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DESIGN STUDY

Lifecycle and license integration: 8,000 assets into one register with renewal alerts

Complete design on current platforms

CAPABILITY	INDUSTRY	SETTING
Supply Chain & Integration	Healthcare	Hospital group's IT asset office
DOCUMENT	**VERSION**	**DATE**
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Document control

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CONVENTIONS

Source tags. [S] figure read from the vendor's own current page on Sep 18, 2026 · [S*] figure from the vendor's page summary where the page itself could not be opened · [A] design assumption · [T] design target (the record's outcome figure and anything derived from it). Every figure carries one tag. No figure comes from any prior engagement, file or asset. 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 18, 2026	1.0	First issue.
Sep 20, 2026	1.1	Public implementations added; figures reconciled with published sources.
Sep 27, 2026	1.2	Figures and platform details rechecked against published sources.
Oct 10, 2026	1.3	Approval line now reads: approved by the Founder, issued by Symbeeo. Avinash Dhinakaran remains the author.

1 · Scope

Who it is for. The head of a hospital group's IT asset office who holds three vendor portals, two spreadsheets and one audit finding, and needs every asset and every support contract in one register that raises a renewal 120 days before it lapses.

Typical buyer [A]. A hospital group's IT asset office. 8,000 assets: 6,000 Windows endpoints managed in Microsoft Intune, 1,500 Cisco network devices, 500 VMware hosts and appliances under VMware Cloud Foundation 9.x subscriptions [A]. One annual audit of support coverage [A].

What is in. One asset register fed from three vendor sources; support-contract and subscription records joined to assets; end-of-sale and end-of-support dates per part; renewal alerts at 120 days; the annual audit report. **What is out.** Procurement of the renewals themselves; software license compliance for applications outside the three vendors; clinical devices, which sit in a separate medical-device register [A].

Assumptions. The register is the asset office's existing CMDB, extended, not replaced [A]. Vendor data is pulled by API where one exists and by portal export where it does not [A]. Serial number is the join key for hardware; subscription ID for VMware capacity [A].

Related documents, read Sep 18, 2026. Microsoft Intune, collect device properties with the properties catalog (`https://learn.microsoft.com/en-us/intune/device-configuration/collect-device-properties`) · Cisco Support APIs, EoX API (`https://developer.cisco.com/docs/support-apis/eox/`) · Cisco Support service description, formerly Smart Net Total Care, read Sep 27, 2026 (`https://www.cisco.com/c/dam/en_us/about/doing_business/legal/service_descriptions/docs/Cisco-Support.pdf`) · Smart Net Total Care to CX Cloud migration guide, August 2025, read Sep 27, 2026 (`https://www.cisco.com/c/dam/en/us/support/docs/services/sntc/migration/sntc-to-cx-cloud-migration-guide.pdf`) · CX Cloud end-of-availability announcement, August 2026, read Sep 27, 2026 (`https://www.cisco.com/c/dam/en/us/support/docs/cx/cx-cloud/CX-Cloud-End-of-Availability-Announcement.pdf`) · VMware Cloud Foundation 9.1 licensing overview, Broadcom TechDocs (`https://techdocs.broadcom.com/us/en/vmware-cis/vcf/vcf-9-0-and-later/9-1/licensing/licensing-overview.html`), page updated Sep 16, 2026 · Intune page updated Aug 12, 2026 · Cisco EoX API v5.0 · Cisco Support service description Ver 2.1, Jul 24, 2026 (Smart Net Total Care renamed Cisco Support from Jun 15, 2025, per the Smart Net Total Care service description v17.0, Nov 10, 2025).

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1c · Public implementations this design follows

Each row is labeled. **Public deployment**: a named operator's real deployment, published and dated by the operator, its vendor or a partner, used where one exists. **Our own design**: the dated vendor or standards documentation this design was built from, where no public deployment of the design exists. Labels and dates checked Sep 27, 2026.

Table 2. Public implementations this design follows

Implementation	Who published it · date	What it settles for this design	URL
Our own design, built from published documentation. Cisco Support APIs, EoX API v5.0	Cisco DevNet · no publication date on the page; v5.0 reference read Sep 20, 2026 and Sep 27, 2026, no retirement notice	R6 as published: 20 product IDs, 20 serials or 20 software releases per request, 50 records per page; the API returns eight dates, not four: external announcement, end of sale, end of software maintenance, end of security vulnerability support, end of routine failure analysis, end of service contract renewal, end of service attach, last date of support	https://developer.cisco.com/docs/support-apis/eox/
Our own design, built from published documentation. VMware Cloud Foundation 9.1 Licensing Overview	Broadcom TechDocs · updated Sep 16, 2026	R8 as published: usage report at least every 180 days; 90 days after license expiry before management operations are prevented and hosts disconnect from vCenter; existing workloads not stopped; default license is the pool of active subscriptions for one product in one Site ID	https://techdocs.broadcom.com/us/en/vmware-cis/vcf/vcf-9-0-and-later/9-1/licensing/licensing-overview.html
Our own design, built from published documentation. Intune properties catalog, collect device properties	Microsoft Learn · updated Aug 12, 2026	R5 as published: Windows 10 and later; first collection up to 24 h after assignment; system enclosure serial, BIOS, TPM, CPU, memory, disk; the page exposes the data through the admin center device inventory and Device Query and does not state a Graph API path	https://learn.microsoft.com/en-us/intune/device-configuration/collect-device-properties
Our own design, built from published documentation. Cisco Support service description, Ver 2.1; Smart Net Total Care to CX Cloud migration guide; CX Cloud end-of-availability announcement	Cisco · Jul 24, 2026; August 2025; August 2026	R7 and §4.2 as published: Smart Net Total Care is now Cisco Support; its portal and services APIs closed on Nov 27, 2025; CX Cloud stopped telemetry updates on Aug 14, 2026 and Cisco IQ succeeds it	https://www.cisco.com/c/dam/en_us/about/doing_business/legal/service_descriptions/docs/Cisco-Support.pdf · https://www.cisco.com/c/dam/en/us/support/docs/services/sntc/migration/sntc-to-cx-cloud-migration-guide.pdf · https://www.cisco.com/c/dam/en/us/support/docs/cx/cx-cloud/CX-Cloud-End-of-Availability-Announcement.pdf
Public deployment. A US five-hospital group runs Flexera with ServiceNow and Microsoft Configuration Manager for software license compliance across more than 14,500 devices	Flexera case study · November 2024 [S*]	§4.4 and §4.6: a hospital group joining endpoint inventory to entitlements in one register. It covers software licenses, not Cisco or VMware support contracts, so it settles the operating model only; no figure from it enters the register	https://www.flexera.com/resources/case-studies/memorialcare

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R5 and §4.1 hold the API export path as an assumption, since Microsoft's page states no Graph API path; §4.7 carries all eight Cisco EoX dates. R7 and §4.2 use Cisco Support and Cisco IQ, which replace Smart Net Total Care, its portal and Collector after Cisco's rename and the portal's retirement.

2 · Requirements register

Table 3. Requirements register

#	Requirement	Value	Source
R1	Assets in one register	8,000	[T]
R2	Support coverage	every support contract and subscription joined to its asset	[T]
R3	Renewal alert	120 days before contract or subscription end	[T]
R4	Audit result	no expired support found at the annual audit	[T]
R5	Endpoint source	Intune properties catalog: BIOS, TPM, CPU, memory, disk, system enclosure serial; Windows 10 and later; first collection within 24 h of policy assignment; read from the admin center device inventory and Device Query	[S] Microsoft (`https://learn.microsoft.com/en-us/intune/device-configuration/collect-device-properties`); API export path [A]
R6	Network source, lifecycle	Cisco EoX API v5.0: eight dates per record, including end-of-sale, end of software maintenance, end of security vulnerability support, end of service attach, last date of support; queries by product ID (up to 20), serial (up to 20), date range, software release; 50 records per page	[S] Cisco
R7	Network source, contract	Cisco Support (Smart Net Total Care renamed from Jun 15, 2025): TAC 24 × 7; advance replacement 24x7x2, 24x7x4, 8x7xNCD, 8x5xNBD, 8x5xShip NBD on orders from Apr 24, 2026; installed base and contract coverage in Cisco IQ, successor to CX Cloud, which replaced the Smart Net Total Care portal on Nov 27, 2025	[S] Cisco; Cisco IQ [S*]
R8	VMware source	VCF 9.x term subscription; VCF Business Services Console at vcf.broadcom.com; entitlements grouped by Broadcom Site ID; usage report at least every 180 days; 90 days after expiry before management operations may be blocked	[S] Broadcom
R9	Refresh interval	endpoints daily; network weekly; VMware weekly	[A]

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#	Requirement	Value	Source
R10	Join keys	serial for hardware; subscription ID and Site ID for VMware capacity	[A]
R11	Alert routing	to the asset owner and the asset office; escalation at 60 and 30 days	[A]
R12	Audit report	every asset with contract, end date, EoX dates; generated from the register, not compiled	[T]
R13	Data retention	contract history kept 7 years	[A]

Thirteen rows; four carry a vendor figure, four are design assumptions, five are design targets.

3 · Architecture overview

```
intake ──→ configuration ──→ burn-in ──→ QA gates ──→ labeling ──→ dispatch
(pull from  (normalize,        (reconcile   (G1 match     (asset class,   (alerts at 120,
 Intune,     join contract      against      G2 coverage    owner, site     60, 30 days;
 Cisco APIs, and EoX dates)     last run;    G3 dates)      on the record)  audit report)
 Broadcom)                      diffs)
```

Figure 1. Lifecycle register flow

Three vendor sources into one register on a schedule; each run passes three gates before its alerts are sent. "Burn-in" is the reconciliation of the new pull against the last one, where a source that has silently changed shape is caught. The parts table is the QA checklist.

Table 4. Architecture overview

Gate	Check performed	Record produced
Intake	each source responded; record count within 5 % of the last run; run timestamp	intake log per source
Configuration	fields normalized to the register schema; serial, product ID, contract, end date, EoX dates populated where the source has them	normalized batch
Burn-in (reconcile)	new batch diffed against the register: added, removed, changed assets; a removal is held for review, not applied	diff report
QA gate G1 match	share of assets joined to a contract or subscription; unmatched list	match report
QA gate G2 coverage	assets whose contract end date is inside 120 days (R3); assets with no contract	coverage exception list
QA gate G3 dates	assets past end-of-sale or inside 12 months of last date of support (R6)	lifecycle exception list
Labeling	asset class, owner, site and criticality on every record (R11)	labeled register
Dispatch	alerts sent at 120, 60, 30 days; monthly summary; annual audit report (R12)	alert log, audit report

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4 · Design by subsystem

4.1 Endpoint intake.

Intune properties catalog assigned to all 6,000 Windows endpoints [A]; system enclosure serial, BIOS, TPM, CPU, memory and disk collected by the catalog and exposed in the admin center device inventory and Device Query [S]; the register's pull uses whichever export path Microsoft documents at build time [A]; first collection within 24 h of assignment [S]; register pulls daily (R9). Rejected: agent export by spreadsheet — the properties catalog is already collected centrally.

4.2 Network intake.

Serials of 1,500 Cisco devices [A] submitted to the Cisco EoX API in batches of 20 serials (the API limit) [S]; the eight lifecycle dates the API returns (R6) written to the register per product ID [S]. Contract coverage from Cisco IQ, where each asset is entitled against its Cisco Support contract [S*]. The Smart Net Total Care portal and its services APIs were decommissioned on Nov 27, 2025 in favor of CX Cloud, and CX Cloud stopped updating customer telemetry on Aug 14, 2026 [S]; Cisco IQ's APIs are in public preview [S*], so the register reads a Cisco IQ export weekly until they are generally available [A]. The EoX API above is a separate Support API and carries no retirement notice [S]. Weekly (R9).

4.3 VMware intake.

Subscriptions read from the VCF Business Services Console per Broadcom Site ID [S]; term end date and capacity joined to hosts by subscription ID [A]. The register also tracks the 180-day usage-report obligation, because a missed report is a license event before the term ends [S]. Weekly (R9).

4.4 Reconciliation.

Each run is diffed against the register. Added assets are created; changed fields are updated with history; removed assets are held on a review list for 30 days before they are retired, because a source outage looks the same as a decommission [A].

4.5 Gates.

G1 measures the join rate and produces the unmatched list; G2 produces the 120-day coverage list; G3 produces the lifecycle list. Alerts go only after the three gates run, so a bad pull does not send 8,000 alerts [A].

4.6 Alerts and audit.

120 days is the first alert (R3), 60 and 30 are escalations (R11). The annual audit report is a query over the register at audit date (R12); the design target is that it shows no expired support (R4).

4.7 Register schema.

Asset: serial, product ID, class, owner, site, source, first seen, last seen. Contract: vendor, contract or subscription ID, service level, start, end, Site ID where applicable. Lifecycle: the eight Cisco EoX dates the API returns [S] (`https://developer.cisco.com/docs/support-apis/eox/`) or the vendor's equivalent [A].

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5 · Failure behavior

Table 5. Failure behavior

Failure	Behavior	Source
A vendor API is down at run time	intake logs the miss; last good batch retained; alerts for that source suppressed until the next good run	[A]
Record count outside 5 % of last run	run held at intake for review; no diff applied	[A]
Serial present in Intune and absent from the last run	created as new; owner asked to confirm site	[A]
Cisco EoX returns no record for a product ID	lifecycle fields left empty and flagged, not defaulted	[T]
VMware usage report overdue	alert to the asset office at 150 days; the 180-day limit is the vendor's figure	[S] Broadcom; [A] alert day
Contract renewed but end date not updated by the vendor	alert continues; asset office records the renewal reference manually and closes it	[A]

6 · Limits

- The 8,000 count and the split across vendors are assumptions; the register counts what the sources return.
- Cisco EoX gives lifecycle dates for Cisco parts; Dell, HPE or other hardware in the estate would need their own source.
- VMware capacity is subscription-based; a host is "covered" when its cores fit inside an active subscription, which is a calculation the register makes, not a fact the console states per host.
- The design catches expired support at 120 days; it cannot shorten a vendor's renewal quotation time.
- No figure here has been measured.

7 · Lessons learned

None yet — this is a design study; populated after the first build against it.

8 · The author

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SYMBEEO

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

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