

VMWARE HORIZON CLOUD WITH ON-PREMISES INFRASTRUCTURE SETUP CHECKLIST

Complete the following tasks to prepare your network and VMware vSAN™ Ready Node for the installation of VMware Horizon Cloud with On-Premises Infrastructure. After the checklist is complete, follow the suggested workflow to deploy and start administering the service. A worksheet is included to help you collect the information required. If you require help, contact your VMware customer service representative.

For Horizon Cloud with On-Premises Infrastructure on VxRail, please work with your VCE, EMC, or partner representative to complete the VxRail Appliance Pre-Installation Site Checklist via the site survey.

Assumptions

- This checklist is for the minimum configuration required for Horizon Cloud with On-Premises Infrastructure, a 4-server cluster of vSAN Ready Nodes. For larger cluster sizes, the quantities listed below should be scaled up appropriately.
- Compatible software versions for the [Horizon Cloud with On-Premises Infrastructure components](#) are used.

Setup Checklist

PHYSICAL REQUIREMENTS (ASSUMES MINIMUM CONFIGURATION OF 4-SERVER vSAN READY NODE CLUSTER)	
<input type="checkbox"/>	Rack space to accommodate servers (e.g., 2 RU of rack space per server for R730xd)
<input type="checkbox"/>	Required power connections per server (e.g., 2 x 220 v power connections per server for R730xd)
<input type="checkbox"/>	2 x 10 GBe SFP+ switch ports and cabling per server
<input type="checkbox"/>	1 x 1 Gbe switch ports and cabling for out-of-band management per physical server (optional)
vSAN CLUSTER CONFIGURATION REQUIREMENTS	
<input type="checkbox"/>	Dedicated VMware vCenter® Server Appliance™ (VCSA) deployed on Server 1
<input type="checkbox"/>	Dedicated vSAN datastore (included in the hardware)
<input type="checkbox"/>	Ensure VMware ESXi™ servers are registered with vCenter via FQDN “DNS name” (not IP address) and other instructions as described in Horizon Cloud with On-Premises Infrastructure Installation and Configuration .
NETWORKING REQUIREMENTS	
4 X VLANS	
<input type="checkbox"/>	VLANS A and B with outbound network Internet connectivity
<input type="checkbox"/>	VLAN C with IGMP snooping and IGMP queries enabled for vSAN. For reference, see the VMware Virtual SAN 6.2 Network Design Guide .

<input type="checkbox"/>	VLAN D for VMware vSphere® vMotion®																																				
	<table border="1"> <thead> <tr> <th>VLAN</th> <th>TYPE</th> <th>NETWORK</th> <th>PREFIX</th> <th>ROUTER</th> <th>USE</th> </tr> </thead> <tbody> <tr> <td colspan="6">-----</td> </tr> <tr> <td>A</td> <td>routed</td> <td>site specific</td> <td>/27 min</td> <td>site specific</td> <td>Management, ESXi/vCenter/ Horizon Cloud Node Appliance</td> </tr> <tr> <td>B</td> <td>routed</td> <td>site specific</td> <td>*</td> <td>site specific</td> <td>Desktops, Horizon Cloud Node Appliance</td> </tr> <tr> <td>C</td> <td>private</td> <td>private(1)</td> <td>/24</td> <td>none</td> <td>vSAN</td> </tr> <tr> <td>D</td> <td>private</td> <td>private(2)</td> <td>/24</td> <td>none</td> <td>vMotion</td> </tr> </tbody> </table> <p>* This network must be large enough to provide a DHCP scope for all of the desktops to be provisioned, along with three addresses for Horizon Cloud Node Appliance.</p>	VLAN	TYPE	NETWORK	PREFIX	ROUTER	USE	-----						A	routed	site specific	/27 min	site specific	Management, ESXi/vCenter/ Horizon Cloud Node Appliance	B	routed	site specific	*	site specific	Desktops, Horizon Cloud Node Appliance	C	private	private(1)	/24	none	vSAN	D	private	private(2)	/24	none	vMotion
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PHYSICAL SWITCH PORT CONFIGURATION																																					
<input type="checkbox"/>	10 GB ports on the physical switch in trunk mode with all above VLANs																																				
<input type="checkbox"/>	10 GB ports on the physical switch must not have LACP enabled																																				
<input type="checkbox"/>	1 GBe ports on the physical switch for out-of-band NICs may require access mode depending on IPMI capability																																				
IP ALLOCATION																																					
<input type="checkbox"/>	VLAN A • 4 x addresses for server out-of-band IPMI interfaces - Could be any VLAN/IPs used for out-of-band management (optional)																																				
<input type="checkbox"/>	• 4 addresses for ESXi Servers (Hosts)																																				
<input type="checkbox"/>	• 1 x address for VMware Horizon® Air® Link																																				
<input type="checkbox"/>	• 1 x address for vCenter Server Appliance																																				
<input type="checkbox"/>	• 5 x contiguous addresses for Horizon Cloud with On-Premises Infrastructure management appliances																																				
<input type="checkbox"/>	VLAN B - Must be large enough for all desktop IP addresses plus Horizon Cloud with On-Premises Infrastructure management appliances (suggest /24 or /23) • 3x contiguous addresses for Horizon Cloud with On-Premises Infrastructure management appliances - Example IP Addresses: .2 - .4																																				
<input type="checkbox"/>	• DHCP scope large enough for all desktops to obtain IP addresses																																				
<input type="checkbox"/>	VLAN C - 4 x IP addresses for vSAN interfaces																																				
<input type="checkbox"/>	VLAN D - 4 x IP addresses for vMotion interfaces																																				
ACTIVE DIRECTORY (AD)																																					
<input type="checkbox"/>	Add an account which can be used by the system to create computer objects, typically a new account ("domain join user account"). This account requires the following permissions: Create Computer Objects , Delete Computer Objects , and Write All Properties . For reference, see https://support.microsoft.com/en-us/kb/251335 .																																				
<input type="checkbox"/>	Add AD domain bind account (a standard user with read access) that has permission to read objects in the AD																																				

<input type="checkbox"/>	Two types of AD groups are required <ul style="list-style-type: none"> • Administrators – Administrators group of the appliance, typically linked to a Security group in AD • Users – Security groups or groups in AD, the users of which will have access to desktops in Horizon Cloud with On-Premises Infrastructure 						
EXTERNAL WINDOWS-BASED SMB FILE SHARE							
<input type="checkbox"/>	Highly available Windows-based SMB file share, with enough capacity for desktop golden images and VMware App Volumes™ AppStacks. For reference, see Horizon Cloud with On-Premises Infrastructure Administration . <ul style="list-style-type: none"> • Read permissions for domain bind account user • Optionally R/W permissions for other users to add or update images or AppStacks 						
<input type="checkbox"/>	Highly available Windows-based SMB file shares, with enough capacity for VMware User Environment Manager™ configuration and profiles. For reference, see Horizon Cloud with On-Premises Infrastructure Administration .						
SITE DNS							
<input type="checkbox"/>	DNS server(s) that can perform recursive (reverse) queries (i.e., myvmware.com must resolve)						
<input type="checkbox"/>	Web proxy (if needed) to access https://cloud.horizon.vmware.com from both Management and Desktop network						
<input type="checkbox"/>	DNS server(s) with A and PTR records for all static IP addresses used for non-private systems: <table border="0" style="width: 100%; margin-top: 5px;"> <tr> <td style="width: 16.6%;">i. ESXi server 1 management</td> <td style="width: 16.6%;">ii. ESXi server 2 management</td> <td style="width: 16.6%;">iii. ESXi server 3 management</td> <td style="width: 16.6%;">iv. ESXi server 4 management</td> <td style="width: 16.6%;">v. Horizon Air Link</td> <td style="width: 16.6%;">vi. vCenter Server Appliance</td> </tr> </table>	i. ESXi server 1 management	ii. ESXi server 2 management	iii. ESXi server 3 management	iv. ESXi server 4 management	v. Horizon Air Link	vi. vCenter Server Appliance
i. ESXi server 1 management	ii. ESXi server 2 management	iii. ESXi server 3 management	iv. ESXi server 4 management	v. Horizon Air Link	vi. vCenter Server Appliance		
<input type="checkbox"/>	DNS A and PTR records for end-user desktop access, which is the Horizon Cloud Node IP address that is assigned from the desktop network during deployment						
<input type="checkbox"/>	KMS server for OS licensing of all desktops						
<input type="checkbox"/>	NTP server(s) – Ensure ESXi host NTP is set up correctly including endpoint management device						
PORTS AND INTERNAL FIREWALLS (ON YOUR FIREWALLS BETWEEN INTERNAL NETWORKS)							
<input type="checkbox"/>	LDAP port 389 allowed internally (TCP and UDP)						
<input type="checkbox"/>	LDAP port 3268 allowed internally (TCP)						
<input type="checkbox"/>	Kerberos port 88 allowed internally (TCP and UDP)						
<input type="checkbox"/>	DNS port 53 (TCP and UDP)						
<input type="checkbox"/>	DHCP ports 67/68 and DHCP forwarder configured on switch (UDP)						
<input type="checkbox"/>	Desktop protocols <ul style="list-style-type: none"> • TCP/UDP 4172 for PCoIP desktop access internal and external • TCP/UDP 443/8443 for Blast Extreme desktop access external • TCP/UDP 22443 for Blast Extreme desktop access internal • TCP 32111 for USB redirection internal • TCP 9427 for MMR and CDR internal 						
<input type="checkbox"/>	Outbound port 443 for Horizon Cloud Node Appliance						
<input type="checkbox"/>	VMware Unified Access Gateway™ (formerly Access Point) requirements (optional, for internal and or external access) – For reference, see Deploying and Configuring VMware Unified Access Gateway . Additional ports may need to be enabled for external access.						

Horizon Cloud with On-Premises Infrastructure Deployment Workflow

After completing the preceding checklist, follow this suggested workflow to deploy and start administering the service.

1. Install and configure the vSAN Ready Node. (See [Horizon Cloud with On-Premises Infrastructure Installation and Configuration](#).)
2. Pair the vSAN Ready Node with the cloud. (See [Horizon Cloud with On-Premises Infrastructure Installation and Configuration](#).)
3. Perform a domain join/bind. (See *Register Active Directory* in [Horizon Cloud with On-Premises Infrastructure Administration](#).)
4. [Optional] Upload SSL certificates to ensure end users have a trusted connection to their environment. (See *Upload Certificates* in [Horizon Cloud with On-Premises Infrastructure Administration](#).)
5. Create a gold / master desktop image. (See *Create a Desktop Image* in [Horizon Cloud with On-Premises Infrastructure Administration](#).)
Note: It is recommended that you build a brand new Windows desktop image and use the VMware [OS Optimization Tool](#) to optimize your desktop image to get the best user experience and login times.
6. Capture AppStacks, a collection of applications on a VMDK or VHD used to deploy applications to end users. (See *Managing Applications for Deployment with AppCapture* for more information on using the AppCapture tool as described in [Horizon Cloud with On-Premises Infrastructure Administration](#).)
7. Set up User Environment Manager for end-user data, settings, and profile persistence. (See *Configure the Environment for End-User Data, Settings and Profile Persistence* in [Horizon Cloud with On-Premises Infrastructure Administration](#).)
8. Create a desktop service and assignments. (See *Desktop Assignment* in [Horizon Cloud with On-Premises Infrastructure Administration](#).)
9. Create application service and assignments. (See *App Assignment* in [Horizon Cloud with On-Premises Infrastructure Administration](#).)
10. Launch desktops and applications.

References

- [vSAN Ready Node documentation](#)
- [Horizon Cloud with On-Premises Infrastructure Installation and Configuration](#)
- [Horizon Cloud with On-Premises Infrastructure Administration](#)
- [Deploying and Configuring Access Point](#)
- [Global Support](#)

Horizon Cloud with On-Premises Infrastructure Setup Worksheet

VLAN B (DESKTOP)	IP ADDRESS	SUBNET	GATEWAY	VLAN ID	INTERNET
Horizon Cloud Node-SM1					
MANAGEMENT	IP ADDRESS	SUBNET	GATEWAY	VLAN ID	INTERNET
vCenter					
ESXi					
ESXi					
ESXi					
ESXi					
IPMI Interface					
IPMI Interface					
IPMI Interface					
IPMI Interface					
Horizon Air Link					
	(5 contiguous IPs)				
Horizon Cloud Node Appliance					
Horizon Cloud Node Appliance (Upgrade)					
Horizon Cloud Node Appliance (Future Use)					
Horizon Cloud Node Appliance (Future Use)					
Horizon Cloud Node Appliance (Future Use)					
DESKTOP	IP ADDRESS	SUBNET	GATEWAY	VLAN ID	INTERNET
	(3 contiguous IPs)				
Horizon Cloud Node Appliance					
Horizon Cloud Node Appliance (Future Use)					
Horizon Cloud Node Appliance (Future Use)					
DESKTOP	IP ADDRESS RANGE	SUBNET	GATEWAY	VLAN ID	INTERNET
Desktop Subnet (DHCP)					

VMWARE HORIZON CLOUD WITH ON-PREMISES INFRASTRUCTURE SETUP CHECKLIST

vSAN	IP ADDRESS	SUBNET	GATEWAY	VLAN ID	INTERNET
ESXi vSAN Interface					No
ESXi vSAN Interface					No
ESXi vSAN Interface					No
ESXi vSAN Interface					No
vMOTION	IP ADDRESS	SUBNET	GATEWAY	VLAN ID	INTERNET
ESXi vMotion Interface					No
ESXi vMotion Interface					No
ESXi vMotion Interface					No
ESXi vMotion Interface					No

