

## *Table of Contents*

<b>1. Purpose of this Document .....</b>	<b>2</b>
<b>2. How to purchase Aeonix on AWS.....</b>	<b>2</b>
2.1 Aeonix.....	2
2.2 Sangoma.....	3
<b>3. AWS Requirements.....</b>	<b>3</b>
3.1 EC2.....	3
3.2 VPC .....	3
<b>4. The difference between Hybrid and Pure cloud.....</b>	<b>4</b>
4.1 Pure cloud.....	4
4.2 Hybrid cloud.....	5
<b>5. Connectivity to AWS.....</b>	<b>5</b>
5.1 VPN.....	5
5.2 Session Border Controller.....	6
5.3 SIP Gateway.....	6
<b>6. How to install Aeonix .....</b>	<b>7</b>
6.1 Installation .....	7
6.2 Capacity .....	8
<b>7. Limitations .....</b>	<b>8</b>

## 1. Purpose of this Document

Aeonix can be installed and managed today on Amazon's Web Services (AWS) infrastructure by both partners who want to distribute Aeonix as a service and end-customers who want to add capacity to their existing system or simply move their infrastructure into the cloud.

In addition, Aeonix can be installed as either a pure cloud solution, a hybrid cloud solution or as a disaster recovery node.

This document explains how to launch Aeonix on AWS for each of these purposes. In some cases, this document will reference existing documentation already published on the Tadiran partner site.

When deploying Aeonix on AWS, the rule of thumb is AWS is just another environment (Infrastructure as a Service – IaaS) on which Aeonix can be deployed. Aeonix supports virtualization environment such as VMware and Hyper-V. Now can be deployed in AWS. Nothing has changed conceptually and all of the capabilities of Aeonix still exist when deploying on AWS.

## 2. How to purchase Aeonix on AWS

### 2.1 Aeonix

Aeonix is sold over the AWS marketplace. You can visit the Aeonix AWS marketplace page here: <https://aws.amazon.com/marketplace/pp/B015G4QK80>

To use Aeonix, a customer will setup an account with Amazon and create Virtual Private Cloud (VPC), a private container within AWS. An AWS customer will create an instance in the VPC that launches Aeonix directly from the AWS Marketplace. The customer will pay instance charges, as defined by Amazon, for every Aeonix instance launched.

Launching Aeonix on AWS does not provide a full working system. In order to activate an Aeonix instance on AWS, the customer must contact Tadiran via the AWS contact portal located on the Tadiran web site here: <http://www.tadirantele.com/en/contact/aws-contact-form/>

Once in contact with Tadiran, the customer will be assigned with a local partner to provide services including licensing.

While most AWS cloud offerings are Opex in nature, Aeonix is still sold as capex. Customers purchasing Aeonix from partners will still receive a license as they do today with every other Aeonix install.

## 2.2 Sangoma

Aeonix is sold over the Amazon Community. You can find this by going to Community AMIs when launching a new instance in AWS and typing Sangoma in the *Search community AMIs* box. The search will show **Sangoma SBC 2.2.2-xxGA for AWS**. Click on the Select button to start the installation process.

As with Aeonix, Sangoma on AWS is sold as a capex purchase. Customers purchasing Sangoma from partners will receive a license from Tadiran. For more information on Sangoma SBC installation, refer information further in this document.

## 3. AWS Requirements

In order to deploy Aeonix on AWS, a basic understanding of the underlying AWS services is required. Aeonix mainly use EC2 and VPC to deploy on AWS.

### 3.1 EC2

EC2 provides users with resizable compute instances. When compared with VMware, think of EC2 as the ability to create new virtual machines on top of a VMware host, defining the CPU, memory and drive space for each host.

For a basic understanding of EC2, please see here: <https://aws.amazon.com/ec2/>.

Tadiran recommends partners and users take the free EC2 training class by browsing to [https://run.qwiklab.com/lab\\_catalogue](https://run.qwiklab.com/lab_catalogue) and searching for “Introduction to Amazon Elastic Computer Cloud (EC2)”

### 3.2 VPC

VPC (Virtual Private Cloud) defines a networking environment including DHCP, subnets, firewalls, VPN connectivity and more. A VPC is a mandatory requirement for deploying Aeonix. There is no cost involved with creating a VPC but AWS may charge for using various services within a VPC (such as VPN).

Partners who want to provide Aeonix as a managed service will create a VPC for every customer for which they wish to provide service.

Customers will need to choose which VPC, if more than one exists, they will use to deploy Aeonix.

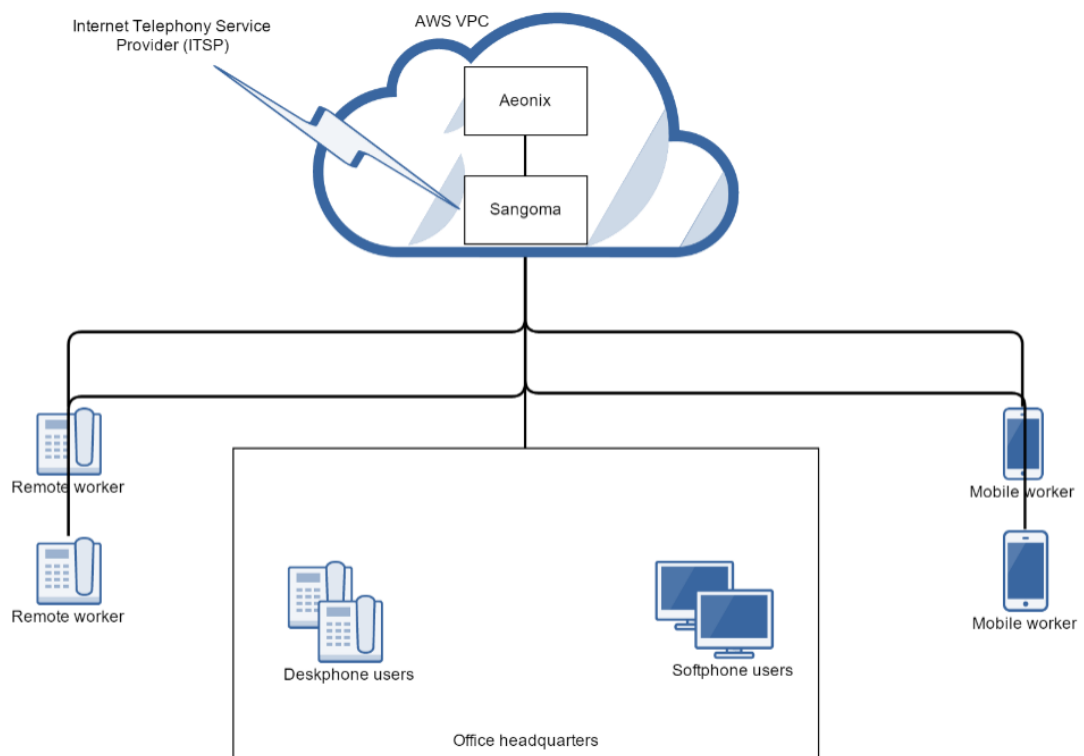
Tadiran recommends partners and users take the free VPC training class by browsing to [https://run.qwiklab.com/lab\\_catalogue](https://run.qwiklab.com/lab_catalogue) and searching for “Introduction to Amazon Virtual Private Cloud (VPC)”

## 4. The difference between Hybrid and Pure cloud

### 4.1 Pure cloud

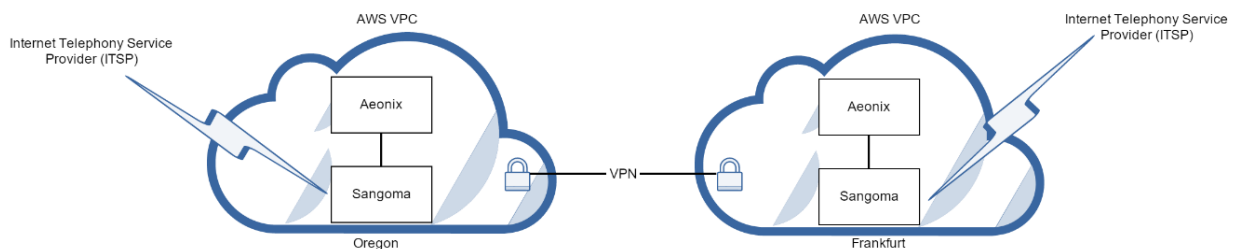
In a pure private cloud topology, a single Aeonix server or clustered Aeonix servers are installed in the Amazon cloud, in one or more regions. There are no virtual or physical servers deployed at the customer premise. All of the UC features are hosted on the AWS cloud.

SIP trunks can be terminated directly onto the AWS through the SBC as well as remote workers, mobile workers and people at the office headquarters.



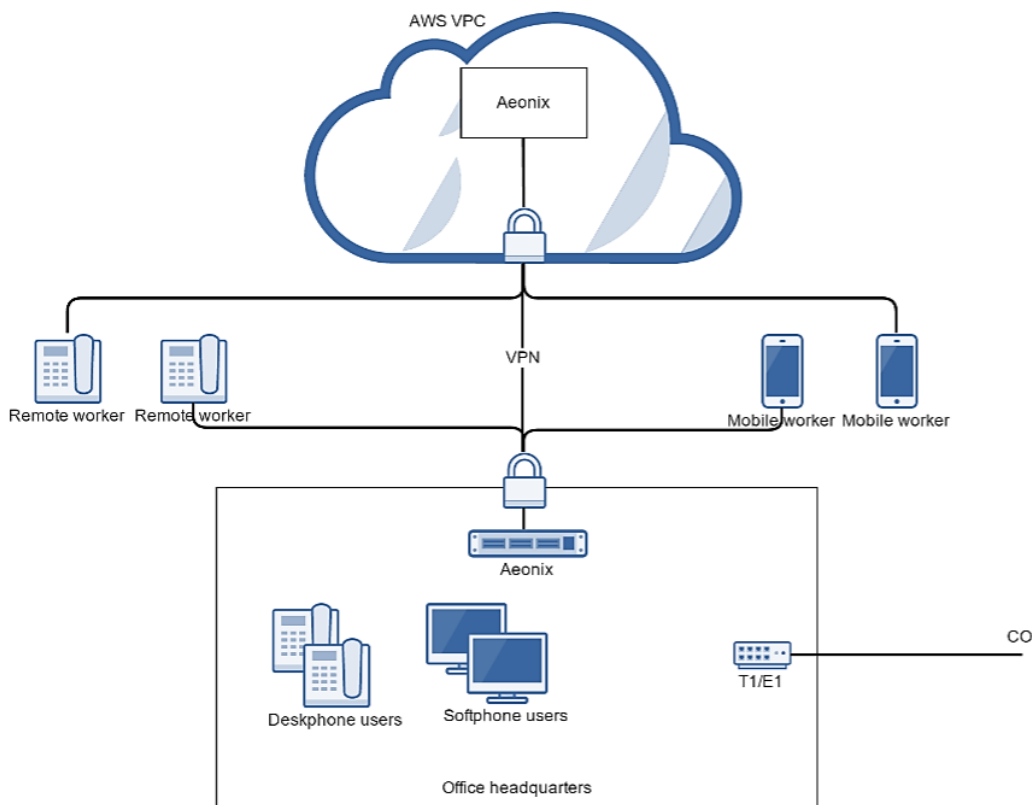
For increased uptime and disaster recovery, an additional Aeonix server can be brought up in the same or different region.

With or without an additional ITSP provider, the Aeonix cluster provides increased uptime and business continuity, across the globe.



## 4.2 Hybrid cloud

In a hybrid private cloud topology, one or more Aeonix servers are deployed on the customer premises. These servers are clustered to an instance or multiple instances of Aeonix servers on the Amazon cloud.



## 5. Connectivity to AWS

### 5.1 VPN

By default, VPCs cannot communicate with each other or with the enterprise network. To allow connections between the VPC and the enterprise network, a VPN is required.

A VPN gateway installed at the customer premises is required to create this connection. A complete list of supported VPN devices can be found here: <https://aws.amazon.com/vpc/faqs/>

In addition to the provided list, many other devices are already in use by customers. AWS recommends checking on the Amazon VPC forums here: <https://forums.aws.amazon.com/forum.jspa?forumID=58>

A VPN connection between the AWS and VPC can be established for both pure cloud and hybrid cloud solutions and is set up in the VPC console on AWS. For up to date instructions on how to set up the VPN, please browse here: [http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC\\_VPN.html](http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_VPN.html)

This method enables Aeonix on the AWS to behave as just another server in the enterprise space. Trunks can be provided either through ITSPs or legacy T1/E1 and FXO.

## 5.2 Session Border Controller

A virtual Session Border Controller (SBC) that is certified to be installed in a VPC in Amazon AWS can be deployed in both pure and hybrid cloud models. Sangoma is currently the only SBC certified by Tadiran to run on AWS with integration to Aeonix.

Once installed, this SBC acts as a gatekeeper for connectivity to Aeonix in Amazon AWS that is not coming through a VPN connection. This connectivity can either be remote SIP terminals, Tadiran SIP gateways for analog station or PSTN trunking or SIP trunks from an ITSP. The size of the instance defined in Amazon AWS for Sangoma depends on a number of factors encryption, transcoding (converting between codecs) and number of simultaneous calls. Below is a chart showing the instance and number of simultaneous sessions with the different options:

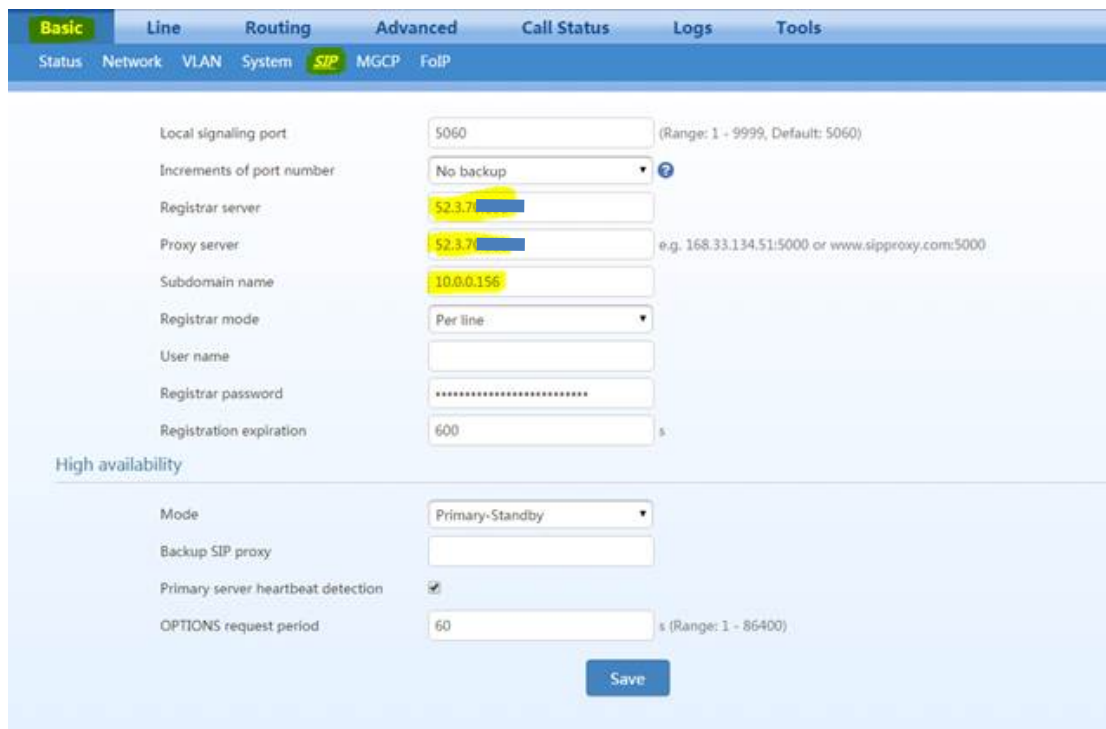
Amazon AWS Instance	Scenario	Memory	vCPU	Suggested Max Sim Calls
m3.medium	Plain	3.75	1	45
m3.medium	TLS and SRTP	3.75	1	15
m3.medium	Transcoding	3.75	1	18
m3.medium	Transcoding, TLS and SRTP	3.75	1	7
m4.large	Plain	8	2	200
m4.large	TLS and SRTP	8	2	95
m4.large	Transcoding	8	2	42
m4.large	Transcoding, TLS and SRTP	8	2	53

For instructions on how to install a Sangoma SBC In Amazon AWS can be found here: [Sangoma AWS application note](#)

## 5.3 SIP Gateway

Tadiran SIP gateways allow customers to connect analog station, or traditional trunking to Aeonix. These gateways convert TDM to SIP along with high availability failover to other Aeonix servers. The Tadiran Gateways install the same whether they register to Aeonix on Amazon AWS using a VPN or over a

SBC expect for one difference, if they are connecting over a SBC, the Proxy and Registrar servers will be programmed with the public IP address of the SBC instead of the private IP address of Aeonix. The subdomain name will be programmed with the private IP address of the Aeonix (see below).



The screenshot shows the configuration page for SIP settings in the Aeonix interface. The 'Basic' tab is selected, and the 'SIP' sub-tab is active. The configuration fields are as follows:

Field	Value	Notes
Local signaling port	5060	(Range: 1 - 9999, Default: 5060)
Increments of port number	No backup	
Registrar server	52.3.7	
Proxy server	52.3.7	e.g. 168.33.134.51:5000 or www.sipproxy.com:5000
Subdomain name	10.0.0.156	
Registrar mode	Per line	
User name		
Registrar password	*****	
Registration expiration	600	s

**High availability**

Field	Value	Notes
Mode	Primary-Standby	
Backup SIP proxy		
Primary server heartbeat detection	<input checked="" type="checkbox"/>	
OPTIONS request period	60	s (Range: 1 - 86400)

A 'Save' button is located at the bottom right of the configuration area.

You can download the programming guides for Tadiran Gateways below:

- [Tadiran Gateway 4 or 8 analog port gateways](#)
- [Tadiran Gateway 24 or 96 analog port gateways](#)
- [Tadiran Gateway ISDN PRI gateway](#)

## 6. How to install Aeonix

### 6.1 Installation

Instructions on how to install Aeonix can be found here:

[http://tadiranfiles.blob.core.windows.net/mycontainer/Aeonix/Aeonix\\_AWS\\_Administration\\_Manual\\_2.5.pdf](http://tadiranfiles.blob.core.windows.net/mycontainer/Aeonix/Aeonix_AWS_Administration_Manual_2.5.pdf)

Specifically, chapter 3 goes through the process of launching an AWS instance through getting Aeonix fully loaded and ready to activate.

In addition, chapter 3.2 explains the process of licensing the Aeonix in greater details.

## 6.2 Capacity

As with all platforms, different instances on AWS provide different user and media resource capacity. Please refer to the table below for more information. As with any Aeonix install, multiple instances can be clustered for additional capacity

Instance type	Number of registered users	Concurrent media sessions per instance (Conferences, ACD, virtual endpoints)
<b>M3.medium</b>	1000	200
<b>M4.large</b>	3000	254 (Aeonix limit)

## 7. Limitations

When connecting locations to Aeonix and Amazon AWS over a VPN, there are no limitations for Aeonix features or applications.

However, when connecting location or remote users over SBC to Aeonix and Amazon AWS there are limitations. Extended SIP feature support by Tadiran SIP terminals are not handled correctly at the remote firewall and thus do not work properly. These features include:

1. Aeonix Contact Center Agent (either clientless PC or Agent client)
2. Aeonix Dispatch Console
3. Certain feature button programming functionality including:
  - a. Auto Redial
  - b. Breakin
  - c. Conference call
  - d. Deflect
  - e. DND
  - f. Flash Mode
  - g. Forward all
  - h. Page Queue
  - i. Record on Demand
  - j. Shared Line
  - k. Silent Monitor

This limitation for remote SIP terminals over SBC is being handled in Aeonix v3.



If you have any questions regarding this note, please contact our Support team  
at:

<http://www.tadirantele.com/tadiran-telecom/support.aspx>

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