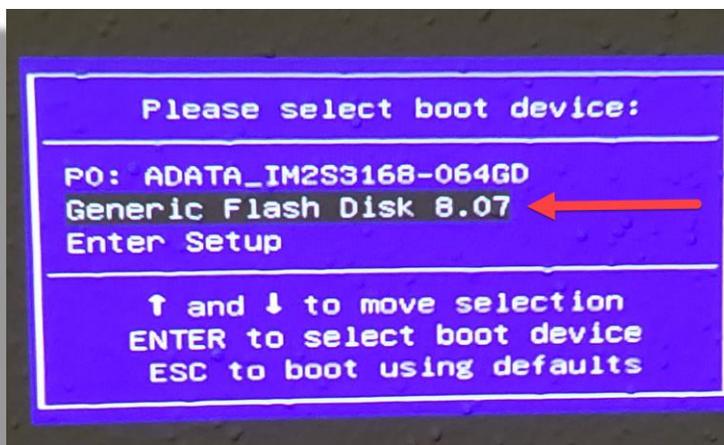
Next sections will show step by step the whole process

4.4 Start the NEC SVR3, Booting from the Master USB/CD

Insert/connect the provided USB/CD into one of the 4 available USB Ports in the SVR3.

Turn on or reboot the SVR3.

Keep pressing F7 until you get the initial boot options screen:



4.5 Install the Image in SVR3 Hard Drive

Once you select to boot from the USB, The image Writer will review and detect SVR3 hardware to determine all the resources available including the Hard Drive to be used for the Image copy.

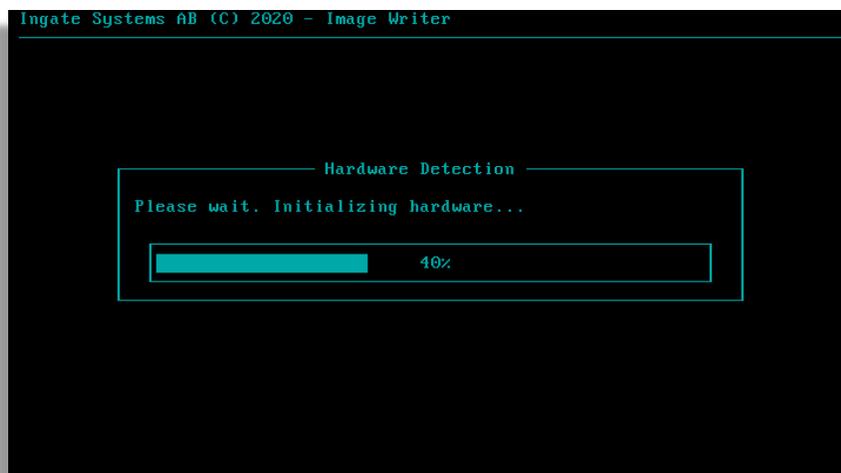
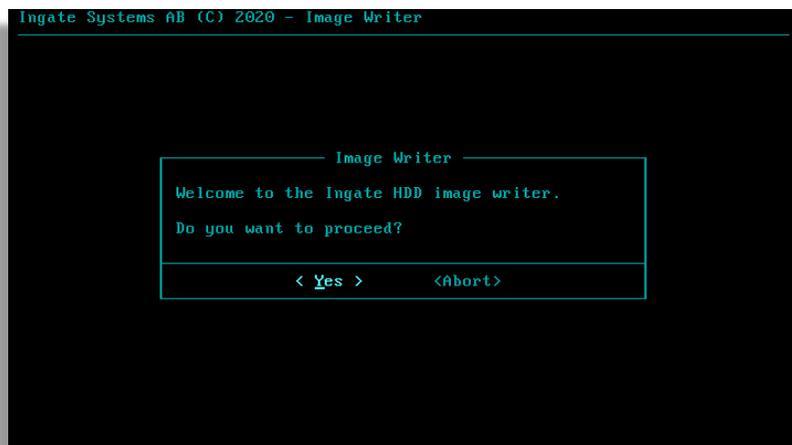
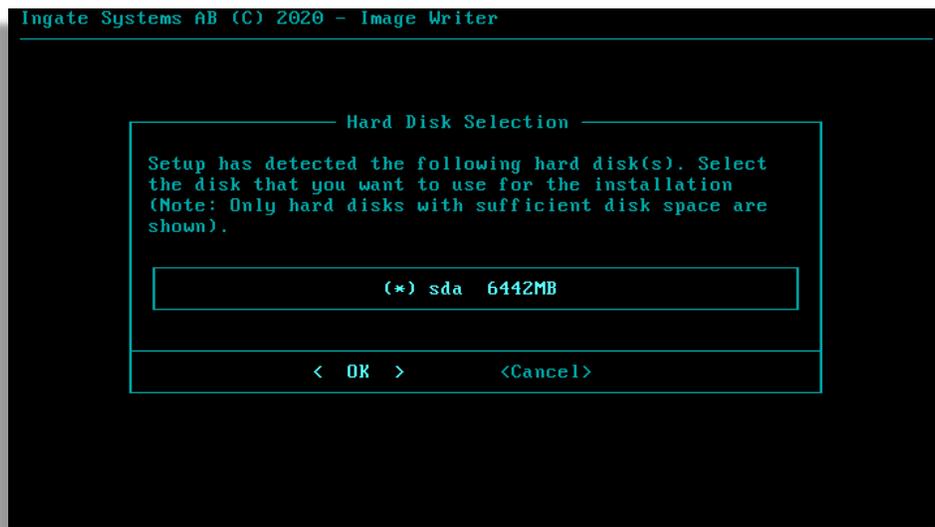


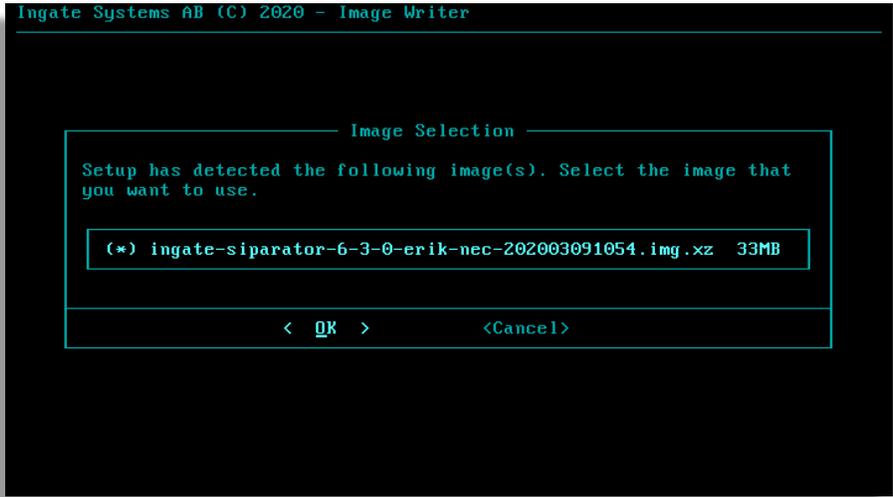
Image Writer will ask confirmation to detect and overwrite the SSD/Hard Drive with a new Image.



From the detected hard drives you will be able to select which one to use and confirm



It then will show the current images files in the USB/CD for you to select the right one and confirm.



A last conformation that you want to overwrite the drive and volume

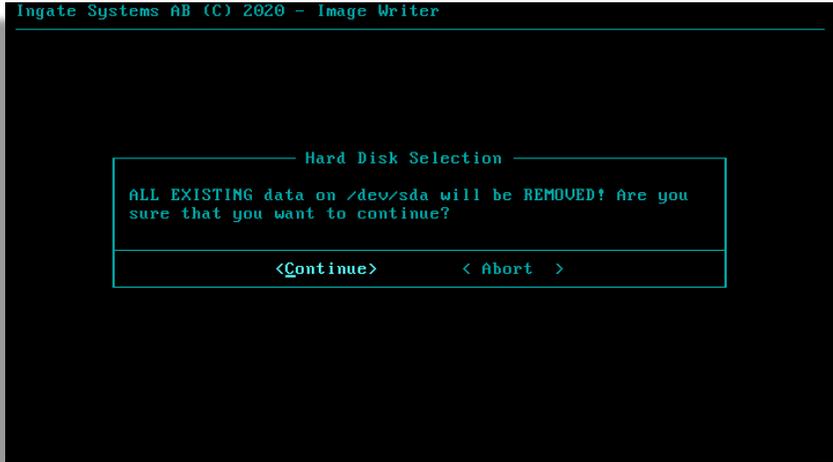
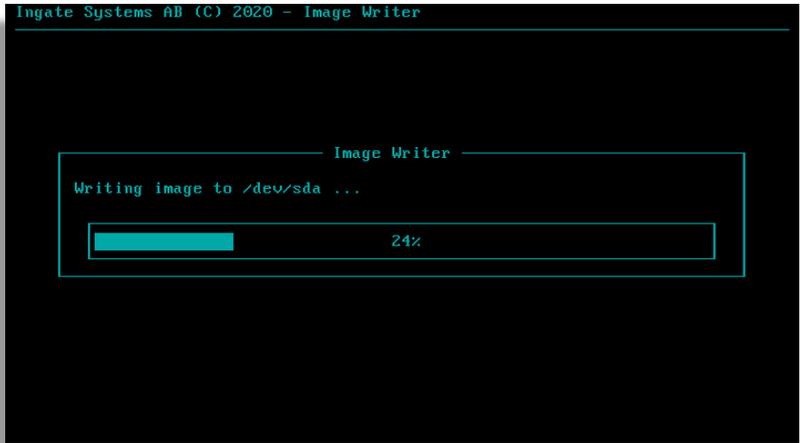
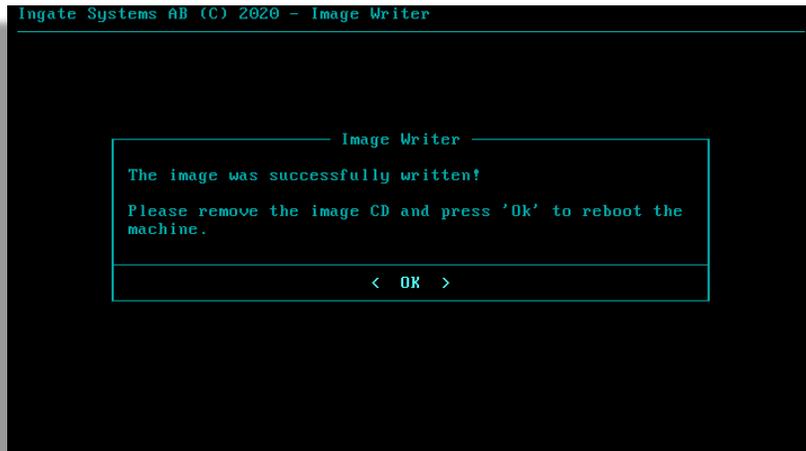


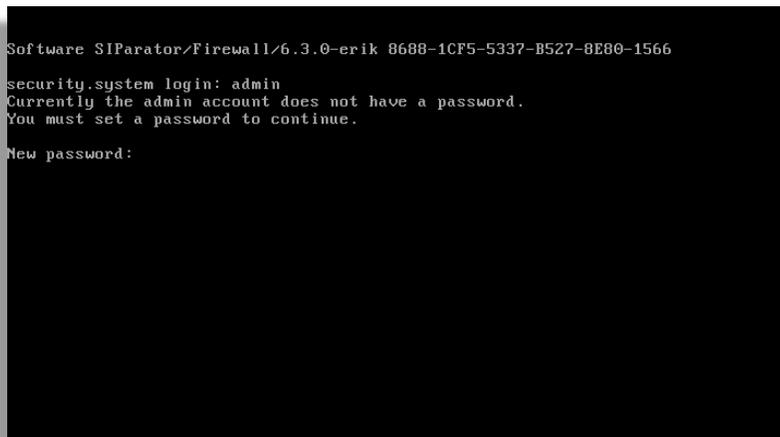
Image being written



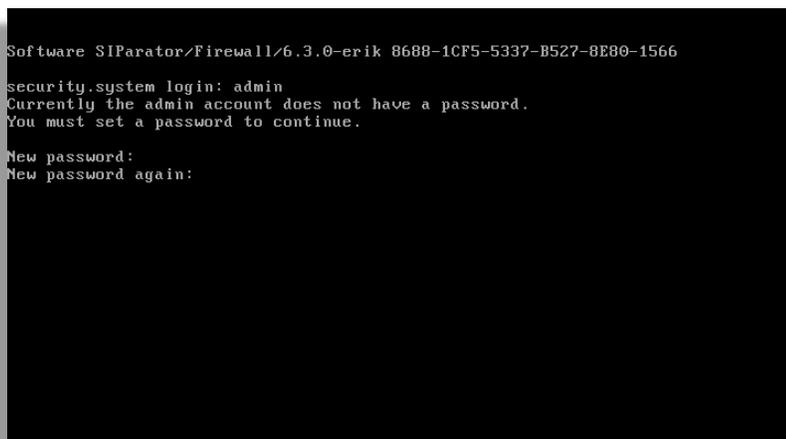
After completed, you will be required to remove the USB/CD and by pressing OK the SVR3 will reboot.



Assign initial Password for amin user:



Confirm new password:



4.6 Create your initial configuration

At this point the boot will be done from the recent image written in the Hard Drive. A prompt to log in will show up:

Initial default credentials are:

Login user: *admin*

Login password: *<recently assigned new password>*

```
Software SIParator/Firewall/6.3.0-erik 2DDD-E9C7-9C90-2772-1004-2A6F
security.system login:
```

After Login, select option 1 to do an initial configuration in case you need anything different of default values. Default values will be shown and you decide if you keep or change anyone.

```
Administration
=====
(Navigation tip: You may use Ctrl-d to skip back to this menu.)

 1.   Basic configuration
 6.   Set password
 7.   Command line interface
 8.   Clear the log database
 a.   About
reboot. Reboot
reset.  Factory reset
q.     Exit admin
==>
```

```
Basic unit installation program:
You may answer 'abort' to the last question to abort this procedure.
Press return to keep the default value, if one exists.

Network configuration:
Physical device name: [eth0]
IPv4/IPv6 address for eth0: [192.168.1.1] 192.168.200.5
IPv4 netmask/bits for eth0: [255.255.255.0]
Deactivate other interfaces? [no]

Computers from which configuration is allowed:
Configure from a single computer? [no]
Configure from IPv4 network address: [0.0.0.0]
Configure from IPv4 netmask/bits: [0.0.0.0]

Part of the network you allow configuration from is not local to this unit.
Configure a static route? [no] _
```

```
Network configuration:
Physical device name: [eth0]
IPv4/IPv6 address for eth0: [192.168.1.1] 192.168.200.5
IPv4 netmask/bits for eth0: [255.255.255.0]
Deactivate other interfaces? [no]

Computers from which configuration is allowed:
Configure from a single computer? [no]
Configure from IPv4 network address: [0.0.0.0]
Configure from IPv4 netmask/bits: [0.0.0.0]

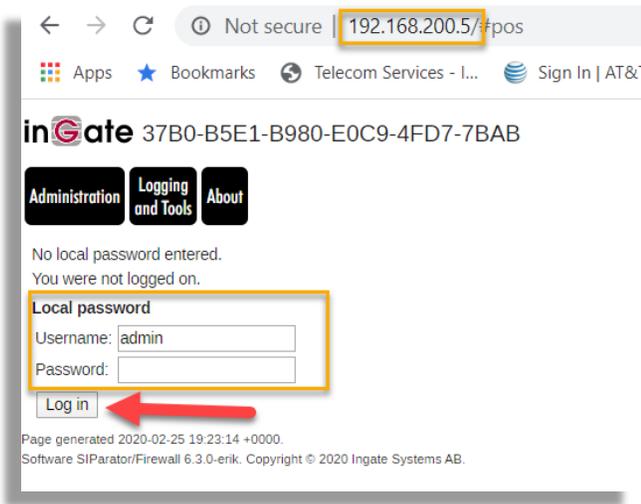
Part of the network you allow configuration from is not local to this unit.
Configure a static route? [no]

Authentication:
Admin password: [] foo

Other configuration:
Do you want to reset the rest of the configuration? [no] yes
```

Once you complete this process you will be able to access the unit using your browser. You will use the IP address you defined. In this case 192.168.200.5 (Factory Default is 192.168.1.1)

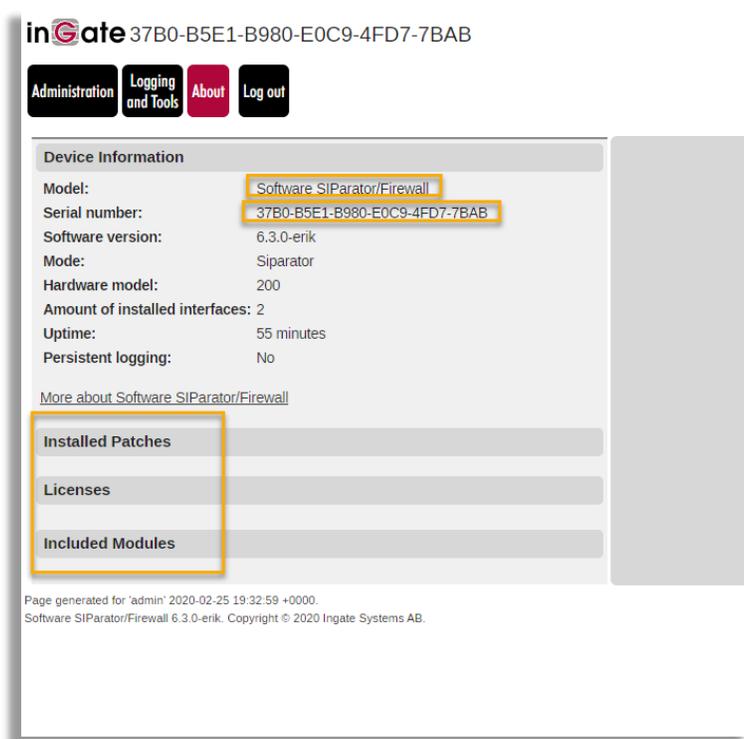
4.7 First Time GUI Access



Login using the credential defined during the basic configuration.

Initial Page will show just a few options, and will stay like that until a license is installed.

Click on the About tag:

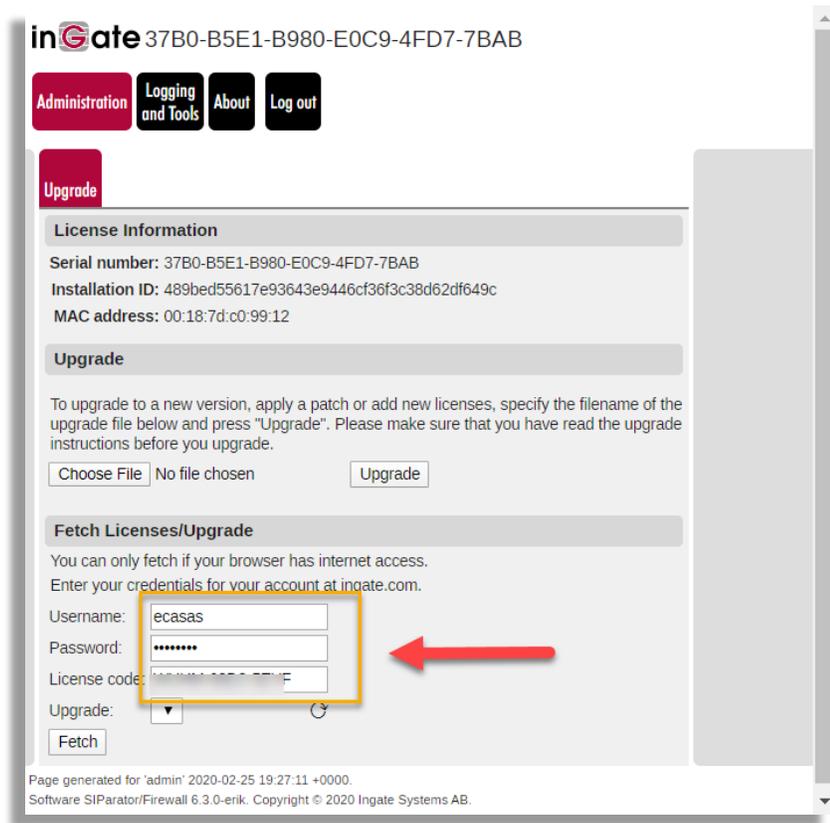


Notice the following facts:

- 1) Model: is a generic name and refers to SIParator Product Version
- 2) Serial Number: This is a temporary serial number that will change to a definitive and perpetual serial number after installing the base license
- 3) There are no patches installed, no licensed components and no modules activated.

4.8 Install Licenses

Click on the Administration Tag:



Use your Ingate.com portal account credentials and introduce the license code provided to you to activate the unit.

Make sure your browser has internet access..

Click **Fetch**

License, Step 2

Processed license 1024816.

The following actions will be taken when the license is applied:

- Install 10 Concurrent Calls SIP Trunk Sessions to SIP Trunk 1-2:
- Install 10 Concurrent Calls SIP Trunk Sessions to SIP Trunk 1-2:
- Selecting 1-2 will add a new SIP Trunk Group page.
- The unit will have a total of 20 Concurrent Calls SIP Trunk Sessions.
- Install 10 Remote User SIP Sessions.
- The unit will have a total of 10 Remote User SIP Sessions.
- Install 10 SIP Registrar Users.
- The unit will have a total of 10 SIP Registrar Users.
- Install a Base license. 
- Set the TURN mode to 0.
- Set the Serial number to IG-200-009-2008-0. 
- Change platform name. 

Apply the license

To apply the license you just uploaded, press "Apply license".

Remove the license

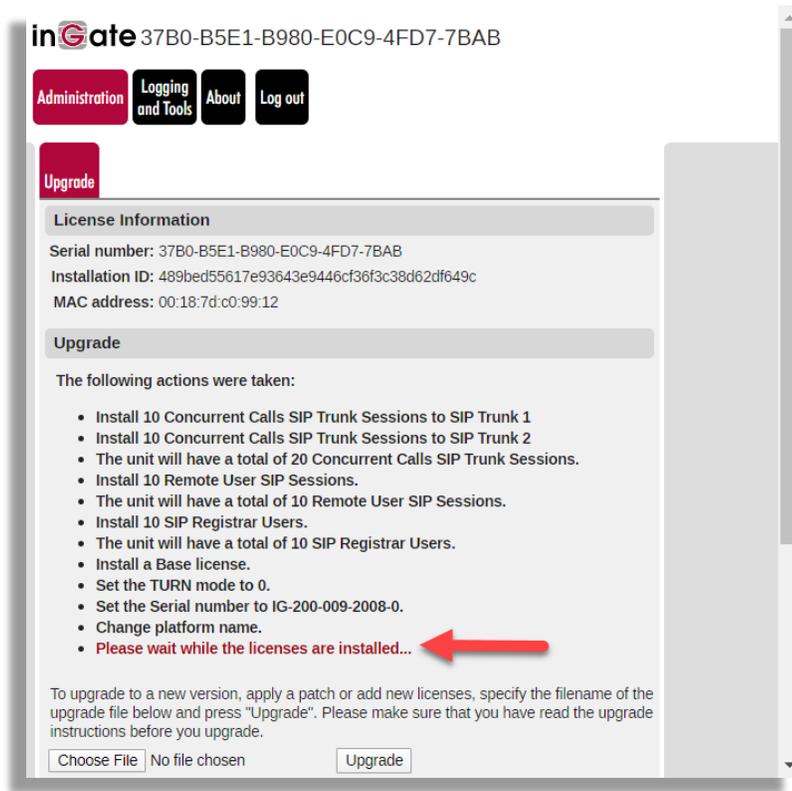
To remove it, press "Remove license".

Page generated for 'admin' 2020-02-25 19:40:20 +0000.
Software SIParator/Firewall 6.3.0-enik. Copyright © 2020 Ingate Systems AB.

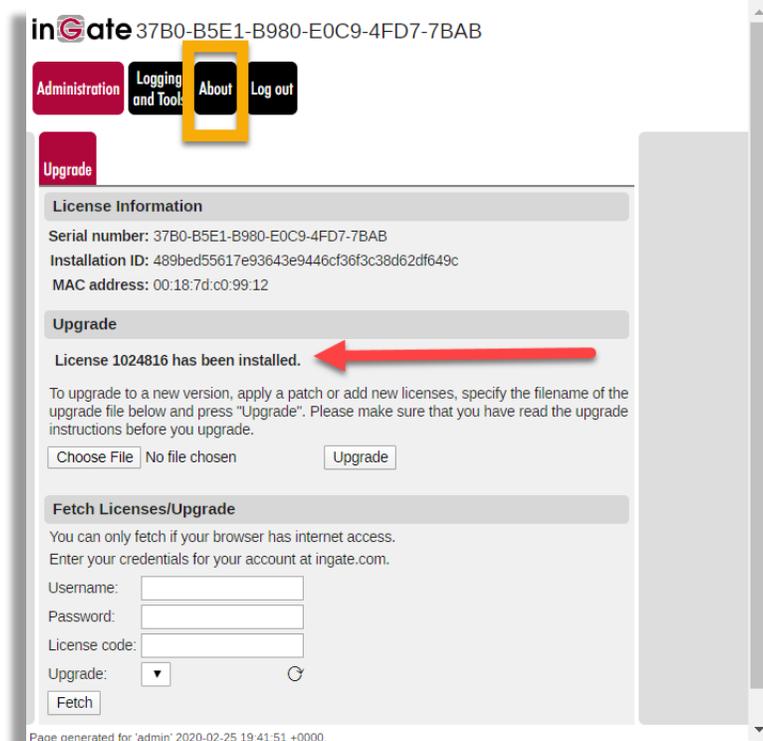
In step 2 it will show all the attributes of the license you are installing. In this example:

- 2 Trunk Groups with 10 Concurrent calls each
- 10 Remote users
- 10 Registrar
- Base License
- New Serial Number
- Platform Name

You will then click on **Apply License**



A message will show while the licenses are being applied.



Once the licenses are applied a final confirmation will show the License ID applied.

Click the About Tag

The screenshot displays the InGate web interface for a device with ID 37B0-B5E1-B980-E0C9-4FD7-7BAB. The navigation menu includes Administration, Basic Configuration, Network, SIP Services, SIP Traffic, SIP Trunks, Q-TURN, Failover, Virtual Private Networks, Quality of Service, Logging and Tools, About, and Log out. The 'About' tab is selected.

Device Information

Model:	SIParator/Firewall/ fpr NEC SRV3 Blade
Serial number:	IG-200-009-2008-0
Software version:	6.3.0-erik
Mode:	Siparator (Standalone)
Hardware model:	200
Amount of installed interfaces:	2
Uptime:	1 hour and 6 minutes
Persistent logging:	No

[More about Software SIParator/Firewall](#)

Installed Patches

License Information

Name:	Ernesto Casas
Email:	ernesto@ingate.com
Installation ID:	[Redacted]
MAC Address:	[Redacted]

Licenses

- 10 SIP Registrar Users
- 20 Concurrent Calls SIP Trunk Sessions (of max unlimited)
- 10 Remote User SIP Sessions (of max unlimited)
- 2 Trunk Groups
- Trunk Group 1 can have max 10 Concurrent Calls SIP Trunk Sessions
- Trunk Group 2 can have max 10 Concurrent Calls SIP Trunk Sessions
- 0 Q-TURN Sessions

Included Modules

- Standard SIP features
- SIP Trunking
- Advanced SIP Routing
- VoIP Survival
- Enhanced Security
- Q-TURN
- VPN (IPsec and PPTP)
- QoS

Page generated for 'admin' 2020-02-25 19:44:00 +0000.
Software SIParator/Firewall 6.3.0-erik. Copyright © 2020 Ingate Systems AB.

Notice:

- A New Model Name is associate dto the unit. In this case *SIParator/Firewall for NEC SVR3 Blade*
- A Permanent and unique serial number is assigned to the unit
- Shows how many Network Interfaces has been built
- License owner and ID/Mac addresses
- All licensed components
- All Modules Included.

5 Ready and Go

5.1 Ready to Configure

After the reboot, the Ingate SIParator/Firewall shall be fully functional and ready to be configured for your application. Logging into the web GUI of the Ingate SIParator/Firewall at the IP address you assigned to the SIParator/Firewall, shall now show all features.

The screenshot displays the Ingate SIParator web GUI. At the top left is the logo "inGate SIParator" and a "Log Out" button. Below the logo is a navigation bar with buttons for Administration, Basic Configuration, Network, SIP Services, SIP Traffic, SIP Trunks, Failover, Virtual Private Networks, Quality of Service, Logging and Tools, and About. Below the navigation bar, it says "Logged in as admin (Full Access) using local password." The main content area is divided into several sections, each with a list of sub-items:

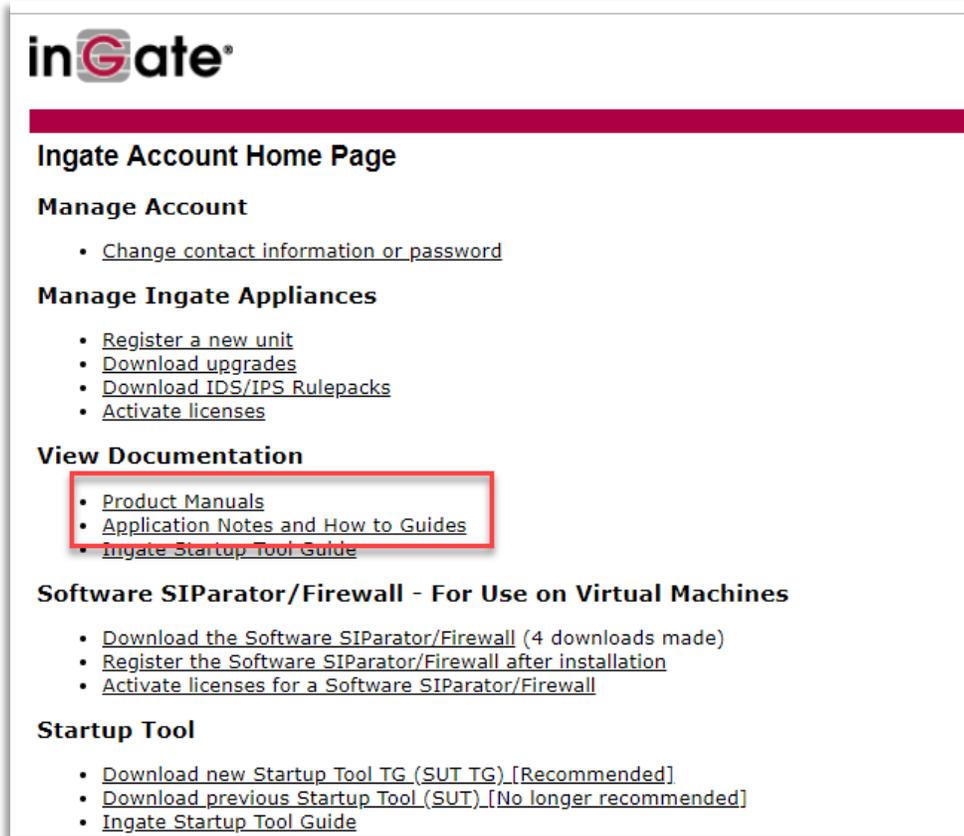
- Administration**
 - Save/Load Configuration
 - Show Configuration
 - User Administration
 - Upgrade
 - Table Look
 - Date and Time
 - Restart
 - Change Language
- Basic Configuration**
 - Basic Configuration
 - Access Control
 - RADIUS
 - SNMP
 - Dynamic DNS Update
 - Certificates
 - TLS
 - Advanced Settings
 - SIParator Type
- Network Configuration**
 - Networks and Computers
 - Default Gateways
 - All Interfaces
 - VLAN
 - Eth0
 - Eth1
 - Interface Status
 - PPPoE
 - Tunnels
 - Topology
- SIP Services**
 - Basic Settings
 - Signaling Encryption
 - Media Encryption
 - Media Transcoding
 - Interoperability
 - Sessions and Media
 - Remote SIP Connectivity
 - VoIP Survival
 - VoIP Survival Status
- SIP Traffic and Users**
 - SIP Methods
 - Filtering
 - Local Registrar
 - Authentication and Accounting
 - SIP Accounts
 - Call Control
 - Dial Plan
 - Routing
 - Time Classes
 - SIP Status
 - IDS/IPS
 - IDS/IPS Status
 - SIP Test
 - SIP Test Status
- SIP Trunks**
 - SIP Trunks
- Failover**
 - Failover Settings
 - Reference Hosts
 - Failover Status
- Virtual Private Networks**
 - IPsec Peers
 - IPsec Tunnels
 - IPsec Advanced
 - IPsec Cryptos
 - IPsec Certificates
 - IPsec Settings
 - Authentication Server
 - IPsec Status
 - PPTP
 - PPTP Status
- Quality of Service**
 - QoS and SIP
 - QoS Classes
 - Services
 - QoS Eth0
 - QoS Eth1
 - TOS Modification
 - All QoS Interfaces
- Logging and Tools**
 - Display Log
 - Packet Capture
 - Check Network
 - Logging Configuration
 - Log Classes
 - Log Sending

Page generated for 'admin' 2019-05-19 23:44:03 +0000.
Software SIParator Firewall 6.2.1. Copyright © 2019 Ingate Systems AB.

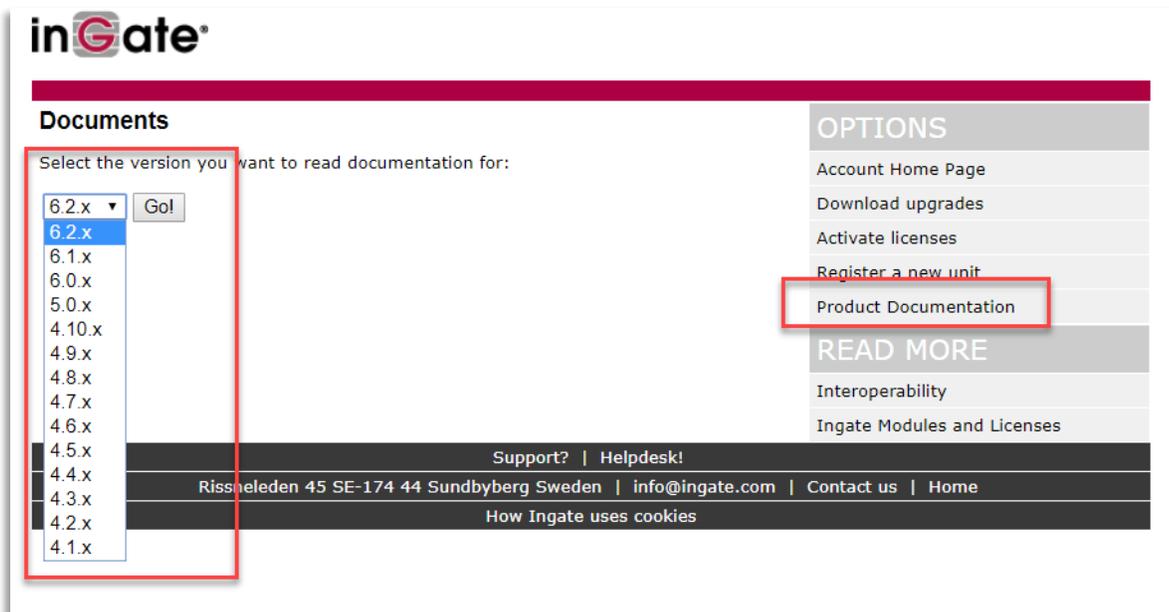
5.2 Setup and Configuration

You will need good documentation and technical information, case studies, etc. There is a lot of good documentation available thru the Account Porta.

At the **Account Home Page**, you find links to Product Manuals,



The screenshot shows the InGate Account Home Page. At the top is the InGate logo. Below it is a red horizontal bar. The main heading is "Ingate Account Home Page". Underneath is the "Manage Account" section with a link to "Change contact information or password". The "Manage Ingate Appliances" section includes links for "Register a new unit", "Download upgrades", "Download IDS/IPS Rulepacks", and "Activate licenses". The "View Documentation" section has a red box around the links "Product Manuals" and "Application Notes and How to Guides". Below that is the "Software SIParator/Firewall - For Use on Virtual Machines" section with links for "Download the Software SIParator/Firewall", "Register the Software SIParator/Firewall after installation", and "Activate licenses for a Software SIParator/Firewall". The "Startup Tool" section has links for "Download new Startup Tool TG (SUT TG) [Recommended]", "Download previous Startup Tool (SUT) [No longer recommended]", and "Ingate Startup Tool Guide".



This screenshot shows the InGate Account Home Page with a dropdown menu open. The dropdown menu is titled "Documents" and contains a list of version numbers from 6.2.x down to 4.1.x. A red box highlights the dropdown menu and the "Go!" button. To the right of the dropdown menu is a "PRODUCT DOCUMENTATION" section with a red box around the "Product Documentation" link. Below this is a "READ MORE" section with links for "Interoperability" and "Ingate Modules and Licenses". At the bottom of the page is a footer with the text "Support? | Helpdesk!", "Rissneleden 45 SE-174 44 Sundbyberg Sweden | info@ingate.com | Contact us | Home", and "How Ingate uses cookies".

other useful documentation (Application Notes, How to Guides) for setup and configuration for Ingate products. (You need to be logged in to your Ingate Account to be able to access the documentation.)

inGate PRODUCTS SOLUTIONS PARTNERS SUPPORT

Ingate Product Documentation

Product Manuals and Start Guides

- [Product Manuals and Start Guides](#)
- [Ingate Startup tool - Getting Started Guide](#)
- [Orientation and Installation - Ingate Software Firewall/SIParator](#)

Application Notes -- IP-PBX

3Com

- [Configuration Guide for 3Com VCX Connect for SIP Trunking](#)

Aastra

- [How to Install an Ingate Solution for Aastra Teleworker Solution](#)

Asterisk

- [Configuration Guide for Asterisk BE with Remote Phones](#)
- [Configuration Guide for Asterisk BE with SIP Trunking](#)

Avaya

- [Configuration Guide for Ingate and Avaya without SES](#)
- [Configuration Guide for Ingate and Avaya QE](#)
- [Configuration Guide for Avaya S8300 for SIP Trunking without SES](#)
- [Configuration Guide for an Avaya CM/SES ver 5.0 with Remote Phones](#)
- [Configuration Guide for an Avaya CM/SES ver 5.2 with Remote Phones](#)
- [Configuration Guide for an Avaya CM/SES with SIP Trunking](#)
- [Configuration Guide for an Avaya Aura SM with SIP Trunking](#)

Cisco

- [How to configure a Cisco Pix \(VPN\) to work with Ingate Firewalls](#)
- [How to configure a Cisco Pix to work with Ingate SIParators](#)

Ericsson

- [Configuration Guide for Ericsson MX-ONE with SIP Trunking](#)

Microsoft

- [Configuration Guide for Microsoft Lync](#)
- [Configuration Guide for Office 365 Unified Messaging](#)
- [Configuration Guide for Microsoft Exchange Server 2010 Unified Messaging](#)
- [Configuration Guide for Microsoft OCS 2007](#)

Mitel

- [Configuration Guide for Mitel 3300 ICP with SIP Trunking](#)

NEC

- [NEC - Multitenant Remote Users](#)

ShoreTel

- [Configuration Guide for a Shoretel with SIP Trunking](#)

To ease the configuration of your software Ingate, we recommend you to download and use the Ingate Startup Tool TG found at https://account.ingate.com/Startup_Tool_TG.php

The Startup Tool is especially useful for SIP Trunking, where you can select predefined PBXs and ITSPs.

6 Appendices

6.1 Using Rufus to create your own Bootable USB from the Master ISO File.

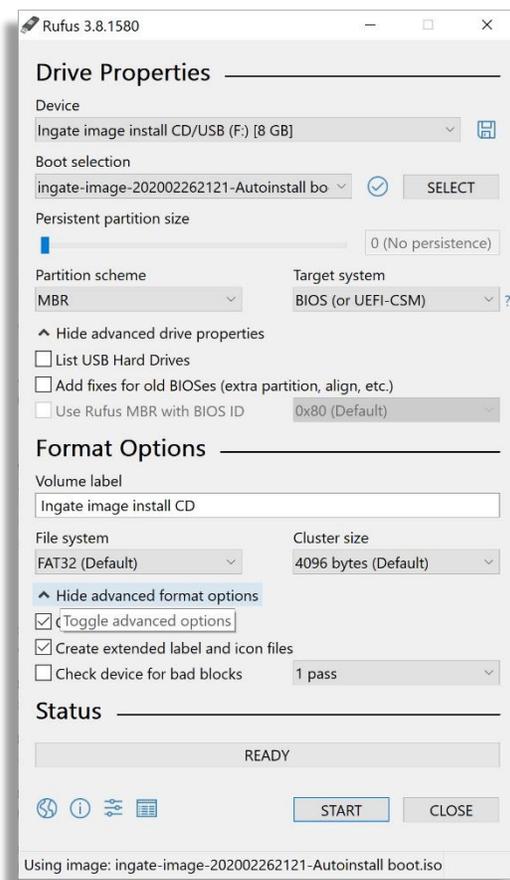
In case NEC or Ingate provides you an ISO File to create your own Bootable device, you can use any of the know utilities available in the market to do so.

In this case we are shown the process using Rufus for Windows to create a bootable USB (8 Gb minimum recommended)

Rufus can be obtained from the Web and is free of any charge.

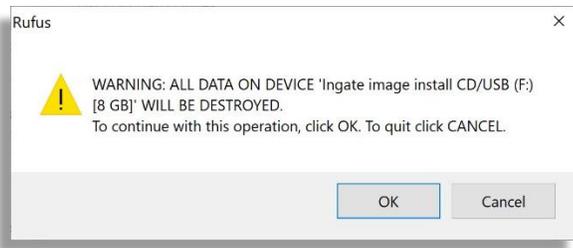
Here is the link: <https://rufus.ie/>

- 1) Insert the USB in your PC (Be aware all content of this USB will be deleted)
- 2) Usually, NEC or ingate will provide you a link to download the ISO file. Download it and have it available in your PC.
- 3) Run Rufus:

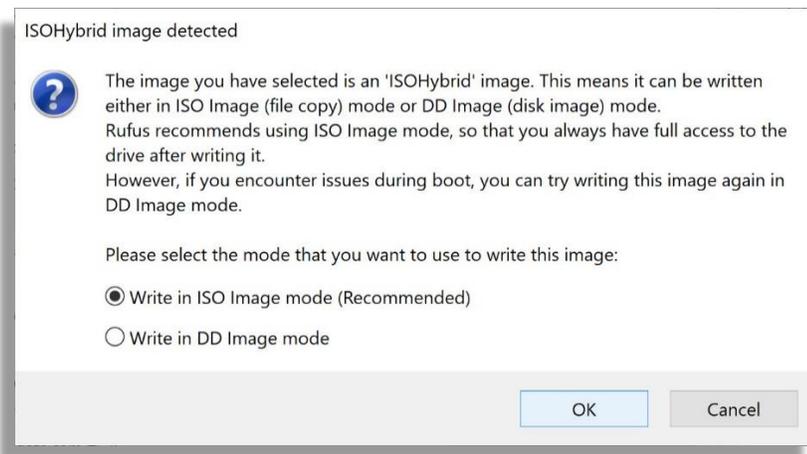


- a. In Devices select the USB Drive detected.

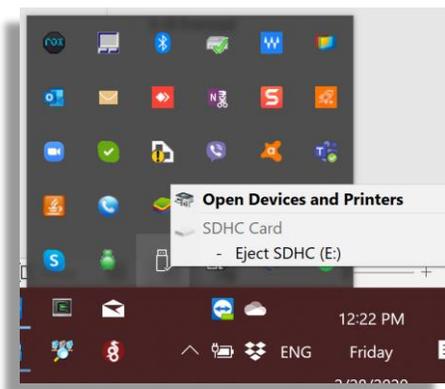
- b. In Boot Selection first select “DISK or ISO Image and press the Select button on the right
- c. Then navigate and select the ISO file you downloaded in step 2).
- d. Only fields you need to complete in Format Options section are
 - i. Volume Label (just a description)
 - ii. File System: FAT32
 - iii. Cluster size: 4096
- e. Press Start!
- f. Confirm you accept to overwrite data



- g. Next screen will allow you to select between 2 options as ISOHybrid image is detected.
Select ISO Image mode:



- 4) Once completed, exit Rufus program and before extracting the USB from your PC make sure you select Eject in your PC



At this point you have the USB ready as needed for section 4.4 in this document.

Any question, comments or suggestion: ernesto@ingate.com

7 Additional help or support

If you have questions, suggestions and any other concern feel free to contact Educronix LLC

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We also provide consulting services as well as remote hands troubleshooting and configuration.