# Orientation and how to install

# Ingate SBC and E-SBC

# SIParator® / Firewall®

# on AWS

For the Ingate Cloud SIParators using software release 6.2.1 or later

Revision 1

May 18th, 2019

# Frequently Asked Questions

**Q** **Does the Ingate Cloud SIParator/Firewall SBC have the same functions as the Ingate Software SIParator/Firewall or appliances S21, S52, S95… etc.?** Yes, they even use the same software revisions. The differences are related to the hardware (e.g. performance, number of physical ports, etc.), and the capabilities and infrastructure provided by the Cloud Service Provider (vCPU's, Interface types and specs, etc…)

**Q** **What about selecting the cloud to install SIParator Software SBC?** SIParator is available in the most popular Cloud Providers, including AWS, Azure and Google Cloud. It is also available to be installed in most Cloud infrastructures supporting NFV/OpenStack.

**Q** **For whom is the Cloud SBC a good choice?** It has become a common trend for traditional on-premise IT infrastructure to transition to hosted environments, cloud providers or even hybrid infrastructures. Once UC, IPPBX, or even any RTC infrastructure starts moving to the cloud, the need for having SBC/Firewall in the border, in front of such RTC infrastructure will be mandatory. Adopting Software SIParator to be installed in Hosted environments using traditional hypervisors, or Cloud for those cases where AWS, Azure, Google Cloud, or any other OpenStack based Cloud infrastructure will always be the right choice.

**Q** **What performance do I get and how many virtual CPUs do I need to allocate?** The short and simple answer is that you CAN get the same high performance as running natively on the underlying hardware (beyond 20 000 concurrent voice calls), but it is dependent on the CPU and network support and performance

Based on live testing in AWS if you allocate 4 virtual CPUs, compute type of instance, 6 Gig RAM it can handle up to 2 000 concurrent calls (20 ms, G.711, RTP media) and call setup rates of 100 calls per second. Rule of thumb to increase capacity is about 2 vCPU and 2 Gig for every 1000 calls.

A benchmark is being built and results will be published soon.

**Q** **Does the software Ingate run on every Cloud Provider?** There can of course be no such guarantee, but it should work on most common ones. We have tested AWS, Azure and Google Cloud. Also we have made possible to implement Ingate SIParator/Firewall on OpenStack based infrastructure. In this moment, it is available directly from AWS Marketplace and soon will be similarly in Azure and Google.

**Q** **Does the fault tolerant or failover modes in some Cloud Platforms work with Ingate's Cloud SBC?** Cloud Service Providers generally do not provide low level control or access to low level networking capabilities. Most of them do not even allow to manage freely IP addressing at the interface level**. SIParator HA is based, among other things, on heartbeat monitoring at layer 2 and we are working on implementing this at Cloud Vendors.**

Ingate will soon announce new version or alternative way to implement our HA Failover technology.

However, with Ingate SIParator/Firewall, taking advantage of extensive DNS support (Including embedded DNS Override, DNS SRV resolution and dual homing for PBX's and ITSP's), you have the tools to design and create highly resilient solutions. Documentation for capabilities associated with DNS OVR and other topics can be found in ***" Ingate Siparator High Available Deployments Configuration Guide for AWS"***. Some Cloud Providers such AWS also offer their own functionalities that can be used not only for failover purposes, but also for performance escalation. That is the case of AWS Auto Scaling Groups.

In next releases Autoscaling Groups in AWS will be supported.

# Ingate SIParator®/Firewall®

## Table of Contents

## Ingate SIParator®/Firewall® for AWS

This description is for the current software release 6.2.1 and later. Customers/developers/testers can, after obtaining access to an AMI (Amazon Machine Image), launch an Ingate SIParator/Firewall Instance and install it following this description. You also need the license code to be able to start using and configuring the software.

Please note:

- You are assumed to be familiar with the cloud platform you have chosen. Ingate may not be able to support or take responsibility for that part.
- Instance can be launched using most Instance types available in AWS. Current release supports c4, d2, f1, g2, g3, h1, i2, i3, m4, p2, p3, r4, t2 and x1. All other Instance types will be supported soon once ENA (Elastic Network Adapter) is included in SIParator. This will increase Network Interface Support for up to 100 Gbps.
- It can also run in most popular cloud platforms, including AWS, Azure and Google Cloud.
- You can launch as many instances as you want from the same AMI, but once a license is associated to an instance it will only be valid for that one.
- Ingate's licensing prohibits the use of cloning. Each VM must be properly installed, including the licensing procedure. Adding more memory or CPUs to host machine, or even changing the instance type when you need more horsepower is no problem.
- Your account and license information will be displayed on the About page in the SIParator GUI, as well as details of your Cloud setup, including Type of instance, region, used AMI, etc.

# 1 Getting Up and Running – In Short (AWS Install)

These are the steps to get a cloud SIParator/Firewall up and running on AWS. A detailed description of each step follows. The Ingate web referred to in this description is http://www.ingate.com.

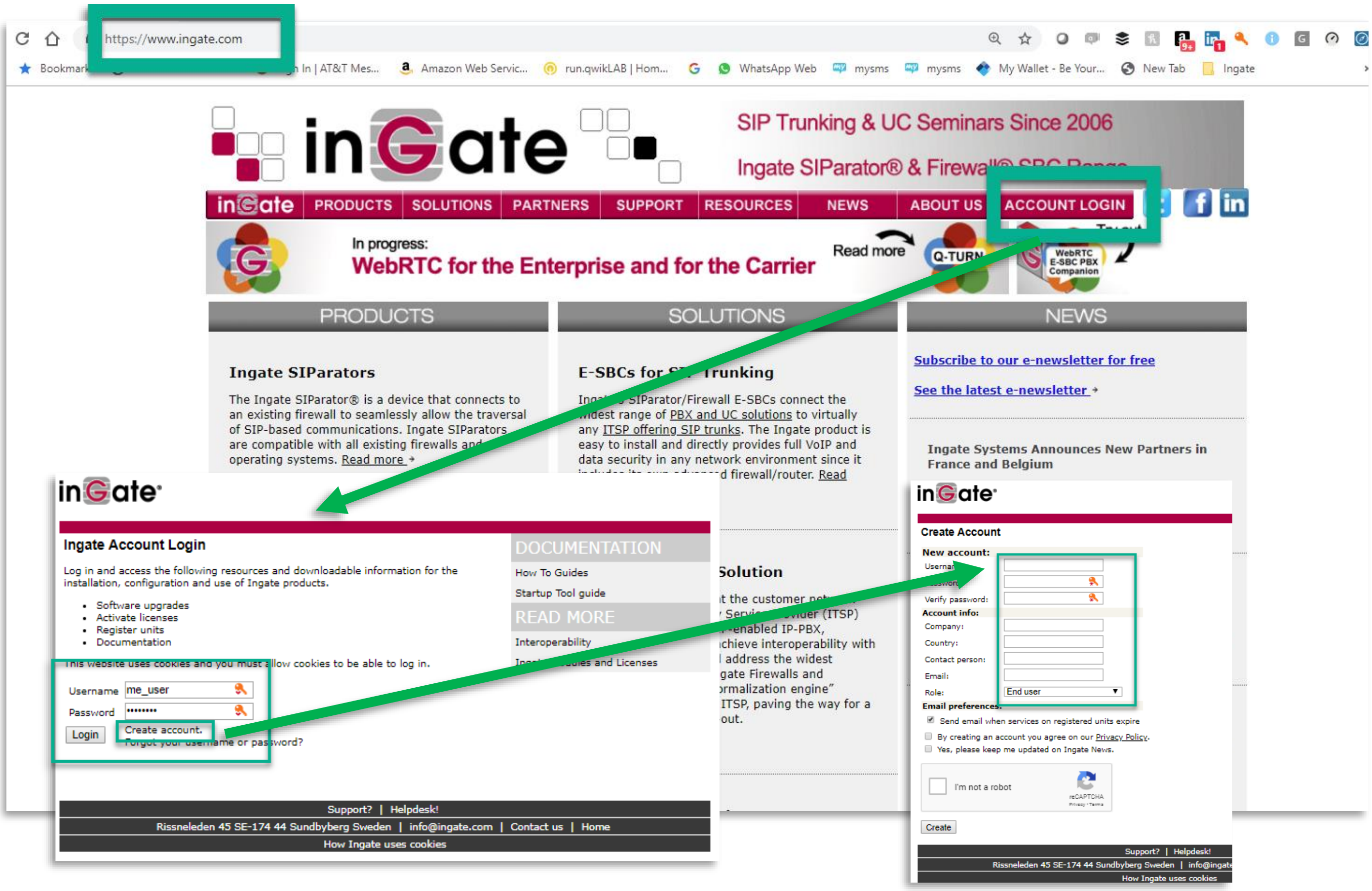
1) Create an account at the Ingate web, http://www.ingate.com/Register_Account.php, in case you don't already have one.
2) Look for Ingate products in the AWS Marketplace. You should have an AWS account already
3) Launch Ingate Instance
4) Get or purchase a License Code from Ingate.
5) Start the Instance and access using HTTPS.
6) Surf into the web GUI of the SIParator/Firewall – Only the Administration>Upgrade page will be shown.
7) Provide your user name, credentials and license information in the Upgrade page in order to activate the license and register this new SIParator under your Ingate Portal Account.

The machine will reboot, and the Ingate SIParator/Firewall should thereafter be fully functional.

# 2 Installing the SIParator®/Firewall® on AWS

## 2.1 Create an Account at the Ingate Web

Create an account at the Ingate web site [http://www.ingate.com](http://www.ingate.com). You will get confirmation via email.



https://www.ingate.com
SIP Trunking & UC Seminars Since 2006
Ingate SIParator® & Firewall® SBC Range
PRODUCTS
SOLUTIONS
PARTNERS
SUPPORT
RESOURCES
NEWS
ABOUT US
ACCOUNT LOGIN
In progress:
WebRTC for the Enterprise and for the Carrier
Read more
Q-TURN
WebRTC E-SBC PBX Companion
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Ingate Systems Announces New Partners in France and Belgium

**Ingate Account Login**

Log in and access the following resources and downloadable information for the installation, configuration and use of Ingate products.

- Software upgrades
- Activate licenses
- Register units
- Documentation

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**Create Account**

New account:
Username:
Password:
Verify password:
Account info:
Company:
Country:
Contact person:
Email:
Role: End user ▼
Email preferences:
☑ Send email when services on registered units expire
☐ By creating an account you agree on our Privacy Policy.
☐ Yes, please keep me updated on Ingate News.
☐ I'm not a robot

Create

## 2.2 Launch Cloud SIParator®/Firewall® Instance from the Marketplace.

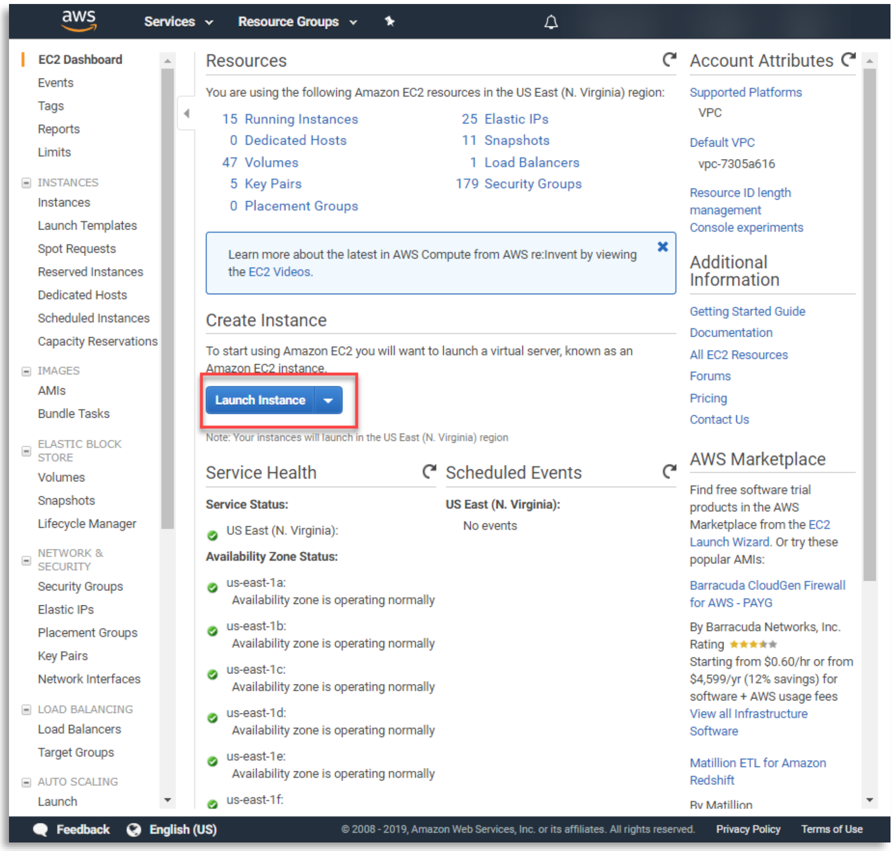
### 2.2.1 EC2 Instance Launch

After login in in your AWS Account you can start the Launch process in order to create a brand-new instance in your VPC. Here are some facts you need to know:

- Ingate's SIParator/Firewall for AWS is the same as the software version of Ingate's E-SBCs specially customized for AWS, - (the solution for enterprises who want to deploy award-winning SIParator E-SBCs on the Cloud.)
- Like all Ingate's E-SBCs, the SIParator/Firewall for AWS, is a key component to build secure SIP-based communications - including VoIP, RTC, SIP trunking and UC.
- The SIParator/Firewall for AWS comes with the option to choose the number of sessions, remote users and registrar users, to meet the needs of the entire enterprise market, regardless if it's used by small enterprises e.g. branch offices, home workers, or mid-range to large enterprises. It can be used not only for SIP Trunking but also to support remote users or locations.
- Is the most important building block when deploying infrastructure for Real Time Communications including voice and Video, either if we are talking about plain SIP or the most advanced implementations for WebRTC.

- When using SIParator Firewall capabilities, you don't need to include third party Firewall components. SIParator can provide you all in one single platform. Therefor you'll have all you need to add advanced capabilities to deliver real QoS.
- It has been implemented as an AWS EC2 service
- Classified under Security and Network Infrastructure Categories
- Defined as a Firewall and Session Border Controller for Real Time Communications deployments
- It's available for all geographical regions where AWS has coverage (16 regions as of today covering USA: 4, Canada: 1, EU: 5, APAC: 5, South America: 1)
- 1-Click AMI provisioning thru the AWS Marketplace portal
  You can just click here: → Get it from Marketplace
- Available Instances options from 1 core / 1 Gig RAM / 1 Gig Network, up to 64 core / 256 Gig RAM / 20 Gig Network.
- Available for Free Tier (t2.micro instance type)
- Buy Licenses directly from Ingate (BYOL), demo licenses available.
- EBS Supported for reliable and secure storage
- EBS Optimized also supported for maximum throughput when accessing storage
- Coming releases will support ENA (Elastic Network Adapter) for even better Network performance.
- Integrated with CloudFormation for service orchestration via RestAPI and Redhat ANSIBLE
- Ingate IPSEC VPN fully compatible with AWS VPC VPN Gateway as well as with VPC Client VPN Endpoints
- Ideal Substitution for a traditional NAT Instance usually suggested by AWS (see NAT instance details) from AWS here:
  ➔ https://docs.aws.amazon.com/vpc/latest/userguide/VPC_NAT_Instance.html)

Login into your AWS account and Open EC2 Service Dashboard (If you are already logged in, you can also follow the 1-Click instructions as explained in section 2.2.2):



Resources

You are using the following Amazon EC2 resources in the US East (N. Virginia) region:

| | |
|---|---|
| 15 Running Instances | 25 Elastic IPs |
| 0 Dedicated Hosts | 11 Snapshots |
| 47 Volumes | 1 Load Balancers |
| 5 Key Pairs | 179 Security Groups |
| 0 Placement Groups | |

Learn more about the latest in AWS Compute from AWS re:Invent by viewing the EC2 Videos.

Create Instance

To start using Amazon EC2 you will want to launch a virtual server, known as an Amazon EC2 instance.

Note: Your instances will launch in the US East (N. Virginia) region

Service Health

Service Status:

US East (N. Virginia):

Availability Zone Status:

us-east-1a:
Availability zone is operating normally

us-east-1b:
Availability zone is operating normally

us-east-1c:
Availability zone is operating normally

us-east-1d:
Availability zone is operating normally

us-east-1e:
Availability zone is operating normally

us-east-1f:

Scheduled Events

US East (N. Virginia):
No events

Account Attributes

Supported Platforms
VPC

Default VPC
vpc-7305a616

Resource ID length management
Console experiments

Additional Information

Getting Started Guide
Documentation
All EC2 Resources
Forums
Pricing
Contact Us

AWS Marketplace

Find free software trial products in the AWS Marketplace from the EC2 Launch Wizard. Or try these popular AMIs:

Barracuda CloudGen Firewall for AWS - PAYG

By Barracuda Networks, Inc.
Rating ★★★★★
Starting from $0.60/hr or from $4,599/yr (12% savings) for software + AWS usage fees
View all Infrastructure Software

Matillion ETL for Amazon Redshift

By Matillion

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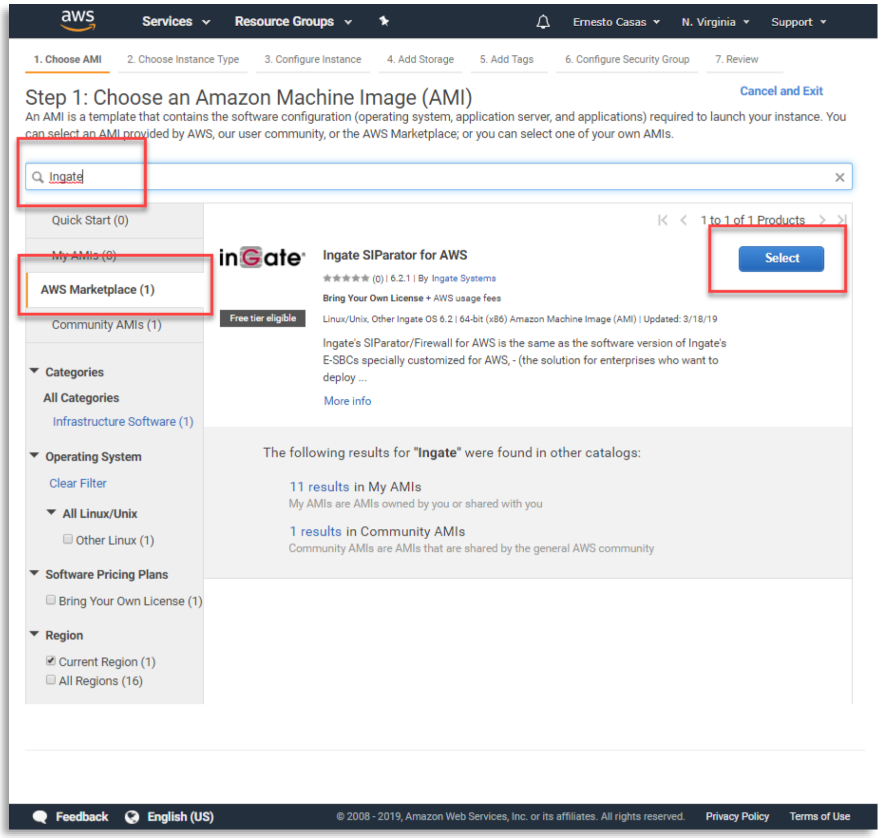
**Figure 1**

- Make sure you are in the Region you want to create the instance.
- Click on “Launch Instance”



Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Ingate SIParator for AWS

★★★★★ (0) | 6.2.1 | By Ingate Systems

Bring Your Own License + AWS usage fees

Linux/Unix, Other Ingate OS 6.2 | 64-bit (x86) Amazon Machine Image (AMI) | Updated: 3/18/19

Ingate's SIParator/Firewall for AWS is the same as the software version of Ingate's E-SBCs specially customized for AWS, - (the solution for enterprises who want to deploy ...

The following results for "**Ingate**" were found in other catalogs:

11 results in My AMIs
My AMIs are AMIs owned by you or shared with you

1 results in Community AMIs
Community AMIs are AMIs that are shared by the general AWS community

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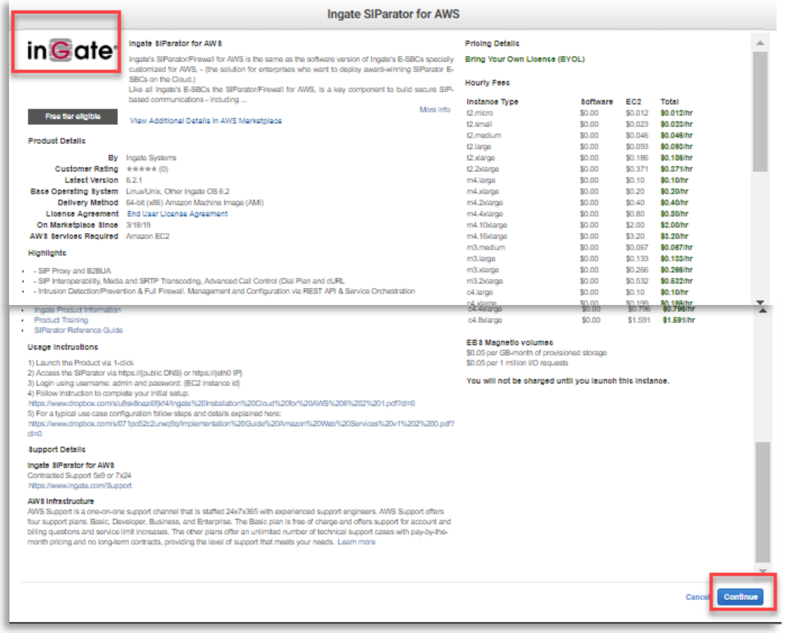
**Figure 2**

- Select AWS Marketplace
- Filter using “Ingate”
- Then click on Select to use Ingate’s AMI to create your Instance

After doing so, a page will show details about the product including AWS instance pricing.



Ingate SIParator for AWS

**Ingate SIParator for AWS**

Ingate's SIParator/Firewall for AWS is the same as the software version of Ingate's E-SBCs specially customized for AWS, - (the solution for enterprises who want to deploy award-winning SIParator E-SBCs on the Cloud.)
Like all Ingate's E-SBCs the SIParator/Firewall for AWS, is a key component to build secure SIP-based communications - including ...

**Product Details**

| | |
|---|---|
| By | Ingate Systems |
| Customer Rating | ★★★★★ (0) |
| Latest Version | 6.2.1 |
| Base Operating System | Linux/Unix, Other Ingate OS 6.2 |
| Delivery Method | 64-bit (x86) Amazon Machine Image (AMI) |
| Licence Agreement | End User License Agreement |
| On Marketplace Since | 3/18/19 |
| AWS Services Required | Amazon EC2 |

**Highlights**

- - SIP Proxy and B2BUA
- - SIP Interoperability, Media and SRTP Transcoding, Advanced Call Control (Dial Plan and cURL
- - Intrusion Detection/Prevention & Full Firewall. Management and Configuration via REST API & Service Orchestration
- Ingate Product Information
- Product Training
- SIParator Reference Guide

**Usage Instructions**

1) Launch the Product via 1-click
2) Access the SIParator via https://{public DNS) or https://{eth0 IP}
3) Login using username: admin and password: {EC2 instance id}
4) Follow instruction to complete your initial setup:
https://www.dropbox.com/s/u8sk8oazi6fjkf4/Ingate%20Installation%20Cloud%20for%20AWS%206%202%201.pdf?dl=0
5) For a typical use case configuration follow steps and details explained here:
https://www.dropbox.com/s/071po52c2urwq9q/Implementation%20Guide%20Amazon%20Web%20Services%20v1%202%200.pdf?dl=0

**Support Details**

**Ingate SIParator for AWS**
Contracted Support 5x9 or 7x24
https://www.ingate.com/Support

**AWS Infrastructure**
AWS Support is a one-on-one support channel that is staffed 24x7x365 with experienced support engineers. AWS Support offers four support plans: Basic, Developer, Business, and Enterprise. The Basic plan is free of charge and offers support for account and billing questions and service limit increases. The other plans offer an unlimited number of technical support cases with pay-by-the-month pricing and no long-term contracts, providing the level of support that meets your needs. Learn more

**Pricing Details**

**Bring Your Own License (BYOL)**

**Hourly Fees**

| Instance Type | Software | EC2 | Total |
|---|---|---|---|
| t2.micro | $0.00 | $0.012 | $0.012/hr |
| t2.small | $0.00 | $0.023 | $0.023/hr |
| t2.medium | $0.00 | $0.046 | $0.046/hr |
| t2.large | $0.00 | $0.093 | $0.093/hr |
| t2.xlarge | $0.00 | $0.186 | $0.186/hr |
| t2.2xlarge | $0.00 | $0.371 | $0.371/hr |
| m4.large | $0.00 | $0.10 | $0.10/hr |
| m4.xlarge | $0.00 | $0.20 | $0.20/hr |
| m4.2xlarge | $0.00 | $0.40 | $0.40/hr |
| m4.4xlarge | $0.00 | $0.80 | $0.80/hr |
| m4.10xlarge | $0.00 | $2.00 | $2.00/hr |
| m4.16xlarge | $0.00 | $3.20 | $3.20/hr |
| m3.medium | $0.00 | $0.067 | $0.067/hr |
| m3.large | $0.00 | $0.133 | $0.133/hr |
| m3.xlarge | $0.00 | $0.266 | $0.266/hr |
| m3.2xlarge | $0.00 | $0.532 | $0.532/hr |
| c4.large | $0.00 | $0.10 | $0.10/hr |
| c4.xlarge | $0.00 | $0.199 | $0.199/hr |
| c4.4xlarge | $0.00 | $0.796 | $0.796/hr |
| c4.8xlarge | $0.00 | $1.591 | $1.591/hr |

**EBS Magnetic volumes**
$0.05 per GB-month of provisioned storage
$0.05 per 1 million I/O requests

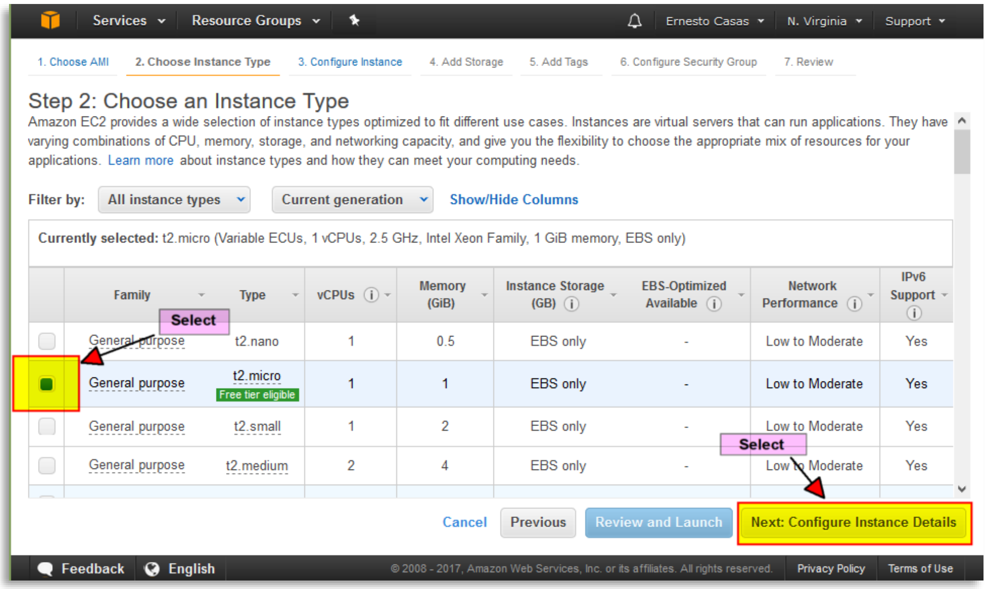
**You will not be charged until you launch this instance.**

**Figure 3**

- Read thru all the information see all option regarding Instance type costs, links to documentation, product brief, etc.
- Press continue to start selecting your instance

Next step will provide you options to select the Instance Type. It will depend on what type of load, including simultaneous calls and calls per second. A separated guide is available to help you on the selection. For details write to support@ingate.com.

As for this example, we suggest using t2.micro, as it is usually available as a free tier, and will be enough for less than 50 simultaneous calls and up to 10 calls per second. Is an excellent option for testing and Proof of Concept, including small installations



Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. Learn more about instance types and how they can meet your computing needs.

Filter by: All instance types | Current generation | Show/Hide Columns

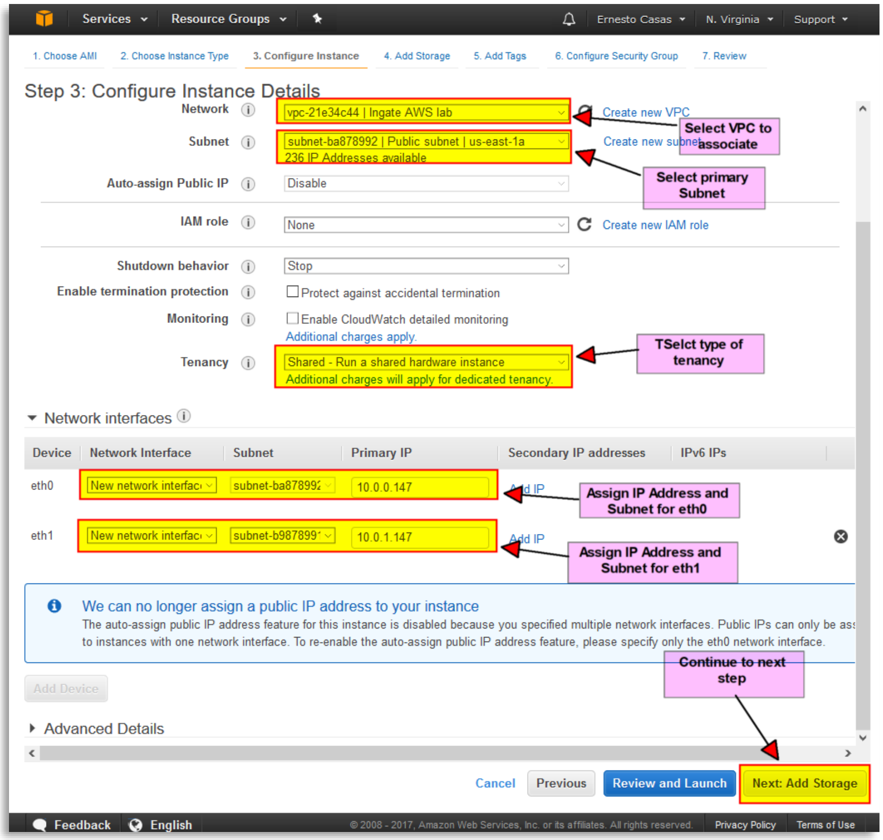
**Currently selected:** t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

| | Family | Type | vCPUs | Memory (GiB) | Instance Storage (GB) | EBS-Optimized Available | Network Performance | IPv6 Support |
|---|---|---|---|---|---|---|---|---|
| □ | General purpose | t2.nano | 1 | 0.5 | EBS only | - | Low to Moderate | Yes |
| ■ | General purpose | t2.micro<br>Free tier eligible | 1 | 1 | EBS only | - | Low to Moderate | Yes |
| □ | General purpose | t2.small | 1 | 2 | EBS only | - | Low to Moderate | Yes |
| □ | General purpose | t2.medium | 2 | 4 | EBS only | - | Low to Moderate | Yes |

**Figure 4**

- Select the desired Type
- Select next screen to continue Instance Configuration

Next screen will allow setting up instance details associated to VPC, Subnets, network interfaces and IP address.



Step 3: Configure Instance Details

Network: vpc-21e34c44 | Ingate AWS lab

Select VPC to associate

Subnet: subnet-ba878992 | Public subnet | us-east-1a
236 IP Addresses available

Select primary Subnet

Auto-assign Public IP: Disable

IAM role: None

Shutdown behavior: Stop

Enable termination protection: □ Protect against accidental termination

Monitoring: □ Enable CloudWatch detailed monitoring
Additional charges apply.

Tenancy: Shared - Run a shared hardware instance
Additional charges will apply for dedicated tenancy.

TSelct type of tenancy

Network interfaces

| Device | Network Interface | Subnet | Primary IP | Secondary IP addresses | IPv6 IPs |
|---|---|---|---|---|---|
| eth0 | New network interfac | subnet-ba87899 | 10.0.0.147 | Add IP | |
| eth1 | New network interfac | subnet-b987899 | 10.0.1.147 | Add IP | |

Assign IP Address and Subnet for eth0

Assign IP Address and Subnet for eth1

We can no longer assign a public IP address to your instance
The auto-assign public IP address feature for this instance is disabled because you specified multiple network interfaces. Public IPs can only be ass to instances with one network interface. To re-enable the auto-assign public IP address feature, please specify only the eth0 network interface.

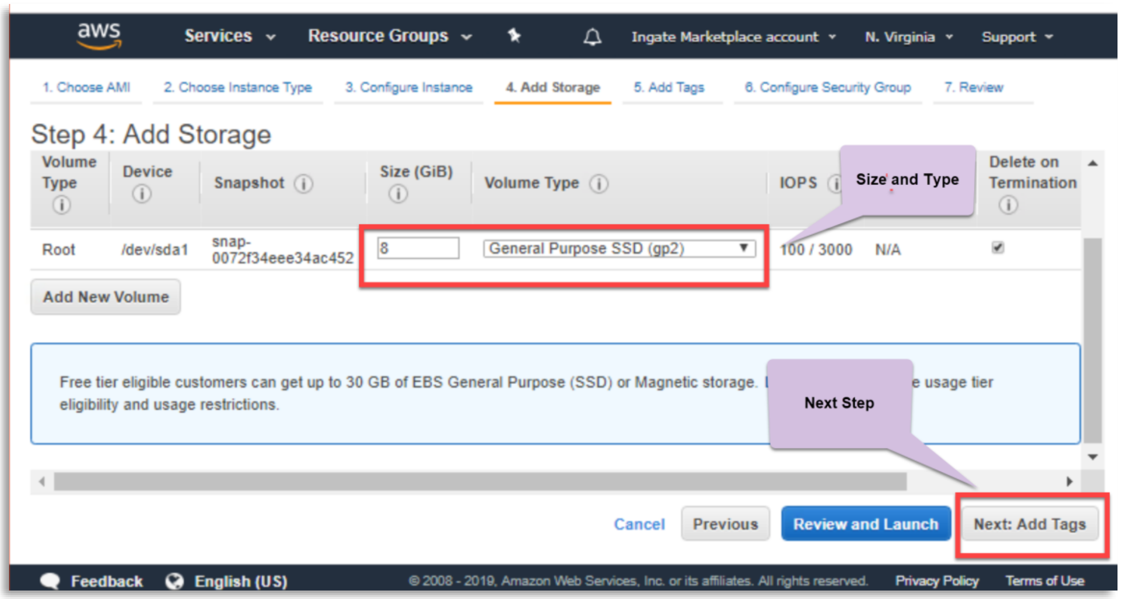
Continue to next step

Advanced Details

**Figure 5**

- First select the VPC where the SIParator will be hosted. If VPC have not been created you can click on the Create VPC and follow suggestion explained in the next point 3.1.2
- Select the primary Subnet where this Instance will be associated. It is important to understand that this Subnet will be also associated to interface eth0 and once created it is the only Interface that cannot be detached from the Instance. In our example, we will select a Subnet defined as Public.
- By Default type of tenancy is selected as Shared Hardware Instance. This can be changed to Dedicated Instance or Dedicated Host which can provide better performance, but you will need to review additional costs and limited to some types of Instances (t2 types are usually not supported as Dedicated Instance or Hardware).
- In Network Interfaces, by default only eth0 will be shown up, so you will need to add one more interface (eth1), and then associated eth0 to the primary (Public Subnet), and eth1 (Private Subnet) and you can pre-assign the IP address or leave it blank for AWS VPC assign and IP address via its VPC DHCP self-provided service.

Next step will be to configure Storage



Step 4: Add Storage

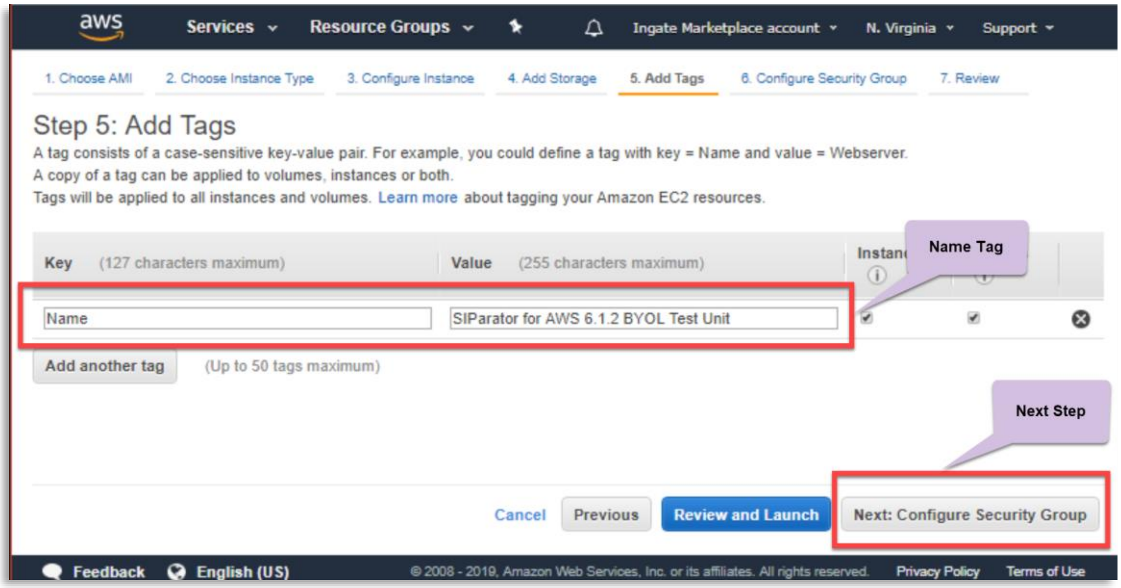
| Volume Type | Device | Snapshot | Size (GiB) | Volume Type | IOPS | Delete on Termination |
|---|---|---|---|---|---|---|
| Root | /dev/sda1 | snap-0072f34eee34ac452 | 8 | General Purpose SSD (gp2) | 100 / 3000 | ☑ |

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. l e usage tier eligibility and usage restrictions.

**Figure 6**

- Make sure you change the Size from any default value to 8 GiB, otherwise the Instance won't work.
- Select General Purpose SSD (GP2) as the Volume type to be used.
- Move to the next step to assign a name to the instance.

Next step will provide you a way to add tags to the instance. In our case we will add only one Tag "Name", but you can assign any tag you might need based on your criteria on how an Instance should be identified and documented.



Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver.
A copy of a tag can be applied to volumes, instances or both.
Tags will be applied to all instances and volumes. Learn more about tagging your Amazon EC2 resources.

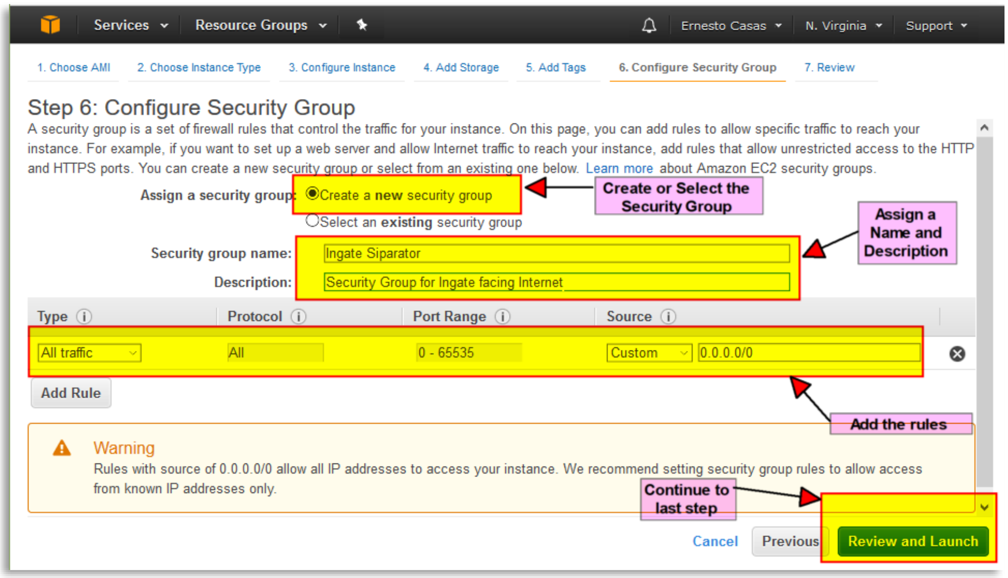
| Key (127 characters maximum) | Value (255 characters maximum) | Instan | |
|---|---|---|---|
| Name | SIParator for AWS 6.1.2 BYOL Test Unit | ☑ | ☑ |

**Figure 7**

- Tags allow to associated attributes or denominations to specific key names for Instances. It usually helps to organize and qualify Instances. In our case and as a good practice we will add one Key.
- Add a Tag named “Name” and associate the name you want to be shown in the Dashboard for this Instance
- Move to next step to proceed to associate a security group to this Instance.

Now a Security Group needs to be associated to the Instance. It will be used as Policies to allow flows between the Internet and the SIParator.

As SIParator will act as the firewall for all access to IP-PBX platform it will be enough just to allow any traffic from the Internet and manage all policies in just one place (The SIParatore/Firewall)



Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. Learn more about Amazon EC2 security groups.

Assign a security group: ● Create a **new** security group ○ Select an **existing** security group

Security group name: Ingate Siparator

Description: Security Group for Ingate facing Internet

| Type | Protocol | Port Range | Source |
|---|---|---|---|
| All traffic | All | 0 - 65535 | Custom 0.0.0.0/0 |

Warning

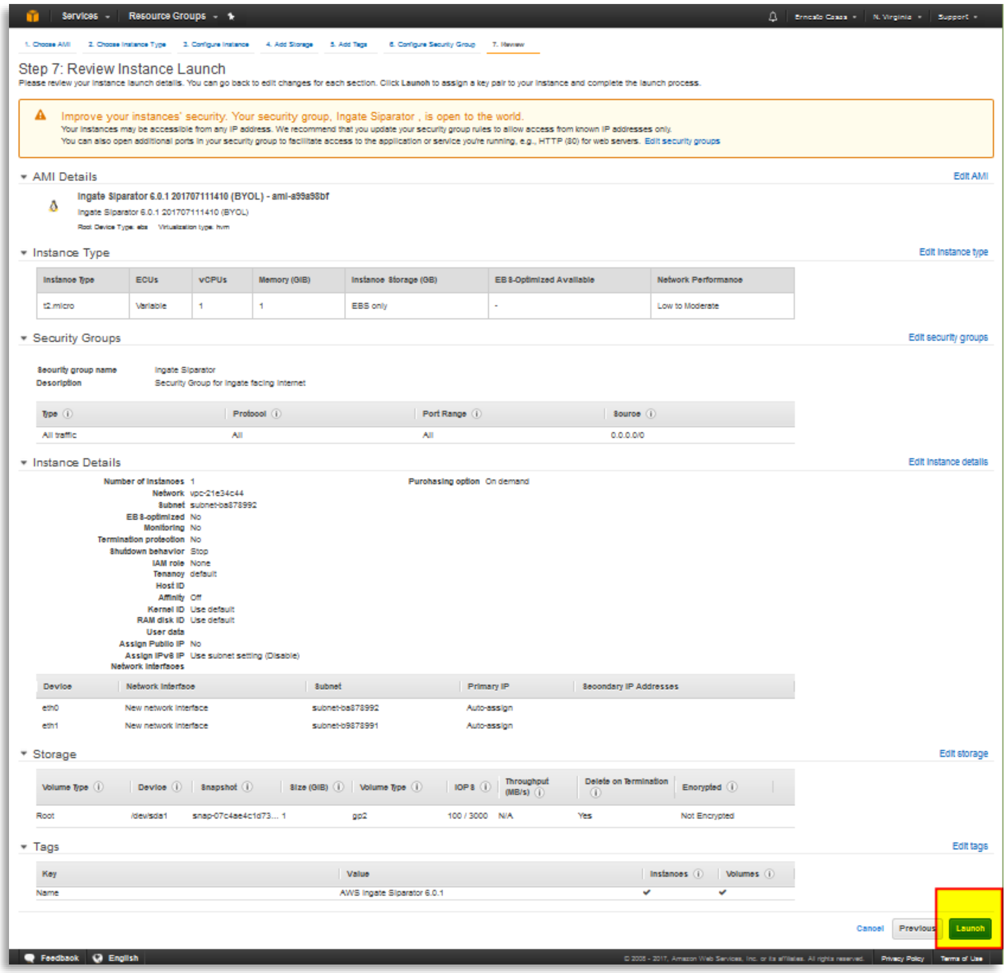
Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Figure 8

- In this example, a new Security Group is being created, but an existing one can be also used. By default, AWS Marketplace will automatically create a Security Group to allow only HTTPS. You will need to enable other Protocols and ports depending on your needs.
- Designate a name and description to this Security Group. This will help to identify what this is for and reuse it in other similar Instances.
- Note we are creating a rule to open any access from the Internet. This is not usual when you expose directly any service related Instance, but in our case the Ingate will be the NAT gateway

for any Service inside the Private Network and Port access will be fully controlled by Ingate SIParator/Firewall.

- Next will be to move to the final step which is review what we did, assign how the access will be authenticated (Operating System level, using or not an encrypted connection with a Shared Key).



Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

Improve your instances' security. Your security group, Ingate Siparator , is open to the world.
Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only.
You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. Edit security groups

AMI Details

**Ingate Siparator 6.0.1 201707111410 (BYOL) - ami-a99a98bf**
Ingate Siparator 6.0.1 201707111410 (BYOL)
Root Device Type: ebs    Virtualization type: hvm

Instance Type

| Instance Type | ECUs | vCPUs | Memory (GiB) | Instance Storage (GB) | EBS-Optimized Available | Network Performance |
|---|---|---|---|---|---|---|
| t2.micro | Variable | 1 | 1 | EBS only | - | Low to Moderate |

Security Groups

| | |
|---|---|
| **Security group name** | Ingate Siparator |
| **Description** | Security Group for Ingate facing Internet |

| Type | Protocol | Port Range | Source |
|---|---|---|---|
| All traffic | All | All | 0.0.0.0/0 |

Instance Details

| | | | |
|---|---|---|---|
| **Number of instances** | 1 | **Purchasing option** | On demand |
| **Network** | vpc-21e34c44 | | |
| **Subnet** | subnet-ba878992 | | |
| **EBS-optimized** | No | | |
| **Monitoring** | No | | |
| **Termination protection** | No | | |
| **Shutdown behavior** | Stop | | |
| **IAM role** | None | | |
| **Tenancy** | default | | |
| **Host ID** | | | |
| **Affinity** | Off | | |
| **Kernel ID** | Use default | | |
| **RAM disk ID** | Use default | | |
| **User data** | | | |
| **Assign Public IP** | No | | |
| **Assign IPv6 IP** | Use subnet setting (Disable) | | |
| **Network interfaces** | | | |

| Device | Network Interface | Subnet | Primary IP | Secondary IP Addresses |
|---|---|---|---|---|
| eth0 | New network interface | subnet-ba878992 | Auto-assign | |
| eth1 | New network interface | subnet-b9878991 | Auto-assign | |

Storage

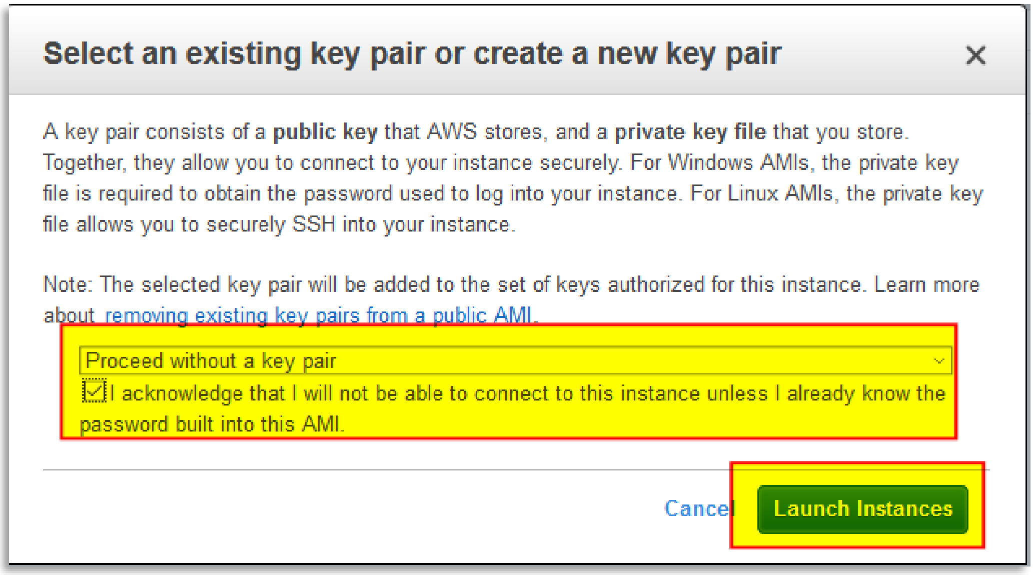
| Volume Type | Device | Snapshot | Size (GiB) | Volume Type | IOPS | Throughput (MB/s) | Delete on Termination | Encrypted |
|---|---|---|---|---|---|---|---|---|
| Root | /dev/sda1 | snap-07c4ae4c1d73... | 1 | gp2 | 100 / 3000 | N/A | Yes | Not Encrypted |

Tags

| Key | Value | Instances | Volumes |
|---|---|---|---|
| Name | AWS Ingate Siparator 6.0.1 | ✓ | ✓ |

**Figure 9**

- Here you can review all you have done and you can navigate and adjust anything you've missing.
- Proceed to Launch the Instance.



Select an existing key pair or create a new key pair

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

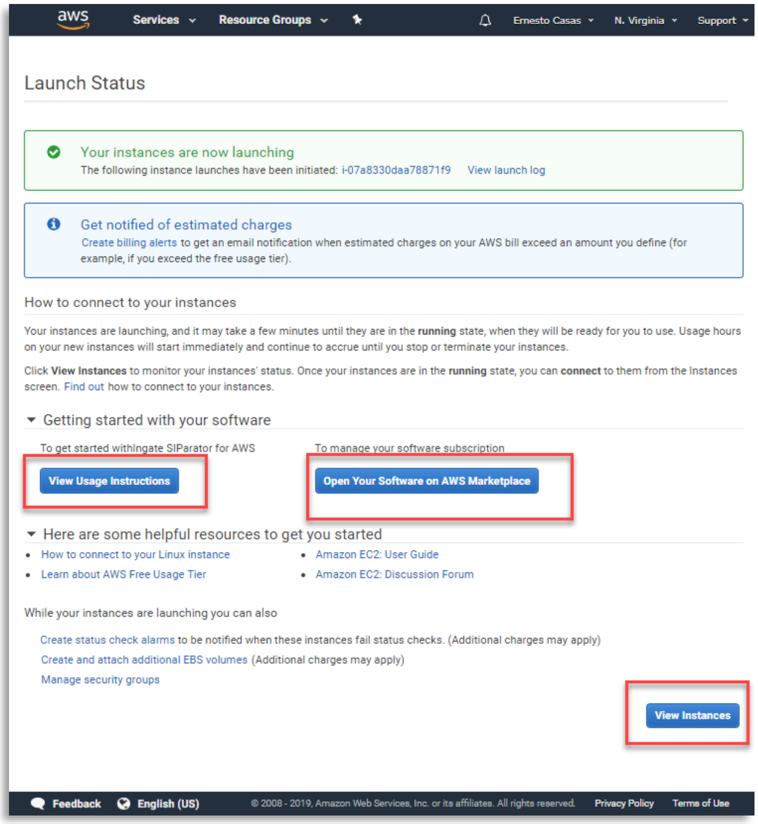
Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about removing existing key pairs from a public AMI.

Proceed without a key pair

☑ I acknowledge that I will not be able to connect to this instance unless I already know the password built into this AMI.

**Figure 10**

- For Ingate SIParator/Firewall you will proceed without a Key pair.
- Now the Instance is ready to be launched for the first time.
- Select Launch Instance button



Launch Status

Your instances are now launching

The following instance launches have been initiated: i-07a8330daa78871f9 View launch log

Get notified of estimated charges

Create billing alerts to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).

How to connect to your instances

Your instances are launching, and it may take a few minutes until they are in the **running** state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances.

Click **View Instances** to monitor your instances' status. Once your instances are in the **running** state, you can **connect** to them from the Instances screen. Find out how to connect to your instances.

Getting started with your software

To get started withIngate SIParator for AWS

To manage your software subscription

Here are some helpful resources to get you started

- How to connect to your Linux instance
- Learn about AWS Free Usage Tier
- Amazon EC2: User Guide
- Amazon EC2: Discussion Forum

While your instances are launching you can also

Create status check alarms to be notified when these instances fail status checks. (Additional charges may apply)

Create and attach additional EBS volumes (Additional charges may apply)

Manage security groups

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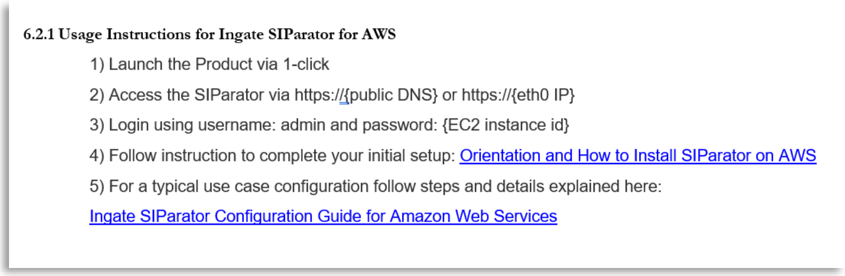
**Figure 11**

- Once the Launch process is completed, you'll arrive to a page where provide results and also provides links to View Usage Instructions and Open Software in the marketplace
- Now the Instance is launched and can be seen in the Dashboard.
- Usage instructions will show like this:



**6.2.1 Usage Instructions for Ingate SIParator for AWS**

1) Launch the Product via 1-click

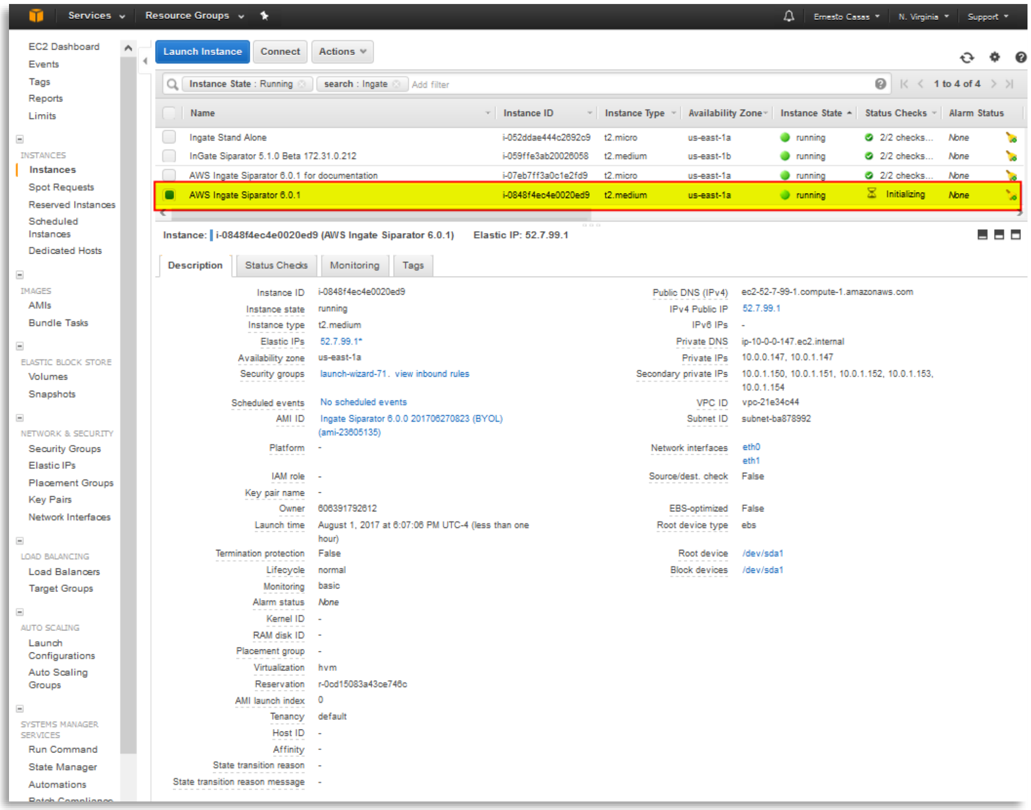
2) Access the SIParator via https://{public DNS} or https://{eth0 IP}

3) Login using username: admin and password: {EC2 instance id}

4) Follow instruction to complete your initial setup: Orientation and How to Install SIParator on AWS

5) For a typical use case configuration follow steps and details explained here: Ingate SIParator Configuration Guide for Amazon Web Services

- After selecting View Instance, you will see the launching happening



| Name | Instance ID | Instance Type | Availability Zone | Instance State | Status Checks | Alarm Status |
|---|---|---|---|---|---|---|
| Ingate Stand Alone | i-052ddae444c2692c9 | t2.micro | us-east-1a | running | 2/2 checks... | None |
| InGate Siparator 5.1.0 Beta 172.31.0.212 | i-059ffe3ab20026058 | t2.medium | us-east-1b | running | 2/2 checks... | None |
| AWS Ingate Siparator 6.0.1 for documentation | i-07eb7ff3a0c1e2fd9 | t2.micro | us-east-1a | running | 2/2 checks... | None |
| AWS Ingate Siparator 6.0.1 | i-0848f4ec4e0020ed9 | t2.medium | us-east-1a | running | Initializing | None |

Instance: i-0848f4ec4e0020ed9 (AWS Ingate Siparator 6.0.1) Elastic IP: 52.7.99.1

|  |  |  |  |
|---|---|---|---|
| Instance ID | i-0848f4ec4e0020ed9 | Public DNS (IPv4) | ec2-52-7-99-1.compute-1.amazonaws.com |
| Instance state | running | IPv4 Public IP | 52.7.99.1 |
| Instance type | t2.medium | IPv6 IPs | - |
| Elastic IPs | 52.7.99.1* | Private DNS | ip-10-0-0-147.ec2.internal |
| Availability zone | us-east-1a | Private IPs | 10.0.0.147, 10.0.1.147 |
| Security groups | launch-wizard-71. view inbound rules | Secondary private IPs | 10.0.1.150, 10.0.1.151, 10.0.1.152, 10.0.1.153, 10.0.1.154 |
| Scheduled events | No scheduled events | VPC ID | vpc-21e34c44 |
| AMI ID | Ingate Siparator 6.0.0 201706270823 (BYOL) (ami-23605135) | Subnet ID | subnet-ba878992 |
| Platform | - | Network interfaces | eth0<br>eth1 |
| IAM role | - | Source/dest. check | False |
| Key pair name | - |  |  |
| Owner | 606391792612 | EBS-optimized | False |
| Launch time | August 1, 2017 at 6:07:06 PM UTC-4 (less than one hour) | Root device type | ebs |
| Termination protection | False | Root device | /dev/sda1 |
| Lifecycle | normal | Block devices | /dev/sda1 |
| Monitoring | basic |  |  |
| Alarm status | None |  |  |
| Kernel ID | - |  |  |
| RAM disk ID | - |  |  |
| Placement group | - |  |  |
| Virtualization | hvm |  |  |
| Reservation | r-0cd15083a43ce746c |  |  |
| AMI launch index | 0 |  |  |
| Tenancy | default |  |  |
| Host ID | - |  |  |
| Affinity | - |  |  |
| State transition reason | - |  |  |
| State transition reason message | - |  |  |

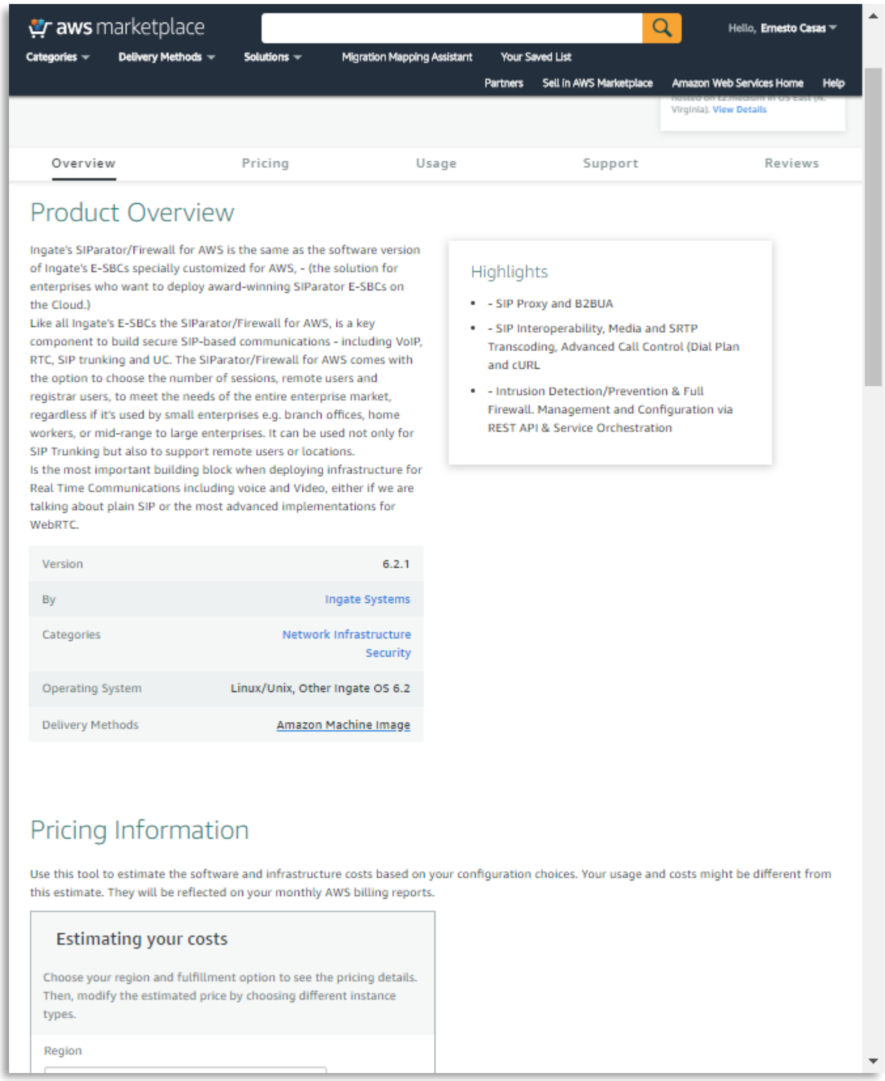
**Figure 12**

- You can now verify all what we did.
- Two eth interfaces are created
- Public IP is properly assigned
- Etc…

You can also go directly to the Marketplace even without login in your AWS account, by following instructions in next section

### 2.2.2 One-Click Provisioning - AWS Marketplace site

Once you click on the Marketplace link for Ingate (→ Get it from Marketplace ) you will be able to easily provision your instance. It will be automatically created with only one Interface, usually the one you will use for the public subnet and later you can add one additional interface facing the private subnet where your IPPBX is located.



## Product Overview

Ingate's SIParator/Firewall for AWS is the same as the software version of Ingate's E-SBCs specially customized for AWS, - (the solution for enterprises who want to deploy award-winning SIParator E-SBCs on the Cloud.)
Like all Ingate's E-SBCs the SIParator/Firewall for AWS, is a key component to build secure SIP-based communications - including VoIP, RTC, SIP trunking and UC. The SIParator/Firewall for AWS comes with the option to choose the number of sessions, remote users and registrar users, to meet the needs of the entire enterprise market, regardless if it's used by small enterprises e.g. branch offices, home workers, or mid-range to large enterprises. It can be used not only for SIP Trunking but also to support remote users or locations.
Is the most important building block when deploying infrastructure for Real Time Communications including voice and Video, either if we are talking about plain SIP or the most advanced implementations for WebRTC.

### Highlights

- - SIP Proxy and B2BUA
- - SIP Interoperability, Media and SRTP Transcoding, Advanced Call Control (Dial Plan and cURL
- - Intrusion Detection/Prevention & Full Firewall. Management and Configuration via REST API & Service Orchestration

| | |
|---|---|
| Version | 6.2.1 |
| By | Ingate Systems |
| Categories | Network Infrastructure<br>Security |
| Operating System | Linux/Unix, Other Ingate OS 6.2 |
| Delivery Methods | Amazon Machine Image |

## Pricing Information

Use this tool to estimate the software and infrastructure costs based on your configuration choices. Your usage and costs might be different from this estimate. They will be reflected on your monthly AWS billing reports.

### Estimating your costs

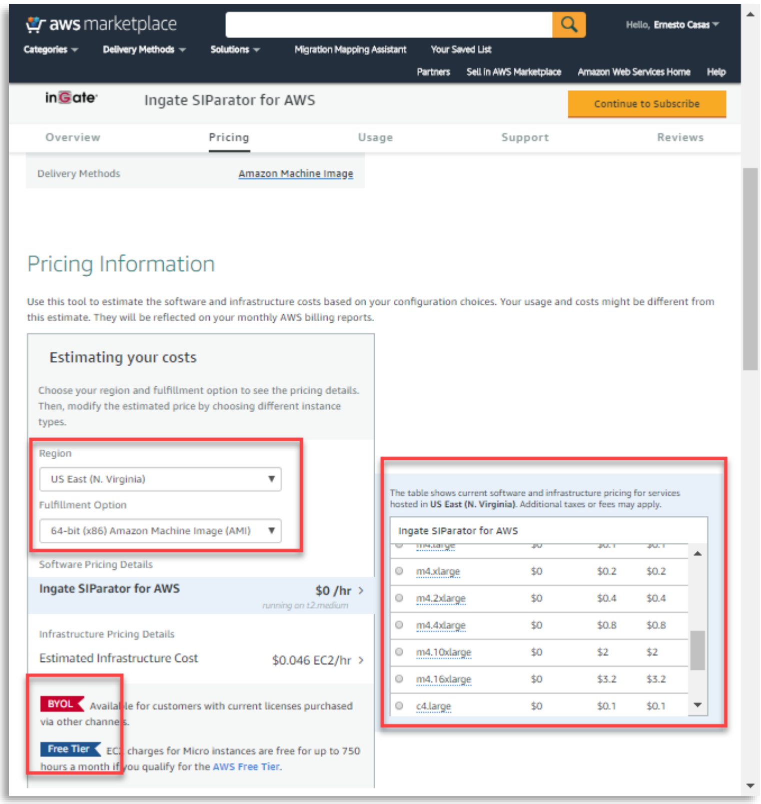
Choose your region and fulfillment option to see the pricing details. Then, modify the estimated price by choosing different instance types.

Region

**Figure 13**

Notice the product shows a few labels indicating you will need to acquire the license from Ingate and also it can be used in the Free Tier to have zero cost for the VM under certain AWS rules.

In this section of the page you can estimate your infrastructure cost selecting the instance type and the region where it will be launched.



Ingate SIParator for AWS

Delivery Methods: Amazon Machine Image

Pricing Information

Use this tool to estimate the software and infrastructure costs based on your configuration choices. Your usage and costs might be different from this estimate. They will be reflected on your monthly AWS billing reports.

Estimating your costs

Choose your region and fulfillment option to see the pricing details. Then, modify the estimated price by choosing different instance types.

Region: US East (N. Virginia)

Fulfillment Option: 64-bit (x86) Amazon Machine Image (AMI)

Software Pricing Details

Ingate SIParator for AWS $0 /hr
running on t2.medium

Infrastructure Pricing Details

Estimated Infrastructure Cost $0.046 EC2/hr

BYOL Available for customers with current licenses purchased via other channels.

Free Tier EC2 charges for Micro instances are free for up to 750 hours a month if you qualify for the AWS Free Tier.

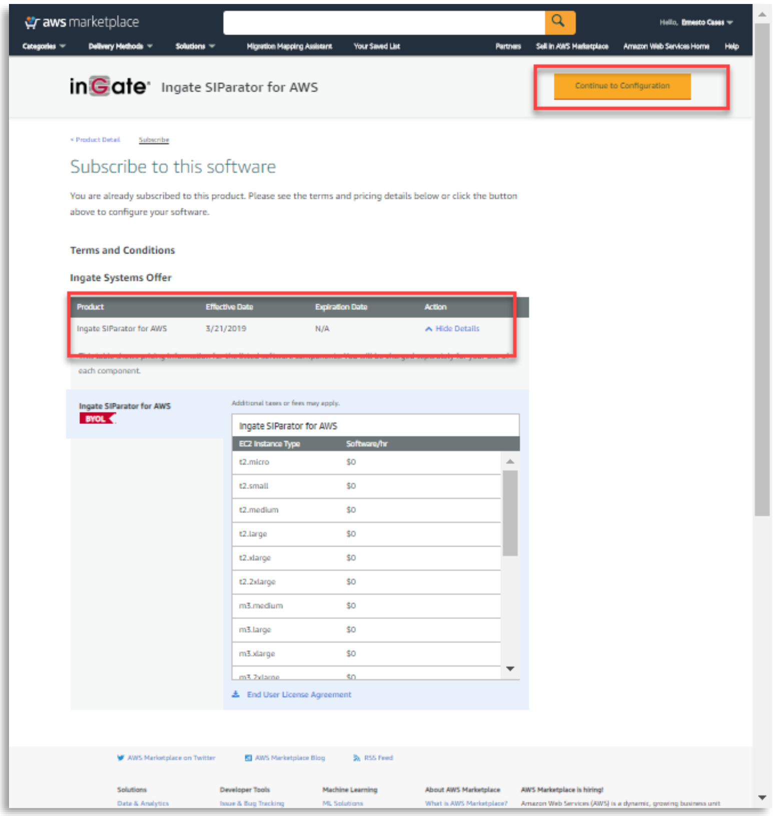
The table shows current software and infrastructure pricing for services hosted in **US East (N. Virginia)**. Additional taxes or fees may apply.

Ingate SIParator for AWS

| | | | | |
|---|---|---|---|---|
| ○ | m4.large | $0 | $0.1 | $0.1 |
| ○ | m4.xlarge | $0 | $0.2 | $0.2 |
| ○ | m4.2xlarge | $0 | $0.4 | $0.4 |
| ○ | m4.4xlarge | $0 | $0.8 | $0.8 |
| ○ | m4.10xlarge | $0 | $2 | $2 |
| ○ | m4.16xlarge | $0 | $3.2 | $3.2 |
| ○ | c4.large | $0 | $0.1 | $0.1 |

**Figure 14**

- Select the Instance type
- Select the region
- Select the AMI (Fulfillment Option) to be used.
- You can then click on Continue to Subscribe.



Ingate SIParator for AWS

Subscribe to this software

You are already subscribed to this product. Please see the terms and pricing details below or click the button above to configure your software.

Terms and Conditions

Ingate Systems Offer

| Product | Effective Date | Expiration Date | Action |
|---|---|---|---|
| Ingate SIParator for AWS | 3/21/2019 | N/A | ^ Hide Details |

This table shows pricing information for the listed software components. You will be charged separately for your use of each component.

Ingate SIParator for AWS BYOL

Additional taxes or fees may apply.

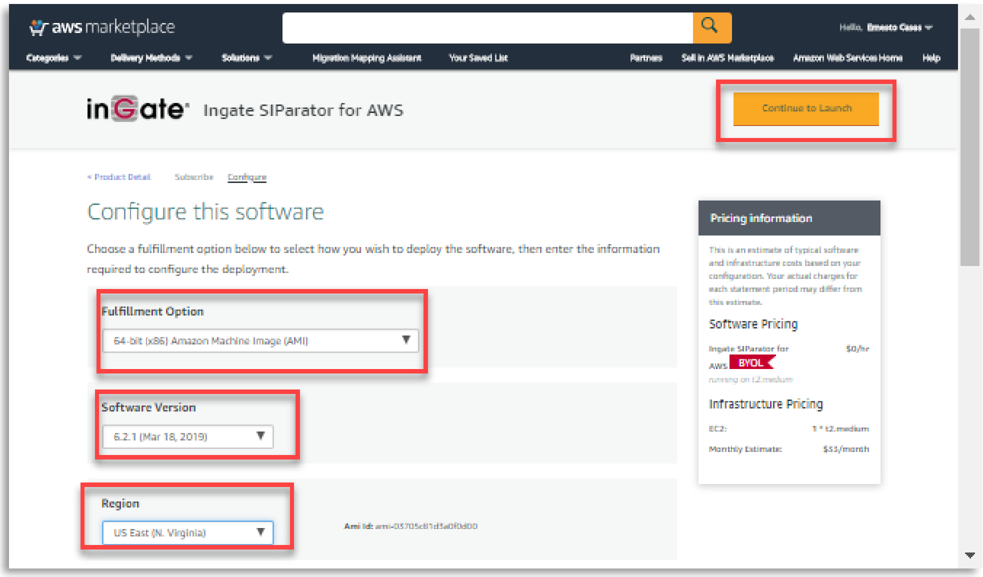
Ingate SIParator for AWS

| EC2 Instance Type | Software/hr |
|---|---|
| t2.micro | $0 |
| t2.small | $0 |
| t2.medium | $0 |
| t2.large | $0 |
| t2.xlarge | $0 |
| t2.2xlarge | $0 |
| m3.medium | $0 |
| m3.large | $0 |
| m3.xlarge | $0 |
| m3.2xlarge | $0 |

Amazon Web Services (AWS) is a dynamic, growing business unit

**Figure 15**

- From here you can read EULA
- Proceed to Configure



Ingate SIParator for AWS

Configure this software

Choose a fulfillment option below to select how you wish to deploy the software, then enter the information required to configure the deployment.

Fulfillment Option: 64-bit (x86) Amazon Machine Image (AMI)

Software Version: 6.2.1 (Mar 18, 2019)

Region: US East (N. Virginia)

Ami Id: ami-03705c81d5a0f0d00

Pricing information

This is an estimate of typical software and infrastructure costs based on your configuration. Your actual charges for each statement period may differ from this estimate.

Software Pricing

Ingate SIParator for AWS BYOL $0/hr
running on t2.medium

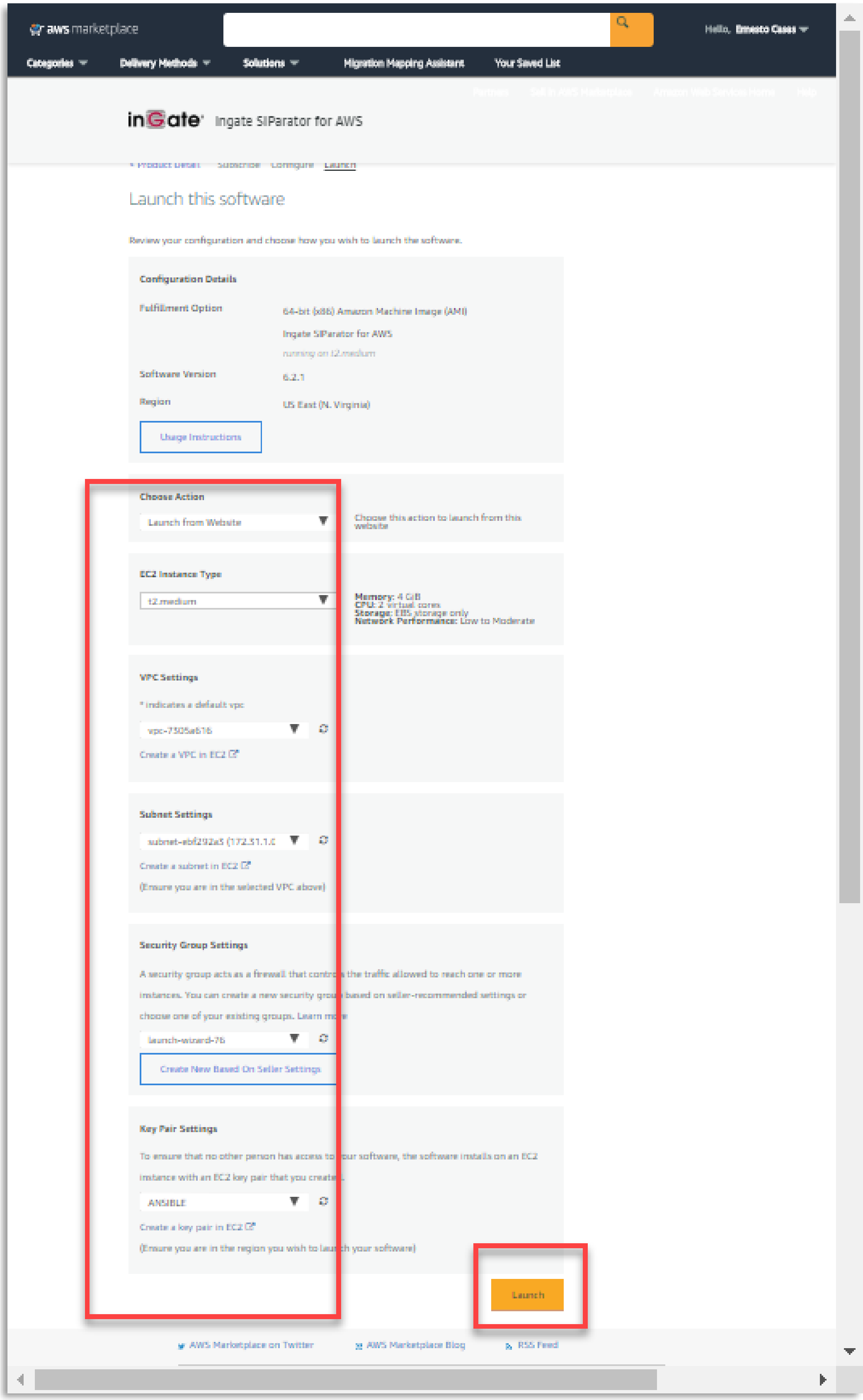
Infrastructure Pricing

EC2: 1 * t2.medium

Monthly Estimate: $33/month

**Figure 16**

- You can confirm your product selection, version and Region.
- Click continue to launch



Launch this software

Review your configuration and choose how you wish to launch the software.

**Configuration Details**

Fulfillment Option: 64-bit (x86) Amazon Machine Image (AMI)
Ingate SIParator for AWS
running on t2.medium

Software Version: 6.2.1

Region: US East (N. Virginia)

**Choose Action**

Launch from Website

Choose this action to launch from this website

**EC2 Instance Type**

t2.medium

**Memory:** 4 GiB
**CPU:** 2 virtual cores
**Storage:** EBS storage only
**Network Performance:** Low to Moderate

**VPC Settings**

* indicates a default vpc

vpc-7305a616

**Subnet Settings**

subnet-ebf292a5 (172.31.1.0

(Ensure you are in the selected VPC above)

**Security Group Settings**

A security group acts as a firewall that controls the traffic allowed to reach one or more instances. You can create a new security group based on seller-recommended settings or choose one of your existing groups. Learn more

launch-wizard-76

**Key Pair Settings**

To ensure that no other person has access to your software, the software installs on an EC2 instance with an EC2 key pair that you created.

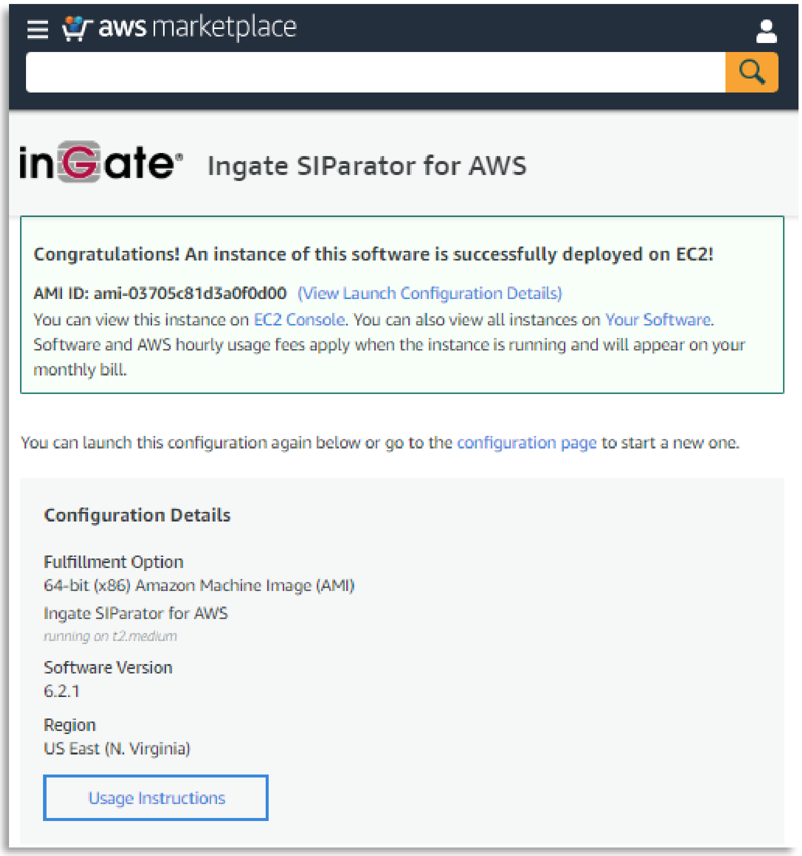
ANSIBLE

(Ensure you are in the region you wish to launch your software)

**Figure 17**

- You will be able to select how to launch:
  - Launch from Website will be a 1-click procedure but limited to one network interface. You'll need to manually add a second interface
  - Launch from EC2 will take you to the same process explained in 2.1.1.1
- Next you can choose:
  - Instance type
  - VPC
  - Subnet (Usually you'll select the one you created for Public Access
  - Security Group. Here is mandatory to use a Key Pair. If you don't have one, you'll need to create it.
- You can then click Launch.

After Launching you see a results page:



Ingate SIParator for AWS

**Congratulations! An instance of this software is successfully deployed on EC2!**

**AMI ID: ami-03705c81d3a0f0d00** (View Launch Configuration Details)
You can view this instance on EC2 Console. You can also view all instances on Your Software.
Software and AWS hourly usage fees apply when the instance is running and will appear on your monthly bill.

You can launch this configuration again below or go to the configuration page to start a new one.

**Configuration Details**

Fulfillment Option
64-bit (x86) Amazon Machine Image (AMI)
Ingate SIParator for AWS
*running on t2.medium*

Software Version
6.2.1

Region
US East (N. Virginia)

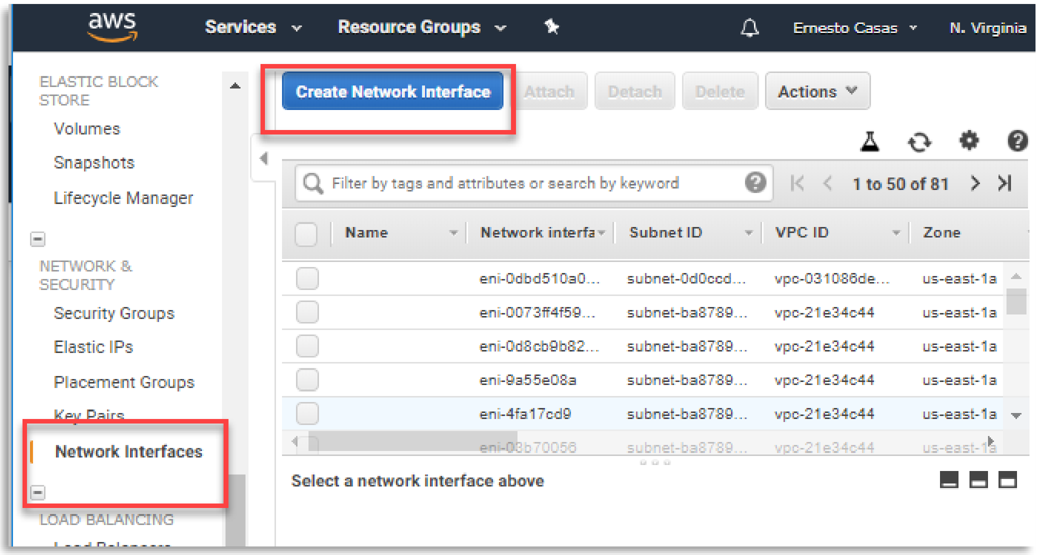
**Figure 18**

### 2.2.3 Network adjustments for SIParator/Firewall

### 2.2.3.1 Add a second Network Interface (If needed)

If the instance was launched using AWS Marketplace link, you will need to add another interface at least to connect to your private subnet.

To do so go to your EC2 service dashboard and select Network Interfaces as shown here:

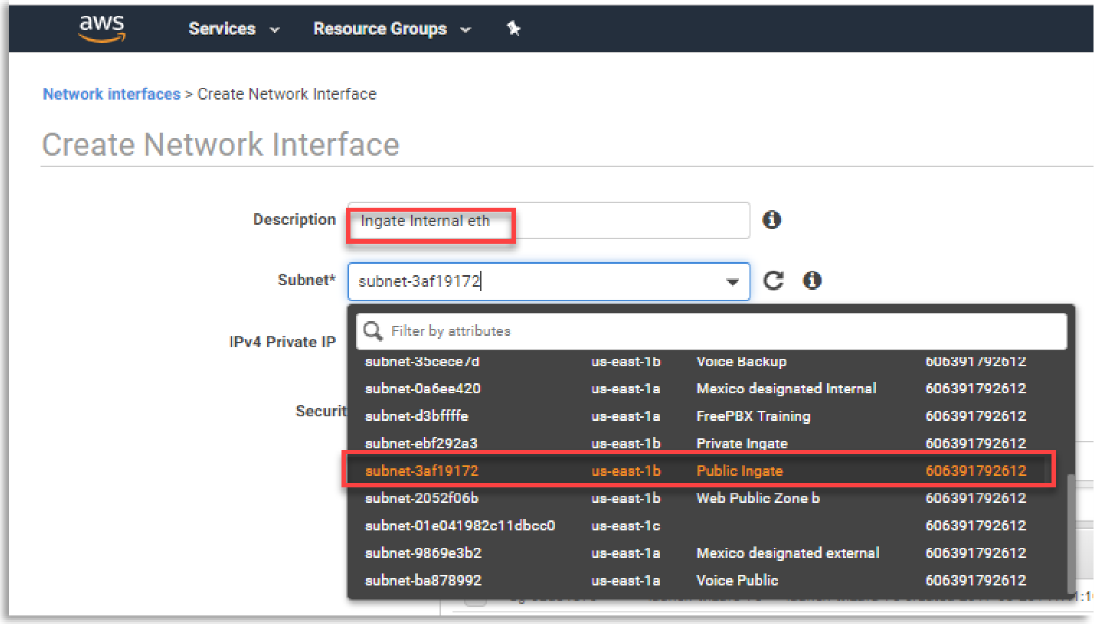


| | Name | Network interfa | Subnet ID | VPC ID | Zone |
|---|---|---|---|---|---|
| □ | | eni-0dbd510a0... | subnet-0d0ccd... | vpc-031086de... | us-east-1a |
| □ | | eni-0073ff4f59... | subnet-ba8789... | vpc-21e34c44 | us-east-1a |
| □ | | eni-0d8cb9b82... | subnet-ba8789... | vpc-21e34c44 | us-east-1a |
| □ | | eni-9a55e08a | subnet-ba8789... | vpc-21e34c44 | us-east-1a |
| □ | | eni-4fa17cd9 | subnet-ba8789... | vpc-21e34c44 | us-east-1a |
| □ | | eni-03b70056 | subnet-ba8789... | vpc-21e34c44 | us-east-1a |

Select a network interface above

**Figure 19**

Now you will need to provide the information needed to create a new interface in the private subnet to be attached later to your recently created Instance:



Create Network Interface

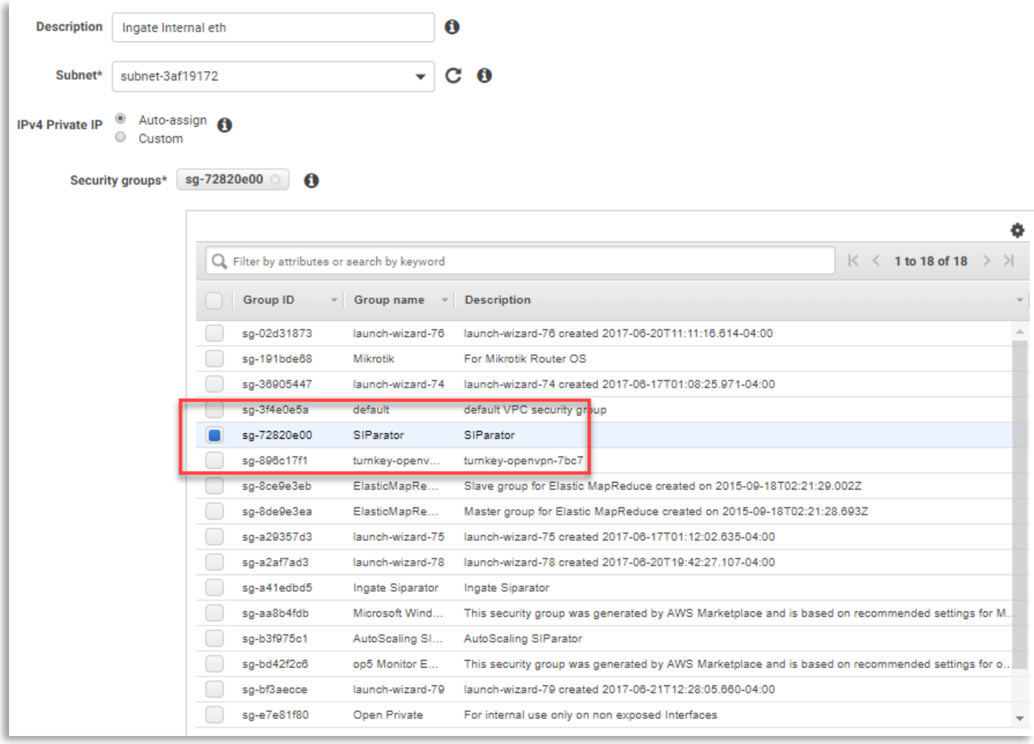
Description: Ingate Internal eth

Subnet*: subnet-3af19172

| | | | |
|---|---|---|---|
| subnet-35cece7d | us-east-1b | Voice Backup | 606391792612 |
| subnet-0a6ee420 | us-east-1a | Mexico designated Internal | 606391792612 |
| subnet-d3bffffe | us-east-1a | FreePBX Training | 606391792612 |
| subnet-ebf292a3 | us-east-1b | Private Ingate | 606391792612 |
| subnet-3af19172 | us-east-1b | Public Ingate | 606391792612 |
| subnet-2052f06b | us-east-1b | Web Public Zone b | 606391792612 |
| subnet-01e041982c11dbcc0 | us-east-1c | | 606391792612 |
| subnet-9869e3b2 | us-east-1a | Mexico designated external | 606391792612 |
| subnet-ba878992 | us-east-1a | Voice Public | 606391792612 |

**Figure 20**

- Select a security group. Usually as this interface will be in the private area you can select a security group without restrictions



Description: Ingate Internal eth

Subnet*: subnet-3af19172

IPv4 Private IP: ● Auto-assign ○ Custom

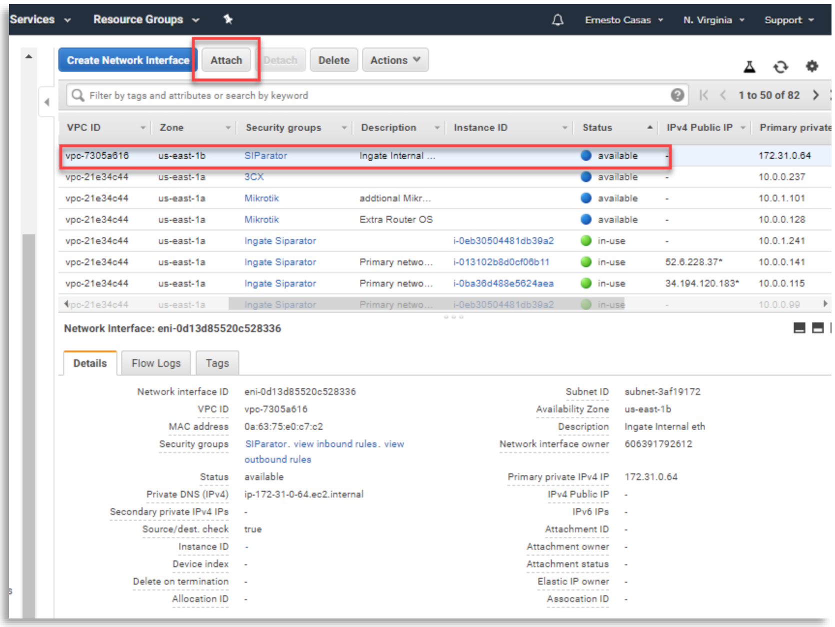
Security groups*: sg-72820e00

Filter by attributes or search by keyword — 1 to 18 of 18

| | Group ID | Group name | Description |
|---|---|---|---|
| □ | sg-02d31873 | launch-wizard-76 | launch-wizard-76 created 2017-06-20T11:11:16.614-04:00 |
| □ | sg-191bde68 | Mikrotik | For Mikrotik Router OS |
| □ | sg-36905447 | launch-wizard-74 | launch-wizard-74 created 2017-06-17T01:08:25.971-04:00 |
| □ | sg-3f4e0e5a | default | default VPC security group |
| ☑ | sg-72820e00 | SIParator | SIParator |
| □ | sg-896c17f1 | turnkey-openv... | turnkey-openvpn-7bc7 |
| □ | sg-8ce9e3eb | ElasticMapRe... | Slave group for Elastic MapReduce created on 2015-09-18T02:21:29.002Z |
| □ | sg-8de9e3ea | ElasticMapRe... | Master group for Elastic MapReduce created on 2015-09-18T02:21:28.693Z |
| □ | sg-a29357d3 | launch-wizard-75 | launch-wizard-75 created 2017-06-17T01:12:02.635-04:00 |
| □ | sg-a2af7ad3 | launch-wizard-78 | launch-wizard-78 created 2017-06-20T19:42:27.107-04:00 |
| □ | sg-a41edbd5 | Ingate Siparator | Ingate Siparator |
| □ | sg-aa8b4fdb | Microsoft Wind... | This security group was generated by AWS Marketplace and is based on recommended settings for M... |
| □ | sg-b3f975c1 | AutoScaling SI... | AutoScaling SIParator |
| □ | sg-bd42f2c6 | op5 Monitor E... | This security group was generated by AWS Marketplace and is based on recommended settings for o... |
| □ | sg-bf3aecce | launch-wizard-79 | launch-wizard-79 created 2017-06-21T12:28:05.660-04:00 |
| □ | sg-e7e81f80 | Open Private | For internal use only on non exposed Interfaces |

Figure 21

Now you will need to attach the new interface to your Ingate Instance



Filter by tags and attributes or search by keyword — 1 to 50 of 82

| VPC ID | Zone | Security groups | Description | Instance ID | Status | IPv4 Public IP | Primary private |
|---|---|---|---|---|---|---|---|
| vpc-7305a616 | us-east-1b | SIParator | Ingate Internal ... | | available | - | 172.31.0.64 |
| vpc-21e34c44 | us-east-1a | 3CX | | | available | - | 10.0.0.237 |
| vpc-21e34c44 | us-east-1a | Mikrotik | addtional Mikr... | | available | - | 10.0.1.101 |
| vpc-21e34c44 | us-east-1a | Mikrotik | Extra Router OS | | available | - | 10.0.0.128 |
| vpc-21e34c44 | us-east-1a | Ingate Siparator | | i-0eb30504481db39a2 | in-use | - | 10.0.1.241 |
| vpc-21e34c44 | us-east-1a | Ingate Siparator | Primary netwo... | i-013102b8d0cf06b11 | in-use | 52.6.228.37* | 10.0.0.141 |
| vpc-21e34c44 | us-east-1a | Ingate Siparator | Primary netwo... | i-0ba36d488e5624aea | in-use | 34.194.120.183* | 10.0.0.115 |
| vpc-21e34c44 | us-east-1a | Ingate Siparator | Primary netwo... | i-0eb30504481db39a2 | in-use | - | 10.0.0.99 |

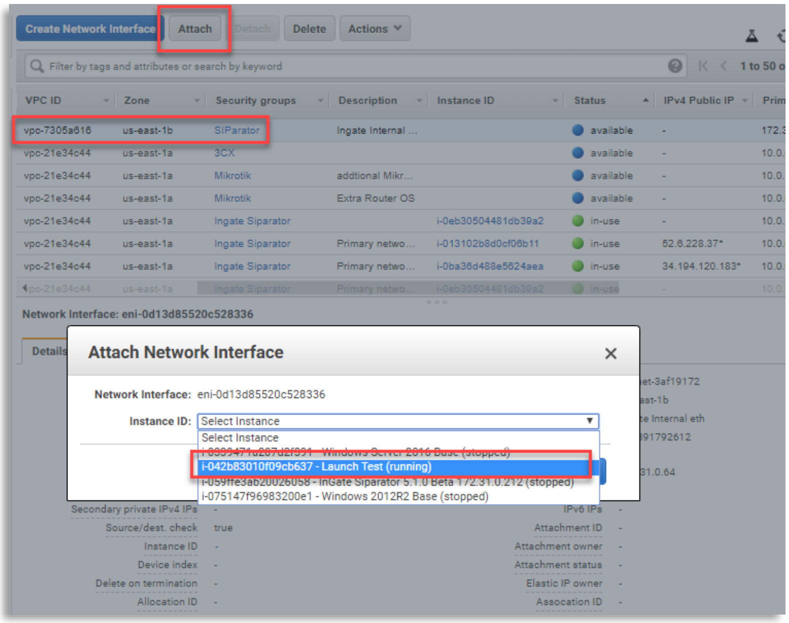
Network Interface: eni-0d13d85520c528336

Details | Flow Logs | Tags

| | | | |
|---|---|---|---|
| Network interface ID | eni-0d13d85520c528336 | Subnet ID | subnet-3af19172 |
| VPC ID | vpc-7305a616 | Availability Zone | us-east-1b |
| MAC address | 0a:63:75:e0:c7:c2 | Description | Ingate Internal eth |
| Security groups | SIParator. view inbound rules. view outbound rules | Network interface owner | 606391792612 |
| Status | available | Primary private IPv4 IP | 172.31.0.64 |
| Private DNS (IPv4) | ip-172-31-0-64.ec2.internal | IPv4 Public IP | - |
| Secondary private IPv4 IPs | - | IPv6 IPs | - |
| Source/dest. check | true | Attachment ID | - |
| Instance ID | - | Attachment owner | - |
| Device index | - | Attachment status | - |
| Delete on termination | - | Elastic IP owner | - |
| Allocation ID | - | Assocation ID | - |

Figure 22

- Select the interface
- Click on Attach



| VPC ID | Zone | Security groups | Description | Instance ID | Status | IPv4 Public IP | Prim |
|---|---|---|---|---|---|---|---|
| vpc-7305a616 | us-east-1b | SIParator | Ingate Internal ... | | available | - | 172.3 |
| vpc-21e34c44 | us-east-1a | 3CX | | | available | - | 10.0. |
| vpc-21e34c44 | us-east-1a | Mikrotik | addtional Mikr... | | available | - | 10.0. |
| vpc-21e34c44 | us-east-1a | Mikrotik | Extra Router OS | | available | - | 10.0. |
| vpc-21e34c44 | us-east-1a | Ingate Siparator | | i-0eb30504481db39a2 | in-use | - | 10.0. |
| vpc-21e34c44 | us-east-1a | Ingate Siparator | Primary netwo... | i-013102b8d0cf06b11 | in-use | 52.6.228.37* | 10.0. |
| vpc-21e34c44 | us-east-1a | Ingate Siparator | Primary netwo... | i-0ba36d488e5624aea | in-use | 34.194.120.183* | 10.0. |
| pc-21e34c44 | us-east-1a | Ingate Siparator | Primary netwo... | i-0eb30504481db39a2 | in-use | - | 10.0. |

Network Interface: eni-0d13d85520c528336

Details

Attach Network Interface

Network Interface: eni-0d13d85520c528336

Instance ID: Select Instance

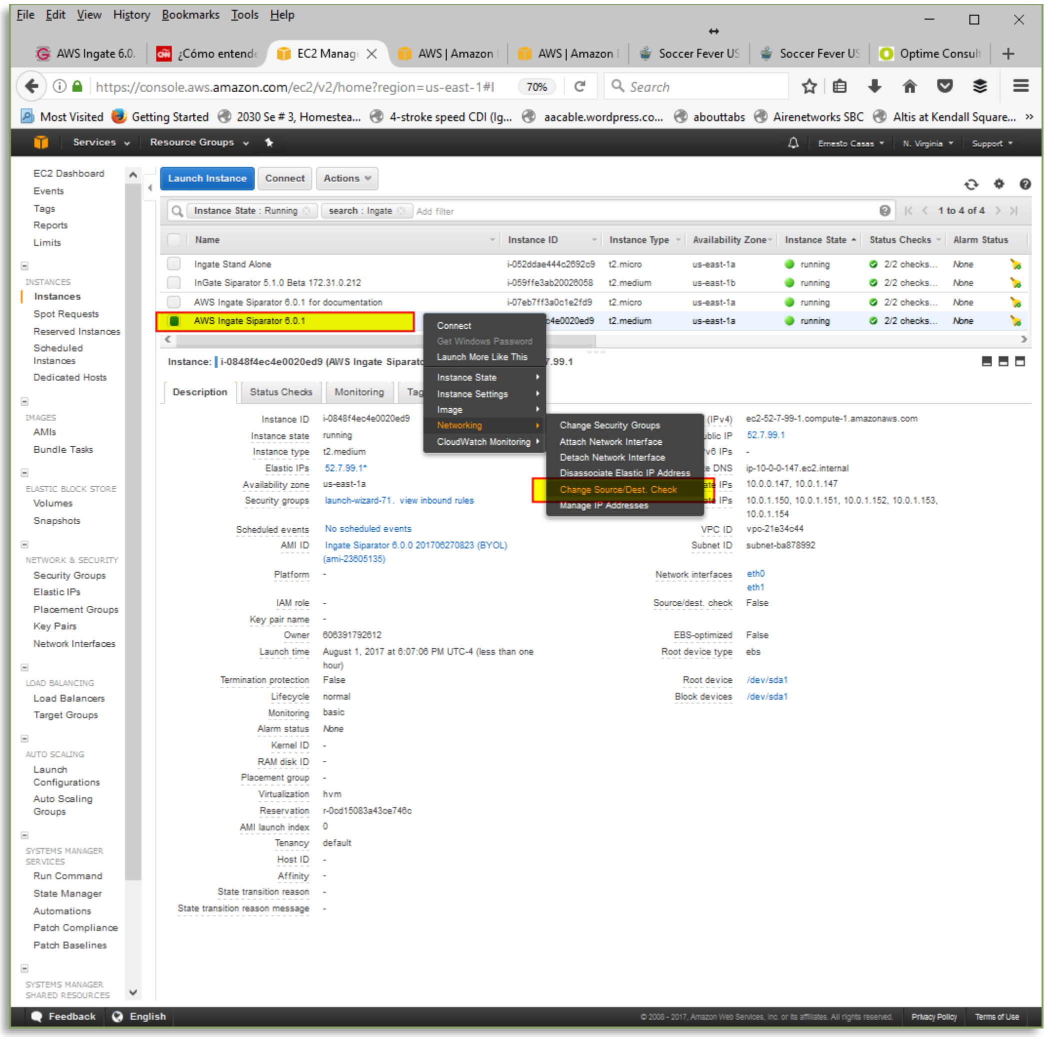
Select Instance
i-0899471a207d2f891 - Windows Server 2016 Base (stopped)
i-042b83010f09cb637 - Launch Test (running)
i-059ffe3ab20026058 - InGate Siparator 5.1.0 Beta 172.31.0.212 (stopped)
i-075147f96983200e1 - Windows 2012R2 Base (stopped)

et-3af19172
ast-1b
te Internal eth
391792612
31.0.64

| | | | |
|---|---|---|---|
| Secondary private IPv4 IPs | - | IPv6 IPs | - |
| Source/dest. check | true | Attachment ID | - |
| Instance ID | - | Attachment owner | - |
| Device index | - | Attachment status | - |
| Delete on termination | - | Elastic IP owner | - |
| Allocation ID | - | Assocation ID | - |

**Figure 23**

- Select the Instance to which the new interface will be attached to.
- Disable Source Destination Check



https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#I

Instance State : Running   search : Ingate   Add filter   1 to 4 of 4

| Name | Instance ID | Instance Type | Availability Zone | Instance State | Status Checks | Alarm Status |
|---|---|---|---|---|---|---|
| Ingate Stand Alone | i-052ddae444c2692c9 | t2.micro | us-east-1a | running | 2/2 checks... | None |
| InGate Siparator 5.1.0 Beta 172.31.0.212 | i-059ffe3ab20026058 | t2.medium | us-east-1b | running | 2/2 checks... | None |
| AWS Ingate Siparator 6.0.1 for documentation | i-07eb7ff3a0c1e2fd9 | t2.micro | us-east-1a | running | 2/2 checks... | None |
| AWS Ingate Siparator 6.0.1 | c4e0020ed9 | t2.medium | us-east-1a | running | 2/2 checks... | None |

Instance: i-0848f4ec4e0020ed9 (AWS Ingate Siparat… 7.99.1

| | |
|---|---|
| Instance ID | i-0848f4ec4e0020ed9 |
| Instance state | running |
| Instance type | t2.medium |
| Elastic IPs | 52.7.99.1* |
| Availability zone | us-east-1a |
| Security groups | launch-wizard-71. view inbound rules |
| Scheduled events | No scheduled events |
| AMI ID | Ingate Siparator 6.0.0 201706270823 (BYOL) (ami-23605135) |
| Platform | - |
| IAM role | - |
| Key pair name | - |
| Owner | 606391792612 |
| Launch time | August 1, 2017 at 6:07:06 PM UTC-4 (less than one hour) |
| Termination protection | False |
| Lifecycle | normal |
| Monitoring | basic |
| Alarm status | None |
| Kernel ID | - |
| RAM disk ID | - |
| Placement group | - |
| Virtualization | hvm |
| Reservation | r-0cd15083a43ce746c |
| AMI launch index | 0 |
| Tenancy | default |
| Host ID | - |
| Affinity | - |
| State transition reason | - |
| State transition reason message | - |

| | |
|---|---|
| (IPv4) | ec2-52-7-99-1.compute-1.amazonaws.com |
| blic IP | 52.7.99.1 |
| v6 IPs | - |
| e DNS | ip-10-0-0-147.ec2.internal |
| IPs | 10.0.0.147, 10.0.1.147 |
| IPs | 10.0.1.150, 10.0.1.151, 10.0.1.152, 10.0.1.153, 10.0.1.154 |
| VPC ID | vpc-21e34c44 |
| Subnet ID | subnet-ba878992 |
| Network interfaces | eth0<br>eth1 |
| Source/dest. check | False |
| EBS-optimized | False |
| Root device type | ebs |
| Root device | /dev/sda1 |
| Block devices | /dev/sda1 |

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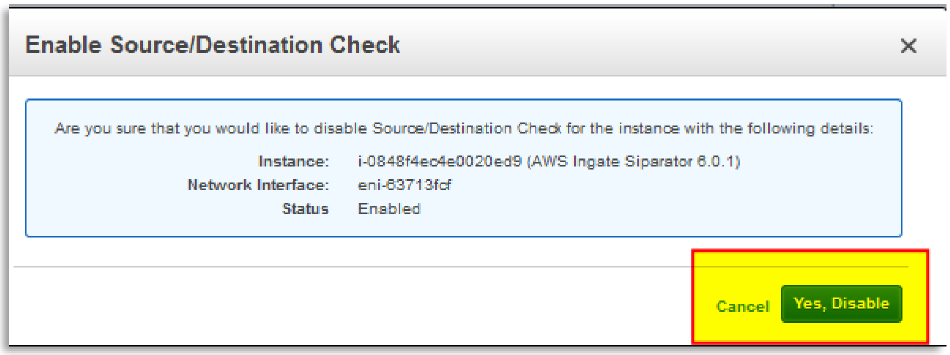
**Figure 24**

- Right Click on the recently created SIParator Instance
- Select “Change Source/Destination Check”
- Disable the feature



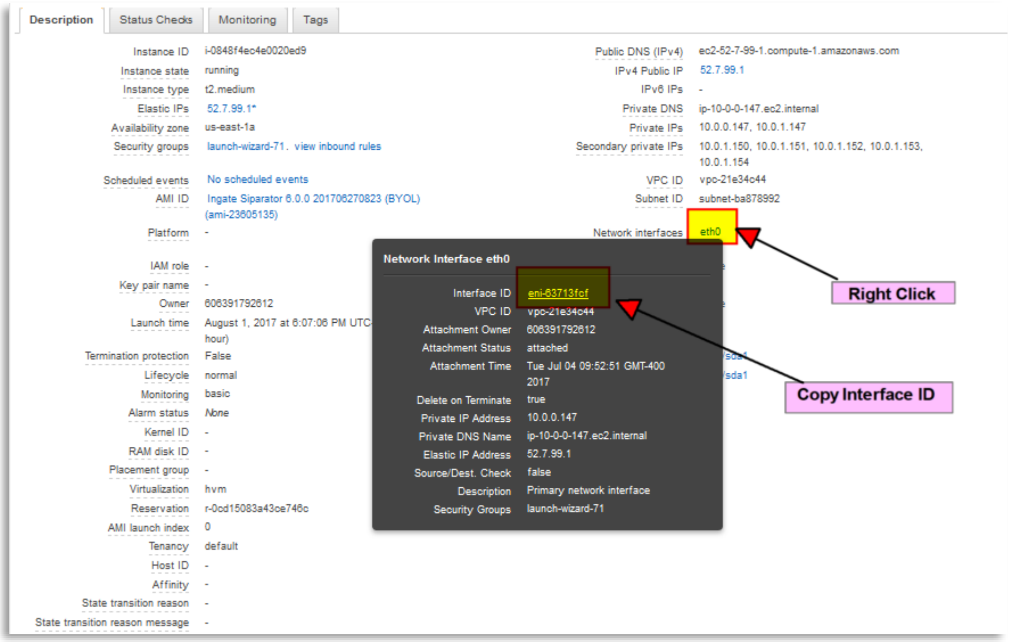
Enable Source/Destination Check

Are you sure that you would like to disable Source/Destination Check for the instance with the following details:

Instance: i-0848f4ec4e0020ed9 (AWS Ingate Siparator 6.0.1)
Network Interface: eni-63713fcf
Status Enabled

**Figure 25**

### 2.2.3.2 Assign a Public IP address to Public Interface



| | |
|---|---|
| Instance ID | i-0848f4ec4e0020ed9 |
| Instance state | running |
| Instance type | t2.medium |
| Elastic IPs | 52.7.99.1* |
| Availability zone | us-east-1a |
| Security groups | launch-wizard-71. view inbound rules |
| Scheduled events | No scheduled events |
| AMI ID | Ingate Siparator 6.0.0 201706270823 (BYOL) (ami-23605135) |
| Platform | - |
| IAM role | - |
| Key pair name | - |
| Owner | 606391792612 |
| Launch time | August 1, 2017 at 6:07:06 PM UTC hour) |
| Termination protection | False |
| Lifecycle | normal |
| Monitoring | basic |
| Alarm status | None |
| Kernel ID | - |
| RAM disk ID | - |
| Placement group | - |
| Virtualization | hvm |
| Reservation | r-0cd15083a43ce746c |
| AMI launch index | 0 |
| Tenancy | default |
| Host ID | - |
| Affinity | - |
| State transition reason | - |
| State transition reason message | - |

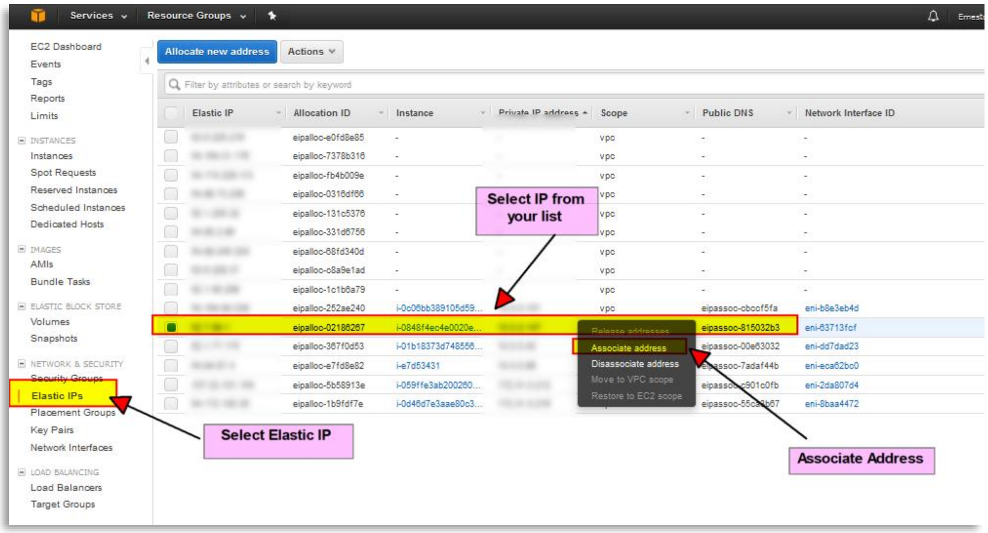
| | |
|---|---|
| Public DNS (IPv4) | ec2-52-7-99-1.compute-1.amazonaws.com |
| IPv4 Public IP | 52.7.99.1 |
| IPv6 IPs | - |
| Private DNS | ip-10-0-0-147.ec2.internal |
| Private IPs | 10.0.0.147, 10.0.1.147 |
| Secondary private IPs | 10.0.1.150, 10.0.1.151, 10.0.1.152, 10.0.1.153, 10.0.1.154 |
| VPC ID | vpc-21e34c44 |
| Subnet ID | subnet-ba878992 |
| Network interfaces | eth0 |

Network Interface eth0

| | |
|---|---|
| Interface ID | eni-63713fcf |
| VPC ID | vpc-21e34c44 |
| Attachment Owner | 606391792612 |
| Attachment Status | attached |
| Attachment Time | Tue Jul 04 09:52:51 GMT-400 2017 |
| Delete on Terminate | true |
| Private IP Address | 10.0.0.147 |
| Private DNS Name | ip-10-0-0-147.ec2.internal |
| Elastic IP Address | 52.7.99.1 |
| Source/Dest. Check | false |
| Description | Primary network interface |
| Security Groups | launch-wizard-71 |

**Figure 26**

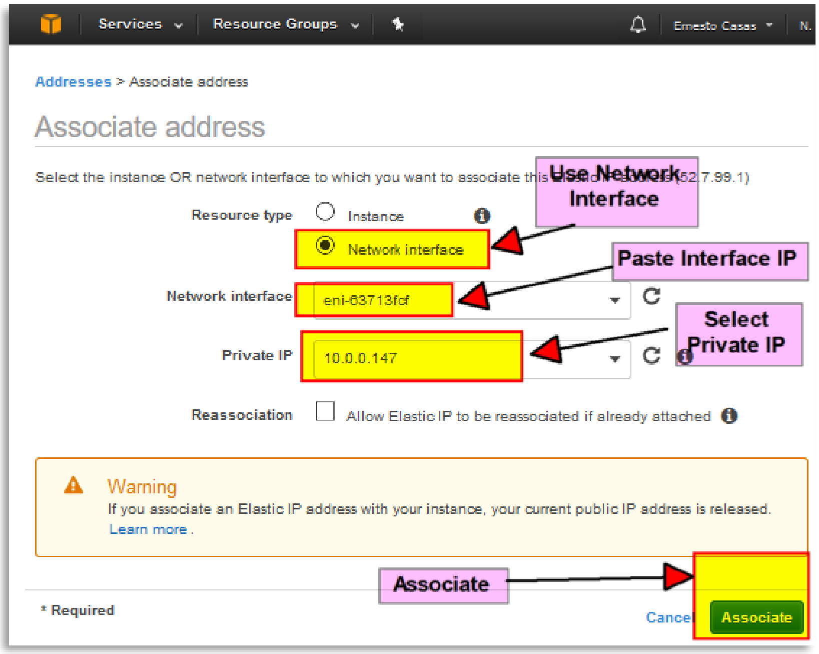
- In the Dashboard, selecting the recently created Instance, right click on eth0 and copy the Interface ID as we will needed to associate a Public IP
- Next step will be to create and associate a Public IP Address, known in AWS terms as an Elastic IP



| Elastic IP | Allocation ID | Instance | Private IP address | Scope | Public DNS | Network Interface ID |
|---|---|---|---|---|---|---|
| [redacted] | eipalloc-e0fd8e85 | - | [redacted] | vpc | - | - |
| [redacted] | eipalloc-7378b316 | - | [redacted] | vpc | - | - |
| [redacted] | eipalloc-fb4b009e | - | [redacted] | vpc | - | - |
| [redacted] | eipalloc-0316df66 | - | [redacted] | vpc | - | - |
| [redacted] | eipalloc-131c5376 | - | [redacted] | vpc | - | - |
| [redacted] | eipalloc-331d6756 | - | [redacted] | vpc | - | - |
| [redacted] | eipalloc-68fd340d | - | [redacted] | vpc | - | - |
| [redacted] | eipalloc-c8a9e1ad | - | [redacted] | vpc | - | - |
| [redacted] | eipalloc-1c1b6a79 | - | [redacted] | vpc | - | - |
| [redacted] | eipalloc-252ae240 | i-0c06bb389105d59... | [redacted] | vpc | eipassoc-cbccf5fa | eni-b8e3eb4d |
| [redacted] | eipalloc-02186267 | i-0848f4ec4e0020e... | [redacted] |  | eipassoc-815032b3 | eni-63713fcf |
| [redacted] | eipalloc-367f0d53 | i-01b18373d748556... | [redacted] |  | eipassoc-00e63032 | eni-dd7dad23 |
| [redacted] | eipalloc-e7fd8e82 | i-e7d53431 | [redacted] |  | eipassoc-7adaf44b | eni-eca62bc0 |
| [redacted] | eipalloc-5b58913e | i-059ffe3ab200260... | [redacted] |  | eipassoc-c901c0fb | eni-2da807d4 |
| [redacted] | eipalloc-1b9fdf7e | i-0d46d7e3aae80c3... | [redacted] |  | eipassoc-55ca8b67 | eni-8baa4472 |

**Figure 27**

- From the Dashboard Left menu select "Elastic IP"
- Select and right click the IP address you want to use from your list
- From the pop-up menu choose "Associate Address"



Addresses > Associate address

Associate address

Select the instance OR network interface to which you want to associate this Elastic IP address (52.7.99.1)

Resource type ○ Instance ● Network interface

Network interface eni-63713fcf

Private IP 10.0.0.147

Reassociation □ Allow Elastic IP to be reassociated if already attached

Warning
If you associate an Elastic IP address with your instance, your current public IP address is released. Learn more .

* Required

**Figure 28**

- As we have 2 Network Interfaces in the same Instance, we will use Network Interface as the resource type

- Paste the Interface ID from eth0 copied a few steps earlier
- Select the IP address (Private) that will be automatically NATed 1-1 from the Public IP selected
- Press “Associate” to complete this step.

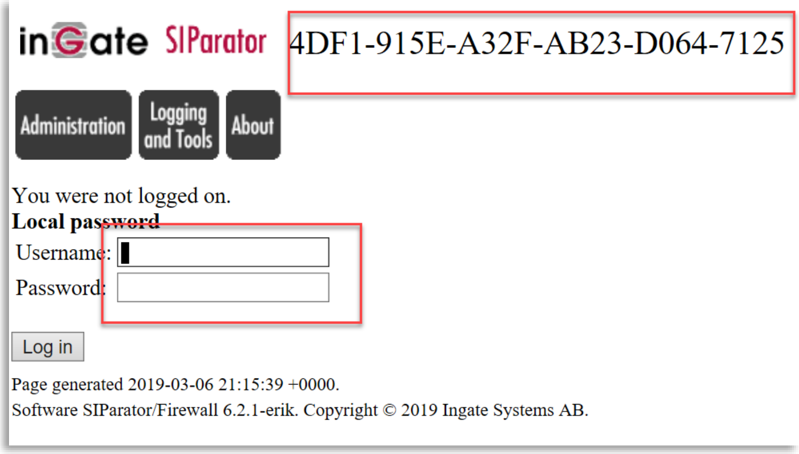
At this point Ingate SIParator/Firewall is ready to be licensed and activated.

## 2.3 Activate and License SIParator®/Firewall® for AWS

Once the new instance is launched, we will need to activate licenses. This is a very straight forward process and will do the following actions:

- Create a unique Serial Number for the Instance
- Update customer data base of Ingate Devices directly into user Portal account (no need to access Ingate.com portal).
- Generate and download license for the instance.

As a first step you will need to access the GUI via https using eth0 ip address. Screen will look like this:



4DF1-915E-A32F-AB23-D064-7125

You were not logged on.

**Local password**

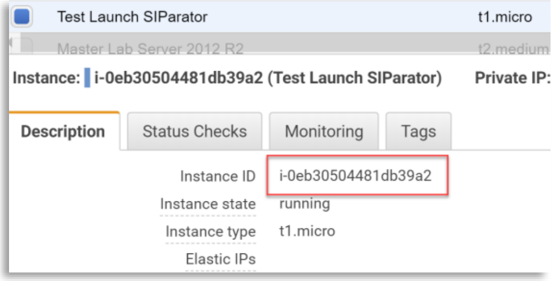
Username:

Password:

Page generated 2019-03-06 21:15:39 +0000.

Software SIParator/Firewall 6.2.1-erik. Copyright © 2019 Ingate Systems AB.

- An Initial unique ID is generated, but it will be replaced with a final unique serial number once the license is installed
- Default user name is admin and the initial password is the unique instance-id generated by AWS.



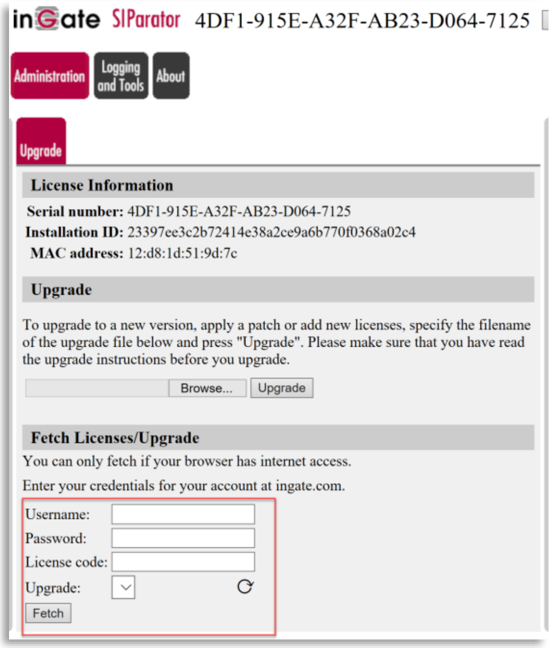
Test Launch SIParator t1.micro

Master Lab Server 2012 R2 t2.medium

Instance: i-0eb30504481db39a2 (Test Launch SIParator) Private IP:

| | |
|---|---|
| Instance ID | i-0eb30504481db39a2 |
| Instance state | running |
| Instance type | t1.micro |
| Elastic IPs | |

Once you Login and click on Administration, you will be taken directly to the section to load the license. This is a first-time access. No other relevant options are exposed yet in the GUI



**License Information**

**Serial number:** 4DF1-915E-A32F-AB23-D064-7125
**Installation ID:** 23397ee3c2b72414e38a2ce9a6b770f0368a02c4
**MAC address:** 12:d8:1d:51:9d:7c

**Upgrade**

To upgrade to a new version, apply a patch or add new licenses, specify the filename of the upgrade file below and press "Upgrade". Please make sure that you have read the upgrade instructions before you upgrade.

**Fetch Licenses/Upgrade**

You can only fetch if your browser has internet access.

Enter your credentials for your account at ingate.com.

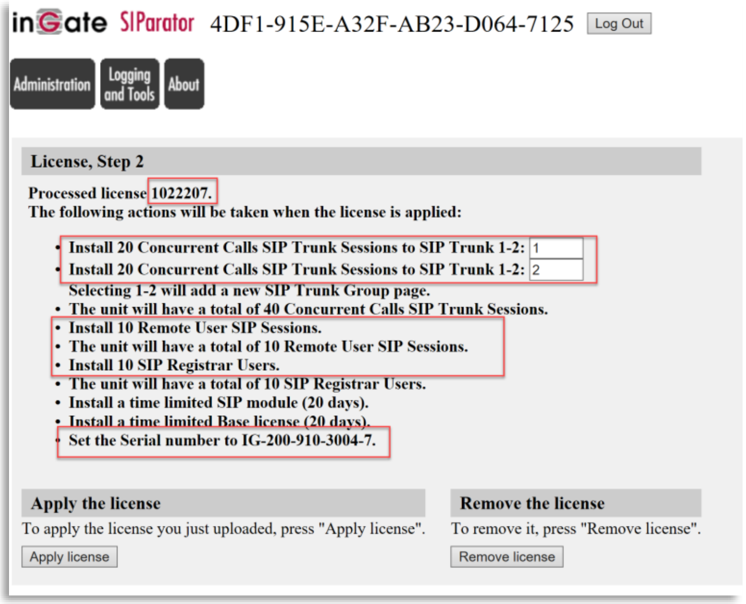
Username:
Password:
License code:
Upgrade:

- You will need to enter your user/password credentials normally used to access your Ingate Portal Account
- Also, you'll enter the License Code provided to you by Ingate
- Pressing **Fetch** button (As far as the computer running the browser has internet access) will get from Ingate data bases the license file and download it, as well as update your devices database.

Once the license is installed you will have full access to admin GUI interface, and you'll confirm a unique serial number has been generated and associated to this instance.

In our example we applied a license that includes:

- First Time activation (Base License)
- 2 Trunks 20 CCS each
- 10 Remote Users
- 10 Registrar
- Total of 40 CCS



4DF1-915E-A32F-AB23-D064-7125

**License, Step 2**

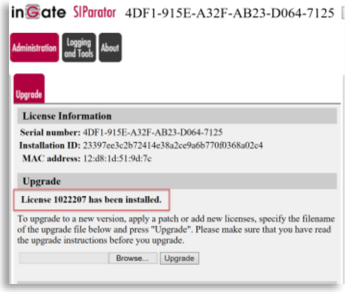
**Processed license 1022207.**
**The following actions will be taken when the license is applied:**

- **Install 20 Concurrent Calls SIP Trunk Sessions to SIP Trunk 1-2:** 1
- **Install 20 Concurrent Calls SIP Trunk Sessions to SIP Trunk 1-2:** 2
  **Selecting 1-2 will add a new SIP Trunk Group page.**
- **The unit will have a total of 40 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 time limited SIP module (20 days).**
- **Install a time limited Base license (20 days).**
- **Set the Serial number to IG-200-910-3004-7.**

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

**Remove the license**
To remove it, press "Remove license".

- Notice the unique serial number generated. This is a permanent identification that cannot be moved or used in any other Instance.
- Now just need to apply the License



4DF1-915E-A32F-AB23-D064-7125

**License Information**

**Serial number:** 4DF1-915E-A32F-AB23-D064-7125
**Installation ID:** 23397ee3c2b72414e38a2ce9a6b770f0368a02c4
**MAC address:** 12:d8:1d:51:9d:7c

**Upgrade**

**License 1022207 has been installed.**

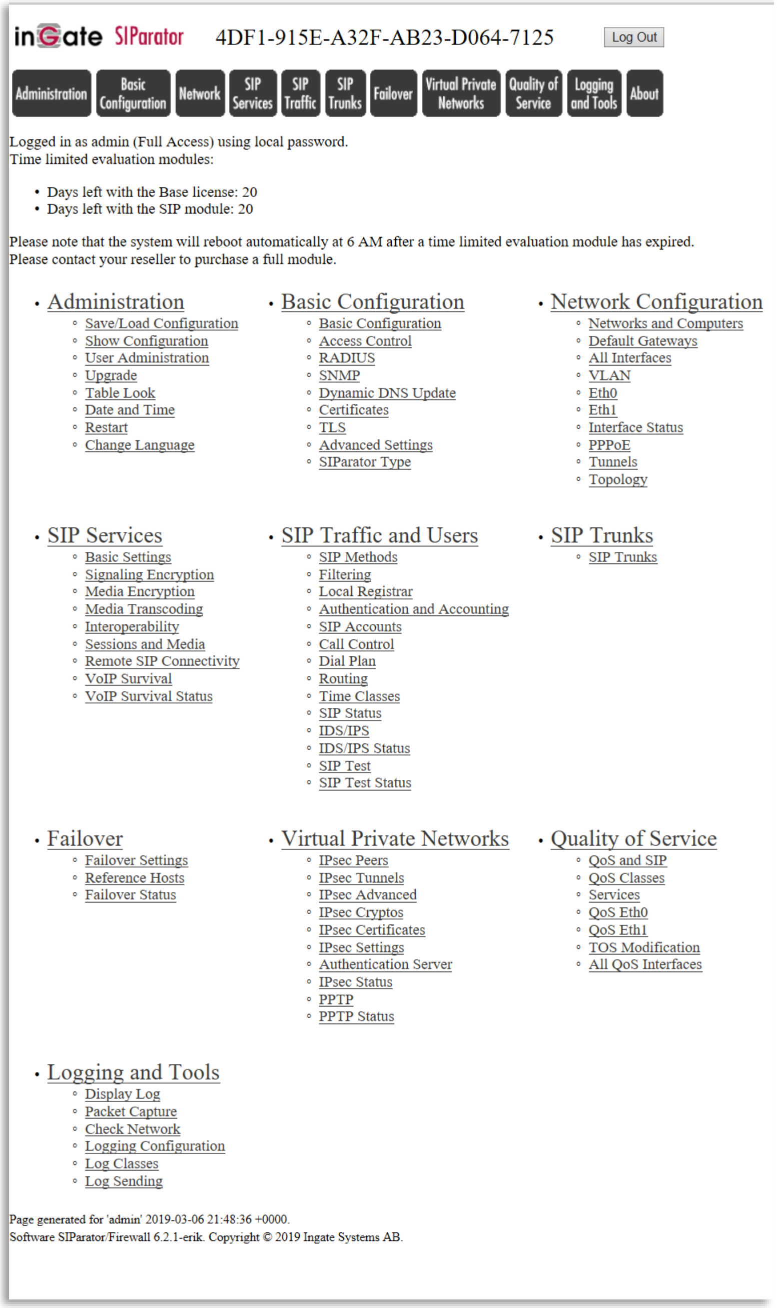
To upgrade to a new version, apply a patch or add new licenses, specify the filename of the upgrade file below and press "Upgrade". Please make sure that you have read the upgrade instructions before you upgrade.

Now the Instance is ready to be used and configured.

# 3 Ready and Go

## 3.1 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.



4DF1-915E-A32F-AB23-D064-7125

Logged in as admin (Full Access) using local password.
Time limited evaluation modules:

- Days left with the Base license: 20
- Days left with the SIP module: 20

Please note that the system will reboot automatically at 6 AM after a time limited evaluation module has expired.
Please contact your reseller to purchase a full module.

- 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' 2019-03-06 21:48:36 +0000.
Software SIParator/Firewall 6.2.1-erik. Copyright © 2019 Ingate Systems AB.

For detailed explanation and step by step instruction to do your configuration, you may want to review the following documents:

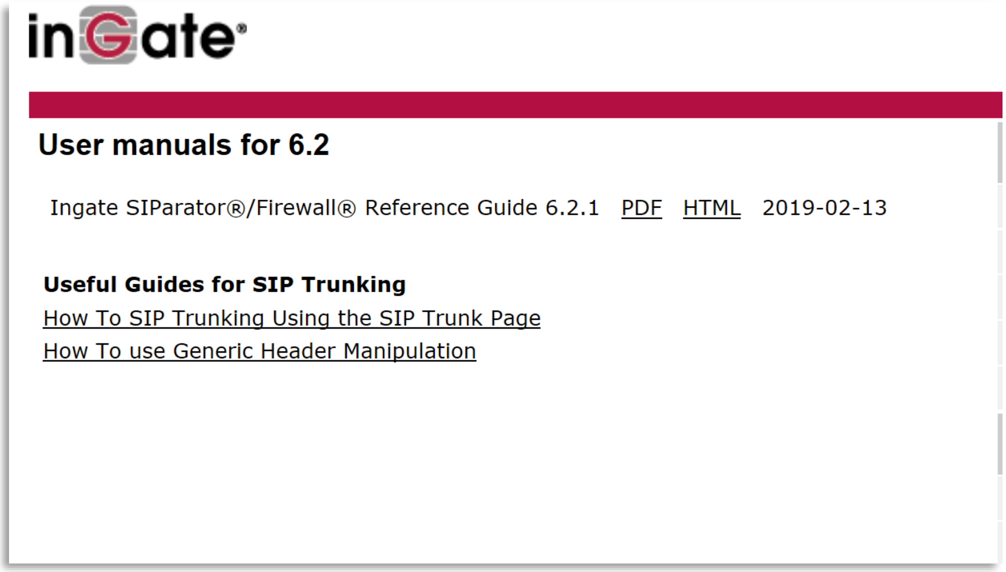
➔ Ingate Siparator Configuration Guide for AWS

➔ Ingate Siparator Configuration Guide - High Available Deployments for AWS

➔ Ingate SIParator Configuration Guide - Secure Voip Implementation for Remote Users on AWS

## 3.2 Setup and Configuration

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



User manuals for 6.2

Ingate SIParator®/Firewall® Reference Guide 6.2.1 PDF HTML 2019-02-13

**Useful Guides for SIP Trunking**

How To SIP Trunking Using the SIP Trunk Page

How To use Generic Header Manipulation

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.)

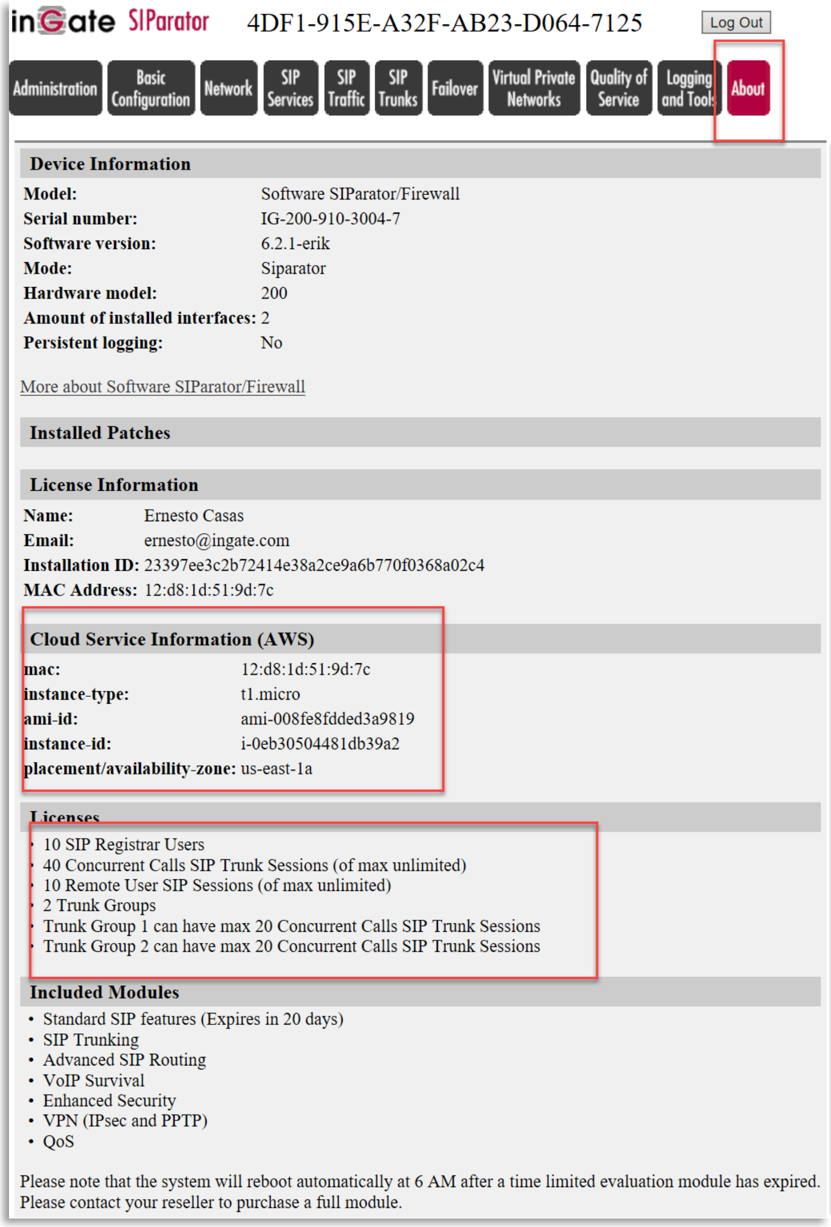
To ease the configuration of your software Ingate, we recommend you to download and use the Ingate Startup Tool TG found at http://www.ingate.com/Startup_Tool_TG.php .

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

## 3.3 Your Account Information, cloud data and Licenses are Displayed

On the About page in the SIParator/Firewall you will see your account information and the licenses installed.

Yo can also notice additional information about Cloud related data, including Instance type, AMI id and Instance id, placement and availability zone.



4DF1-915E-A32F-AB23-D064-7125

**Device Information**

| | |
|---|---|
| **Model:** | Software SIParator/Firewall |
| **Serial number:** | IG-200-910-3004-7 |
| **Software version:** | 6.2.1-erik |
| **Mode:** | Siparator |
| **Hardware model:** | 200 |
| **Amount of installed interfaces:** | 2 |
| **Persistent logging:** | No |

More about Software SIParator/Firewall

**Installed Patches**

**License Information**

| | |
|---|---|
| **Name:** | Ernesto Casas |
| **Email:** | ernesto@ingate.com |
| **Installation ID:** | 23397ee3c2b72414e38a2ce9a6b770f0368a02c4 |
| **MAC Address:** | 12:d8:1d:51:9d:7c |

**Cloud Service Information (AWS)**

| | |
|---|---|
| **mac:** | 12:d8:1d:51:9d:7c |
| **instance-type:** | t1.micro |
| **ami-id:** | ami-008fe8fdded3a9819 |
| **instance-id:** | i-0eb30504481db39a2 |
| **placement/availability-zone:** | us-east-1a |

**Licenses**

- 10 SIP Registrar Users
- 40 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 20 Concurrent Calls SIP Trunk Sessions
- Trunk Group 2 can have max 20 Concurrent Calls SIP Trunk Sessions

**Included Modules**

- Standard SIP features (Expires in 20 days)
- SIP Trunking
- Advanced SIP Routing
- VoIP Survival
- Enhanced Security
- VPN (IPsec and PPTP)
- QoS

Please note that the system will reboot automatically at 6 AM after a time limited evaluation module has expired. Please contact your reseller to purchase a full module.