

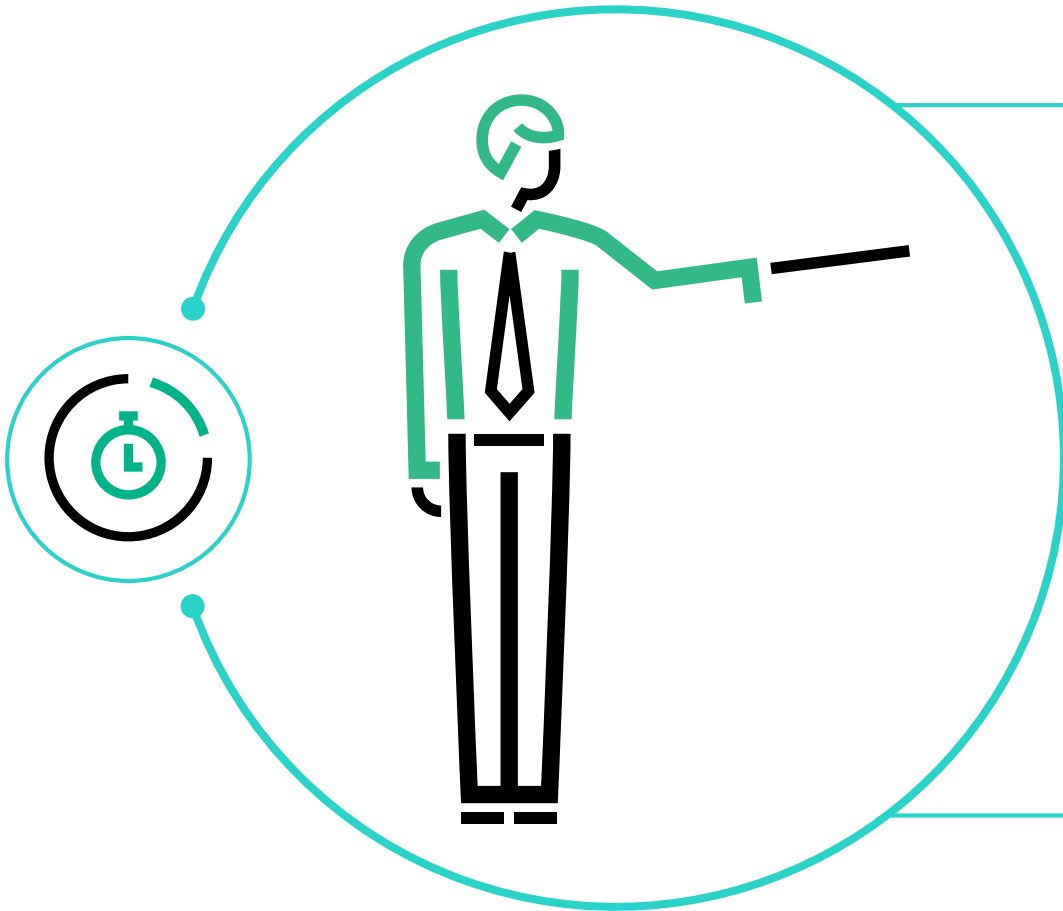
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Planning for Azure Stack Datacenter Integration

Patrick Lownds

September 25, 2018

Overview

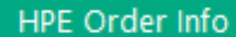
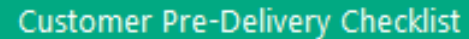
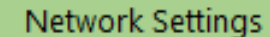


- A successful deployment of Azure Stack depends on the successful integration into the customers datacenter.
- The integration starts by the customer gathering the pre-deployment information in a Customer Deployment Worksheet (CDW).
- The completed CDW Excel spreadsheet is typically provided to HPE prior to the actual deployment.

Customer Deployment Worksheet

The Customer Deployment Worksheet (CDW) is an Excel workbook that initially contains four tabs

- HPE Order Information
- Customer Pre-Delivery Checklist
- Customer and Environment Information
- Network Settings

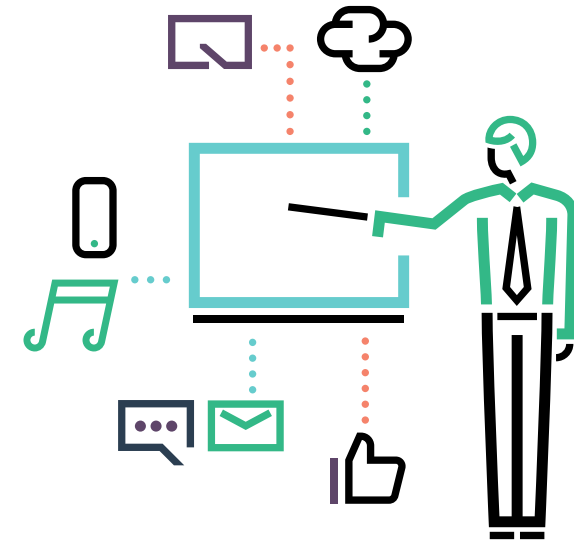
A horizontal bar representing an Excel tab with a light green background and a dark green border. The text "HPE Order Info" is centered in white.A horizontal bar representing an Excel tab with a light green background and a dark green border. The text "Customer Pre-Delivery Checklist" is centered in white.A horizontal bar representing an Excel tab with a light green background and a dark green border. The text "Customer and Environment Info" is centered in white.A horizontal bar representing an Excel tab with a light green background and a dark green border. The text "Network Settings" is centered in white.

Customer Deployment Worksheet

Customer and Environment Information

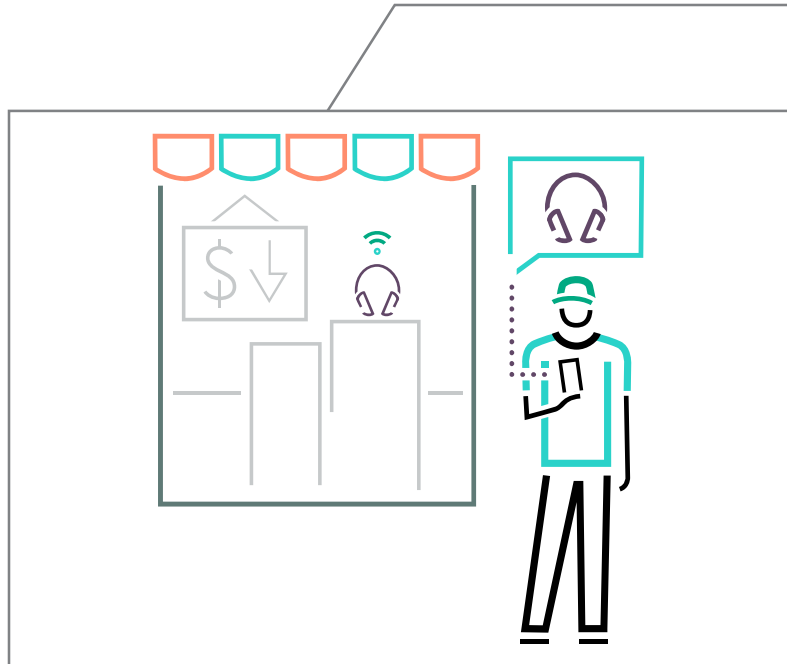
Prompts for the following types of information:

- Azure Stack Identity Store – Azure AD or AD Federation Services
 - Azure AD Information (applicable only for connected mode) Azure AD tenant name e.g. hpe.onmicrosoft.com + Azure environment e.g. AzureCloud
- Customer information
 - Company Name
 - Region Name (prefix to your external domain name suffix) e.g. BRA01
 - External Domain Name (name of the DNS namespace for all external endpoints and services with public facing VIPs) e.g. hpe.com
 - Private Domain Name (Azure Stack AD) e.g. hpecorp.net
 - Naming Prefix (for both virtual and physical machines)
- Environment information
 - Time Synchronization (single reliable time sources)
 - DNS Forwarder (upstream DNS server within your datacenter network)
 - Syslog Server (Syslog listener within your datacenter network)



Azure Stack Connection Type

Connected Mode – Azure AD



- When using Azure AD → best practice recommends the use of two Azure AD accounts
 - Can be the same account
 - Using the same account might be simpler but business needs might suggest using separate accounts.
 - Global admin account - only required for connected deployments (day zero account).
 - Billing account - required for both connected and disconnected deployments. Provided after successful deployment of Azure Stack during registration.

Customer Deployment Worksheet

Network Settings

Prompts for the following types of information:

- Number of Scale Units - **NEW**
- Total number of nodes within the Scale Unit
- Switch information
 - Switch vendor
 - TOR + BMC models
 - Associated firmware versions
- Border connectivity
 - Edge switch count (**NEW nomenclature**)
 - Edge Switch (required for BGP routing) and Software MUX BGP (Border Gateway Protocol) ASNs (Autonomous System Numbers)
- External network
 - External network (Public VIP) /24 network address range



Customer Deployment Worksheet (Cont)

Network Settings

Prompts for the following types of information:

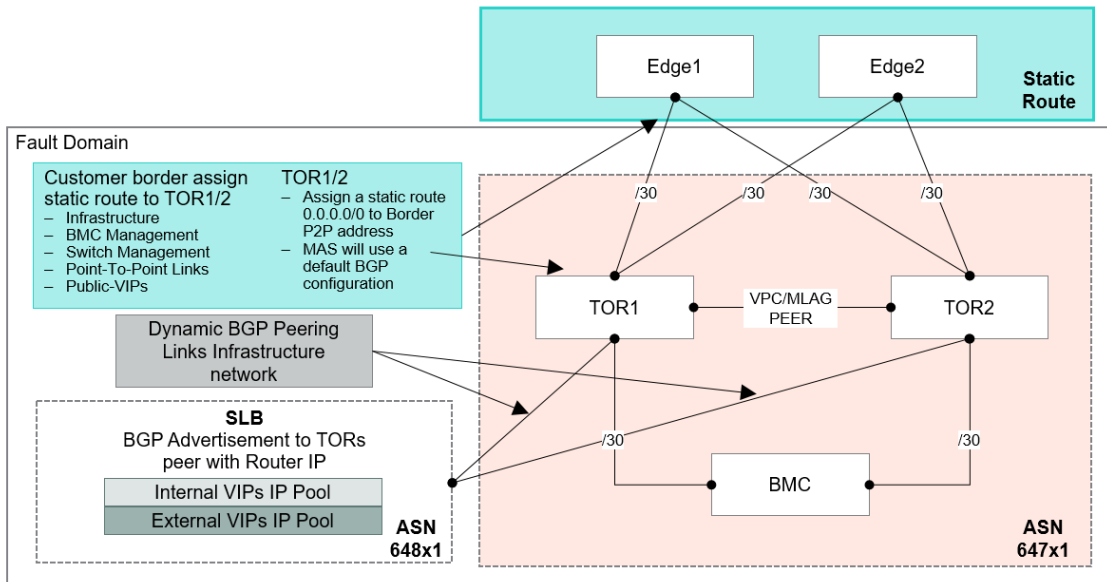
- Scale Unit 1
 - Node count (range currently between 4 – 16 nodes) **NEW previously up to 12 nodes**
 - BMC network /26 network address range (**NEW previously minimum /27**)
 - Storage network /24 network address range
 - Infrastructure network /24 network address range
 - Switch infrastructure network /26 network address range
 - TOR switch BGP ASN



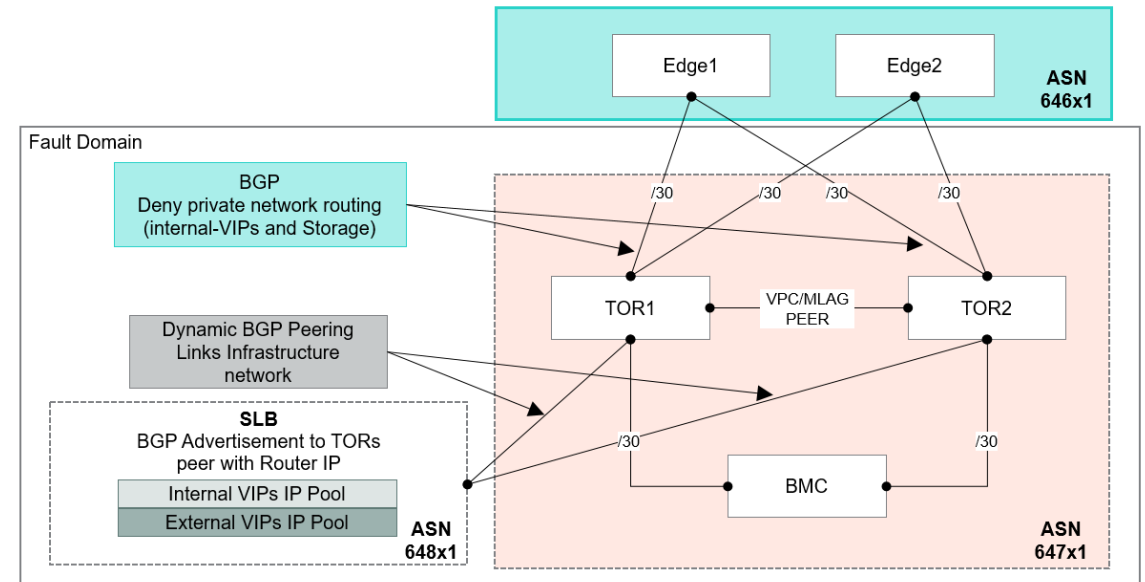
Customer Deployment Worksheet

Physical Network Design

Static routing



Dynamic routing



PKI Certificate Requirements

Mandatory Certificates

Certificates must be issued from either an internal Certificate Authority or a trusted Public Certificate Authority:

- The use of self-signed certificates are not supported.
- For deployment, you can use a single certificate covering all the required namespaces in the certificate's Subject Name and Subject Alternative Name (SAN) fields (best suited for a POC) or you can use individual certificates for each of the namespaces, which is considered a best practice.

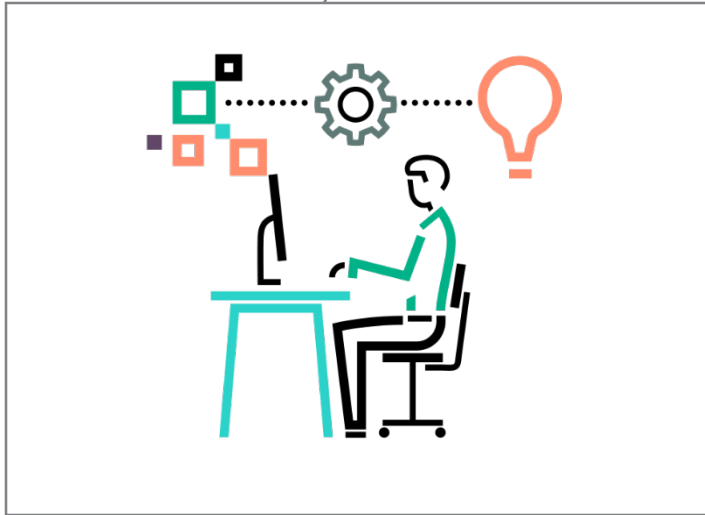
Purpose	Single Certificate (between 4 - 6)
Public Portal	portal.<region>.<fqdn>
Admin Portal	adminportal.<region>.<fqdn>
Azure Resource Manager Public	management.<region>.<fqdn>
Azure Resource Manager Admin	adminmanagement.<region>.<fqdn>
ADFS <i>(ADFS deployment option only)</i>	adfs.<region>.<fqdn>
Graph <i>(ADFS deployment option only)</i>	graph.<region>.<fqdn>

PKI Certificate Requirements (Cont)

Mandatory Certificates

Purpose	Wildcard Certificate (7)
ACS Blob	*.blob.<region>.<fqdn>
ACS Table	*.table.<region>.<fqdn>
ACS Queue	*.queue.<region>.<fqdn>
KeyVault	*.vault.<region>.<fqdn>
KeyVaultInternal	*.adminvault.<region>.<fqdn>
Admin Extension Host (NEW - introduced in build 1808)	*.adminhosting.<region>.<fqdn>
Public Extension Host (NEW - introduced in build 1808)	*.hosting.<region>.<fqdn>

Before Deployment



- Within your wider datacenter network:
 - Azure Stack requires Transparent Proxy access. Here traffic meant for a proxy is directed to it via routing (no operating system or application level configuration occurs). You can daisy chain up to a regular proxy.
 - Connected deployments require access to the Internet. Network Address Translation (NAT) is the recommended method to allow this to occur.
 - Microsoft recommends the use of a firewall device to help secure Azure Stack. Microsoft has published a defined set of firewall rules.
- Validate your setup with the Azure Stack Readiness Checker Tool → used to create a CSR (Certificate Signing Request), validate PKI certificates and validate deployment plus billing accounts.

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Thank you

Contact information