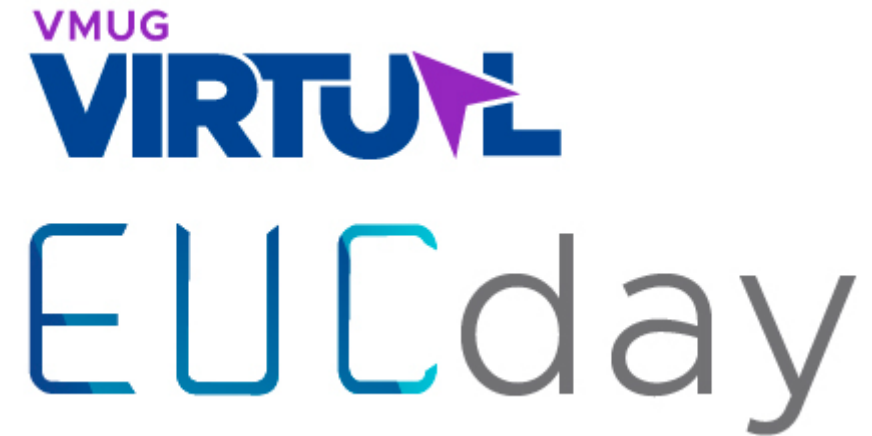


What Omnissa Horizon and Citrix CVAD Customers Need to Know about Broadcom Licensing Changes



Hit me up with questions you might have!

Matt Heldstab

Systems Engineer – Minnesota State Colleges and Universities

Current VMUG Vice President

Contact: matt@tcwd.net -- @mattheldstab on TwiX

LinkedIn – <https://www.linkedin.com/in/matt-heldstab-27387a6>

Broadcom Licensing Information – View From a Customer



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Broadcom Licensing Information – View From a Customer



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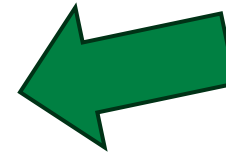
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Items to consider:

- I would like this to be interactive
- I am not a Broadcom or Omnissa employee
- Discussions around the new licensing types
 - VCF (VMware Cloud Foundation)
 - VVF (VMware vSphere Foundation)
 - VVF for VDI
 - VVS (VMware vSphere Standard)
 - VVEP (VMware vSphere Essentials Plus) – Won't cover this in depth as the use-case is minimal
- Perpetual vs. Subscription
- Socket vs. Core focused (**minimum of 16 cores per socket**)
- Impact to VMware Horizon / Citrix CVAD customers



I will be using these abbreviations quite a bit during the presentation

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Other Considerations

- Impact to VMUG Advantage and EvalExperience 365-day Evaluation Keys
- Ways to save money
 - Some of these methods will be geared to SMB / Commercial customers with small-to-medium sized environments
- Preparing for the future (Infrastructure Planning)
- 3rd Party Software Licensing Constraints and how they might impact your vSphere licensing from here on out

Broadcom Licensing Information – View From a Customer

Level-set -- VMware Cloud Foundation – YOU GUYS KNOW THE STORY

- VCF is a best-in class suite of products that comprise the Software-Defined Datacenter
- VCF will absolutely transform your datacenter, especially if you need to
 - Streamline the deployment of VMware products
 - Eliminate configuration inconsistencies that come with manual deployments
 - Standardize how infrastructure is deployed
 - Bring cloud methods into your on-premises datacenter
 - Integrate with other VMware Cloud products such as VMC on AWS, AVS, OCVS, GCVE
- If your organization can afford VCF, you won't be sorry. Just understand that the technology is more expensive than other editions of vSphere.
- This presentation will discuss what some of the differences are, and compare it to other products that are available.

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VCF

VMware Cloud Foundation

VCF

The diagram illustrates the VMware Cloud Foundation (VCF) architecture, organized into several layers and components:

- SDDC Manager** (Side Panel): A vertical bar on the left representing the management layer.
- Aria Suite Enterprise** (Top Layer): The highest management layer, containing:
 - Aria Suite Lifecycle** (Central Component): The core lifecycle management component.
 - Aria Automation** (Left Component): Automation for infrastructure provisioning.
 - Aria Operations** (Middle Component): Operations for monitoring and management.
 - Aria Operations for Logs** (Right Component): Log management and analysis.
- Infrastructure Components** (Middle Layer):
 - vSphere Enterprise Plus** (Left): Contains **vCenter Standard** and **vSphere w/Tanzu**.
 - NSX Enterprise Plus** (Center): Contains **NSX Networking**.
 - vSAN Enterprise** (Bottom Center): Contains **vSAN (1 TiB/Core)**.
 - AON Enterprise** (Right): Contains **Aria Operations for Network**.
 - HCX Enterprise** (Bottom Right): Contains **HCX**.
 - Data Services Manager** (Bottom Right): Contains **DSM**.
- Support and Services** (Right Side):
 - Activation & Upgrade Service** (Yellow Bar): Service for activating and upgrading the VCF environment.
 - Select Support (SAM add-on recommended)** (Yellow Bar): Support service for the VCF environment.

The diagram illustrates the VMware Add-Ons ecosystem, organized into five main categories, each represented by a blue-bordered box. The services are listed within these boxes, with some indicating their availability status.

- VMware Cloud Add-Ons:**
 - VMware VCDR + RWR
 - VMware Cloud DR VCDR
 - VMware Ransomware Recovery RWR
 - VMware Site Recovery Manager SRM
 - vSAN Enterprise vSAN
- VMware Security Add-Ons:**
 - VMware FW + ATP
 - VMware Firewall
 - Distributed FW
 - Gateway FW
 - Security Intelligence
 - Container Security
 - VMware ATP
 - IDS/IPS
 - Malware Prevention
 - NTA/NDR
 - VMware Load Balancer
 - Advanced & Global LB
 - L7 App Security
 - Kubernetes Ingress
- Tanzu Add-Ons:**
 - Tanzu Mission Control
 - TMC (SaaS)
 - TMC (Self-Managed)
 - Tanzu Spring Runtime TSR
 - Tanzu Application Platform
 - TAP
 - TSR
- VMware Tanzu Intelligence Services Add-Ons:**
 - VMware Tanzu Intelligence Services
 - Tanzu Guardrails Ent TGE
 - Tanzu Guardrails Adv TGA
 - Tanzu Ops for Apps TOA (Wavefront)
 - Tanzu Insights TI
 - Tanzu Cloudhealth Ent TCE
 - Tanzu App Catalog TAC
- VMware Private AI Foundation Add-Ons:**
 - VMware Private AI Foundation
 - COMING SOON

On the right side of the diagram, there are five additional service categories, each in a blue-bordered box:

- VMware Learning Education Services**
- Support Services**
- Support Account Manager**
- Support Services**
- Dedicated Technical Support Engineer**
- Support Services**
- Technical Adoption Management**
- Solution Guidance & Planning, Peer Insights**
- Professional Services**
- Pro Cloud & Consulting Services**

<https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/docs/vmw-datasheet-vsphere-product-line-comparison.pdf>

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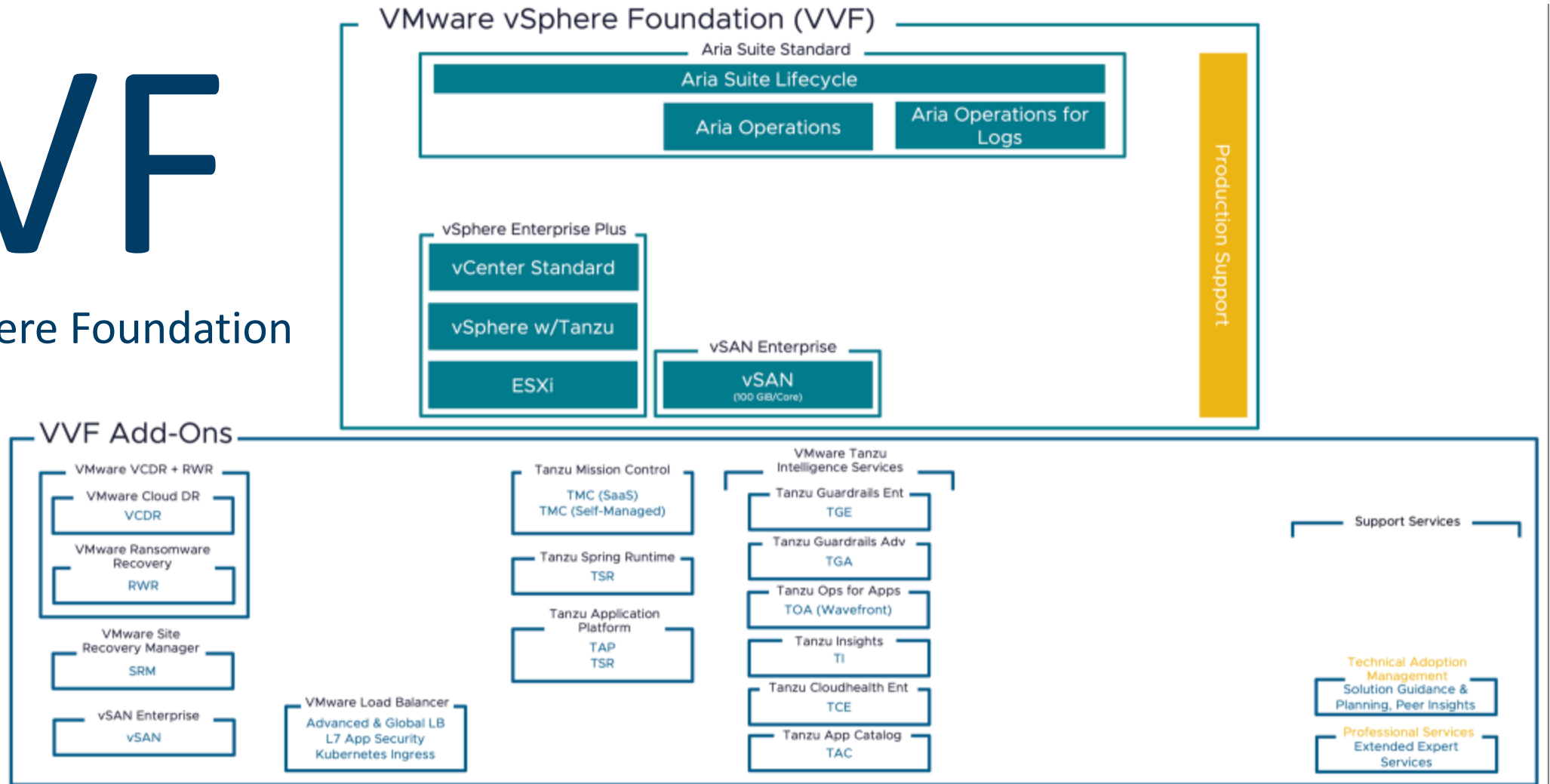
VMware vSphere Foundation

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<https://williamlam.com/2024/01/whats-in-the-new-vmware-vsphere-foundation-vvf-and-vmware-cloud-foundation-vcf-offers.html>

VVF

VMware vSphere Foundation



Entire feature list available at:

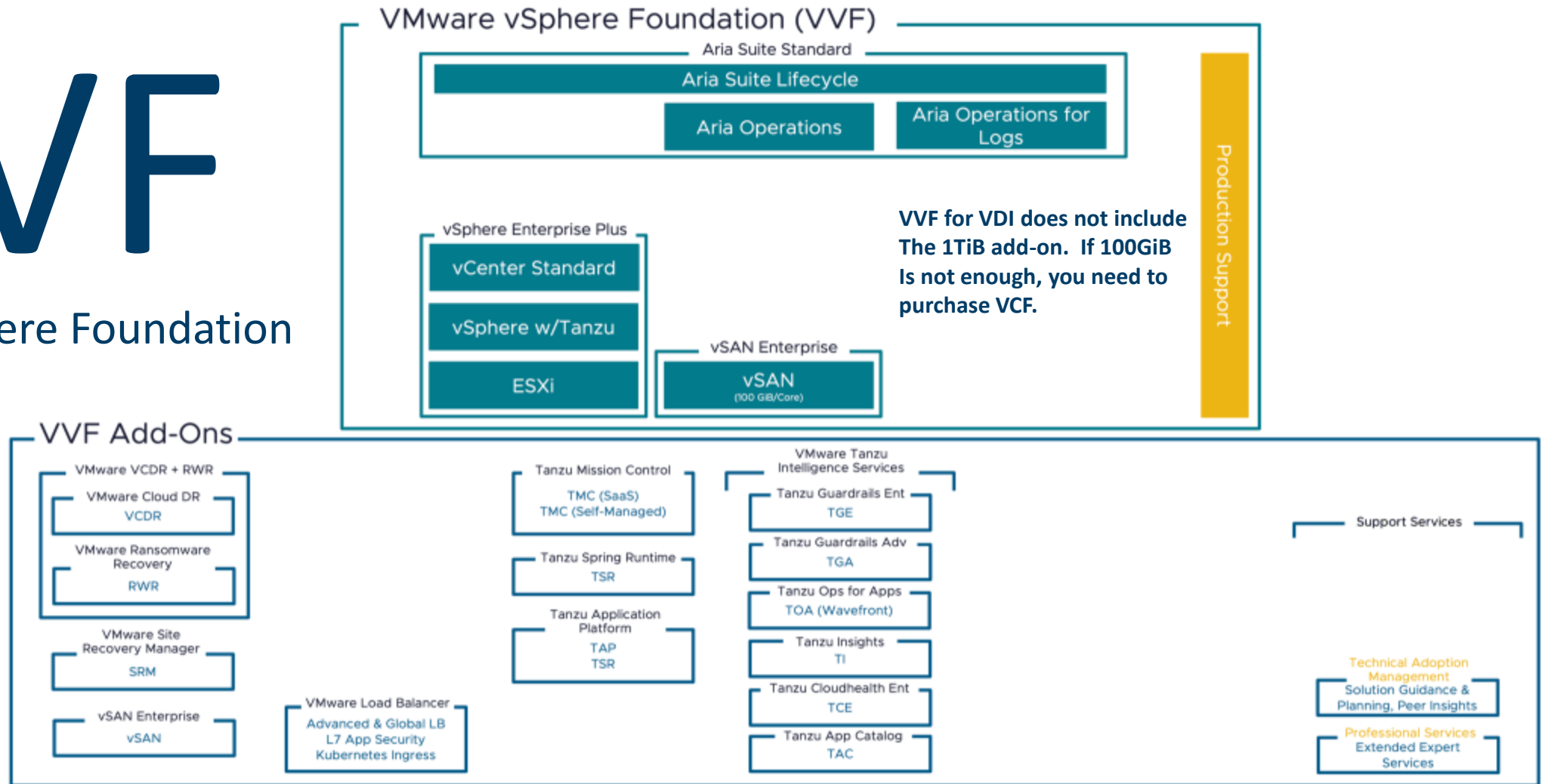
<https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/docs/vmw-datasheet-vsphere-product-line-comparison.pdf>

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VVF

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VVF for VDI

VMware vSphere Foundation
for Virtual Desktop Infrastructure

Broadcom Licensing Information – View From a Customer

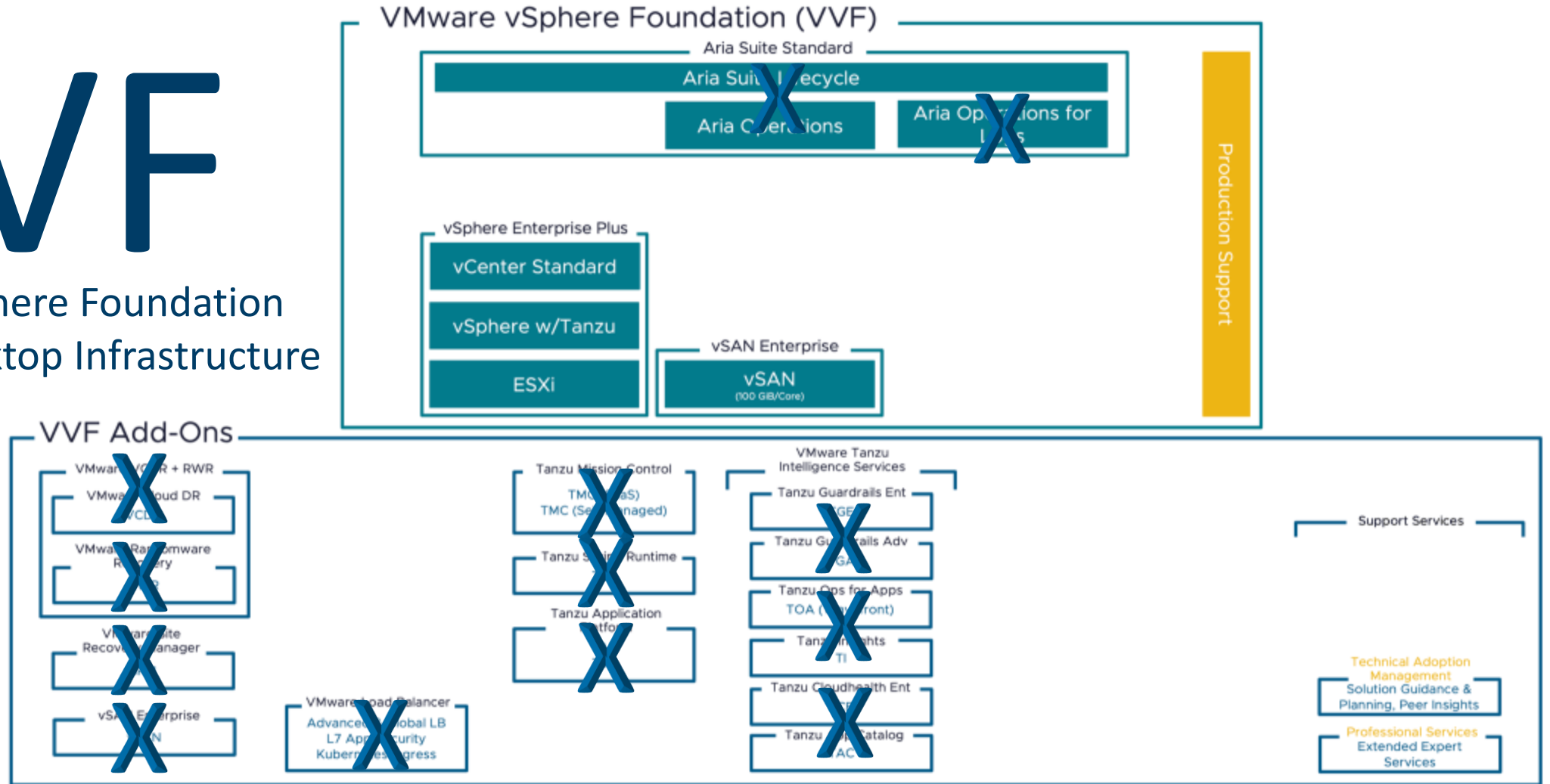
VMware vSphere Foundation for Virtual Desktop Infrastructure

- Replacement license for vSphere for Desktops
- Must be an Omnissa Horizon customer
- Other EUC solutions such as CVAD running vSphere must leverage VCF/VVF
- VVF for VDI Keys will be in your Omnissa customer portal

Broadcom Licensing Information – View From a Customer

VVF

VMware vSphere Foundation
for Virtual Desktop Infrastructure



<https://www.omnissa.com/setting-the-record-straight-euc-to-continue-to-offer-horizon-with-vsphere-and-vsan/>
https://ftpdocs.broadcom.com/cadocs/0/contentimages/VVF_VDI_SPD_July2024.pdf

Broadcom Licensing Information – View From a Customer

2. USE RIGHTS AND LIMITATIONS.

License Metrics

- VMware vSphere Foundation for VDI ("VVF for VDI") is subscription software licensed on a per User license metric.
- **Component Specific License Notes.** The following table describes additional component specific license entitlement rights and limitations of VVF for VDI:

#	VVF for VDI Component	Metric Entitlement	Entitlement Details
1	vSphere Foundation License Manager for VDI	User	The vSphere Foundation License Manager for VDI component is included in VVF for VDI with the sole purpose of facilitating license management for the VVF for VDI bundle. It is not meant to provide any intrinsic management features to end customers.
2	vSAN	100 GiB	The 100 GiB vSAN trial capacity included in VVF for VDI is tied to the VVF for VDI cores that are configured for vSAN and cannot be aggregated. Once customers exceed the trial capacity, they must license the entire raw storage claimed in the vSAN cluster starting from 0.

Once customers exceed the trial capacity, they must license the entire raw storage claimed in the vSAN cluster starting from 0. 1 TiB add-ons Are not available, I was told you need to purchase VCF.

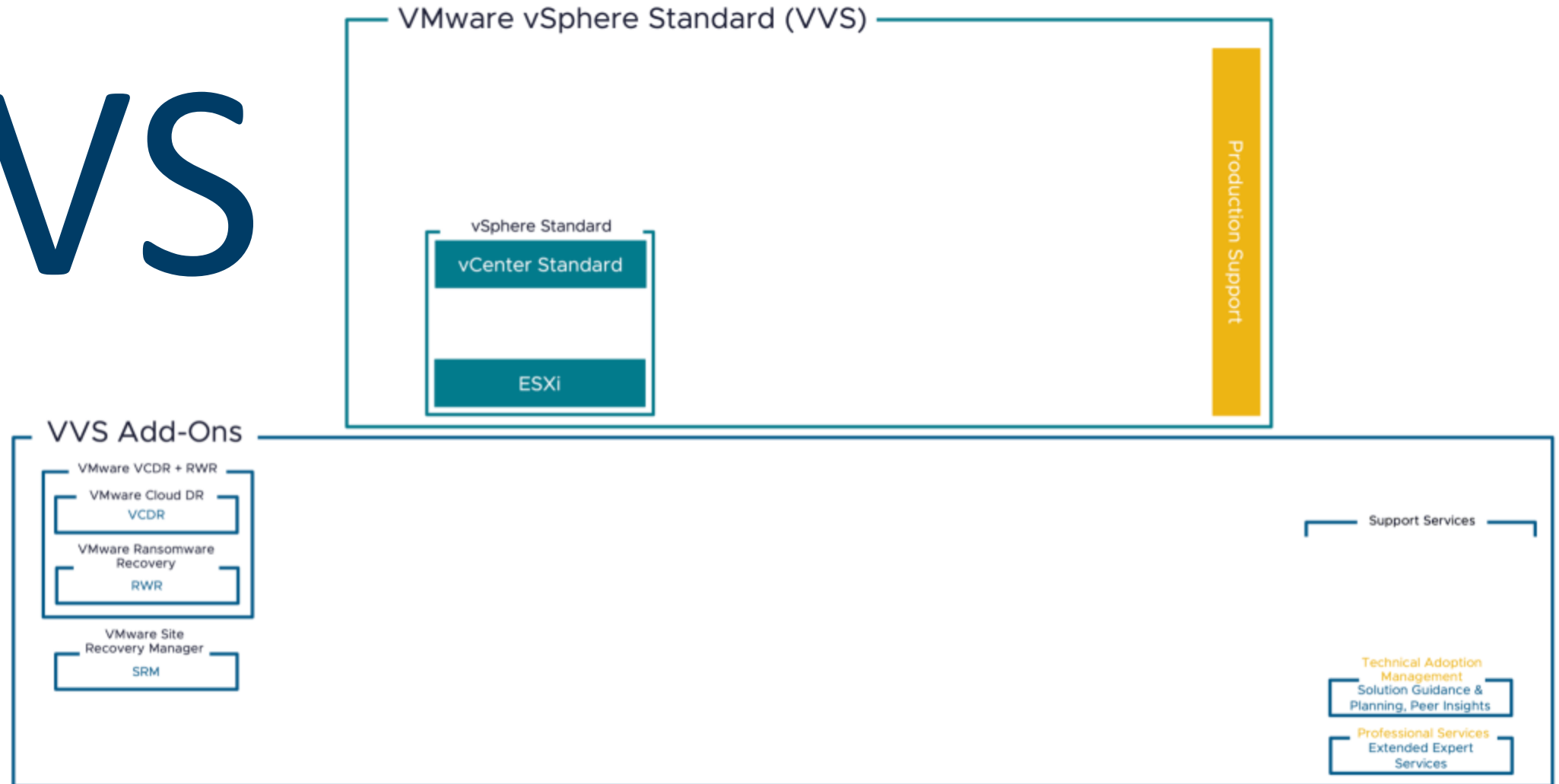
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VVS

VMware vSphere Standard

Broadcom Licensing Information – View From a Customer

VVS



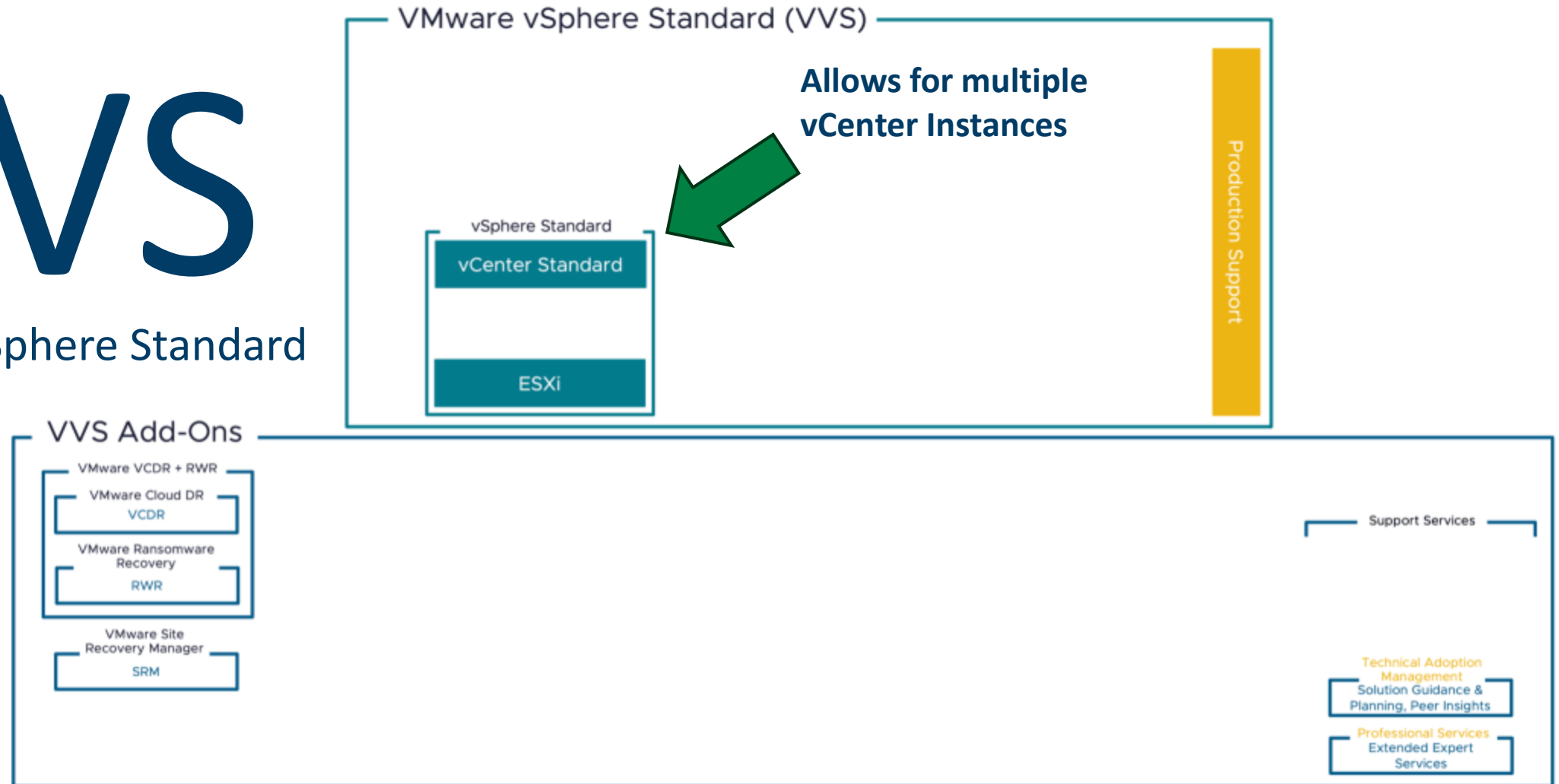
Entire feature list available at:

<https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/docs/vmw-datasheet-vsphere-product-line-comparison.pdf>

Broadcom Licensing Information – View From a Customer

VVS

VMware vSphere Standard



Entire feature list available at:

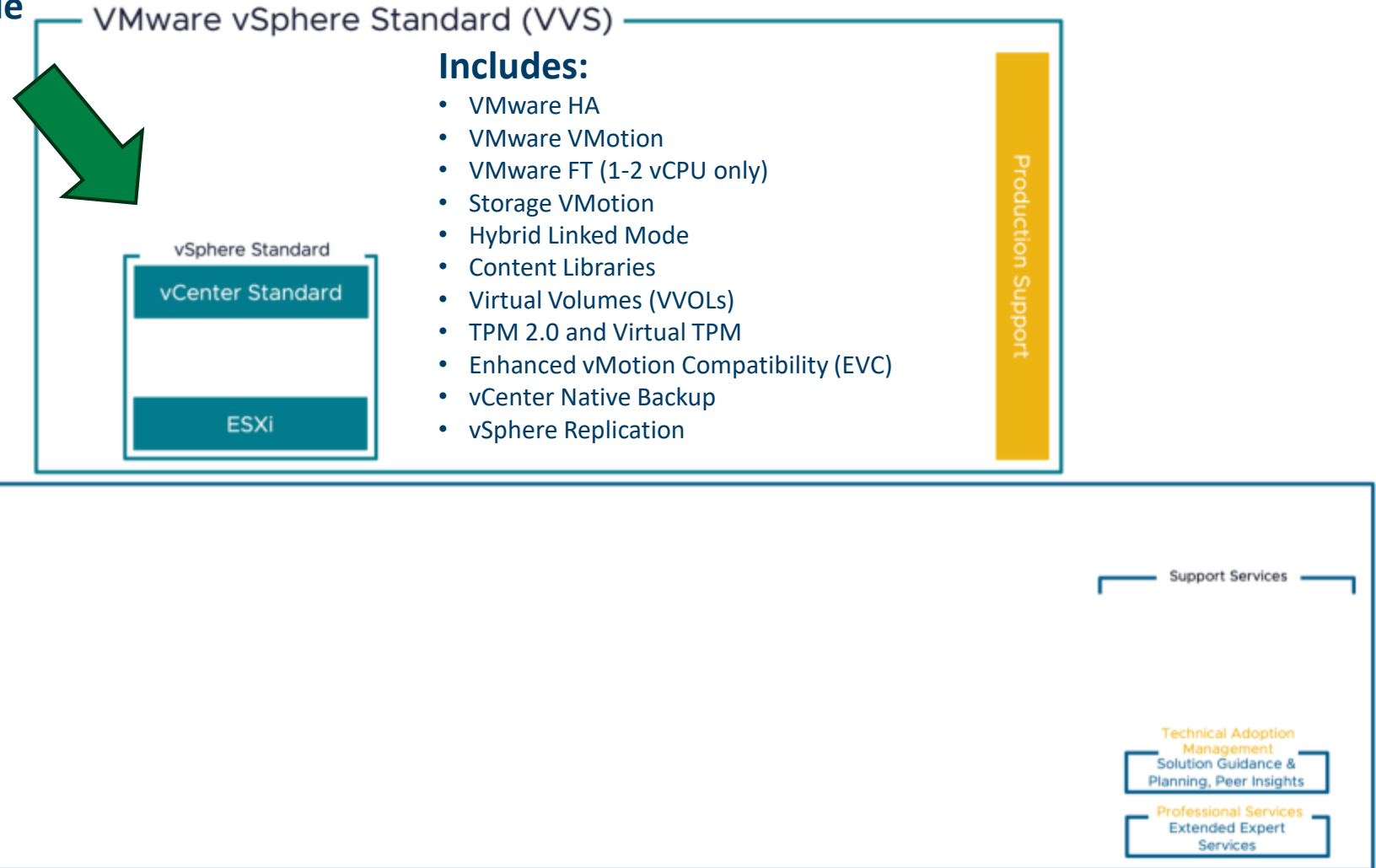
<https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/docs/vmw-datasheet-vsphere-product-line-comparison.pdf>

Broadcom Licensing Information – View From a Customer

Allows for multiple
vCenter Instances

VVS

VMware vSphere Standard



Entire feature list available at:

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Broadcom Licensing Information – View From a Customer

Allows for multiple
vCenter Instances

VVS

VMware vSphere Standard

VMware vSphere Standard (VVS)

Includes:

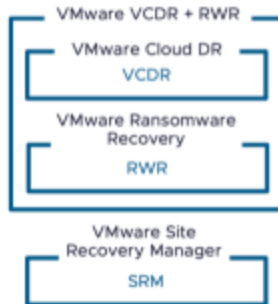
- VMware HA
- VMware VMotion
- VMware FT (1-2 vCPU only)
- Storage VMotion
- Hybrid Linked Mode
- Content Libraries
- Virtual Volumes (VVOLs)
- TPM 2.0 and Virtual TPM
- Enhanced vMotion Compatibility (EVC)
- vCenter Native Backup
- vSphere Replication

Production Support

Does not include:

- Distributed Switches
- Distributed Resource Scheduler (DRS)
- VM Encryption
- Storage DRS
- Storage and Network I/O Controls
- Host Profiles
- Distributed Power Management
- Proactive HA
- vSphere Persistent Memory

VVS Add-Ons



Support Services



Entire feature list available at:

<https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/docs/vmw-datasheet-vsphere-product-line-comparison.pdf>

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- **vSphere ROBO Licensing has not returned**
 - Formerly sold in 25 VM or 100 VM packs
 - Allowed unlimited sockets of vSphere that shared the VM packs
 - Used in small-footprint ROBO solutions
 - VSAN and vRealize Operations also had ROBO SKU's that are no longer available
 - vSphere ROBO Advanced contained a similar feature set to vSphere Enterprise Plus
- ***NEW*** VCF Edge allows edge deployments with as few as 2 nodes
<https://www.vmware.com/docs/vmware-cloud-foundation-edge-datasheet>
 - 2 node deployment requires external storage (no vSAN with witness)
 - 3+ nodes can use vSAN

Broadcom Licensing Information – View From a Customer

- VMware's Enterprise License Agreement Changes
 - Past ELA negotiations usually centered around purchasing new software and not renewing what you have.
 - Subscription plans are all new so the game has changed
 - Historically, an ELA has a stated out year which includes a pro-rated year after your ELA has expired.

EXAMPLE:

Customer has a 4-year ELA -- \$4 Million over 4 years (January 2021 thru January 2025)
Normally, a 5th year "Stated out year" of \$1 million from January 2025 thru January 2026 would be available.

Broadcom has canceled all "Stated out years" so customers cannot use their perpetual licensing for an additional year.

Broadcom Licensing Information – View From a Customer

If I purchase VCF, do I need to run the entire Software-Defined Datacenter?

NO. VCF Cloud Builder doesn't even have a license key in SDDC Mgr. Purchasing VCF gives you the software keys for products such as:

- vSphere
- vCenter
- NSX-T
- vSAN (with up to a 1TiB per physical core entitlement)

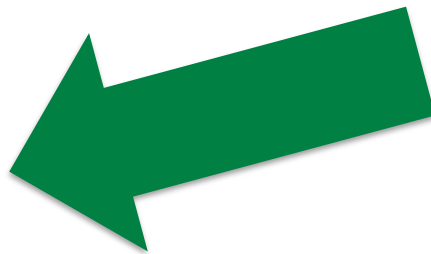
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- vSphere
- vCenter
- NSX-T
- vSAN (with up to a 1TiB per physical core entitlement)

Customers with NSX-T deployed
will need to license all VDI hosts
for VCF



Broadcom Licensing Information – View From a Customer

If I purchase VCF, do I need to run the entire Software-Defined Datacenter?

	B	C	D	E	F	G	H	I	J
1									
3	<p>Instructions: Use the <i>Deployment Parameters</i> tab to input configuration details for physical infrastructure and the components used to implement the Management Domain.</p> <ul style="list-style-type: none">- Grey cells are for information purposes and cannot be modified.- Red cells mean the input data is either missing and mandatory or some type of validation of the input data has failed.- Yellow cells indicate input data, default values are included to help illustrate the formatting to be used and align to the VMware documentation. If a value is not required enter 'n/a', if it turns red then its mandatory.								
5	Existing Infrastructure Details			Infrastructure		Value		DNS Zone	
6	<input checked="" type="checkbox"/>	DNS Server and DNS Zone Defined		DNS Server #1	192.168.202.1		DNS Zone Name		vmuglab.local
7	<input checked="" type="checkbox"/>	NTP Servers		DNS Server #2	192.168.202.2				
8				NTP Server #1	192.168.202.1				
9				NTP Server #2	192.168.202.2				
10									
11	License Keys			Use Keyless Licensing		No		Enable Customer Experience Improvement Program ("CEIP")	
12	<input checked="" type="checkbox"/>	ESXi License Key Defined		Licensing		License Key		Enable FIPS Security Mode on SDDC Manager	
13				ESXi	7P		M		
14				vSAN	6M		M		
15				vCenter Server	J		H		
16				NSX	K		M4		
17									
18	vSphere Infrastructure			vCenter Server		Hostname		IP Address	
19	<input checked="" type="checkbox"/>	Default Password for ESXi Hosts Defined		vCenter Server Hostname and IP Address		vcf-vcenter	192.168.201.25		
20	<input checked="" type="checkbox"/>	vCenter Server Passwords Defined		vCenter Server Appliance Size (Default Small)		tiny			
21	<input checked="" type="checkbox"/>	vCenter Server - Hostname and Static IP Defined		vCenter Server Appliance Storage Size		default			
22									
				vSphere Datastore					
				vSAN Datastore Name		nestVSAN			
				Enable vSAN Deduplication and Compression		No			
				Enable vSAN-ESA		No			

Broadcom Licensing Information – View From a Customer

How do I know how many cores and/or vSAN entitlements I need to buy in my next agreement?

Updated Inventory & Calculator Scripts for counting Cores/TiBs for VMware Cloud Foundation (VCF) and VMware vSphere Foundation (VVF)

02.12.2024 by William Lam // 2 Comments

Here are two new tools to help our users understand and calculate the required subscription capacity for the new **VMware Cloud Foundation (VCF) and VMware vSphere Foundation (VVF) offerings**, which are licensed based on physical CPU Cores for compute and total raw physical storage (TiBs) for vSAN.

Inventory Script

The PowerCLI script provided in [VMware KB 95927](#) is designed to help users inventory their existing vSphere environment (read-only account is sufficient) to assess the required VCF or VVF subscription capacity for compute and/or vSAN. The script has also been enhanced to incorporate the upcoming 100GiBs of vSAN storage entitlement for each VVF core that is provisioned to a vSAN cluster as well as the latest pricing and packaging for both VCF and VVF. For more details on how to download and use the inventory script, please check out the KB for more information.

Note: Make sure you are using the latest version of the script which had a minor update on 02/14/2024

```
PS /Users/wlam/Desktop> Get-FoundationCoreAndTiBUsage -DeploymentType VCF
Querying all ESXi hosts, this may take several minutes...
Sizing Results for VMware Cloud Foundation (VCF) Instance:
Compute Usage Information

```

CLUSTER	VMHOST	NUM_CPU_SOCKETS	NUM_CPU_CORES_PER_SOCKET	FOUNDATION_LICENSE_CORE_COUNT
	esx-standalone-01	2	4	32
DB Cluster	esx-db-01	1	6	16
DB Cluster	esx-db-02	1	6	16
DB Cluster	esx-db-03	1	6	16
ML Cluster	esx-ml-01	2	20	40
ML Cluster	esx-ml-02	2	20	40
ML Cluster	esx-ml-02	2	20	40
ML Cluster	esx-ml-02	2	20	40

```

vSAN Usage Information

```

CLUSTER	NUM_HOSTS	NUM_CPU_SOCKETS	NUM_CPU_CORES	FOUNDATION_LICENSE_CORE_COUNT	ENTITLED_VSAN_LICENSE_TIB_COUNT	REQUIRED_VSAN_TIB_CAPACITY	VSAN_LICENSE_TIB_COUNT
DB Cluster	3	3	18	48	48	25.178	-22.000
ML Cluster	4	8	160	160	160	17.893	-142.000

```

Total Required VCF Compute Licenses: 240
Total Required vSAN Add-on Licenses: -164

```

Broadcom Licensing Information – View From a Customer

Impacts to Horizon Environments

NOTE: Broadcom divestment their EUC business to the Private Equity Firm KKR creating the company OMNISSA.

Currently, partners are working with Broadcom's EUC Division to provide renewals for expiring customers. This includes renewed licenses for **VVF for VDI, vCenter and vSAN**.

Customers who processed renewals before May 12th would have received entitlements to vSphere for Desktops and vSAN with an unlimited entitlement. The subsequent agreement will be subject to the 100GiB per core limit for vSAN raw capacity.

Customers requiring > 100GiB per core of vSAN or NSX in their VDI cluster will need to purchase VCF.

Other EUC solutions such as Cloud Software Group's Citrix Virtual Apps and Desktops (CVAD) leverage vSphere for Desktops at a cost.

Broadcom Licensing Information – View From a Customer

Impacts to Horizon Licenses within VMUG Advantage and EvalExperience

- NOTE: Broadcom has divested the EUC Division

VMUG is in discussions with Omnissa regarding the inclusion of Horizon within VMUG Advantage to assist Horizon Customers in testing VDI solutions.

VMUG is discussing the feasibility of adding other 3rd party solutions to EvalExperience. If you have any requests/recommendations, please reach out to memberservices@vmug.com

Broadcom Licensing Information – View From a Customer

Impacts to Licensing Purchases from a Solution like Dell/EMC VxRail or vSAN Ready Nodes

- Scenario: Customer purchased a solution from an OEM that included vSAN licensing but not vSphere licensing
- Customer uses perpetual keys to license vSphere, but has vSAN licensing paid through 2027

A large partner contact told me the following:

Any perpetual keys for a solution such as vSAN will work with either VCF, VVF or VVS until the solution licenses expire.

Once the vSAN solution licenses expire, vSAN entitlement will need to follow VCF or VVF rules.