

A FUJITSU VMware alapú megoldásainak bemutatása

FUJITSU
Szakmai ügyfél rendezvény

Taál Péter – Head of Presales

FUJITSU-PUBLIC



FUJITSU | vmware[®]
by Broadcom

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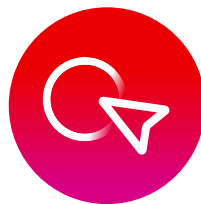
Hatalmas elvárások



**Gyors piacra lépés,
gyorsuló innováció**



**Tervezett, mért IT
fogyasztás**



**One-Click
Simplicity**



**Céges és állami
szabályzások**

“Új üzleti bevételi
forrást indítottunk,
és az éles indítás
percek kérdése volt.

“Csak azt használok
és fizetem, amire
szükségem van, csak
akkor, amikor
szükségem van rá.

“Munkatársaim már
nem töltenek időt
alacsony szintű
infrastruktúra-
kezeléssel.

“Az adatkezelés
biztosítása
kulcsfontosságúvá
vált vállalkozásunk
számára.

“A felhő egy élmény, és nem végcél.

Tervezzén az optimumra...

... a hibrid megoldással, ahogy ezek a vállalkozások már megtették.

A múltban



Most



Cloudba költözött
2016-ban

A skálázhatóság
miatt a felhőre
építkezett

Mindent a felhőre
terveztek, hogy
tudjanak növekedni

Sikerüket a felhő
skálázhatóságának
és
hordozhatóságának
tudják be

Jelentős
szolgáltatás-
kieséseket
szenvedett el, ami
az ügyfélélményre
negatív hatással
volt

Szükséges volt az
infrastruktúra
globális szintű
bővítése

Netflix

A személyre szabott
felhasználói felület
felhőben fut, a
tényleges videó
saját
adatközpontban
van.

Dropbox

Az USA-ban saját
adat-központot
használnak, míg
Európában
továbbra is publikus
felhőben
üzemelnek

Uber

Hibridként fut a
növekvő informatikai
terhelés, a magas
rendelkezésre-állás,
valamint a GDPR
megfelelés
biztosítására

Airbnb

Hibrid módon
működnek, mert a
felhő nem elég
költséghatékony, ha
a terhelés nem
skálázódik gyorsan
fel és le

RBS

Hibridre váltottak a
szolgáltatások
zavartalan
biztosítása
érdekében

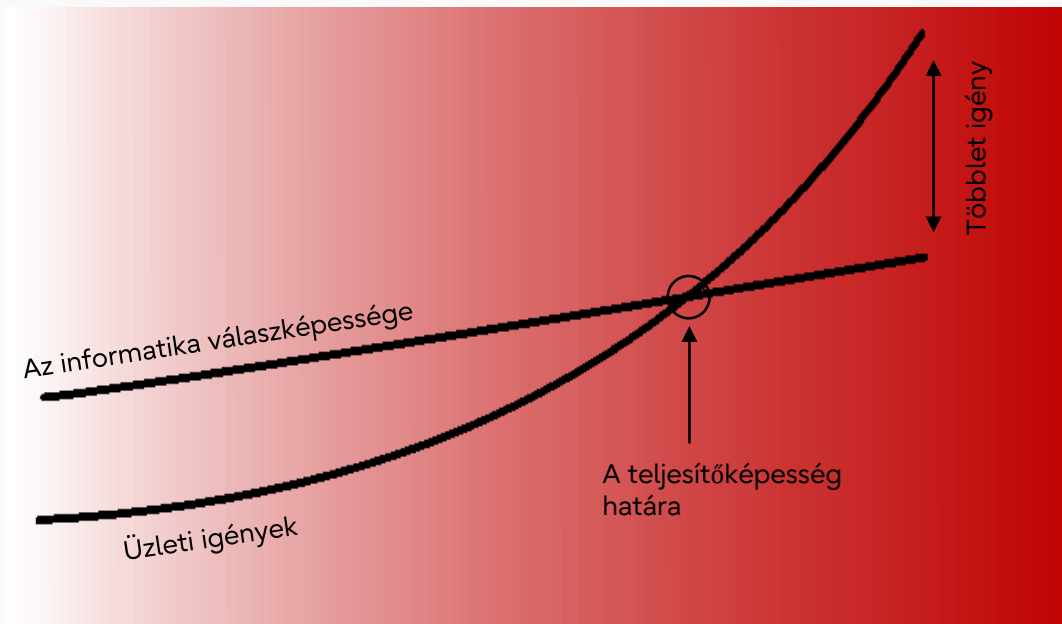
Sephora

A maximális
rendelkezésre-állás
érdekében hibrid
rendszer
üzemeltetnek

Elavult infrastruktúra Az elavult informatikai rendszerek nem rendelkeznek a modern üzleti műveletek támogatásához szükséges agilitással és skálázhatósággal, ami késedelmeket és hatékonyságvesztést eredményez.

Az IT környezetek növekvő összetettsége A hibrid, többfelhős és helyszíni környezetek kezelése működési kihívásokat teremt, ami megnehezíti a sebesség és teljesítmény fenntartását.

Erőforrás korlátok Korlátozott költségvetések, munkaerőhiány és növekvő készséghiány akadályozza az IT csapatokat abban, hogy az üzleti igényeknek megfelelő ütemben nyújtsanak szolgáltatásokat és megoldásokat.

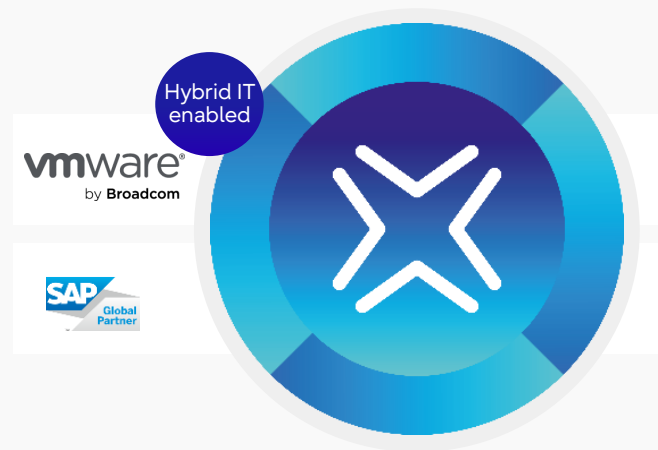


Milyen messze van vállalata a VÖRÖS ZÓNÁTÓL?

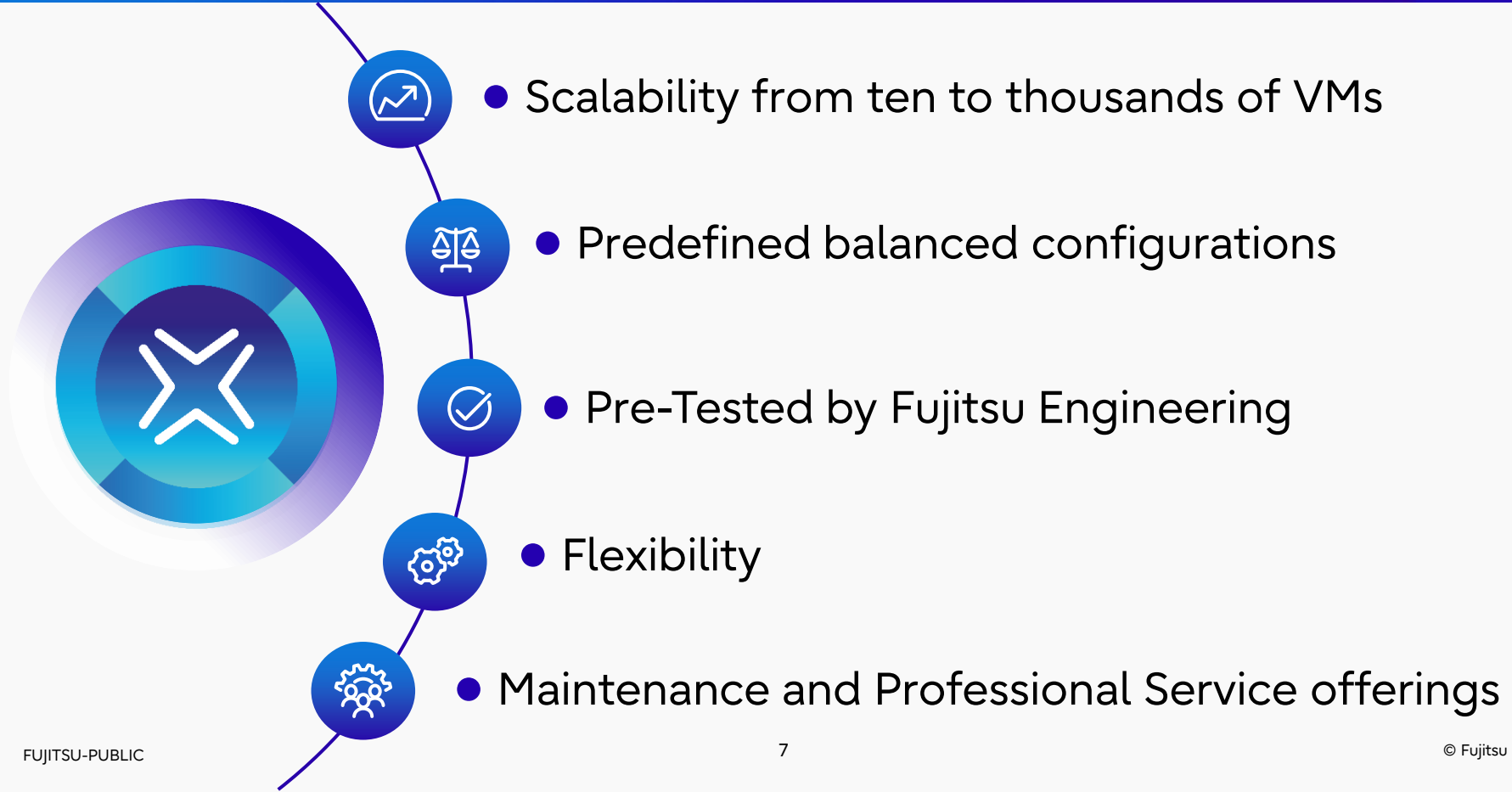
Javítsa az informatika válaszüdejét - Legyen saját felhőszolgáltatója

Valósítson meg egy agilis, szoftveresen definiált privát felhő infrastruktúrát, amely ötvözi a nyilvános felhő skálázhatóságát és rugalmasságát a helyszíni megoldások biztonságával és irányításával.

- **Hyper-Converged**
 - PRIMEFLEX for VMware vSphere Foundation*
 - PRIMEFLEX for VMware Cloud Foundation – coming soon
- **Converged**
 - PRIMEFLEX for VMware vSphere Foundation*
- **Solutions building on PRIMEFLEX**
 - SAP HANA on PRIMEFLEX for VMware vSphere Foundation HCI

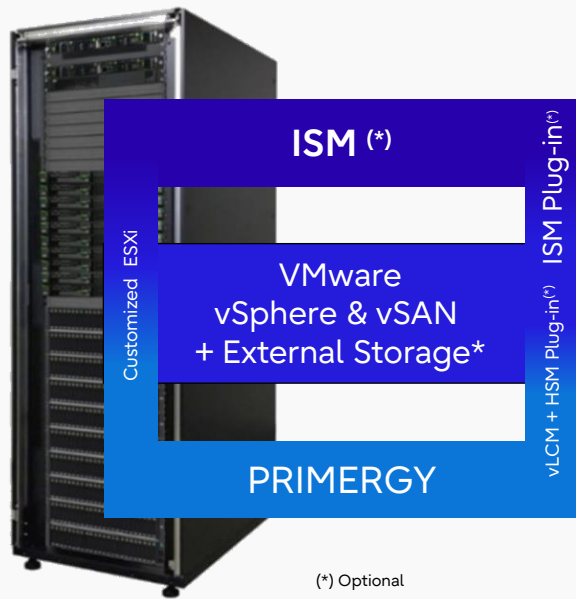


*PRIMEFLEX for VMware vSphere Foundation caters for both Hyper-Converged and Converged Infrastructures



- PRIMEFLEX is your pre-designed solution:

- Fujitsu PRIMERGY servers
- Takes full advantage of the standard VMware Hypervisor and SDS technology
- Optional: Our strong management tool Fujitsu Infrastructure Manager (ISM)



Key Benefits

Rapid

The system is pre-designed and verified. Implementation Packs to build a reliable fully functional infrastructure.

Flexible

You can start small and scale out depending on needs.

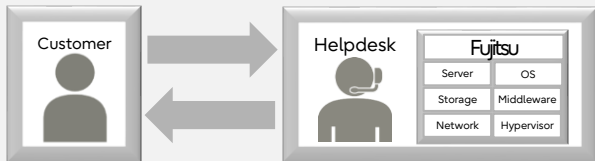
Simple

ISM^(*) unifies complex system management to reduce operational costs.
vLCM + Hardware Support Manager Plug-in^(*)

Rapid – Use Ready Node Certified Hardware

Wide range of certified hardware combinations with a choice of vSAN OSA and vSAN ESA Ready Nodes

With the availability of NVMe and 25 Gbit/s networks you can build a high-performance, secure virtualization foundation while reducing design workload. Fujitsu provide ready to run systems and one stop support.



Flexible - System Configuration

Add storage, increase memory, change networking, etc.

From VMware vSAN certified configurations to external ETERNUS storage, you can tailor your configuration to meet hardware requirements such as 25 Gbit/s network requirements and redundant OS boot areas.

VMware Cloud Service Provider Program (VCSP) and VMware licenses purchased from third parties are also available.

Simple – Operate and Maintain

Use existing operating processes and value add tools from Fujitsu to help monitor and maintain the solution.

Operate with your familiar virtual environment management software and be flexible to your systems operation policies, Use ISM and vLCM + HSM to monitor and maintain the solution.

vmware[®]
by Broadcom



- ISM (Fujitsu Software Infrastructure Manager)

- Optional but recommended
- Fully integrated datacentre management tool from Fujitsu
- Specific vSAN features include:
 - vCenter Plug-in for simple operation using familiar toolsets.
 - Monitoring of virtual I/O, Network, and VM's.
 - Troubleshooting using vSAN Impact Analysis.
 - Maintenance operations for hardware.



HY2, HY4, HY6, HY8, AF4, AF6, AF8, ESA-AF2
ESA-AF4, ESA-AF6, ESA-HighDensity



VMware vSphere
Foundation



FUJITSU ISM (*)



vLCM + HSM
Plugin (*)



Service &
Support (*)

(*) optional offering

- vLCM (VMware Lifecycle Management) + HSM (Hardware Support Module) Plugin

- Optional but recommended to add Hardware Driver and Firmware Management using a single image.

- Service and Support

- Optional but recommended to add Implementation Packs, Support Pack Hardware, Support Fujitsu ISM, (Technical Solution Support, SPoC – HCI only)

PRIMERGY Intel M7 Servers

Fujitsu PRIMERGY RX2530 M7 (w/o Expander)



Entry

VVF	All Flash	1U	1 node	8 Drive bay
OSA	Hybrid			

Fujitsu PRIMERGY RX2530 M7 (w/ Expander or NVMe)



Medium

VVF	All Flash	1U	1 node	10 Drive bay
OSA / ESA	Hybrid			

Fujitsu PRIMERGY RX2540 M7 (w/ or w/o Expander or NVMe)



High Performance / Large Capacity

VVF	All Flash	2U	1 node	24 Drive bay
OSA / ESA	Hybrid			

Fujitsu PRIMERGY RX2540 M7 (w/o Expander BYO)



GPU Mounted / NVIDIA Ampere

VVF	All Flash	2U	1 node	6 Drive bay
OSA	Hybrid			

Fujitsu PRIMERGY RX4770 M7 (NVMe)



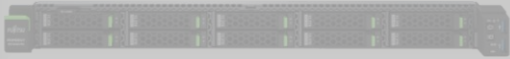
Only for SAP HANA Workload Domain

VVF	All Flash	3U	1 node	24 Drive bay
OSA / ESA				

PRIMERGY AMD M2 Servers

The following server base models are available to choose:

Fujitsu PRIMERGY RX1440 M2 (w/o Expander or NVMe)



Entry

VVF

All Flash

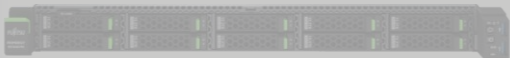
1U

1
node

10
Drive bay

Hybrid

Fujitsu PRIMERGY RX1440 M2 (w/ Expander)



Medium

VVF

All Flash

1U

1
node

10
Drive bay

OSA

Hybrid

Fujitsu PRIMERGY RX2450 M2 (with Expander or NVMe)



High Performance / Large Capacity

VVF

All Flash

2U

1
node

24
Drive bay

OSA

Hybrid

Fujitsu PRIMERGY RX2450 M2 (with Expander)



GPU Mounted / NVIDIA Ampere

VVF

All Flash

2U

1
node

16
Drive bay

OSA

Hybrid

Waiting Certification

PRIMERGY RX2450 M2 (Rövid leírás)

AMD
EPYC



Kétfoglaltos x86 szerver

AMD EPYC 9004/9005 sorozatú CPU-val (akár 160 maggal)



Ideális

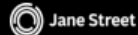
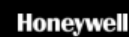
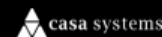
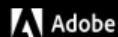
Generatív mesterséges intelligenciához, deep learning LLM modellekhez, analitikához, virtualizált környezetekhez, HPC-hez és adatintenzív feladatokhoz



Mindenre képes

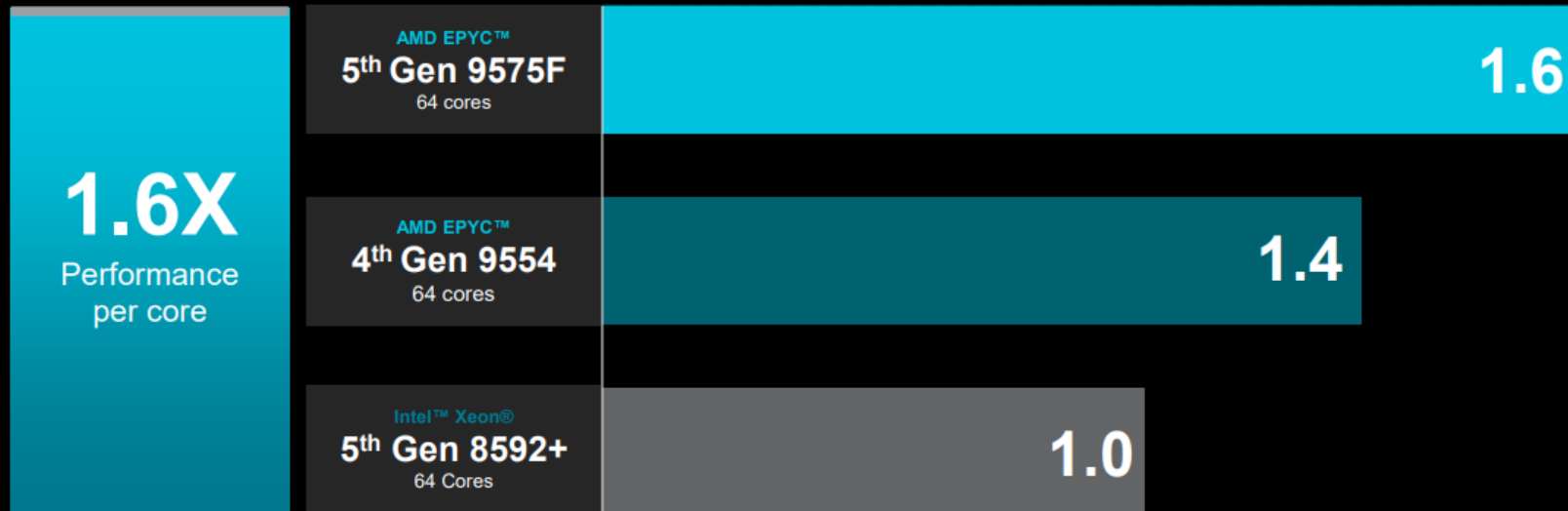
A maximálisan 6TB RAM kapacitásával

Trusted by industry leaders on-prem



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60% More Performance at the Same Licensing Costs



Virtualized Infrastructure
VMmark® 4.0

As of 10/10/2024, <https://www.infobellit.com/BlueBookSeries/VMmark4-1001.pdf>
See endnotes 9xx5-071

External Storage Options

ETERNUS All Flash

- AB2100 / AB5100

ETERNUS Hybrid

- DX200 / DX600
- HB2100 / HB2300 / HB5100

General

- 4 x iSCSI 10/25GbE host ports
- Expandable with drive enclosures
- Software: Storage Manage and Copy (feature pack)



ETERNUS AB/HB

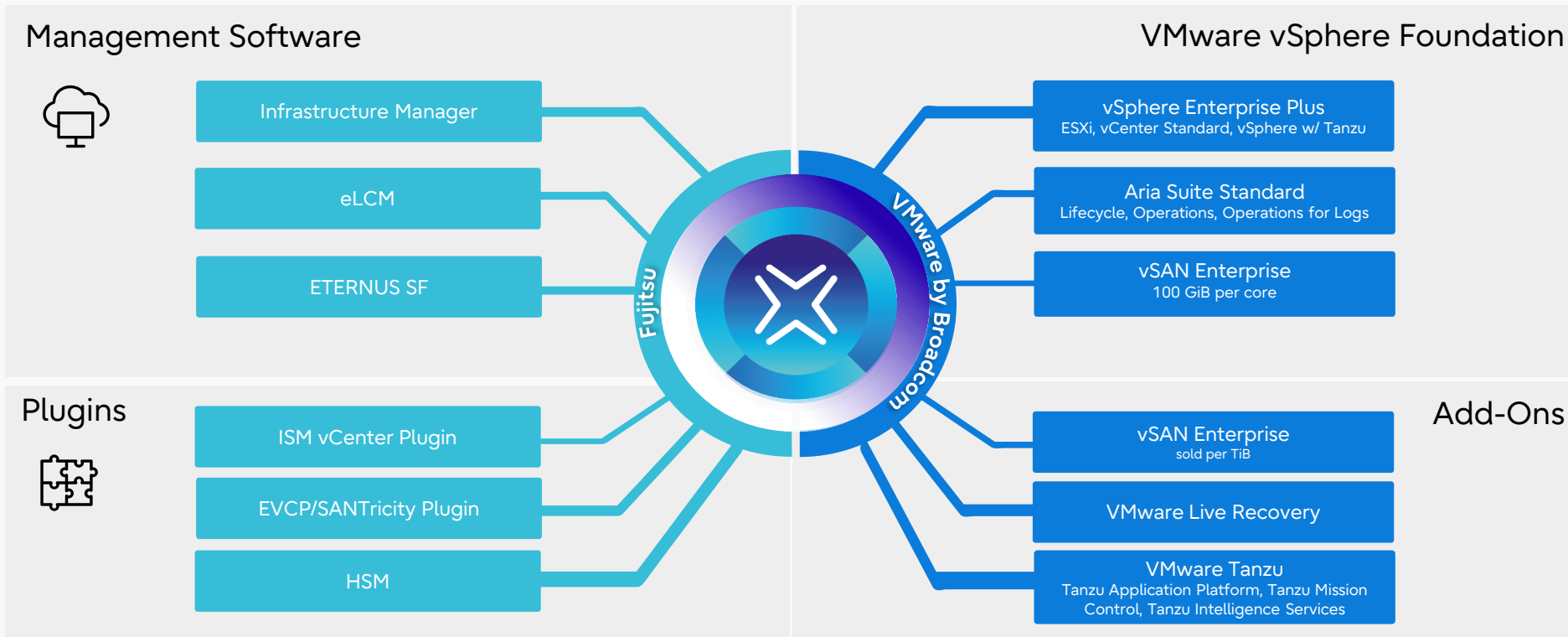
*Option for FC available via Special Release Request. See Configuration & Upgrade Guide



ETERNUS DX

*Option for FC 16/32/64Gb available on DX600

Software and Management Stack Options

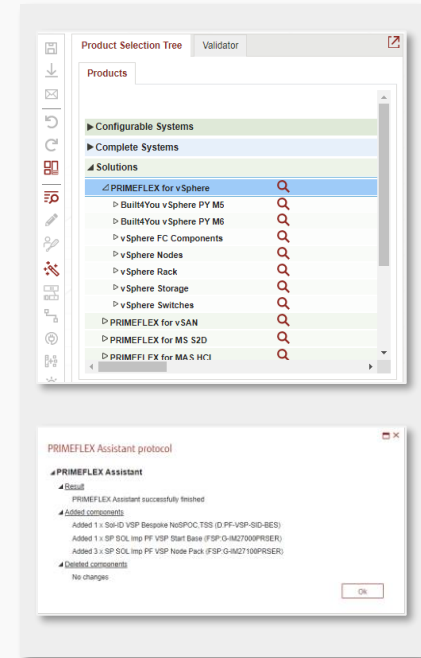


Standardized design enables faster deployment

- Network Design – cabling, VLANs and vSwitches
- Hypervisor Layer – runs any VMware workload
- Storage – vSAN, ETERNUS or both
- Management Stack – vCenter / ISM / Storage Plugins

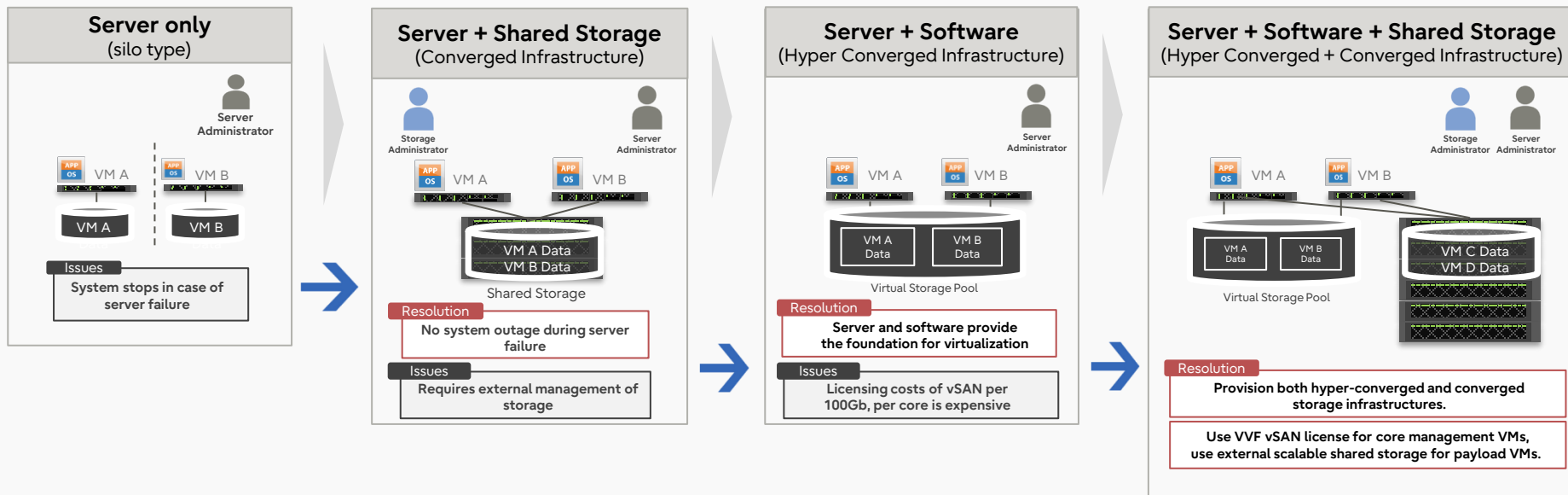
Deployment Process

- Installation - On-site assembly for racks and cables to standard design
- Implementation - On-site with scripted processes
- Acceptance & Handover – Onsite testing and documentation
- Support options

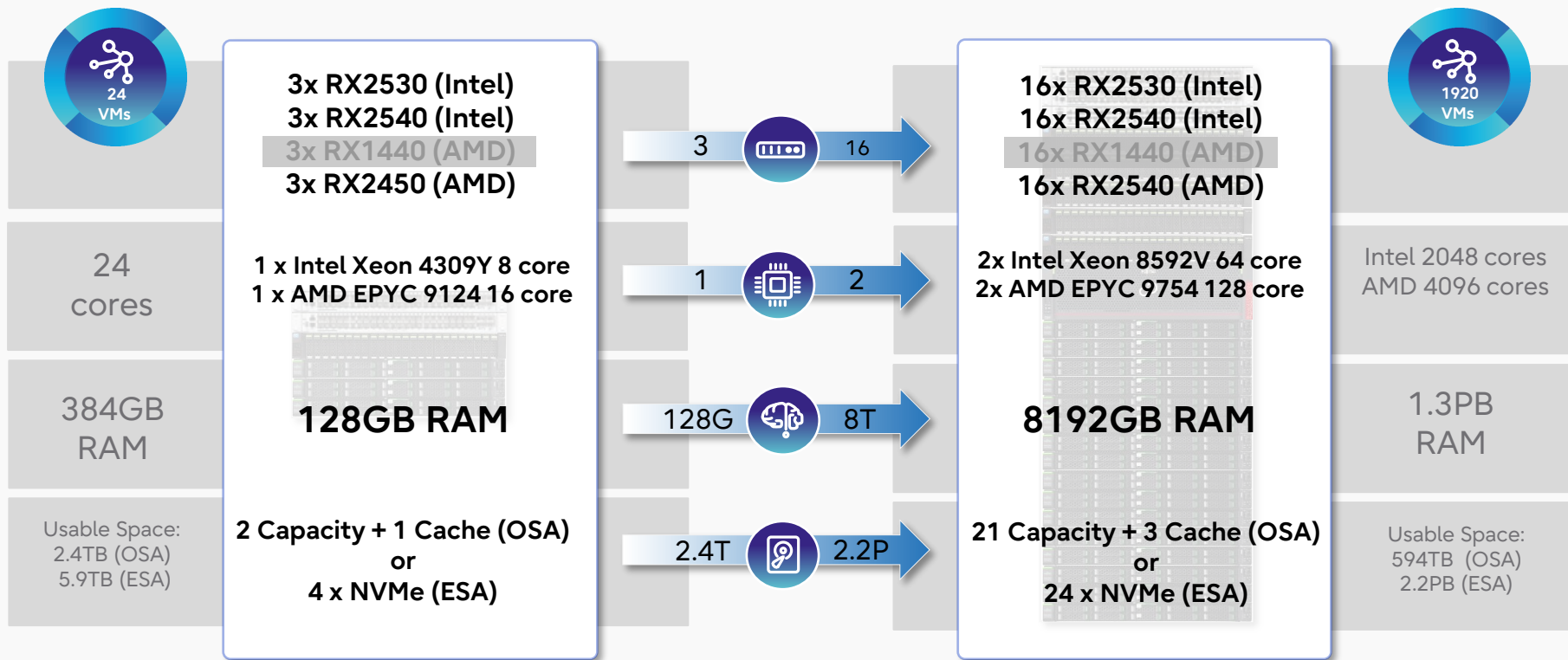


Storage Infrastructures

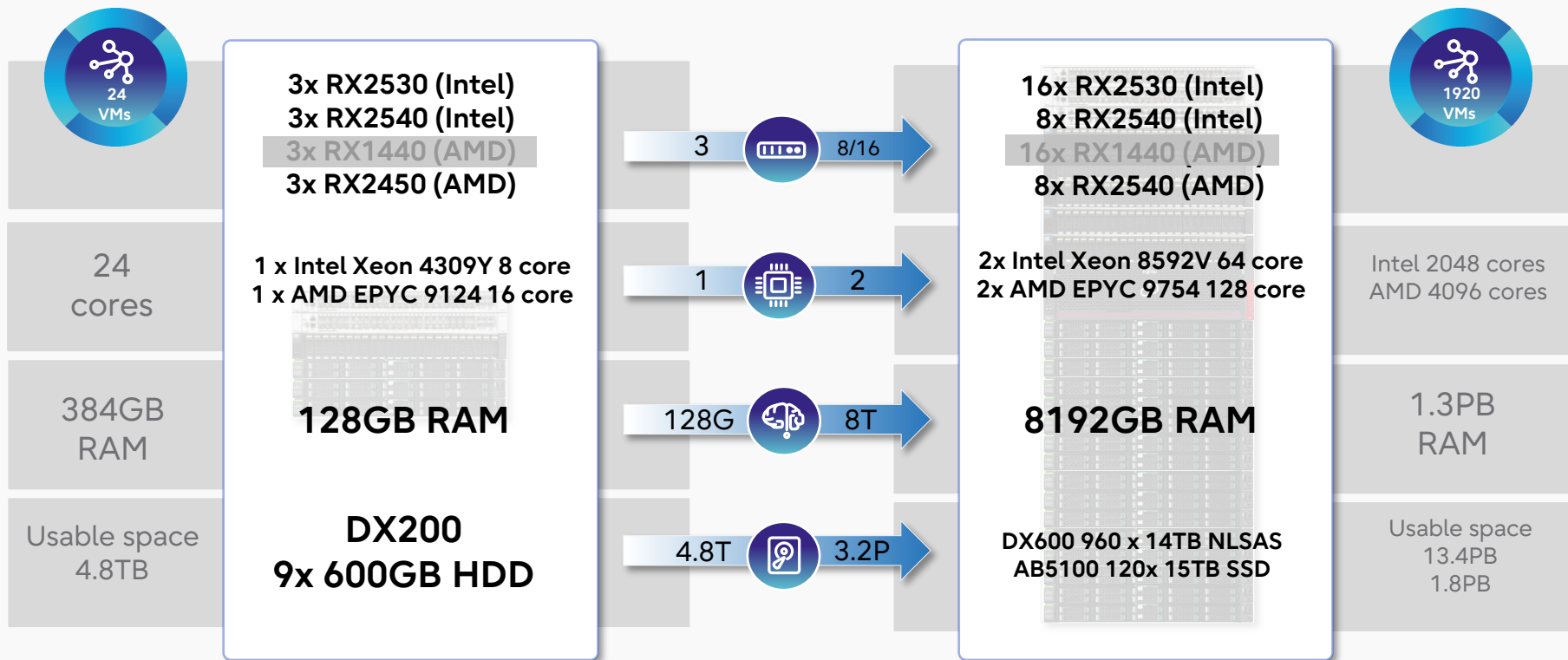
Converged Infrastructure stems from the need of physical, scalable shared storage between virtual infrastructure nodes. Hyper Converged Infrastructure (HCI) is a virtualization foundation that stems from the need to easily use a virtualized infrastructure. By combining both you can manage scalability and cost depending on your needs.



Scalability – Single rack HCI



Scalability – Single rack CI



SAP HANA on PRIMEFLEX for VMware vSAN Certified Solution

HCI Solution

PRIMEFLEX

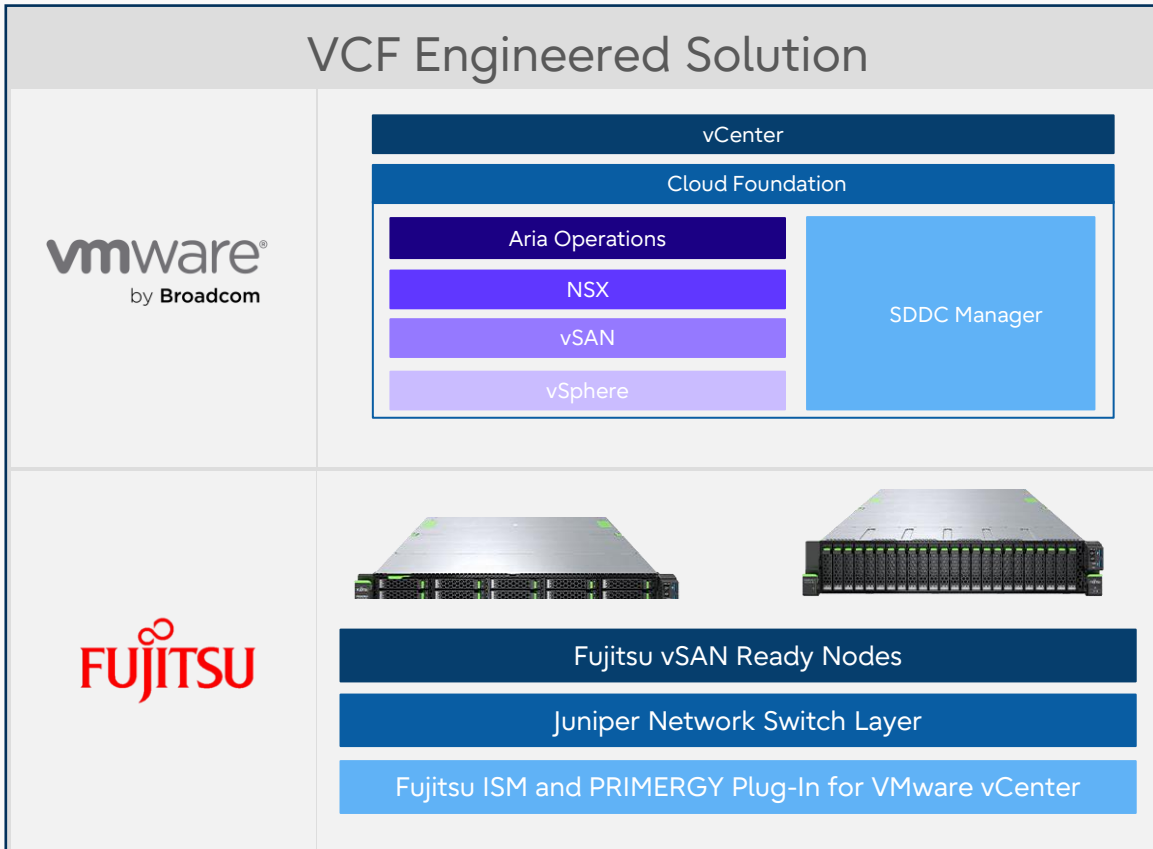
Certification status	certified
Certification released	2025-01-30
Certification expires	2027-12-19
CPU Architecture	Intel Emerald Rapids SP
Sockets	2/2
Certification Scenario	HANA-HyCI 1.0
RAM	128 GiB, 6 TiB
SDS Solution	VMware vSAN
Hypervisor	VMware vSphere/ESXi
Model tested	PRIMERGY RX2540 M7
HCI Models included	PRIMERGY RX2540 M7
CPU Type	Intel(R) Xeon(R) Gold 6430
HCI CPU Range	Xeon SP (Emerald Rapids) Gold, Platinum
RAM per CPU-socket	up to 3 TiB
Range of HCI nodes	3-64
Range Hypervisor	vSphere ESXi 8.0 U3 (ff.)
Range SDS Version	vSAN 8.0 U3 (ff.)

HCI Solution

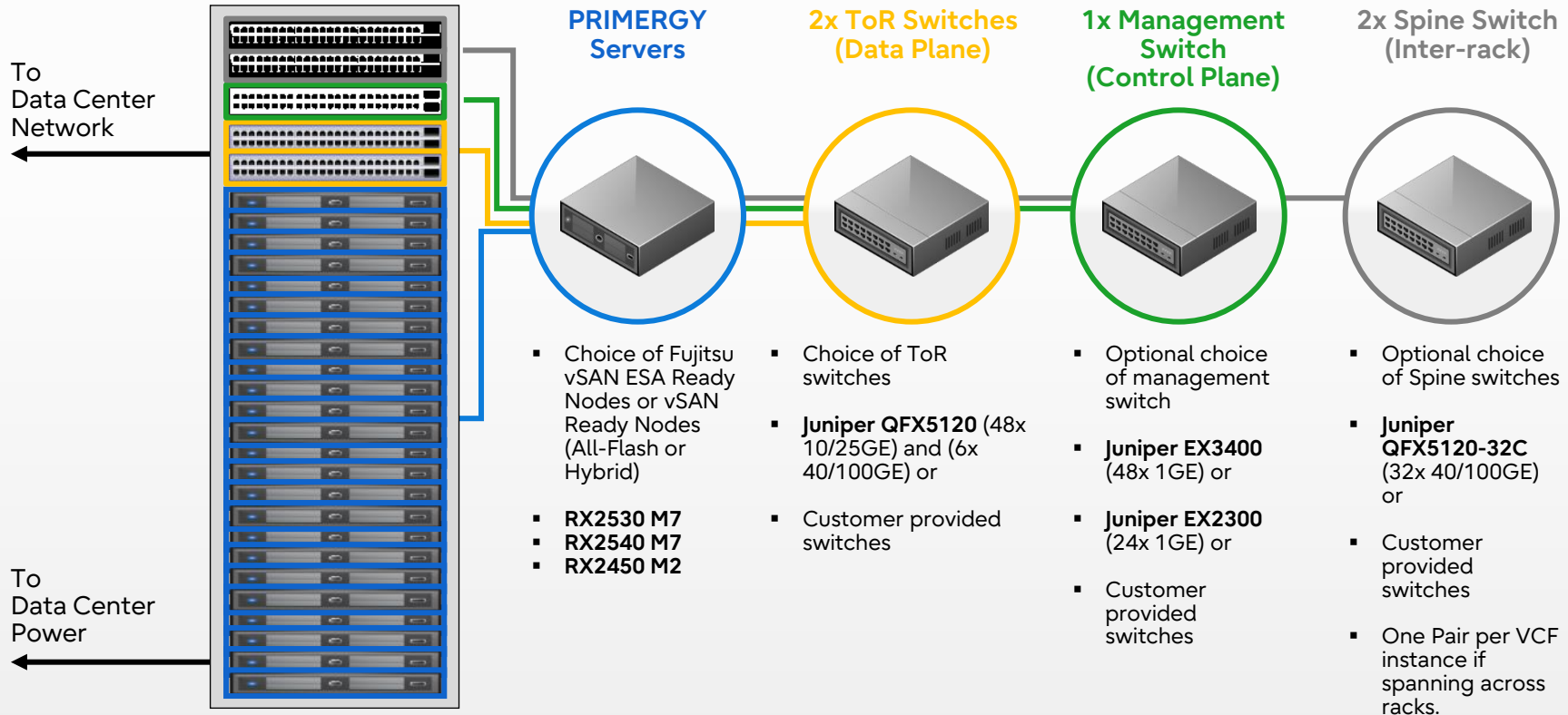
PRIMEFLEX

Certification status	certified
Certification released	2024-12-20
Certification expires	2027-12-19
CPU Architecture	Intel Sapphire Rapids SP
Sockets	2/2; 4/4
Certification Scenario	HANA-HyCI 1.0
RAM	128 GiB, 12 TiB
SDS Solution	VMware vSAN
Hypervisor	VMware vSphere/ESXi
Model tested	PRIMERGY RX2540 M7
HCI Models included	PRIMERGY RX2540 M7, PRIMERGY RX4770 M7
CPU Type	Intel(R) Xeon(R) Gold 6430
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Range Hypervisor	vSphere ESXi 8.0 U3 (ff.)
Range SDS Version	vSAN (ESA) 8.0 U3 (ff.)

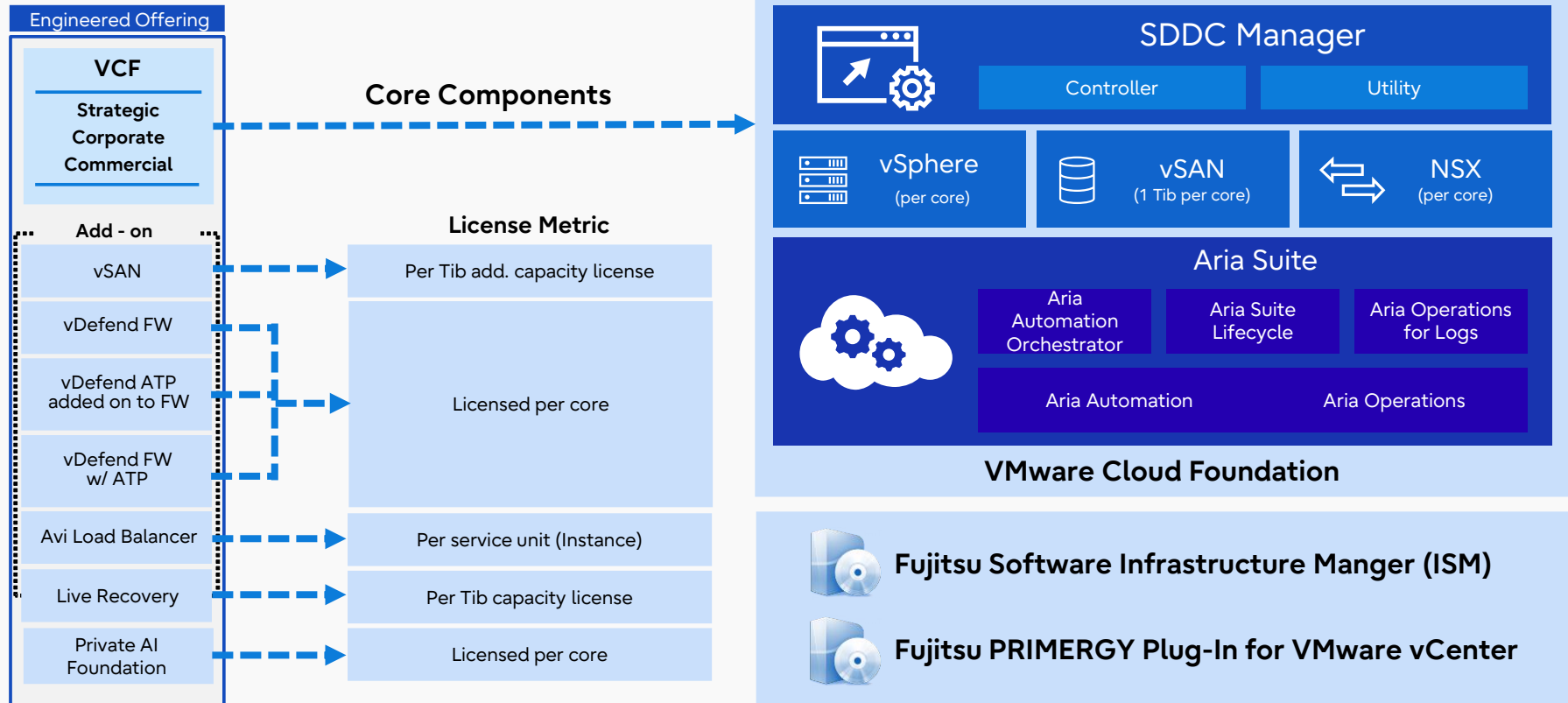
PRIMEFLEX for VMware Cloud Foundation



Hardware Overview – Physical Rack

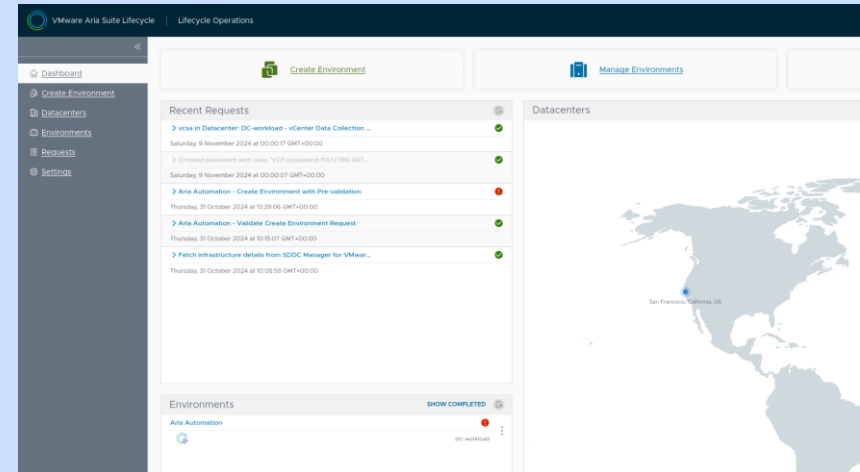


Software Overview



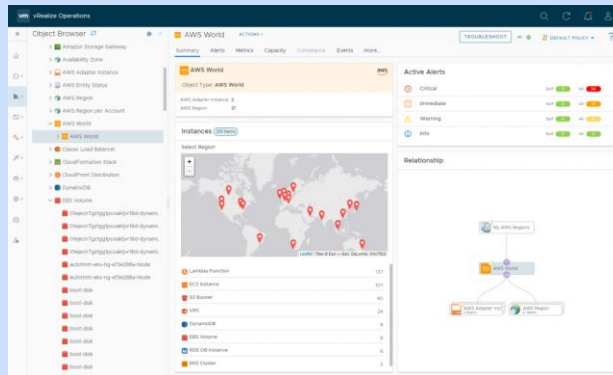
VMware Aria Suite Lifecycle

- VMware Aria Suite Lifecycle is designed to simplify the management and automation of VMware Aria Suite products.
- Lifecycle Operations manage deployment, scaling, upgrades, and certificate management for VMware Aria Suite products.
- Locker provides a centralized repository for managing certificates, licenses, and credentials.
- Identity and Tenant Management helps handle user roles, groups, and integration with Active Directory for multi-tenant environments.
- Offers options for load balancer selection during product deployments, enhancing flexibility and integration with VMware Cloud Foundation.
- Provides REST APIs for programmatic management and automation of lifecycle tasks.



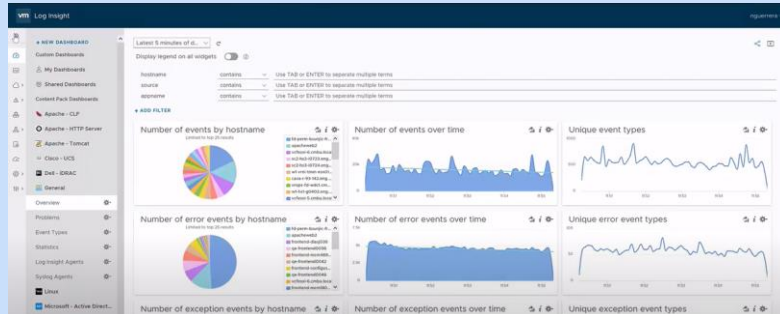
VMware Aria Operations

- Runs in the Management Domain
- Monitor physical and virtual components through a single interface
 - Provides capacity modeling and monitoring
 - Includes management packs for Cloud Foundation, NSX, and Omnisia View.



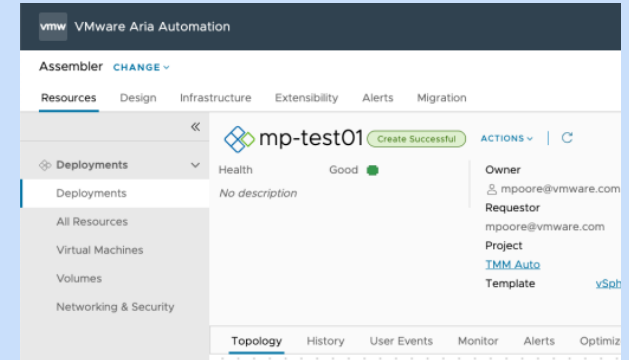
VMware Aria Operations for Logs

- Deployed in the Management Domain
- In a multi-rack setup, multiple Operations for Logs instances are federated for redundancy and scalability.
 - Collect and process log events for every device in the rack including servers, switches, and PDUs
 - Includes content packs for Cloud Foundation, NSX and Omnisia View



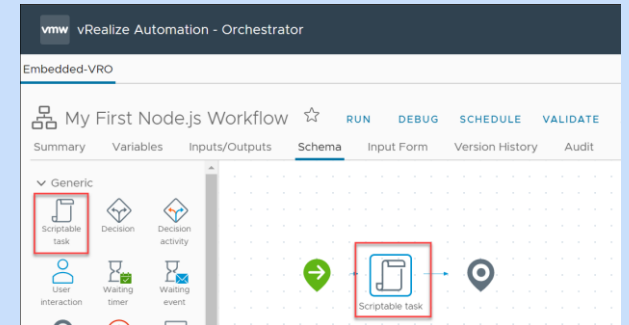
VMware Aria Automation

- Built for multi-cloud management with the ability to configure Workload Domains as endpoints
- Allows for blueprint authoring, administering, and consumption. Key to IT Automating IT operations.
- Scalable and highly available services, with the ability to need organizational needs.



VMware Aria Automation Orchestrator

- It provides a robust platform for automating IT processes, integrating various subsystems, and managing workflows.
- Plug ins allow for the integration of different control systems and extends the platform's capabilities
- A comprehensive library of pre-built workflows helps streamline automation tasks



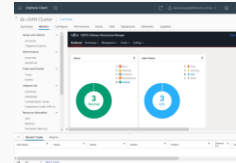


FUJITSU Software Infrastructure Manager ISM

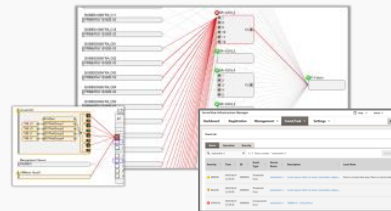
- Fujitsu Infrastructure Manager (ISM) provides additional system management and monitoring
- vCenter plug-in available
- Ability to manage third party devices besides HCI

FUJITSU ISM

Plug-In in VMware vCenter



Monitoring

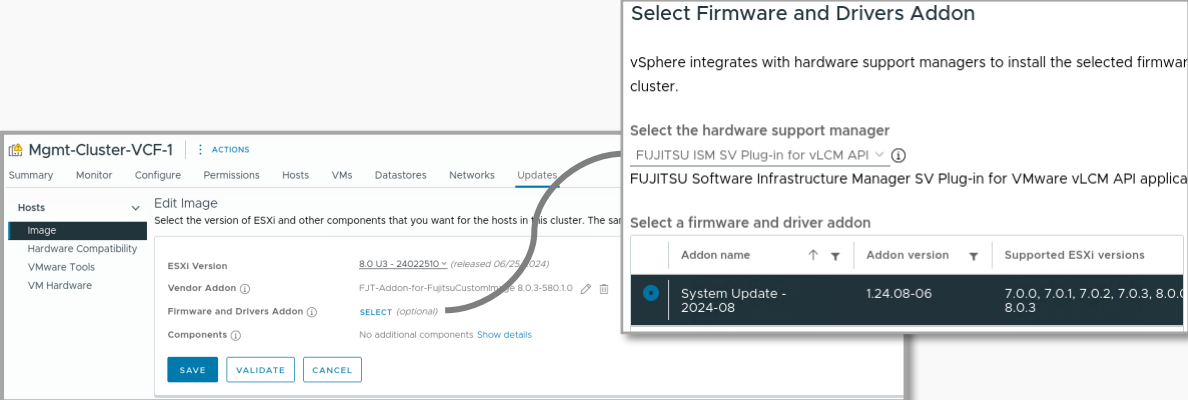


HW Update (BIOS/FW/iRMC)



“PRIMERGY Plug-in for VMware vCenter” extends the desired state model of VMware’s vLCM to the firmware and drivers of Fujitsu’s PRIMERGY servers.

With the plugin installed, you can check and update firmware and drivers on the servers directly from the vSphere Client.



Select Firmware and Drivers Addon

vsphere integrates with hardware support managers to install the selected firmware cluster.

Select the hardware support manager
FUJITSU ISM SV Plug-in for vLCM API 
FUJITSU Software Infrastructure Manager SV Plug-in for VMware vLCM API applica

Select a firmware and driver addon

Addon name	Addon version	Supported ESXi versions
System Update - 2024-08	1.24.08-06	7.0.0, 7.0.1, 7.0.2, 7.0.3, 8.0.0, 8.0.3

Firmware compliance

Firmware component	Host Version	Image Version
BIOS	V5.0.0.12 R1.22.0 for D3383-A1x	V5.0.0.12_R1.49.0
iRMC S5	2.66P	03.05P_sdr03.53

* “PRIMERGY Plug-in for VMware vCenter” does neither require ISM nor any license

ISM integrates with management systems of VMware and Microsoft

- VMware vCenter
- Microsoft Windows Admin Center (WAC)
- Microsoft System Center Operations Manager (SCOM)
- Microsoft System Center Virtual Machine Manager (SCVMM)

ISM integrates with Ansible modules and Playbooks

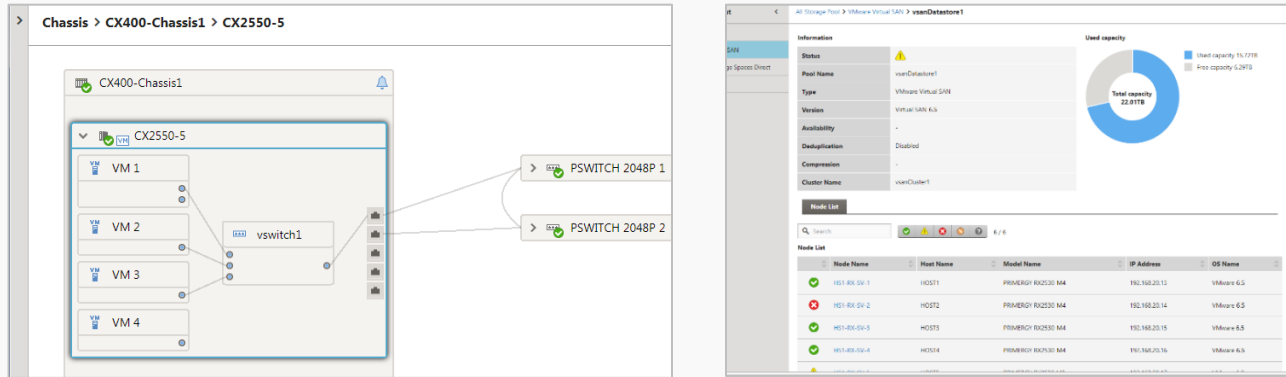
Individual plug-ins for VMware and Microsoft

- PRIMERGY Plug-in for vCenter (vLCM)
- ServerView for Microsoft Cluster-Aware Updating (CAU)

Those plug-ins work without and independent from ISM

Virtual Resource Management: Monitor virtual machines, networks, and storage seamlessly with enterprise and cloud software solutions like VMware vCenter, Microsoft System Center, MSFC Manager, and OpenStack

Anomaly Detection: Spot unusual trends effortlessly with ISM's cutting-edge monitoring.



For VMware vSAN: displays the relationship between virtual machines, physical machines, cache disks, and capacity disks."

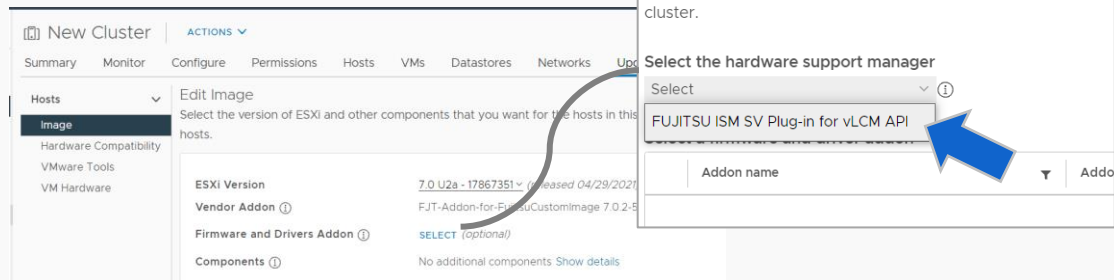
Integrate – PRIMERGY Plug-in for vCenter

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by Broadcom

“PRIMERGY Plug-in for vCenter ” provides firmware management function for FUJITSU Server PRIMERGY within VMware Lifecycle Manager (vLCM)

Once the Plug-in is installed, you can select the HSM to view firmware compliance.



You can then view firmware compliance and update firmware and Bios, including ESXi patches and drivers.

* **“PRIMERGY Plug-in”** does not require license and installation of ISM Advanced/Essential

Firmware compliance		
Firmware component	Host Version	Image Version
BIOS	V5.0.0.12 R1.22.0 for D3383-A1x	V5.0.0.12_R1.49.0
iRMC S5	2.66P	03.05P_sdr03.53

PRIMEFLEX Delivery Options

PRIMEFLEX

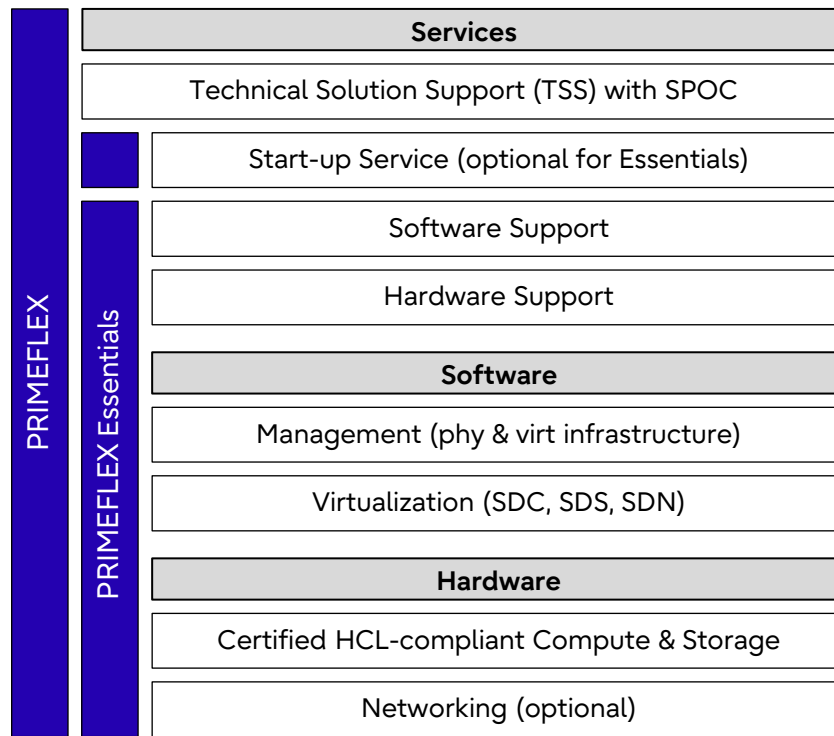
- Mandatory Implementation Service and Technical Solution Support

PRIMEFLEX Essentials

- Optional Implementation Service
- Technical Solution Support not available

Common foundation

- Pre-integrated and certified hardware and software stack
- Single component support



Köszönöm a figyelmet!

