Standard Operating Procedure

Title	Build ESXi Hosts and vCenter Server
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Revision History and Document Management

Initial Release:	01JUN25	Marcos Sachi
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Summary of the Policy/Purpose of this SOP

This SOP outlines the detailed steps required to deploy three ESXi hypervisors and a vCenter Server Appliance (VCSA).

It describes the following tasks:

1. Creation and installation of ESXi VMs
2. Network configuration
3. vCenter Server deployment from ISO
4. Cluster configuration and ESXi host registration

Scope of this SOP

This SOP is intended for system administrators or infrastructure engineers responsible for building and configuring a VMware vSphere environment.

Actors

Responsible:	Infrastructure Technician
Accountable:	System Engineer
Consulted:	Infrastructure Lead
Informed:	IT Manager / Project Manager

Contents

Resources and Prerequisites

- ESXi latest release ISO image from Broadcom Support Portal.
- vCenter latest release ISO image from Broadcom Support Portal.
- DNS records (A and PTR) created.
- Network with DHCP or static IPs allocated.
- DNS server configured for name resolution.
- Internet access for updates (optional).
- A computer or jump box with Windows/Linux/macOS to run the vCenter installation.

Actions

Install ESXi on Hosts

1. Mount the ESXi ISO via virtual media or physical interface.
2. Boot the system and launch the ESXi installer.
3. Press Enter to start installation.
4. Accept license agreement with F11.
5. Select the installation disk and confirm.
6. Choose keyboard layout (default: US).
7. Set the root password (e.g., VMware123!).
8. Press F11 to begin installation.
9. Once completed, press Enter to reboot.
10. Unmount ISO if applicable.

Configure ESXi Network Settings

1. At the ESXi console, press F2 to customize.
2. Log in with root credentials.
3. Navigate to Configure Management Network:

IPv4: Set static IP (e.g., 10.35.2.101)
Subnet: 255.255.255.0
Gateway: 10.35.2.1
DNS: 10.35.2.100
Hostname: esxi-01.local

4. Restart Management Network when prompted.
5. Repeat for the remaining ESXi hosts with their respective IPs and hostnames.

Deploy vCenter Server Appliance

1. On the jumpbox or you own computer, mount the vCenter ISO.
2. Navigate to vcsa-ui-installer > win32 (or mac/linux) > run installer.exe
3. Select 'Install' to begin Stage 1.
4. Choose deployment type: Embedded Platform Services Controller.
5. Enter target ESXi host IP (e.g., 10.35.2.101), and root credentials.
6. Set the appliance VM name (e.g., vcenter.lab) and its root password.
7. Select the appropriate datastore.

Configure network settings:

IP: 10.35.2.110
FQDN: vcenter.lab

Gateway: 10.35.2.1
DNS: 10.35.2.100
Subnet: 255.255.255.0

8. Complete Stage 1 deployment.
9. Click Continue for Stage 2 setup:

   Set SSO domain (e.g., vsphere.local)
   Password: VMware123!
   Choose time sync method
   Enable SSH if required
   Complete deployment

Create the vSphere Cluster and Add Hosts

1. Open browser to https://vcenter.lab/ui or https://10.35.2.110/ui
2. Login with administrator@vsphere.local
3. Create a new Datacenter (e.g., electric-petrol)
4. Create a new cluster (e.g., Compute-Cluster)
5. Add ESXi hosts by their hostname:

   esxi-01.local
   esxi-02.local
   esxi-03.local

6. Authenticate using root credentials for each host.
7. Confirm and add hosts to the cluster.
8. Enable features like vSphere HA and DRS as needed.

Acceptance Tests

1. Verify all hosts are connected and display healthy status in vCenter
2. Confirm name resolution is working (FQDN to IP)
3. Deploy a test VM from vCenter and ensure it powers on
4. Verify host-to-host communication and vCenter access

Output

1. Fully functional VMware vSphere environment with three hosts
2. Centralized vCenter Server management
3. Base infrastructure ready for virtual machine workloads