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1. Purpose of this Document

As Tadiran roles out Aeonix on AWS, important questions come up that need to be answered. Below is a set of questions and answers

2. Pure AWS questions

2.1 What is a region

Amazon has many datacenters distributed worldwide. Each such location is called a region. Each region is then distributed further into availability zones. This means that even within a single region, such as N. Virginia, multiple datacenters exist for added reliability and disaster recovery.

More on regions is available here:

<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-regions-availability-zones.html>

Each region has different pricing for the instances and resources available on that region.

2.2 Which AWS region should I use

If a customer/partner is already using AWS, they will tell you which region to use. Partners and customers who are new to AWS should launch the Aeonix on the AWS region closest to their geographic location.

3. Aeonix and ecosystem on AWS

3.1 Which applications can run on AWS

Aeonix's ecosystem is fully supported on AWS as described below. Most applications loaded on AWS require access for management. This can be achieved either by using VPN or by launching a windows desktop on AWS and remoting into it.

This is the list of supported ecosystem:

- a. SeaMail
- b. Aeonix Contact Center
- c. Aeonix Call Accounting
- d. Aeonix Call Logger
- e. Aeonix Navigator
- f. Aeonix Attendant

- g. Aeonix Dispatch Console
- h. Aeonix Collaboration

Not supported:

- a. Vidyo – Vidyo cannot be run directly on AWS. Instead, Vidyo can be deployed on-premises and can also be connected to Aeonix via VPN if required.
- b. Aeonix Conferencing and Collaboration (ACCA) – To be tested

3.2 Can the Aeonix instance on AWS be idle and then brought up only if there is an emergency, so that we only have to pay for it when it is running?

No. All servers in the Aeonix cluster must always be up and available for Aeonix to function properly

3.3 Where do I learn about AWS pricing and the options?

Aeonix and its ecosystem run on AWS instances. Each instance type has a price and that price changes per region. All the information on all AWS pricing can be found here: <https://aws.amazon.com/ec2/pricing/>

3.4 How do I order my AWS instance from Tadiran?

You don't. Aeonix and the AWS instance are loaded directly from the AWS marketplace. An AWS user would simply log in to their console then go to the Aeonix marketplace page here: <https://aws.amazon.com/marketplace/pp/B015G4QK80>

Exact instructions on how to launch Aeonix on AWS can be found in chapter 3 of this document:

http://tadiranfiles.blob.core.windows.net/mycontainer/Aeonix/Aeonix_AWS_Administration_Manual_2.5.pdf

3.5 How do I deploy?

Aeonix deployment depends on the customer requirements. Does the customer want a pure cloud or hybrid solution? Does the customer want to use VPN or SBC to connect to the AWS instance? In each of these cases, what you ALWAYS need to keep in your mind is that deploying Aeonix on AWS is no different than deploying it in any multi-site installation.

3.6 Is there a script we can run to deploy the Aeonix AWS AMI?

Exact instructions on how to launch Aeonix on AWS can be found in chapter 3 of this document:

http://tadiranfiles.blob.core.windows.net/mycontainer/Aeonix/Aeonix_AWS_Administration_Manual_2.5.pdf

3.7 Can an Aeonix deployment on AWS coexist in a hybrid environment using HyperV or VMWare?

Absolutely. In fact, Aeonix could run in a cluster with one server on hyper-V, one on VMware, one on AWS, one on Google cloud and one on Microsoft Azure. Now what other solution do you know that does that!?!?

Tadiran's in-house system uses 6 servers running on VMware, Hyper-V and AWS.

3.8 What are the prerequisites for deploying Aeonix on AWS

When deploying on AWS, the customer must choose their preferred deployment architecture. Do they need pure cloud or hybrid? Do they want DR? Where are the trunks terminated? In many ways, it is exactly like deploying any other Aeonix solution with multiple sites.

The only real prerequisite is a strong internet connection. The maximum bandwidth must be calculated and then accommodated. ADSL connections must not be used as they will provide customers with poor quality.

4. Aeonix and AWS connectivity

4.1 What type of connection / service is required between the AWS and the main office location?

Either VPN or an SBC are required to connect the main office, or any branch office, with Aeonix running on AWS. Each connectivity method has its own advantages and disadvantages as described in the AWS application note.

4.2 What is the bandwidth requirement between the AWS data center and the Office location?

The bandwidth requirement varies depending on the type of connection used from the office location and AWS.

VPN:

With VPN, all data communications between the office and AWS doubles in size, for encryption.

Calls take double the bandwidth but calls are usually point to point and so do not go through the VPN. The only time a call would use the VPN bandwidth is when Aeonix streams the audio (ACC, conference calls, etc...)

Data is used to establish the call control and is very minimal. If the architecture is that of a hybrid solution and an Aeonix server exists both on AWS and on premises, all cluster data will flow through the VPN. This is also not significant.

SBC:

With SBC, most audio flows to and from the SBC itself. Each G711 call takes 175 Kbps if it goes out on a SIP trunk on Aeonix and 350 Kbps for station to station. G729 calls take less than half of this bandwidth, 124Kbps for station to station.

4.3 How are trunks connected/registered to the Aeonix server located on the AWS server?

SIP trunks can be terminated directly onto a Sangoma SBC running on AWS. This is exactly like terminating SIP trunks on an SBC at the customer location.

Digital and analog trunks can also be used with AWS. In this case, a TGW must be installed at the customer site. The TGW then registers the trunk (via SIP) either on the Sangoma SBC or directly on Aeonix when using VPN.

4.4 Where would the gateways need to be located?

Because hardware cannot be installed on AWS, TGWs must be installed on premise at the customer site where the physical trunk and/or extensions are terminated.

4.5 How are remote stations connected/registered to the Aeonix server located on the AWS server

MGCP – MGCP extensions can only be connected via VPN to the Aeonix running on AWS. No other method is supported.

Analog – Analog extensions can be used with AWS. In this case, a TGW must be installed at the customer site. The TGW then registers the extensions (via SIP) either on the Sangoma SBC or directly on Aeonix when using VPN.

SIP – SIP phones at an enterprise or remote location can register to an Aeonix on AWS either by registering on a Sangoma SBC or directly to Aeonix via VPN. Remote users at home with physical phones cannot register via VPN and have to use an SBC.

4.6 What SBC is required for SIP trunks and remote stations?

Sangoma is currently the only SBC supported by Aeonix to run on AWS. Ingate can be used if the customer wants to deploy an SBC on premises. However, Ingate will not be able to make a future transition to the cloud.

4.7 What functions are not provided when connected remotely vs via a VPN circuit

VPN provides complete functionality. Until version 3.0, remote users will not be able to use ESF functionality when connected using SBC.

4.8 Other than Sangoma and Aeonix, what other instances will be required?

There are several instances that would be required in addition to the Sangoma and Aeonix instances, depending on how the solution is deployed.

1. ACA requires a windows instance.
2. Logger requires a windows instance
3. Can the ACA and Logger share an instance? It depends on the overall load and size of the selected instance
4. If a VPN is required for management of the Aeonix ecosystem on AWS, an additional, extreme low cost instance could be used

4.9 How do I determine what needs to be ordered from Sangoma?

Sangoma is currently in the process of being productized. Until it is, all orders must go through Lindsay. Purchases of Sangoma licenses will be completed directly with Sangoma until Productization is complete. Lindsay will assist in this process.

4.10 If we are using a hybrid cloud deployment can we use our on-prem SBC and the Sangoma SBC in the same cluster?

You absolutely could. However, you would usually only need one SBC per installation. If you already have one on-premise, you can use it instead of Sangoma on AWS. All remote endpoints would then terminate on the on-premises SBC.

4.11 What is the maximum/minimum bandwidth that can be ordered from Level 3 for direct MPLS connection to AWS?

Level 3 offer 37 different bandwidth connectivity options starting from 1Mbps all the way to 10Gpbs. The actual bandwidth required must be calculated based on customer usage.

5. General questions

5.1 Why are we (Tadiran) not using the Aeonix instance in the AWS cloud as our primary or failover server location? Especially for remote users?

Currently Tadiran has one server deployed on AWS as part of the administrative cluster (Tad1-Tad7). Tadiran will likely use AWS to replace Tad7 in the future.

5.2 What Notes should be included on an Aeonix quote when it is intended to be deployed in the AWS cloud?

Multiple documents have been or are being written on this subject. Mainly, the Aeonix AWS application note will be used.

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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