

CXS2060BCN

vmware® **EXPLORE**

Blueprint to Brilliance

Navigating the Marvels of VMware Cloud Foundation

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Technical Support Engineer Level 2

#vmwareexplore #CXS2060BCN



Presenter



Melannie Fernandes

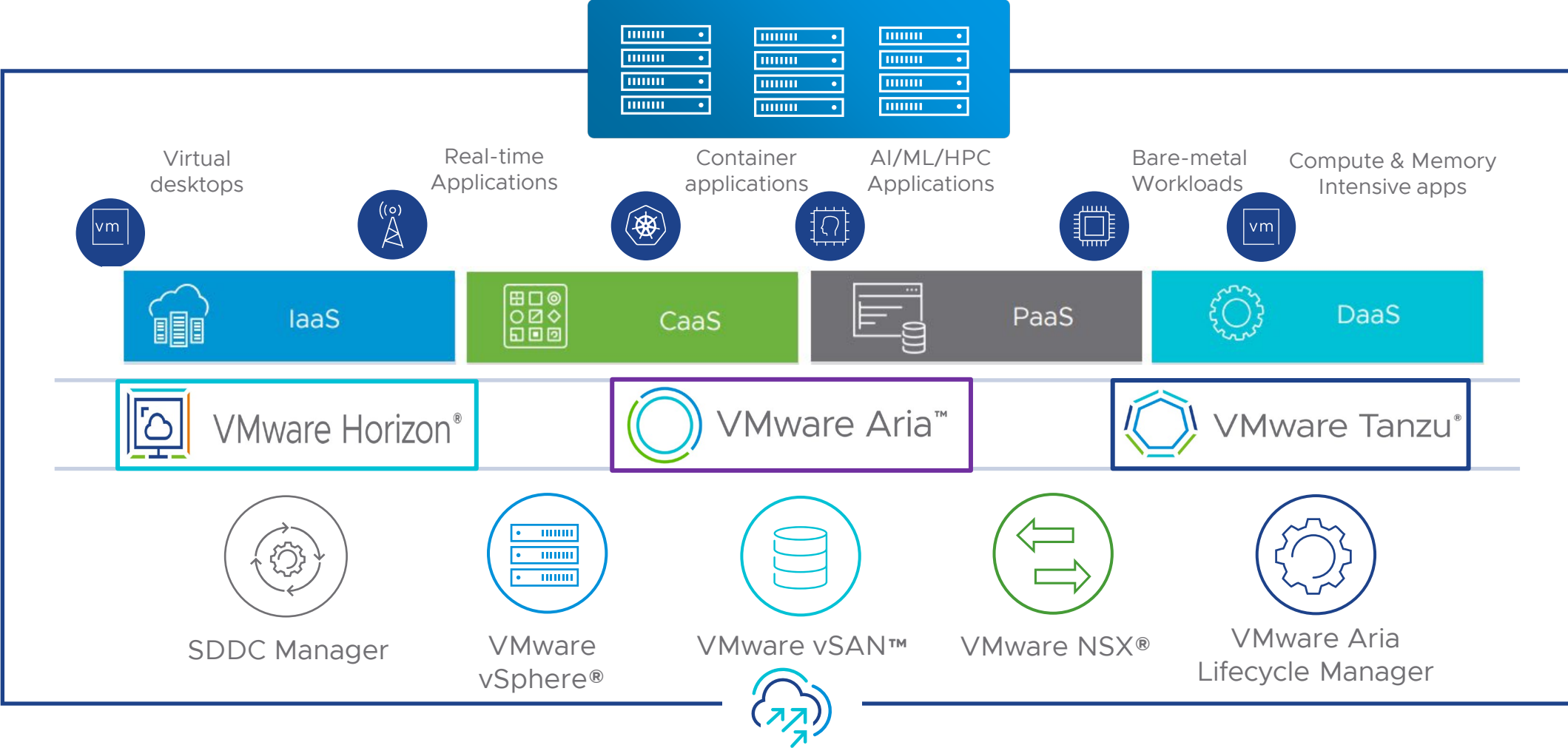
Technical Support Engineer



Agenda

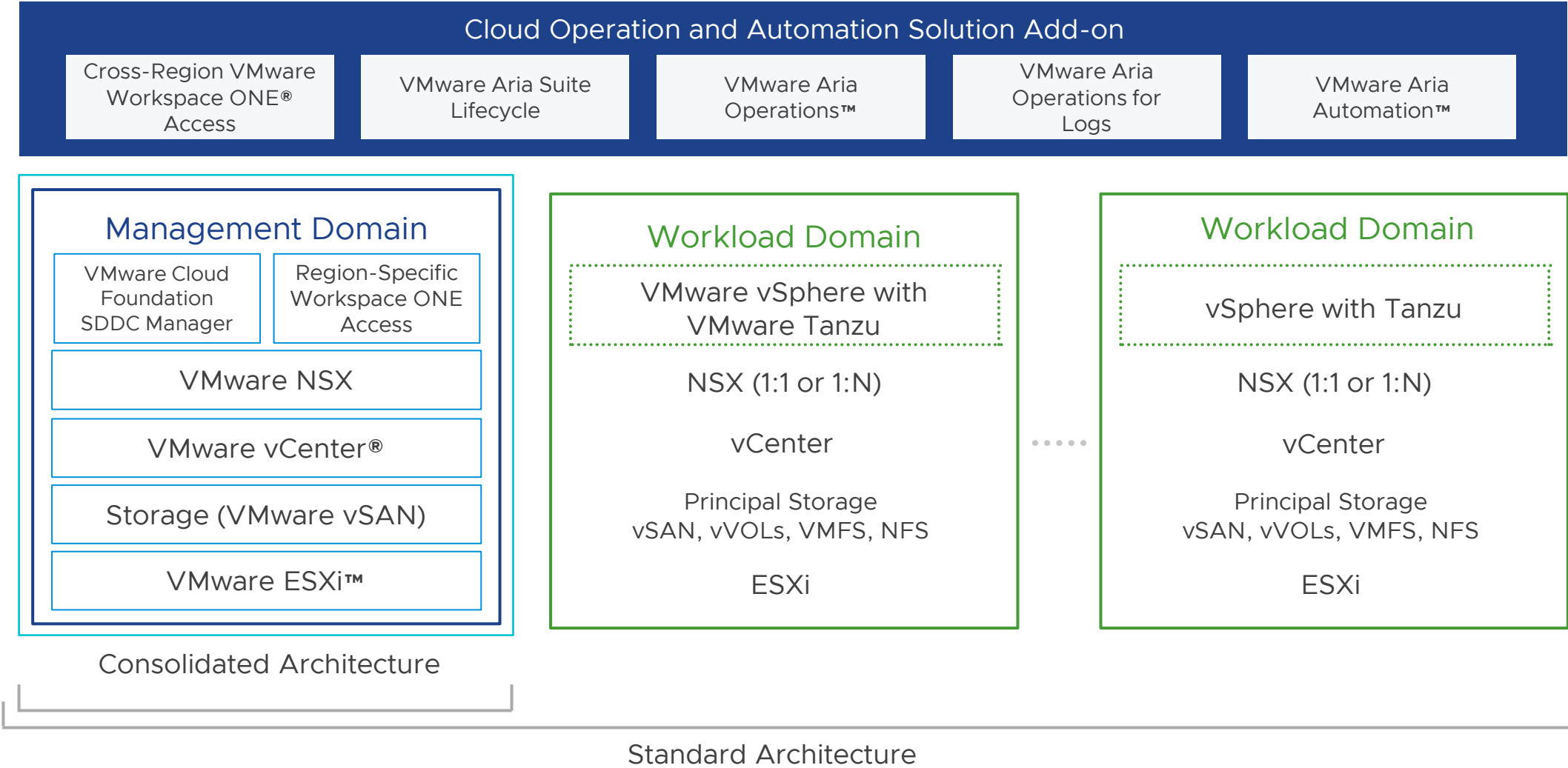
1. VMware Cloud Foundation Overview
2. VMware Cloud Foundation Architecture
3. Breakdown of Services
4. Evolution of VMware Cloud Foundation
5. Navigating VMware Cloud Foundation
6. Tools for Troubleshooting
7. Summary
8. Important Links

VMware Cloud Foundation Overview



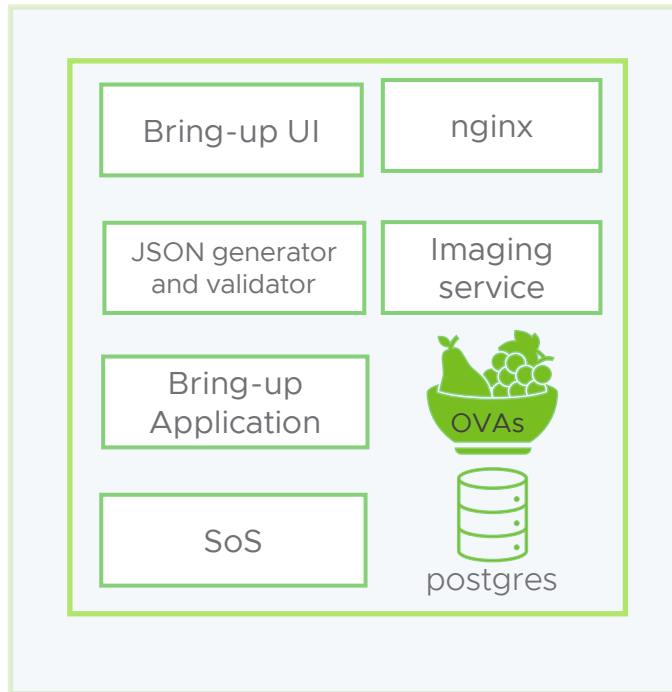
VMware Cloud Foundation Architecture

Top level view

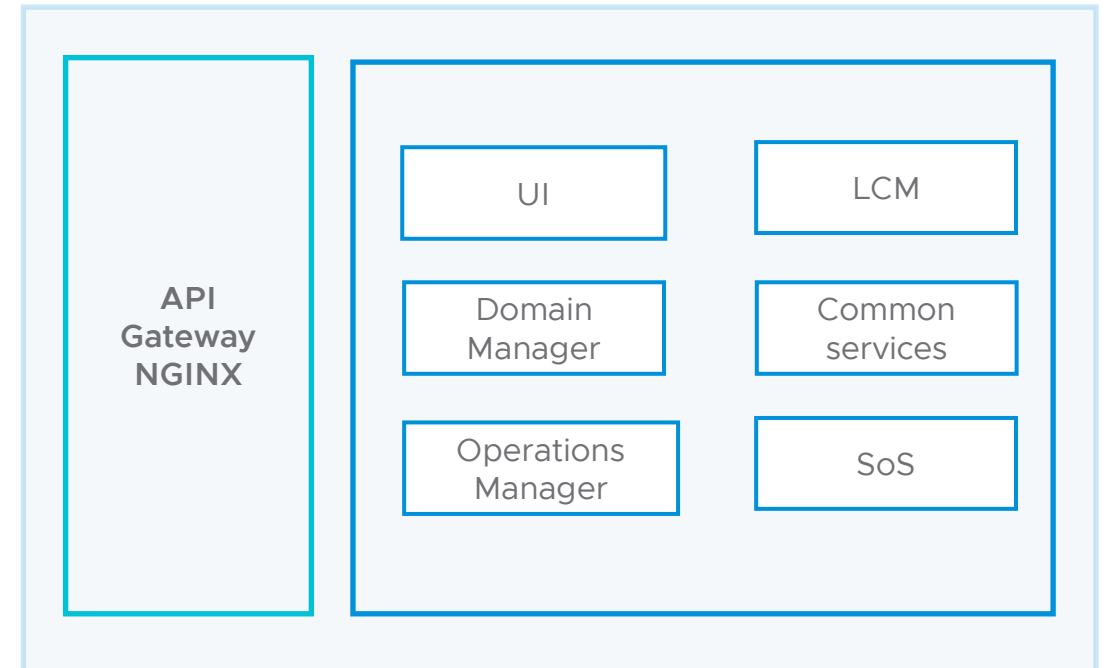


Software Components of Cloud Builder and SDDC Manager

Cloud Builder Services



SDDC Manager Services



SDDC Manager services

A summary of what each service is responsible for

Domain Manager	Operations Manager	Lifecycle Manager	Common Services
<ul style="list-style-type: none">➤ Host and Cluster➤ VI Domain➤ Network➤ Storage➤ Stretch Cluster➤ VMware NSX Edge™ cluster➤ WCP➤ VxRail Manager	<ul style="list-style-type: none">➤ Certificate➤ Credential➤ Commission/decommission➤ License➤ Backup/Recovery➤ DNS/NTP➤ Resource Aggregator	<ul style="list-style-type: none">➤ Precheck➤ Manifests➤ Upgrades➤ Image Management➤ Bundle Management➤ Skip level upgrade	<ul style="list-style-type: none">➤ Lock➤ Task➤ Inventory➤ Credential Store➤ Identity➤ Network pool➤ Appliance

```
root@sddc-manager [ /var/log/vmware/vcf ]# ls -l
total 28
drwxrwxr-x 2 vcf_commonsvcs vcf 4096 Jul 20 12:00 ceip
drwxr-x--- 3 vcf_commonsvcs vcf 4096 Jul 20 01:13 commonsvcs
drwxr-x--- 3 vcf_domainmanager vcf 4096 Jul 20 00:00 domainmanager
drwxr-x--- 4 vcf_lcm vcf 4096 Jul 20 01:13 lcm
drwxr-x--- 3 vcf_operationsmanager vcf 4096 Jul 20 01:13 operationsmanager
drwxr-x--- 5 vcf_sddc_manager_ui_app vcf 4096 Jul 20 02:25 sddc-manager-ui-app
drwxr-xr-x 2 root root 4096 Jul 11 17:19 sddc-support
root@sddc-manager [ /var/log/vmware/vcf ]#
```



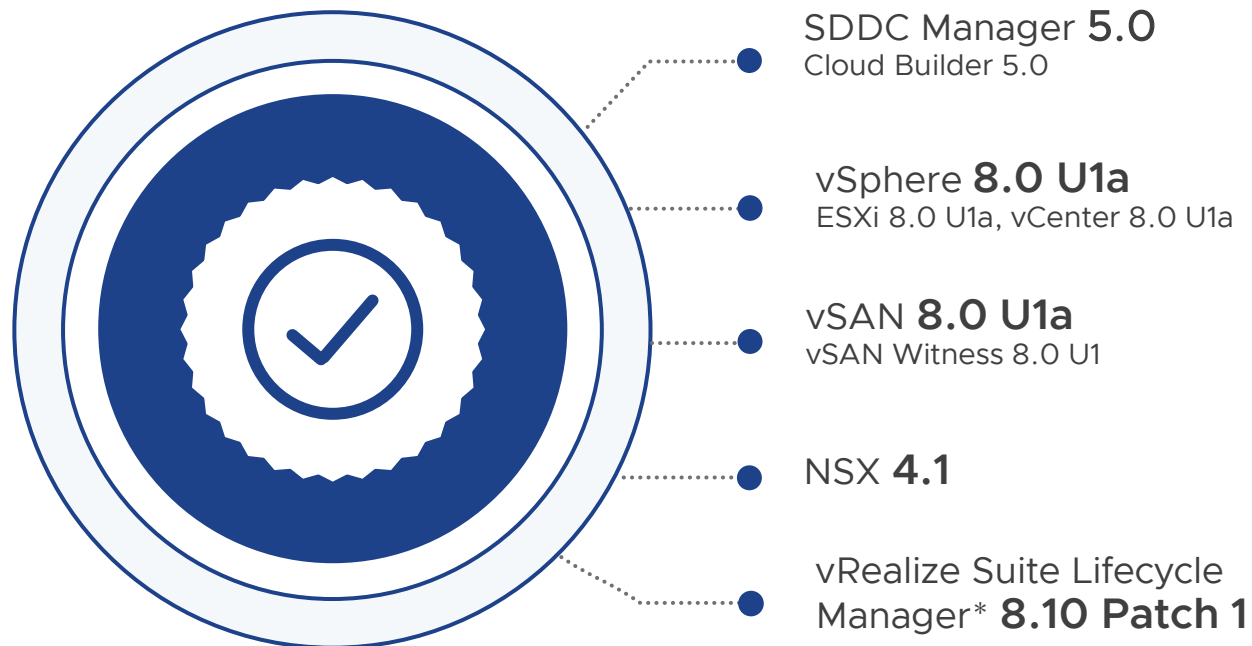
VMware Cloud Foundation Evolution

	Aug 2021	Feb 2022	Oct 2022	June 2023
Features	4.3	4.4	4.5.1	5.0
Kubernetes Workload Management	•	•	•	•
vLCM Firmware Lifecycle Management	•	•	•	•
RBAC User Roles	•	•	•	•
Automated NSX-Edge Deployment	•	•	•	•
Extended Principal Storage support (vVols, 2-node, HCI Mesh)	•	•	•	•
Parallelization (Deployment & Upgrades)	•	•	•	•
Enhanced Prechecks & Skip-level Upgrades	•	•	•	•
Multi-pNIC Deployment		•	•	•
NSX Federation Support (manual guidance)		•	•	•
Security Enhancements		•	•	•
vGPU Support with NVIDIA AI Ent Suite		•	•	•
Parallel Cluster Upgrade			•	•
BOM product re-licensing				•
Isolated WLDs and Identity Management				•

Software Bill of Materials

VMware Cloud Foundation 5.0 contains the following VMware products

Software Building Blocks for the Private Cloud



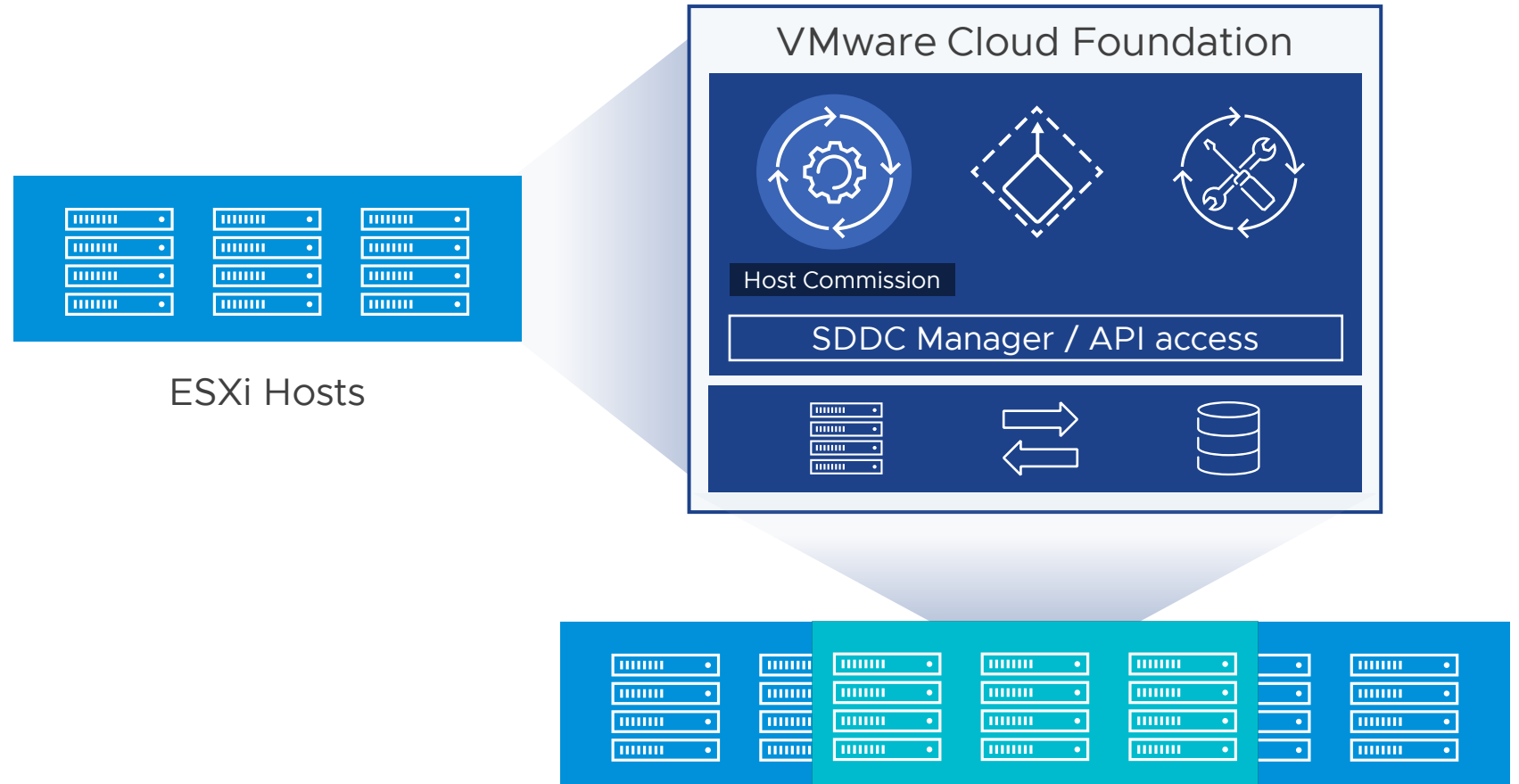
Navigating VMware Cloud Foundation



Automation and Scaling

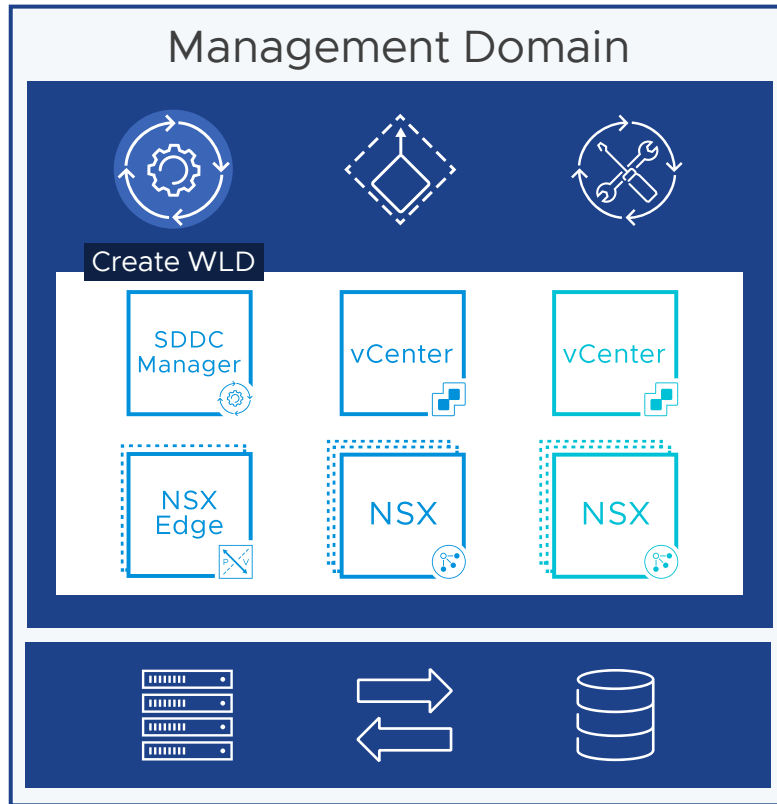
Day N operation workflows overview

- ✓ Add multiple host to SDDC manager
- ✓ Create Workload Domains
- ✓ Create/Expand Cluster
- ✓ Deploy/ Expand Edge cluster



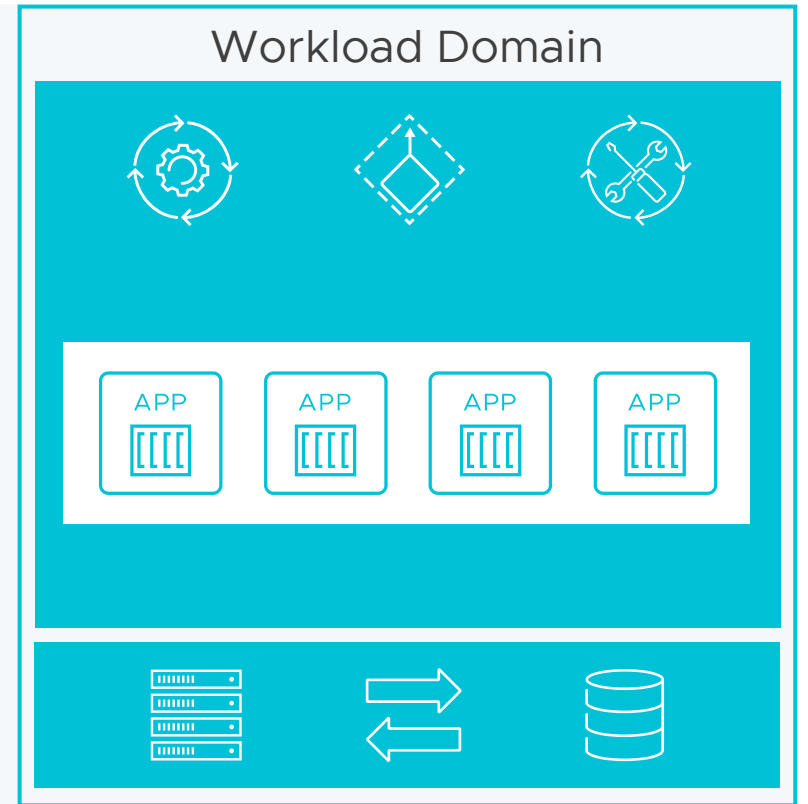
Creating Workload Domain

Automate the deployment of an application ready SDDC



Automated Workflow

- ✓ Deploying a new vCenter Instance
- ✓ Instantiating a new SSO Domain or join existing domain
- ✓ Creates a vSphere Cluster and adds the commissioned ESXi hosts
- ✓ Creates vSAN disk groups and configures a vSAN datastore for the cluster
- ✓ Deploys the NSX Managers and configures NSX in the cluster



VMware Cloud Foundation Inventory

Simplified Troubleshooting Workflow

Deployment and scale workflows


VMware Cloud Foundation Administrator

Error on Task

Log review

Operations Team

Retry Task



1

Subtasks of Task Removing domain nsx-t

Subtask	Task Status
Record Workflow Execution Failure in Customer Experience Improvement Program (CEIP) Settings for Domain Manager Workflow	Successful
Prepare Input Data for NSX-T Deployed Services	Failed

Description

2023-01-17T06:36:58.091+0000 ERROR [vcf_dm,34f40a595d7f454d,c69f] [c.v.v.c.c.vl.ClusterController,http-nio-127.0.0.1-7200-exec-2] Failed to remove cluster
java.lang.NullPointerException: vSAN Cluster moid cannot be null or empty
at java.base/java.util.Objects.requireNonNull(Objects.java:347) 2023-01-17T06:36:58.095+0000 DEBUG [vcf_dm,d4f40a595d7f454d,c69f] [c.v.e.s.e.h.LocalizableRuntimeExceptionHandler,http-nio-127.0.0.1-7200-exec-2] Processing localizable exception InternalServerError
2023-01-17T06:36:58.096+0000 ERROR [vcf_dm,d4f40a595d7f454d,c69f] [c.v.e.s.e.h.LocalizableRuntimeExceptionHandler,http-nio-127.0.0.1-7200-exec-2] [NQAQ0U8] PUBLIC INTERNAL_SERVER_ERROR InternalServerError
Caused by: java.lang.NullPointerException: vSAN Cluster moid cannot be null or empty

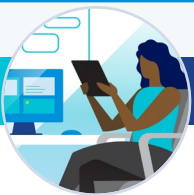
Error

less domain.manager.log
Track task using ID which follows vcf_dm

3

Subtask	Task Status	Last Occurrence
Complete Customer Experience Improvement Program (CEIP) Settings for Domain Manager Workflow	Successful	7/24/23, 11:49 AM
Release Lock	Successful	7/24/23, 11:49 AM
Release Allocated ESXi Hosts IP Addresses	Successful	7/24/23, 11:49 AM
Remove Workload Domain from the SDDC Manager Inventory	Successful	7/24/23, 11:49 AM
Remove ESXi Hosts SSH Keys from SDDC Manager's known_hosts file	Successful	7/24/23, 11:49 AM
Remove Workload Domain's related Credentials from the SDDC Manager Inventory	Successful	7/24/23, 11:49 AM
Delete NSX-T Data Center to Workload Domain mapping from the SDDC Manager Inventory	Successful	7/24/23, 11:49 AM
Disable Lockdown Mode on ESXi Hosts	Successful	7/24/23, 11:49 AM
Retrieve ESXi Host Lockdown Mode Configuration	Successful	7/24/23, 11:49 AM
Remove Embedded Platform Services Controller Certificate from Certificate Truststore	Successful	7/24/23, 11:49 AM
Delete Virtual Machine	Successful	7/24/23, 11:49 AM
Decommission vCenter Server	Successful	7/24/23, 11:49 AM
Remove deleted vCenter from monitoring framework	Successful	7/24/23, 11:48 AM
Delete SSO User	Successful	7/24/23, 11:48 AM
Remove vcenter(s) from ESXi Hosts	Successful	7/24/23, 11:48 AM
Deletes anti-affinity rules for NSX-T managers	Successful	7/24/23, 11:48 AM
Remove NSX-T Data Center SSH Key from SDDC Manager's known_hosts file	Successful	7/24/23, 11:48 AM
Delete NSX-T Manager VM and Controller Cluster	Successful	7/24/23, 11:48 AM
Remove NSX-T Data Center Credentials	Successful	7/24/23, 11:48 AM

Automated Scaling



Cloud Admin

Ease of Troubleshooting



Operations

Step by Step Workflow

Security

Password management

Option types

1. Rotate- generates randomized passwords
2. Update - you provide the new password manually
3. Remediate - manually reset the password in the component product and update that password in the SDDC

On SDDC Manager UI

Password Management

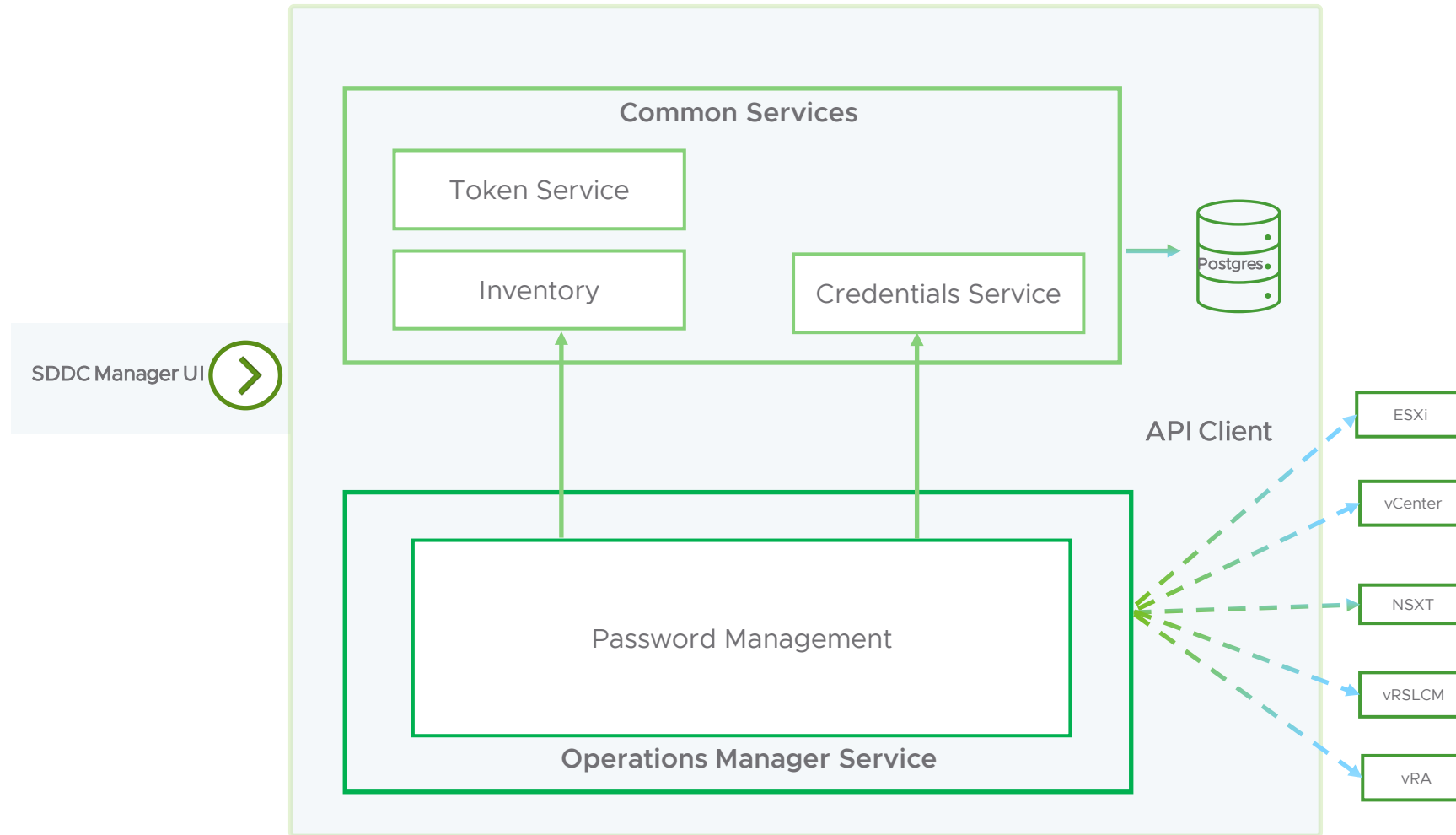
ESXI VCENTER PSC NSXT MANAGER BACKUP

ROTATE ALL ROTATE NOW SCHEDULE ROTATION ▾

<input type="checkbox"/>		FQDN	Status	Domain
<input type="checkbox"/>	⋮	esxi-1	✓ Active	
<input type="checkbox"/>	⋮	esxi-2	✓ Active	

Password Management Module

Password management blueprint



- Operationsmanager service takes charge of retrieving payload and performs password task
- Connection check-Spring cron job runs password check refresh task
- Everyday 1AM UTC default

Disconnected accounts

As part of troubleshooting check for below:

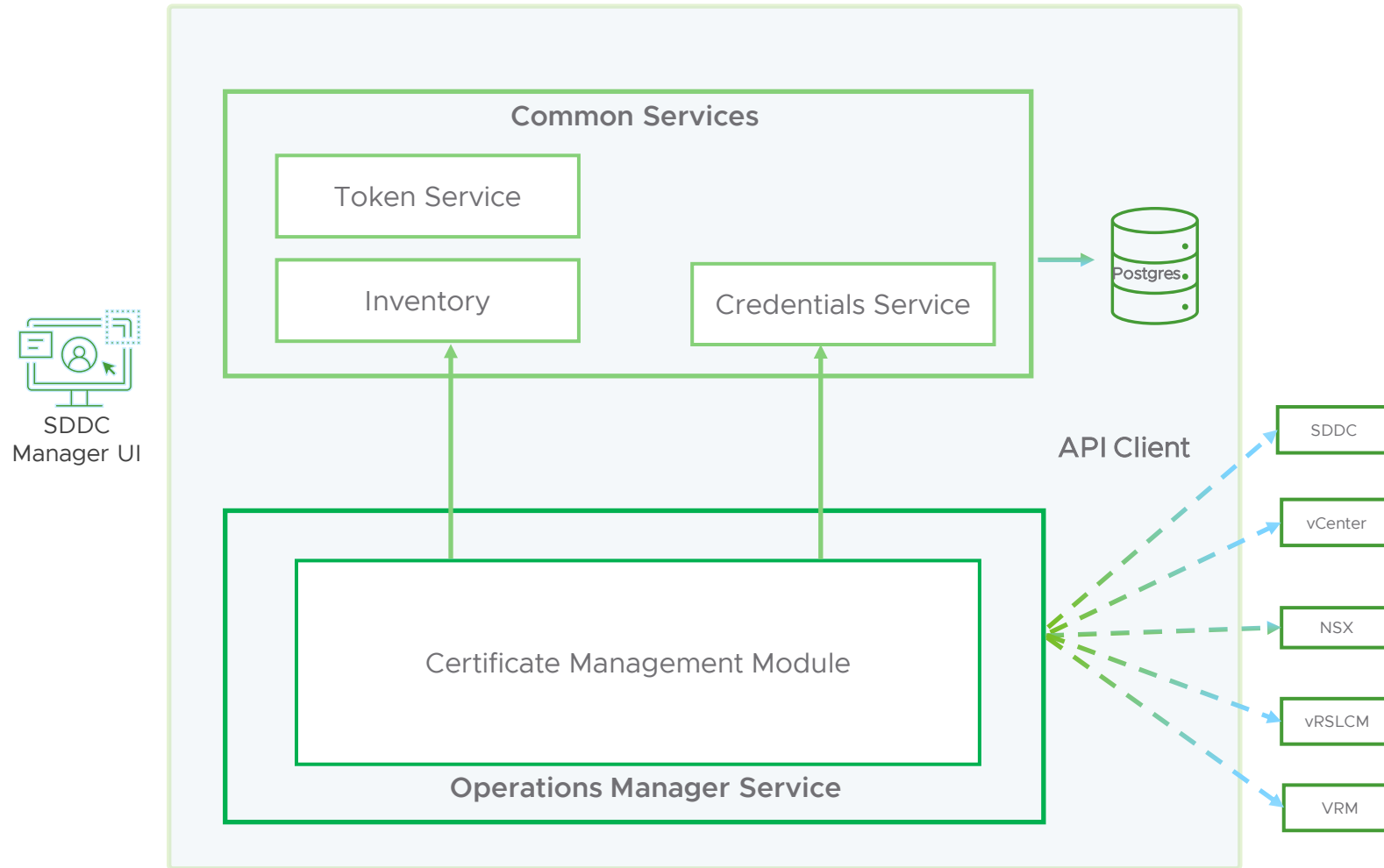
- Appliance state
- Communication to the component from SDDC manager, primarily we use SSH
- Are the passwords changed outside of SDDC manager



	SSH	API
Platform Services Controller- SSO administrator@vsphere.local		✓
ESXI root account		✓
NSX Manager admin account		✓
NSX Manager root account	✓	✓
VMware Aria Lifecycle Platform root account	✓	✓

Security

Certificate management



Options

- Fully automated
 - ✓ Microsoft CA
 - ✓ OpenSSL(internal only) CA
- Partially automated
 - ✓ Third-Party CA

Enhancements

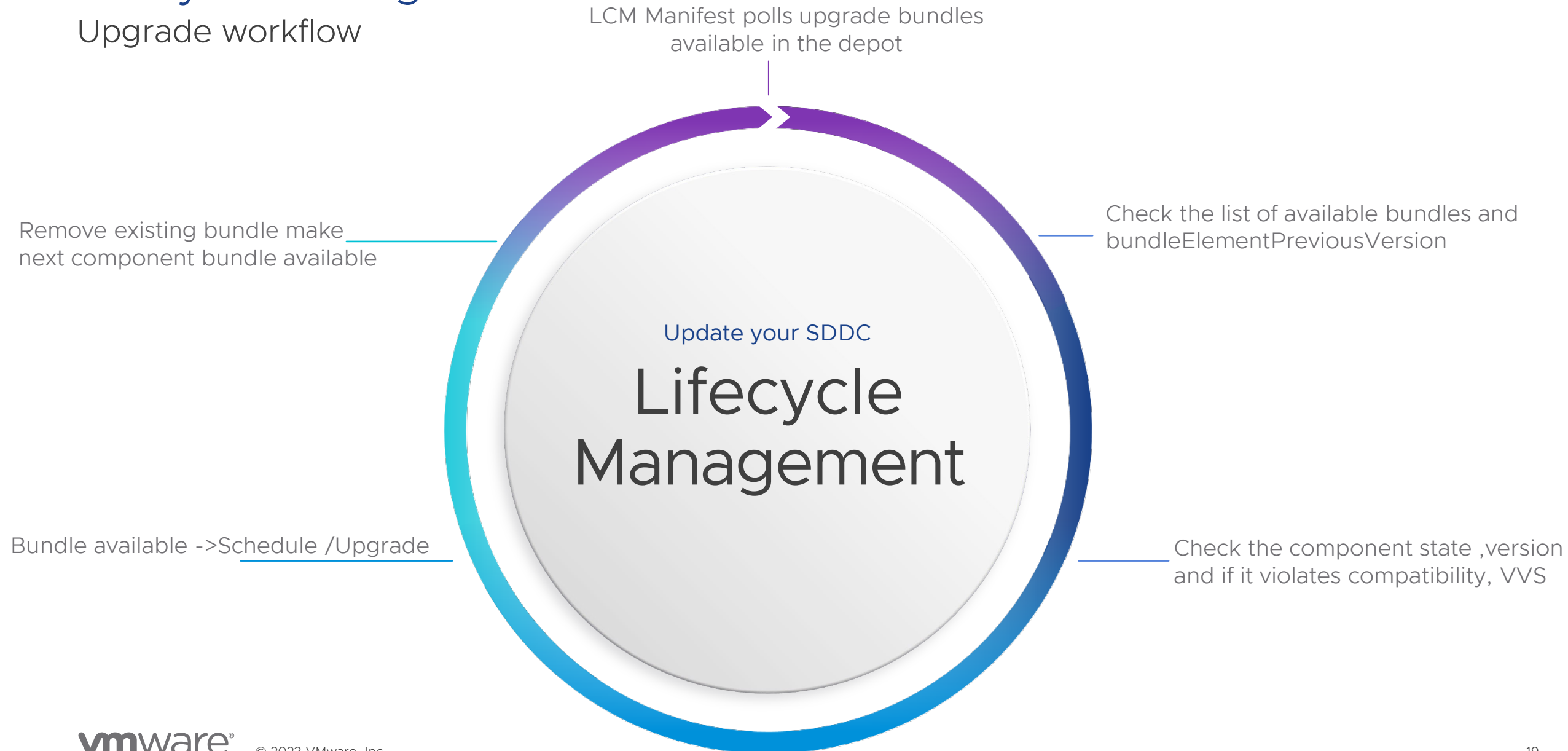
- UI decodes and validates the certificate for invalid chain or key
- Trust certificate option on certificates tab incase not present in store

Critical components



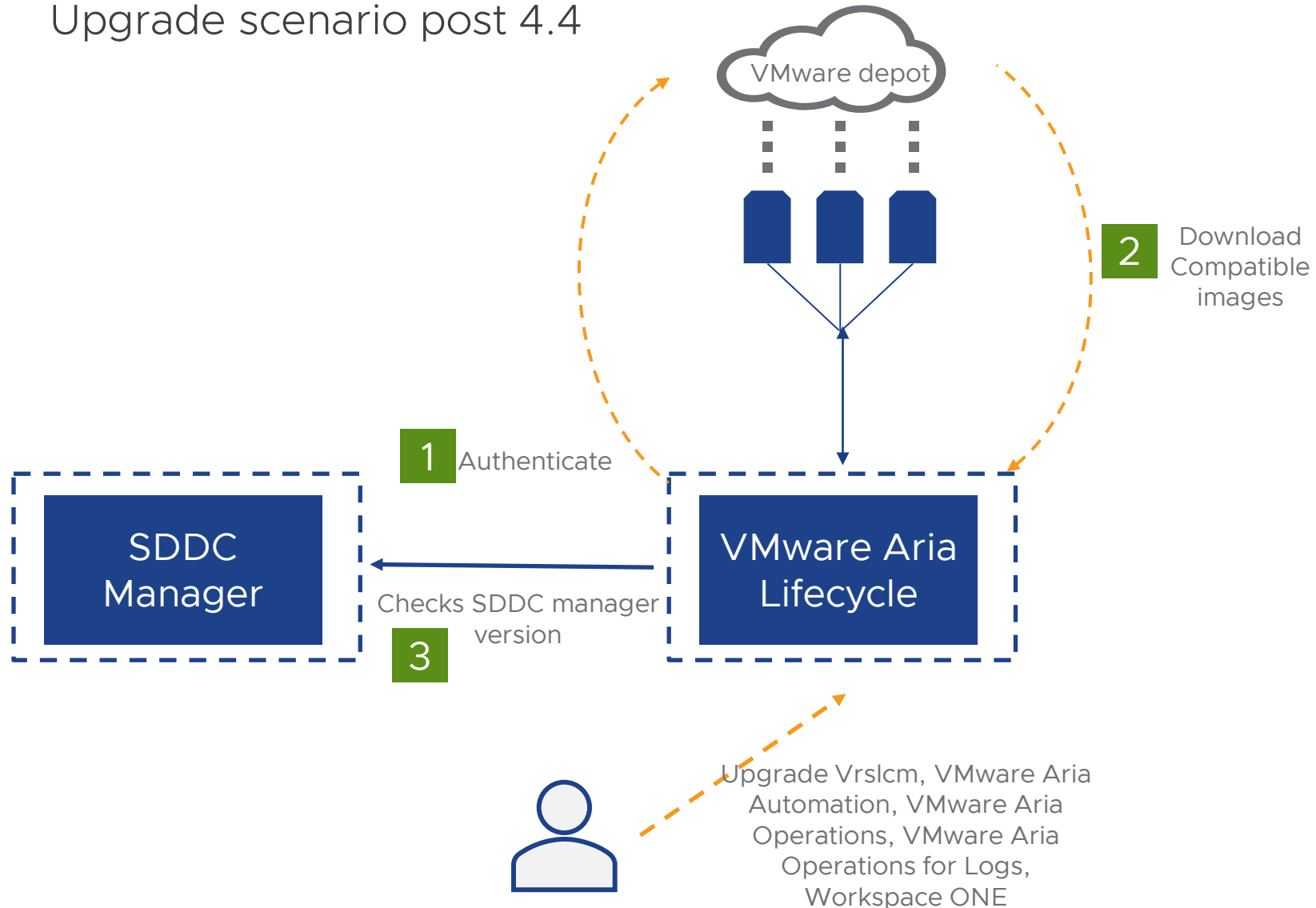
Lifecycle Management

Upgrade workflow



Decoupled VMware Aria Upgrades

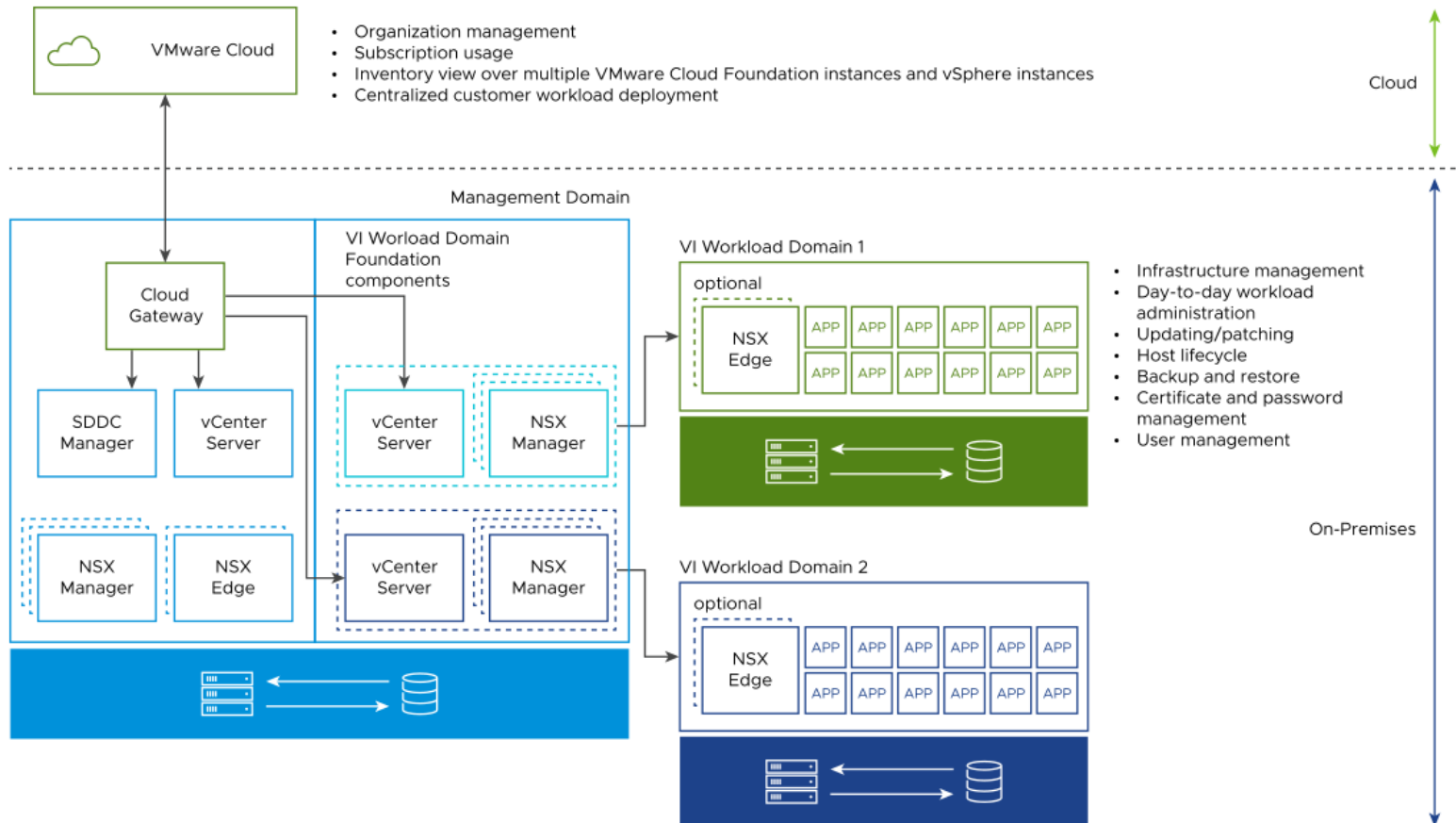
Upgrade scenario post 4.4



- Upgrades availability depends on cross compatibility with VMware Cloud Foundation and VMware Aria Suite Lifecycle version
- Refer [88829](#)

VMware Cloud Foundation+

On-premises to cloud



Cloud Connected



Security Checks



Subscription model
and keyless entitlement



Deploy and manage
all modern workloads

Tools for Troubleshooting and Management



Async Patch tool



API and SOS utility



SHD



Upgrade Prechecks



VDT

Patching SDDC Manager Components

➤ Vulnerability

➤ Bugs

➤ No custom ISO version



Patching SDDC Manager Components

Home / VMware Cloud Foundation

Download VMware Cloud Foundation

Select Version:

5.0

VMware Cloud Foundation is VMware's unified SDDC platform for the hybrid cloud. Based on VMware's compute, storage, and network virtualization, it delivers a natively integrated software stack that can be used on premises for private cloud deployments or run as a service from the public cloud. VMware Cloud Foundation establishes a common foundation between private and public cloud.

Read More

Product Resources

[View My Download History](#)

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[Documentation](#)

Product Downloads

Drivers & Tools

Open Source

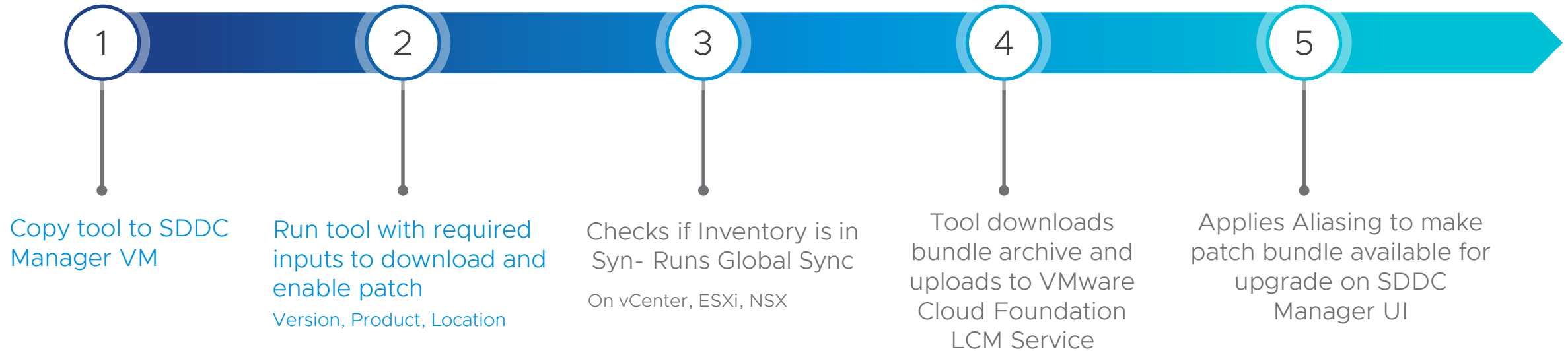
Custom ISOs

OEM Addons

Driver / Tool	Release Date	
VMware Cloud Foundation Tools		
Async Patch Tool	2023-06-22	GO TO DOWNLOADS

Enable Async Patches

Online depot- if SDDC Manager is connected to depot.vmware.com



Async Patch Tool

List patches

```
2023-07-26 14:24:11.054 [INFO ] Telemetry data collection is not enabled
Enter Depot User Password:
2023-07-26 14:24:21.571 [WARN ] Download directory was not provided, defaulting to directory /nfs/vmware/vcf/nfs-mount/apToolBundles
vcf@sphere 2023-07-26 14:24:23.018 [INFO ] Validating list asyncpatch input spec
2023-07-26 14:24:23.048 [INFO ] Downloading latest LCM manifest from depot
2023-07-26 14:24:25.107 [INFO ] Successfully downloaded latest LCM manifest
2023-07-26 14:24:25.108 [INFO ] Default manifest file found, attempting to read into manifest object.
2023-07-26 14:24:25.200 [INFO ]
-----
VCF A Product Type          Version          Sku              Bundle Name
Docum-----
VCF A ESX_HOST              7.0.2-19290878  [VCF]            bundle-56553
ESX_HOST 7.0.1-19324898  [VCF]            bundle-55488
----- ESX_HOST 7.0.3-20036589  [VCF]            bundle-58889
ESX_HOST 7.0.3-20328353  [VCF]            bundle-60929
2023- ESX_HOST 7.0.3-20842708  [VCF]            bundle-66405
, to ESX_HOST 7.0.3-21053776  [VCF]            bundle-69531
2023- ESX_HOST 7.0.3-21313628  [VCF]            bundle-70817
Refer ESX_HOST 7.0.3-21424296  [VCF]            bundle-72874
Pleas ESX_HOST 7.0.3-21686933  [VCF]            bundle-78085
ESX_HOST 7.0.3-21930508  [VCF]            bundle-82836
VCENTER 7.0.3.00500-19480866 [VCF, VCF_ON_VXRAIL] bundle-55743
VCENTER 7.0.3.00700-20051473 [VCF, VCF_ON_VXRAIL] bundle-58885
VCENTER 7.0.3.00800-20150588 [VCF, VCF_ON_VXRAIL] bundle-59284
VCENTER 7.0.3.01000-20395099 [VCF, VCF_ON_VXRAIL] bundle-61453
VCENTER 7.0.3.01100-20845200 [VCF, VCF_ON_VXRAIL] bundle-66401
VCENTER 7.0.3.01200-20990077 [VCF, VCF_ON_VXRAIL] bundle-67932
VCENTER 7.0.3.01400-21477706 [VCF, VCF_ON_VXRAIL] bundle-73797
VCENTER 7.0.3.01500-21784236 [VCF, VCF_ON_VXRAIL] bundle-81248
VCENTER 8.0.1.00200-21860503 [VCF, VCF_ON_VXRAIL] bundle-81347
VX_MANAGER 7.0.410-27831807 [VCF_ON_VXRAIL] VXRAIL7-0-410-27831807R5P0C_VxRail-7-0-410-Composite-Upgrade-Slim-Package-fo
r-7-0-x-zip
VX_MANAGER 7.0.411-27954264 [VCF_ON_VXRAIL] VXRAIL7-0-411-27954264DF24Y_VxRail-7-0-411-Composite-Upgrade-Slim-Package-fo
r-7-0-x-zip
VX_MANAGER 7.0.451-28053212 [VCF_ON_VXRAIL] VXRAIL7-0-451-28053212NT43J_VxRail-7-0-451-Composite-Upgrade-Slim-Package-fo
r-7-0-x-zip
NSX 3.1.3.7.4-19762317 [VCF, VCF_ON_VXRAIL] bundle-57417
```

Upgrade Prechecks

Prior to upgrade

✓ Upgrade precheck started successfully.

▼ Precheck

❗ Precheck failed at Jul 12, 2023, 12:05:08 PM

[View Status](#)

It is recommended that you precheck your domain prior to update.

PRECHECK

SILENCED PRECHECK: 0 ⓘ

Upgrade Precheck

⚠ Precheck passed at Jul 12, 2023, 12:18:51 PM. Resource health status will get updated in the next audit and applicable bundle will become available for upgrade.

It is recommended that you precheck your domain prior to update to prevent an error in an update

RUN PRECHECK

PRECHECK FAILED RESOURCES

SILENCED PRECHECK: 0 ⓘ

> ✓ Deployment Configuration

▼ SDDC Manager

- > ✓ Operations Manager
- > ✓ Sddc Manager Ui
- > ✓ Domain Manager
- > ✓ Common Services
- > ✓ Lcm
- > ✓ Sddc Security Configuration

API

Developer center

▼ **POST**

/v1/system/health-summary

Initiates Health Summary checks.

> Description

> Response

Types

▼ Try it out

Parameter	Value	Type	Description/Data Type
healthsummaries... (required)	<pre>1 "healthChecks": { 2 "certificateHealth": false, 3 "composabilityHealth": false, 4 "computeHealth": true, 5 "connectivityHealth": true, 6 "dnsHealth": false, 7 "generalHealth": true, 8 "hardwareCompatibilityHealth": 9 "ntpHealth": false, 10 "passwordHealth": false, 11 "servicesHealth": true, 12 "storageHealth": false, 13 "versionHealth": false 14 }, 15 "options": { 16 "config": { 17 "force": false, 18 "skipKnownHostCheck": fal 19 }, 20 }, 21</pre>	Body	healthsummariespec HealthSummarySpec { healthChecks: (Object) Sos Health Checks. HealthChecks { ... } options: (Object) Sos options for support health checks. HealthSummaryOption { ... } scope: (Object) Domain and cluster under which logs should be .. .



SOS utility

Command line health checks

VCF, has two different SOS utilities:

- 1. Included with Cloud Builder
- 2. Included with the SDDC Manager

Options and features are different between the two versions

- One of the primary uses of the SOS utility is to create a support bundle
- utilize the SOS utility to perform a health-check on the system
- perform a platform audit on everything or specific modules (like networking, storage, passwords, or ...)

```
Log Collections Options:
--esx-logs          Collect ESXi logs
--vc-logs           Collect vCenter Server logs
--sddc-manager-logs Collect SDDC-Manager logs
--vpxrail-manager-logs Collect VxRail-Manager logs(Applicable for VxRail)
--psc-logs          Collect PSC logs
--nsx-logs          Collect NSX logs
--wcp-logs          Collect Log WCP cluster logs
--vrealize-logs     Collect vRealize components logs (vRSLCM)
--no-clean-old-logs Do not clean old log folder
--test             Sanity test logs collected by verifying the files
--no-health-check   Skip Health Check executed as part of SoS log collection
--api-logs         Collect output from APIs
--vm-screenshots    Collect all VM screenshots
--system-debug-logs Collect System logs to help debug in abnormal scenarios like memory leak
--collect-all-logs Collect logs for all components, excluding WCP and system-debug-logs pass --domain-name DOMAINNAME, For all domains pass --domain-name ALL (Default: MANAGEMENT)

Fix-It-Up Options:
--enable-ssh-esxi  Enable ssh on all esxi nodes in a domain, pass --domain-name DOMAINNAME, For all domains pass --domain-name ALL (Default: MANAGEMENT)
--disable-ssh-esxi Disable ssh on all esxi nodes in a domain, pass --domain-name DOMAINNAME, For all domains pass --domain-name ALL (Default: MANAGEMENT)
```

```
root@sddc-manager [ / ]# /opt/vmware/sddc-support/sos --vc-logs --sddc-manager-logs --zip
Welcome to Supportability and Serviceability(SoS) utility!
Performing SoS operation for sddcId-1001 domain components
Logs : /var/log/vmware/vcf/sddc-support/sos-2023-07-27-02-26-43-7741
Log file : /var/log/vmware/vcf/sddc-support/sos-2023-07-27-02-26-43-7741/sos.log
Progress : 25%, Completed tasks : [VCF-SUMMARY]
```

```
Health Check completed successfully for : [VCF-SUMMARY, CONNECTIVITY=CHECK]
root@sddc-manager [ /home/vcf ]# /opt/vmware/sddc-support/sos --compute-health
Welcome to Supportability and Serviceability(SoS) utility!
Performing SoS operation for melanie wants domain components
Health Check : /var/log/vmware/vcf/sddc-support/healthcheck-2023-07-25-14-12-54-18098
Health Check log : /var/log/vmware/vcf/sddc-support/healthcheck-2023-07-25-14-12-54-18098/sos.log
SDDC Manager : sddc-manager.vrack.vsphere.local
```

Stage	Status
Bringup	Completed
Management Domain State	Completed

Component	Identity
SDDC-Manager	10.0.0.4
Number of Servers	6

```
Compute : RED
```


SL#	Area	Title	State
1	ESXi : esxi-1.vrack.vsphere.local	License check	GREEN
		ESXi Health Status	GREEN
		Check disks for partitions	GREEN
2	ESXi : esxi-2.vrack.vsphere.local	License check	GREEN
		ESXi Health Status	GREEN
		Check disks for partitions	GREEN
3	ESXi : esxi-3.vrack.vsphere.local	License check	GREEN
		ESXi Health Status	GREEN
		Check disks for partitions	GREEN
4	ESXi : esxi-4.vrack.vsphere.local	License check	GREEN
		ESXi Health Status	GREEN
		Check disks for partitions	GREEN
5	ESXi : esxi-5.vrack.vsphere.local	License check	GREEN
		ESXi Health Status	GREEN
		Check disks for partitions	GREEN
6	ESXi : esxi-6.vrack.vsphere.local	License check	GREEN
		ESXi Health Status	GREEN
		Check disks for partitions	GREEN
7	vCenter: vcenter-1.vrack.vsphere.local	Check Health Status	RED

VMware Skyline Health Diagnostics

DC Name	vc1.gssslabs.org		
PNID	vc1.gssslabs.org		
Plugins Summary Details			
Status	Check Name	Message	KB
GREEN	RootPassCheck	vCenter Server Appliance Root Password Status Check	75174
GREEN	VCADCheck	vCenter Active Directory Check	
GREEN	DiskUsageCheck	vCenter Server Appliance Storage Utilization Check	76563
GREEN	InodeCheck	vCenter Server Appliance Filesystem Inode Utilization Check	76563
GREEN	DBSpaceCheck	vCenter Server Appliance Database table Space Utilization Check	2145603
GREEN	STSCertCheck	STS Signing Certificate Expiration Check	79248
GREEN	SSLCertCheck	PSC/vCenter SSL Certificate Expiration Check	82332
GREEN	LookupServiceCheck	vCenter Server Appliance Lookup Service Check	80469
GREEN	ServiceStatusCheck	vCenter Server Service Status Check	2109887
GREEN	DNSCheck	vCenter Server Appliance DNS Configuration Check	
GREEN	NTPCheck	vCenter Server Appliance NTP Configuration Check	
GREEN	PortCheck	vCenter Server Appliance Port Check	2106283
GREEN	vCSAHealthCheck	vCenter Server Appliance Health Status Check	
GREEN	VmDirCheck	vCenter Server Appliance vmdir check	
GREEN	VECSStoreExpCheck	Expiration Check of certificates in the Certificate Store (VECS)	2111411
GREEN	PGPassCheck	Password less login is working as expected	70979
GREEN	HostnameCheck	VMAFD DC Name matches the PNID	84355
GREEN	HostnameCheck	VMAFD DC Name matches the Hostname	84355
GREEN	HostnameCheck	PNID matches the Hostname	84355
GREEN	VECSStoreAlgoCheck	Signature Algorithm Check of certificates in the Certificate Store (VECS)	89424
GREEN	CertSANCheck	Certificate SAN DNS and FQDN Check	2097936

VDT -Pulse

vSphere



vSphere Diagnostic Tool
version 1.1.6 — July 25, 2023

DIAGNOSTICS TROUBLESHOOTING VSPHERE

Release Date: November 17, 2021


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☐ I have read and agree to the Technical Preview License I also understand that Flings are experimental and should not be run on production systems.

vdt-v1.1.6-07_11_2023.zip


DOWNLOAD

Contributors 12



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Comments 48



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Project Details

Summary

Requirements

Instructions

Changelog

 SUMMARY

vSphere Diagnostic Tool is a python script that runs diagnostic commands on the vCenter Server Photon Appliance to return useful troubleshooting data while running within the confines of the local environment with out upstream dependencies.

The motivation behind this tools is to provide multiple Pass/Fail tests to quickly facilitate the rapid isolation of issues encountered in the vSphere environment.

VDT

VMware Cloud Foundation

```
root@sddc-manager [ /home/vcf/vcf-vdt-main ]# python vcf_vdt.py

RUNNING VCF-VDT

DISCLAIMER: This script is currently in its alpha release phase.
As such, it may contain bugs, errors, or incomplete features.
Please use it with caution.

Today: Thursday, September 21 17:31:51
Version: 0.1.4
Log Level: INFO

SDDC Manager Info

BASIC INFO
SDDC Manager Hostname
[ ] sddc-manager.vrack.vsphere.local
SDDC Manager IP Address
[ ] 10.0.0.4
SDDC Manager Version
[ ] 4.5.0.0-20612863
SDDC Manager Load Average
[ ] 0.06, 0.10, 0.09
Configured DNS Server(s)
[ ] 10.0.0.250
Configured NTP Server(s)
[ ] 10.0.0.250, 10.0.0.250
Management vCenter
[ ] vcenter-1.vrack.vsphere.local | 10.0.0.6 | 7.0.3.01500-21784236

SERVICE CHECK
Platform services
[PASS] ACTIVE | 4.5.0-vcf4500RELEASE-20543095
Operations Manager
[PASS] ACTIVE | 4.5.0-vcf4500RELEASE-20543095
Sddc Manager UI App
[PASS] ACTIVE | 4.5.0-vcf4500RELEASE-20543094
Domain Manager
[PASS] ACTIVE | 4.5.0-vcf4500RELEASE-20543095
LCM
[PASS] ACTIVE | 4.5.0-vcf4500RELEASE-20543095

ADDITIONAL DETAILS
Management SSO Domain
[ ] vsphere.local
Is FIPS Enabled?
[ ] FIPS is NOT enabled.
Provide password for administrator@vsphere.local: █
```

```
vip-nsx-mgmt.vrack.vsphere.local
Certificate Trust Check
[PASS] Root Certificate is in both keystores of SDDC Manager.
Expiration Check
[PASS] Server Certificate expires in 753 days
Subject Alternative Name Check
[PASS] Hostname and IP in SAN

nsx-mgmt-1.vrack.vsphere.local
Certificate Trust Check
[PASS] Root Certificate is in both keystores of SDDC Manager.
Expiration Check
[PASS] Server Certificate expires in 753 days
Subject Alternative Name Check
[PASS] Hostname and IP in SAN

LOCKS INFO

Deployment Locks
Check for existing Deployment Locks
[PASS] No Deployment Locks detected.

Resource Locks
Check for existing Resource Locks
[PASS] No Resource Locks detected.

CREDENTIAL TASKS

Check for Invalid Transaction Status on Credential Operations
[PASS] No Invalid transactions for Credentials detected.

LCM MANIFEST

Check number of LCM Manifest Files in the DB
[PASS] 1 Manifest file found in LCM DB.

NSX Specific Checks

COMPUTE MANAGER - SDDC MANAGER INVENTORY CHECK
vcenter-1.vrack.vsphere.local
[PASS] Compute Manager vcenter-1.vrack.vsphere.local is in SDDC Manager Inventory.

Report written to /var/log/vmware/vcf/vcf-vdt/vcf-vdt-report-2023-09-21-173247
Please send feedback / feature requests to vcf-vdt@groups.vmware.com
```

```
Certificate Checks

SDDC MANAGER CERTIFICATES

sddc-manager.vrack.vsphere.local
Certificate Trust Check
[PASS] Root Certificate is in both keystores of SDDC Manager.
Expiration Check
[PASS] Server Certificate expires in 753 days
Subject Alternative Name Check
[WARN] SAN contains hostname but not IP

VCENTER CERTIFICATES

vcenter-1.vrack.vsphere.local
Certificate Trust Check
[PASS] Root Certificate is in both keystores of SDDC Manager.
Expiration Check
[PASS] Server Certificate expires in 659 days
Subject Alternative Name Check
[WARN] SAN contains hostname but not IP

NSX CERTIFICATES

vip-nsx-mgmt.vrack.vsphere.local
Certificate Trust Check
[PASS] Root Certificate is in both keystores of SDDC Manager.
Expiration Check
[PASS] Server Certificate expires in 753 days
Subject Alternative Name Check
[PASS] Hostname and IP in SAN

nsx-mgmt-1.vrack.vsphere.local
Certificate Trust Check
[PASS] Root Certificate is in both keystores of SDDC Manager.
Expiration Check
[PASS] Server Certificate expires in 753 days
Subject Alternative Name Check
[PASS] Hostname and IP in SAN
```


Summary

- VMware Cloud Foundation Architecture Overview

Types of architecture | Domain types | Storage used | VMware Aria Suite integration

- Service breakdown

Cloud builder services | Operations and SDDC manager services

- Navigating VMware Cloud Foundation

Domain manager workflow | Password management module | Certificate blueprint | Upgrade elements | VMware Cloud Foundation+

- Tools for troubleshooting and Management

Async Patch Tool | API and SOS utility | Skyline Diagnostics | Upgrade Precheck | VMware Cloud Foundation-VDT

Important Links

Understanding Version Aliasing:

<https://kb.vmware.com/s/article/89291>

List of VMware Cloud Foundation Supported Async Patches

<https://kb.vmware.com/s/article/88287>

VMware Cloud Foundation+

<https://docs.vmware.com/en/VMware-Cloud-Foundation/services/vcfplus/GUID-113FFEA8-9866-4185-A9FA-5280CD6A41CD.html>

SDDC Manager Developer Center API

<https://vdc-download.vmware.com/vmwb-repository/dcr-public/60ff5385-d6ee-41d3-9ccf-b719a59f7971/b8ba0641-d8ae-4243-acf2-3639ca248783/index.html>

SoS Utility

<https://docs.vmware.com/en/VMware-Cloud-Foundation/4.5/vcf-admin/GUID-9EBC6D42-B799-4177-9EFF-78E98FDBA0FD.html>

VMware Aria Suite Install and Upgrade Paths for VMware Cloud Foundation

<https://kb.vmware.com/s/article/88829>

Thank You

