SYMBEEO

PUBLIC

SOLUTION DESIGN DOCUMENT

Implementation plan for a typical buyer's two-pod build, applying SRA-IMP-001

Design document (HLD + LLD)

CAPABILITY	DOCUMENT	VERSION	DATE
Implementation Services	SDD-IMP-001	1.1	Oct 10, 2026

WRITTEN BY

Steve Phillips, Principal Data Center Architect

© 2026 Symbeeo. All rights reserved.

Document control

Document	SDD-IMP-001	Version	1.1
Issued	Oct 10, 2026	Status	Issued by Symbeeo
Classification	Public	Supersedes	1.0, Sep 27, 2026
Capability	Implementation Services	Author	Steve Phillips
Role	Principal Data Center Architect	Applies to	SRA-IMP-001 v1.0, installs SDD-DC-001 v1.3
Tested by	STP-IMP-001		
Credentials	CCSP, CCIE, AWS Certified Security – Specialty		
Approval	Approved by Edwin Ozer, Founder, Oct 10, 2026. Issued by Symbeeo, Oct 10, 2026.		
Sign-off	"The customer's named representative signs this document before build; the practice lead signs it after."		

Contents

1 · Introduction 3
2 · Prerequisites 3
3 · Solution overview 4
4 · Logical design 5
5 · Physical design 5
6 · Cutover and migration 6
7 · Roles and deliverables 6
8 · Change control and reporting 6
9 · Security and lifecycle clauses 7

© 2026 Symbeeo. All rights reserved. · Public

> CONVENTIONS
>
> The reference architecture applied to one client with names, quantities, a schedule and a cutover plan. Client values are the typical buyer's from SRA-IMP-001 §1 [A] until the design workshop replaces them. Quantities come from SDD-DC-001 §3 and §5; standards and tool facts are from the sources cited in SRA-IMP-001 [S]. A row with more than one tag is counted once: as a published figure if any tag is [S] or [S*], otherwise as an assumption if any tag is [A], otherwise as a design target.

Table 1. Revision history

Date	Version	Change
Sep 27, 2026	1.0	First issue.
Oct 10, 2026	1.1	Approval line now reads: approved by the Founder, issued by Symbeeo. Steve Phillips remains the author.

1 · Introduction

1.1 Purpose.

Install the two-pod private cloud that SDD-DC-001 designs, migrate 250 virtual machines onto it, sanitize and remove the old hosts, and hand the client's operations team a record they can run from. The client signs before any hardware is ordered.

1.2 Goals.

Zero unplanned outage; every production change inside the Saturday 22:00–04:00 window [A]; every unit burned in before it enters a production room; every retired disk sanitized before it leaves the building; as-built delivered within 10 working days of the last cutover (SRA-IMP-001 R16).

1.3 Approach.

Phase 1 survey both sites, release the order. Phase 2 stage and burn in pod B hardware; install at site B; test (STP-IMP-001, then STP-DC-001 T1–T9). Phase 3 migrate application groups to pod B, one per window. Phase 4 decommission and sanitize site A hosts; stage, install and test pod A. Phase 5 replication A⇔B, DR drill (STP-DC-001 T11–T13), handover, hypercare.

1.4 Platform decision.

The migration tool follows the hypervisor that VMware: Stay or Leave chooses: VCF Operations HCX 9 on the ESX path, or Nutanix Move 6.3 on the AHV path. Server management follows the server model SDD-DC-001 §3.1 names. The workshop deletes the unused path.

2 · Prerequisites

Table 2. Prerequisites

#	Prerequisite	Owner	Status
P1	SDD-DC-001 signed; server model and hypervisor decided	client · Symbeeo	open
P2	Site survey both rooms to SRA-IMP-001 R1, signed by client facilities	Symbeeo	open

© 2026 Symbeeo. All rights reserved. · Public

#	Prerequisite	Owner	Status
P3	Staging location agreed (manufacturer line, integrator area or client build room)	Symbeeo	open
P4	Firmware and BIOS baseline written into SDD-DC-001	Symbeeo	open
P5	Certificate authority issues BMC and management certificates	client	open
P6	Application groups, owners and dependency order, from the SDD-DC-001 P5 inventory	client	open
P7	Change authority accepts the window calendar and the go/no-go form	client	open
P8	Sanitization method and witness agreed for retired media	client	open
P9	Label scheme agreed in the TIA-606-D format	client · Symbeeo	open

3 · Solution overview

3.1 What is installed [A], from SDD-DC-001.

Table 3. What is installed [A], from SDD-DC-001

Site	Racks	Servers	Switching	Retired
B (first)	2	16 (management 4 · application 8 · storage-heavy 4)	2 ToR · 1 OOB	none
A (second)	2	12 (management 4 · application 8)	2 ToR · 1 OOB	old hosts, count from P6 inventory

3.2 Link volumes [A].

Per server, the application-node set of SDD-DC-001 §3.2, assumed for all 28 nodes: 2 × 100GbE, 2 × 25GbE, 1 × BMC = 112 data links and 28 BMC links; plus ToR uplinks to the DC fabric per SDD-NET-001. Every fiber link is inspected and tested (SRA-IMP-001 R10, R11); direct-attach copper is continuity-checked by link-up and error counters.

3.3 Schedule [A].

Table 4. Schedule [A]

Phase	Weeks	Gate out
1 Survey and order	1–2	P1–P9 closed; order released
2 Pod B stage, install, test	lead time + 4	STP-IMP-001 T1–T11 and T17–T19 and STP-DC-001 T1–T9 pass at site B
3 Migrate to pod B	7 windows (pilot + 6)	every group signed by its owner
4 Site A retire, pod A build	4	sanitization records complete; STP-IMP-001 T1–T11 and T17–T19 and STP-DC-001 T1–T9 pass at site A
5 Replication, DR drill, handover	2 + 2 hypercare	STP-DC-001 T11–T13 pass; handover pack accepted

© 2026 Symbeeo. All rights reserved. · Public

4 · Logical design

4.1 Source of truth.

NetBox 4.6 [S] unless the client runs a DCIM of its own (SRA-IMP-001 §5). Objects: sites, rooms, racks with elevations, devices by serial, interfaces, cables with test results attached, prefixes and VLANs from SDD-DC-001 §4.1, and one configuration context per device role. The as-built is an export of this record.

4.2 Provisioning network [A].

Table 5. Provisioning network [A]

Network	Purpose	Subnet
OOB	BMC and switch management ports; staging and production	10.<site>.100.0/24
110	hypervisor management (SDD-DC-001 §4.1)	10.<site>.110.0/24
staging	isolated bench network; no route to client production	10.250.0.0/24

The OOB row is added to SDD-DC-001 §4.1 at the workshop.

4.3 Configuration pipeline.

Change in the repository → render from the source of truth → peer review → push over OOB (switches by RFC 8572 zero-touch provisioning where the switch operating system supports it, otherwise the vendor controller SRA-NET-001 names; servers by Redfish) → drift check. The drift check runs nightly until handover and must read zero (SRA-IMP-001 R8).

4.4 Migration waves [A].

250 VMs in application groups of at most 45 VMs, in dependency order: one pilot group of 10 non-production VMs, then six production groups, one per window. Each group has a named owner who signs the data-and-function check.

4.5 Security during the build.

Factory credentials replaced at staging; credentials held in the client's vault, never in the repository; BMC certificates enrolled before the unit ships; the staging network has no route to production (SRA-DC-001 R12 applied from day one).

4.6 Handover and hypercare.

The handover pack is generated, not written: rack elevations, cable schedule with test results and serial manifest are exports of the source of truth at the close of the last window; configurations are the repository at its final tag; runbooks cover node replacement, disk replacement, firmware update and the DR recovery plan from SDD-DC-001 §4.4. The client's operations team walks one runbook on the live system with the Symbeeo engineer before signing receipt. Hypercare runs 10 working days [A] with a named Symbeeo engineer; every call in hypercare is logged against an F-number in SRA-IMP-001 §6 and feeds the lessons entry in its §8.

5 · Physical design

Staging. Per burn-in position: A/B power, OOB and staging-network ports, inlet temperature logged. Units ship with their burn-in log, firmware report and label set.

© 2026 Symbeeo. All rights reserved. · Public

Site. Delivery to the dock, unpacking outside the white space, packaging removed the same day. Racks placed per the SDD-DC-001 §5 elevations; A/B cords to opposite PDUs; blanking panels fitted; labels applied before the first patch. Power per rack measured under burn-in load and recorded against the survey figure.

6 · Cutover and migration

Table 6. Cutover and migration

Step	Action	Rollback
1	Pod B installed and tested (STP-IMP-001 T1–T11 and T17–T19; STP-DC-001 T1–T9)	—
2	Pilot group migrated; rollback rehearsed end to end	reverse migration
3	Go/no-go before each window against the form in P7	no-go = no change
4	One production group per window, in dependency order	roll back at 02:30 if the owner's check has not passed [A]
5	Site A hosts powered off, held 14 days [A], then sanitized under witness	power the host back on inside the hold
6	Pod A built and tested as step 1; replication enabled; DR drill; handover	—

7 · Roles and deliverables

Table 7. Roles and deliverables

Role	Who	Signs
Design authority	practice lead	this document, go/no-go
Implementation lead	Symbeeo engineer, named at P1	each window's close
Application owners	client, one per group	data-and-function check
Change authority	client	window calendar, each go/no-go
Facilities	client	survey, delivery day

Deliverables: this document · survey reports · burn-in logs · STP-IMP-001 with results · cable schedule with test results · serial manifest · configurations at handover · sanitization record per serial · runbooks · acceptance certificate.

8 · Change control and reporting

8.1 Change orders.

Once this document is signed, any change to it is a written change order stating what changes, why, and its effect on cost and schedule. The design authority and the client's representative (§7) sign it before the change is built. A change of window or group order also goes to the change authority (P7).

© 2026 Symbeeo. All rights reserved. · Public

8.2 Weekly status report.

Every week from order release to the end of hypercare the implementation lead sends the client's representative: % complete per deliverable in §7, slippage against the §3.3 schedule (days, per phase).

8.3 Escalation contacts, named at the workshop.

Table 8. Escalation contacts, named at the workshop

Level	Symbeeo	Client
1 · day to day	implementation lead	infrastructure manager
2 · slippage > 5 working days, a failed window, or a disputed change order [A]	practice lead	head of infrastructure
3 · unresolved at level 2 after 5 working days [A]	the Founder	the client's executive sponsor

9 · Security and lifecycle clauses

9.1 Incidents.

A security incident affecting the client's data or systems — at staging, in transit, on site or in hypercare — is reported to the client's named security contact within 24 hours of its discovery.

9.2 Media sanitization.

Storage media leaving the client's control — the retired site A hosts (§6 step 5), any unit returned under F1 or F2, any drive replaced under warranty — are sanitized to NIST SP 800-88 Rev. 2 (final, September 2025, superseding Rev. 1 [S], read Sep 24, 2026 at `https://csrc.nist.gov/pubs/sp/800/88/r2/final)`, with a certificate per device (SRA-IMP-001 R15; STP-IMP-001 T15). Media may instead stay with the client under a non-return service; media holding PHI or other regulated personal data are never taken back unsanitized.

9.3 End of sale and end of support.

No equipment is quoted past its vendor's end-of-sale date, and every quote shows the end-of-support date of every item: servers, switches, optics, PDUs and any software subscription quoted with them.

9.4 Support levels.

Every quote states the vendor support level by severity: the response time for severity 1 to 4, for each hardware and software support contract. Figures are taken from the vendor's contract at quote time, not from this document.

9.5 Handover pack.

At the end the client receives: as-built drawings (elevations, cable schedule, serial manifest); configurations at the final tag; credentials transferred from the build vault to the client's owners; licenses; support contracts; STP-IMP-001 signed; runbooks; and open items with owner and date (SRA-IMP-001 R16; STP-IMP-001 T16). This extends the §4.6 list and the §7 deliverables.

© 2026 Symbeeo. All rights reserved. · Public

SYMBEEO

Each vendor's tool shows you their option. We show you all of them against one requirement.

Compared. Then Delivered.

hello@symbeeo.com · symbeeo.com

© 2026 Symbeeo. All rights reserved.

Product and company names and logos are their owners' trademarks, shown only to identify the lines Symbeeo sources. Naming a vendor or showing its logo does not mean the vendor sponsors or approves Symbeeo's comparisons or any recommendation Symbeeo makes.

Figures are as published by their sources on the dates given in this document; figures marked [A] are assumptions.

SDD-IMP-001 · Version 1.1 · Oct 10, 2026