Server Virtualization powered by VMware®

Standalone vs. High Availability

Server Virtualization powered by VMware® is a hosted solution that offers you easy access to flexible compute resources, backed by a team of certified professionals who act like an extension of your IT team.

Our single-tenant architecture provides a hosted environment that can be expanded as your business needs change. When planning for future growth, keep the following considerations in mind:

- Your initial storage requirements
- How quickly your storage will grow over time
- How quickly you will need to add more hypervisors
- The impact of scheduled downtime on your apps
- The impact of unplanned downtime due to hardware failure

OPTION 1 – LOCAL STORAGE

Local storage is ideal for customers who have modest initial requirements. Because the cost per gigabyte (GB) of storage is minimal, it makes sense to give you room for future growth. For example, if you need 400 GB today, 3 x 450 RAID 5 might be a good starting point since it provides approximately twice the capacity you need. The primary drawback to using local storage is that your virtual machines (VMs) will be susceptible to server hardware failure.

CONFIGURATION NOTES

- 1 x Cisco® ASA 5505 Security Plus Firewall
- 5 Client VPN access
- 1 x Performance 1 Silver (hypervisor):
  3 x 450 RAID 5 storage
- Unmetered backups with 2 week retention
- 5 x Linux® VMs (CentOS) / 60 GB each
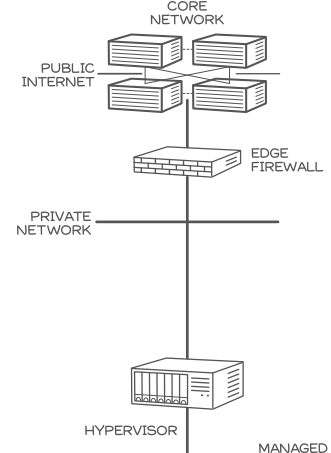
**OPTION 1
LOCAL STORAGE**
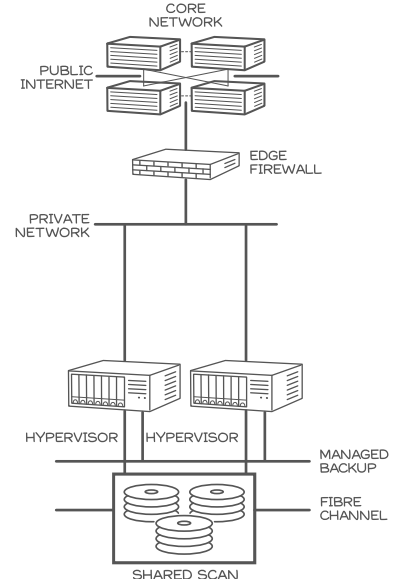
OPTION 2 – HIGH AVAILABILITY USING SHARED SAN

An alternative, more robust, solution would be to use storage area network (SAN) for VM storage and a highly available pair of hypervisors.

SAN provides improved performance, flexibility, and availability over local storage. SAN also allows you to build N+1 server redundancy so that, in the event that a host machine is down for maintenance or due to failure, your VMs can continue processing on the remaining machine*. Other benefits include:

- Much easier expandability (in certain cases, expanding local storage requires scheduled downtime or migration)
- Much greater expandability (local storage is limited by the size of disks used, as well as the number of disks that can be placed within the server chassis)
- Simplified recovery (storage is isolated from server hardware failure)

CONFIGURATION NOTES

- 1 x Cisco ASA 5505 Security Plus Firewall
- 5 Client VPN access
- 2 x Performance 1 Silver (hypervisor):
  2 x 300 RAID 1 storage + HBAs
- 500 GB Shared SAN (silver-tier)
- Unmetered backups with 2 week retention
- 5 x Linux VMs (CentOS) / 60 GB each

**OPTION 2 – HIGH AVAILABILITY
USING SHARED SAN**

Every Rackspace customer has unique virtualization needs when it comes to initial requirements, anticipated growth and tolerance for availability and flexibility. As a key component of *Fanatical Support®*, our team of specialists can work with you to understand your workloads and recommend a best-fit architecture.

For more information or to chat with a specialist: 1-800-961-2888 or www.rackspace.com/managed-virtualization/server-virtualization

When setting up a high availability (HA) configuration for the hypervisors, it's important to size the cluster so that there is enough spare capacity to cover all of the VMs.

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