ALOHA Virtual Appliance best practices

Licencing model

By default, the ALOHA Virtual Appliance firmware is provided for a **single Major branch** *(4.x, 5.x, 6.x, etc...)*
Each licence is limitated to one major branch, so before upgrading to the next major branch, keep in mind to require a new licence for this branch to Exceliance.
Note: there may be a fee for this upgrade unless you subscribed to a software maintenance plan including the option **"major upgrade protection"**.
Each VA can have multiple licences for different branches. When booting, each firmware will load the appropriate licence.

Which Hypervisor?

The ALOHA Load-Balancer can run on top of any hypervisor. The list below summarizes the hypervisor compatibility per VA:

- **aloha-albva-citrix-xenserver**: Citrix XenServer 6.x
- **aloha-albva-esx3X**: VMWare 3.x
- **aloha-albva-hyperv**: Microsoft Windows HyperV 2008
- **aloha-albva-kvm**: RedHat Enterprise Virtualization 3.x, any Linux KVM
- **aloha-albva-opensource-xen**: Xen OpenSource 3.x and 4.x
- **aloha-albva-vsphere4X**: VMWare Vsphere 4.x and 5.x

NOTE: the physical CPUs must be **64 bits**, Intel recommanded, and the hypervisor must be installed in **64 bits** as well.
32 bits might work, but with no guarantee and with a drop in perofrmance.

You can't expect the same performance from all the hypervisors.
The table at the bottom of this memo summarizes the Hypervisor recommended based on the ALOHA VA capacity you want to order.
For more information about Hypervisors Virtual Network stack performance loss, you can read our blog:
`http://wp.me/p1CGyQ-fF`

ALOHA VA Capacity upgrade

It is possible to upgrade the capacity of your ALOHA VA. This is only a question of licence: contact your reseller or Exceliance account manager.
Don't forget to upgrade the Virtual Appliance hardware to match the recommendation for the new licence.

Resources allocation and reservation

Disk space

The ALOHA Virtual Appliance requires **one physical hard drive of 128 MBytes**.

CPU

Follow the instruction provided in the table at the bottom of this memo.
For appliances 30K and above, the 3rd and 4th CPU would lower Network IO impact. That said, 4 CPUs are recommended in very rare cases.
It is highly recommended to reserve CPU resources to the ALOHA Virtual Appliance.

Memory

Follow the instruction provided in the table at the bottom of this memo.
It is highly recommended to reserve all the allocated memory to the ALOHA.

Network interfaces

There is no limitation on the number of network interfaces. Just create and start as many as you need.
Note: the ALOHA understands VLANs, so you can tag frames on the virtual switch where the ALOHA VA is plugged.
For performance purpose, it is highly recommended to use the para-virtualized network interfaces List of virtualized network interfaces per hypervisor:

- **KVM**: virtio
- **HyperV**: Regular network interface (hv_netvsc)
- **Xen**: xen-vnif
- **VMWare**: vmxnet 2 and 3

ALOHA VA resource allocation table

ALOHA VA	VA 500	VA 1K	VA 2K	VA 4K	VA 8K	VA 16K	VA 30K	VA 50K
Recommended hypervisor	HyperV, KVM, RHEV, Xen, Xenserver, ESX, Vsphere						HyperV, Vsphere	Vsphere
Memory	512M	512M	512M	512M	1G	2G	4G	8G
Virtual CPUs	1	1	1	1	2	2	4	4