

The VCF 9 Upgrade: Why Companies Are Making the Move, and What to Watch For

Every organization running VMware Cloud Foundation eventually faces the same question: is it time to upgrade to VCF 9? For most, the answer isn't optional for long. Between licensing changes, end-of-support dates, and a genuinely different management architecture, VCF 9 is less a feature release and more a platform transition. Understanding why it matters, what it delivers, and where teams get tripped up is the first step in planning for it well.

500

KUBERNETES CLUSTERS PER CONTROL PLANE

70%

FASTER CLUSTER PROVISIONING IN VCF 9.1

40%

LOWER TOTAL COST OF OWNERSHIP CLAIMED

— WHY THE UPGRADE ISN'T REALLY OPTIONAL

The most immediate driver is licensing. Broadcom has moved VMware Cloud Foundation to a subscription-only model, and perpetual licenses cannot be upgraded directly to VCF 9: organizations still on perpetual licenses have to transition to a subscription first. That transition is compounded by support timelines: general support for vSphere 7.x perpetual licenses ended in October 2025, and vSphere 8.x follows in October 2027. Once support lapses, organizations are

running unsupported infrastructure, which is a hard sell to any security or compliance team.

For many companies, then, the upgrade conversation starts as a licensing and support conversation, not a features conversation. But once that door opens, the platform changes underneath VCF 9 give teams real reasons to move deliberately rather than reluctantly.

Why the upgrade isn't really optional

LICENSING

Subscription-only

Perpetual licenses can't upgrade directly to VCF 9.

Must convert to a subscription first.

SUPPORT CLOCK

vSphere 7.x: ended Oct 2025 vSphere 8.x: ends Oct 2027

General support windows.

THE RISK

Unsupported infrastructure

A hard sell to security and compliance teams once support lapses.

 **Result: for most companies, the upgrade conversation starts as a licensing and support conversation, not a features conversation.**

— WHAT COMPANIES ACTUALLY GAIN

VCF 9 restructures how the private cloud stack itself is built and run. Management components (SDDC Manager, Aria/VCF Operations, and related services) now deploy as containers inside a VCF Management Services appliance rather than as a sprawl of separate virtual appliances. That appliance can be replicated for fault tolerance, which simplifies both the footprint and the failure model of the management plane. For operations teams that have spent years patching and troubleshooting a dozen separate management VMs, this is a meaningful reduction in surface area.

The platform also leans hard into modern workload types. vSphere Kubernetes Service now includes a Local Consumption Interface as a native, default-enabled Supervisor service, along with a lighter container-as-a-service runtime mode. VCF 9.1 pushes this further, with a control plane supporting up to 500 Kubernetes clusters and provisioning up to 70% faster. For organizations consolidating Kubernetes sprawl onto their private cloud, that's a direct operational win.

AI workloads get specific attention as well. VCF 9 supports live vMotion for GPU-heavy workloads with minimal downtime and includes tighter integration with NVIDIA hardware and software. That's relevant for any company standing up internal AI or ML infrastructure without wanting to build a separate silo for it.

On cost, Broadcom has both cut list pricing on VCF subscriptions and pointed to efficiency gains from the new architecture. VCF 9.1 claims higher consolidation ratios and up to 40% lower total cost of ownership through performance improvements and native software mirroring. Licensing itself has also been simplified: capacity tracking and compliance visibility now live inside VCF Operations, replacing the older world of scattered 25-character license keys with subscription-based license files that are easier to monitor centrally.

Put together, the business case is a combination of avoiding unsupported infrastructure, consolidating and simplifying management overhead, and picking up real capability for Kubernetes and AI workloads without a forklift replacement of the private cloud.

— HOW TO PREPARE BEFORE TOUCHING THE UPGRADE BUTTON

VCF upgrades are not a single component update: they involve mandatory sequencing across SDDC Manager, NSX, vCenter, ESX, and Aria/VCF Operations, with dependencies that make order matter as much as timing. Broadcom's own guidance starts with assessment: validating current component versions and configuration, reviewing the Planning and Preparation Workbook, checking hardware compatibility against the VMware Interoperability Matrix, and running SDDC Manager prechecks before committing to a maintenance window.

VMware has also released an Upgrade Planning Tool that takes in a current environment's versions and produces a tailored, phase-by-phase upgrade plan, exportable to PDF for offline reference during the change window. Teams evaluating VCF 9 should use this rather than reconstructing a plan from scattered documentation: the tool exists specifically because the upgrade paths and sequencing rules are too intricate to track manually with confidence.

Network readiness deserves early attention. VCF Management Services alone can require a dozen or more static IPs, each with a matching forward and reverse DNS entry, scaling toward thirty depending on planned scale-out. Getting IP allocation, DNS records, and naming conventions locked down well before the upgrade window avoids one of the most common last-minute scrambles.

Licensing needs its own workstream: confirming current license type, initiating any required perpetual-to-subscription conversion, and validating capacity and compliance visibility in VCF Operations ahead of the cutover, not as an afterthought during the technical upgrade itself.

Finally, teams should treat fallback planning as a first-class requirement. That means defining rollback boundaries, communication plans, and go/no-go criteria before opening the upgrade tooling, not improvising them mid-maintenance-window.

VCF upgrade checklist: sequential flow & readiness

⚠️ Mandatory sequencing & dependencies | Order & timing matter

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VCF UPGRADE ASSESSMENT

[Broadcom guidance]

- ✓ Validate component versions & configuration
- ✓ Review Planning & Preparation Workbook
- ✓ Check hardware compatibility (Interoperability Matrix)
- ✓ Run SDDC Manager prechecks before the maintenance window

⚠️ Treat assessment as first requirement before other action

2



PLAN

[Tailored PDF plan]

- ✓ Input environment versions
- ✓ Produce tailored, phase-by-phase upgrade plan
- ✓ Export plan to PDF for offline reference

⚠️ Avoid reconstructing a plan from scattered paths — they are intricate

3



NETWORK PREPARATION

[Avoid last scrambles]

- ✓ Deserves early attention well before the window
- ✓ VCF Management Services require static IPs (a dozen, up to thirty)
- ✓ Match forward and reverse DNS entries
- ✓ Lock down naming conventions

⚠️ Scale depends on planned scale-out

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LICENSE

[Initiate conversion]

- ✓ Confirm current license type
- ✓ Initiate perpetual-to-subscription conversion
- ✓ Validate capacity & compliance visibility in VCF Operations
- ✓ Complete work ahead of cutover

⚠️ Not an afterthought during the technical upgrade

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FALLBACK PREPARATION

[First-class requirement]

- ✓ Define before opening tooling
- ✓ Treat fallback as first requirement
- ✓ Define rollback boundaries
- ✓ Establish communication plans
- ✓ Set clear go/no-go criteria

⚠️ Do not improvise mid-maintenance-window

→ SEQUENTIAL FLOW

Each step builds on the previous one. Do not skip or parallelize.

🕒 ORDER & TIMING MATTER

Deviations increase risk and undermine upgrade success.

— WHERE TEAMS GET TRIPPED UP

The single most common cause of failure is DNS hygiene. VCF 9.1 requires strictly lowercase FQDNs, and mismatches between DNS records and what's entered in SDDC Manager are a leading cause of certificate handshake failures during management services deployment. This sounds minor until it stalls a production upgrade at 2 a.m.

Sequencing errors are the second major trap. Because upgrade paths differ depending on the starting combination of vSphere, NSX, and Aria/VCF Operations versions, teams that assume a generic "upgrade everything in order" approach can hit unsupported combinations or find that upgrade binaries for one component simply don't appear where expected in another. There have also been reports of SDDC Manager core services failing to start after a reboot mid-upgrade, resulting in prolonged downtime and an inaccessible UI, exactly the kind of issue a tested rollback plan is meant to catch early rather than discover live.

Conversion scenarios add another layer of risk: organizations converging an existing vCenter environment into VCF, where that vCenter was previously upgraded from 8.x to 9.x outside the VCF process, have run into management services deployment failures tied to FQDN resolution during bootstrap. And because only vSphere Lifecycle Manager image-based clusters are supported starting with VCF 9.0, any workload domains still running baseline-based cluster management need remediation before they're upgrade-eligible at all.

None of these pitfalls are exotic: they're the kind of environment hygiene and sequencing discipline that experienced infrastructure teams already practice. The difference with VCF 9 is that the platform's tighter integration across components means small inconsistencies surface faster and with less forgiveness than they did in earlier, more loosely coupled versions.

VMWARE VCF 9.1 UPGRADE CHALLENGES: A TECHNICAL AUDIT

DNS PRECISION & CERTIFICATE SANCTITY



**MANDATORY
LOWERCASE FQDNs**



"The documentation emphasizes strict lowercase compliance."



DNS Handicap:

1. Uppercase hostname in DNS records

Failure

**FAILED:
CERT MISMATCH**

DNS HYGIENE: The most common failure point.

UPGRADE SEQUENCING & PATH VALIDATION



vSphere 8



NSX 4



vCenter 9



CRITICAL: The current upgrade sequence is invalid for this component combination. See documentation for starting versions and upgrade paths.



"Unsupported combo" prevents binary appearance

PATH VALIDATION: Upgrade paths differ by starting version combination.

CORE SERVICES & ROLLBACK DEFENSE



SDDC Manager core services fail to start post-reboot

SDDC Manager core services Failure:
tokenize.connector: to reconnect...
coating.connectorcontact etc:aa: exit
-
refut do doneeac: oritios
init: errorone: etica occe
enter: opdataer: cnodeir, partcios or racovey
rareconnect: to,one,eatier: cericos or racovey
orcert: dotocero
contor: ractern: cec stort: rhoaoocent
oreneichon
courceo: inlocel: cccateewteo tece essootte
kato: reoatenocot

Failure



**Tested
Rollback**

Post-Reboot Core Services Failure:

Prolonged downtime during restoration.
Tested rollback procedure essential to minimize impact.

CONVERSION RISK & WORKLOAD REMEDIATION

"Existing vCenter converged into VCF" scenario



DNS Resolution failure during bootstrap

"Baseline-based cluster management"



Only vSphere Lifecycle Manager image-based clusters are supported starting VCF 9.0"

ELIGIBLE



VS

INELIGIBLE



REMEDATION MANDATORY

— THE BOTTOM LINE

Companies are moving to VCF 9 because staying still is no longer a real option, but also because the platform genuinely reduces management overhead and extends real capability into Kubernetes and AI workloads. The organizations that get through the upgrade cleanly are the ones that treat it as a planning exercise first: sequencing, DNS, IP allocation, licensing conversion, and fallback criteria settled well before anyone opens the upgrade tooling.

— NEXT STEPS

Planning a VCF 9 upgrade? It is worth a conversation before the work begins.

[Talk to CloudBolt](#)