Sapphire — IT Asset Request & Activation Portal

Product: Sapphire v3.2.0 (Build `sapp-2025.08.15-rc6`)
Environment Badges: DEV (yellow), UAT (blue), PROD (green) — appears at top-right of every page
Data Classification: Internal – Operational (retain 7y)
Do Not Distribute Externally

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0) What Sapphire Is (for users)

Sapphire is where employees **request IT assets**, get **approvals**, track **fulfillment & shipping**, and **activate** the device by installing the company VPN profile (**Sapphire Connect**) so the asset shows **Online** in inventory. It replaces email threads, spreadsheets, and walk-ups.

Key stages: Request → Approvals → Picking/Imaging → QC → Handover/Shipping → VPN Activation → Online Verification → Close

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1) Navigation & Page Anatomy

1.1 Global Header

- **Logo** (click → Dashboard)

- **Environment Badge**: DEV / UAT / PROD

- **Global Search** (⌘/Ctrl+K): Request ID, Asset Tag, People, Tracking No

- **"+ New"** menu: Request, Accessory Order, Bulk Import (admins only)

- **Notifications** (bell): SLA timers, approvals assigned, activation failures

- **Profile Menu**: My Profile, Delegates, Sign out

1.2 Left Sidebar (role-aware)

1. **Dashboard**

2. **Catalog**

3. **My Requests**

4. **Approvals** (only for approvers)

5. **Fulfillment** → Work Orders, Handover, Shipping

6. **Inventory** → Assets, Stock, Disposals, RMAs

7. **Activation** → Live Telemetry, Failures

8. **Reports** → KPIs, Exports

9. **Admin** (Platform Admin, Asset Manager, Security Reviewer, Finance Reviewer)

1.3 Footer

- Build ID, Region (`us-east-2` or `eu-central-1`), Tenant ID (e.g., `TEN-7431`)

- Queue Depth (`qd:`), Job Lag (`lag:`), Last Sync (`sync:`)

- "Report an Issue" opens a pre-filled Sapphire ticket form

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2) Roles, Permissions & Constraints

Role	Can Do	Can't Do
Requester	Submit/track own requests; upload docs; schedule pickup	Approve, image, edit catalog
Delegate	Submit for others in same cost center; see their requests	Approve outside cost center
Manager Approver	Approve/Reject; set Priority Override	Edit budget buckets

Finance Reviewer	Approve capex/opex; assign budget bucket; return for rework	Alter security posture rules
Security Reviewer	Approve security posture; grant temporary VPN exception	Approve capex
Asset Manager	Reserve stock; assign asset tags; create work orders	Change finance decisions
Fulfillment Tech	Image, QC, pack, ship/pickup; mark ready	Change catalog or policies
Auditor	Read-only on all records; export audit trail	Any write action
Platform Admin	All admin areas	—

Hard Limits

- Max **2 monitors** per person unless role exception (`ROLE-TRADER`, `ROLE-DESIGN`).

- Refresh windows: Laptop 36m, Dock 48m, Monitor 60m.

- Each request must pass **Manager** → **Finance** → **Security** in that order; skips are logged as violations.

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3) Catalog & Requesting

3.1 Catalog Items

- **Laptop – Standard (L-STD-14)**: 14", 32GB, 1TB, TPM2.0

- **Laptop – Rugged (L-RGD-13)**: MIL-STD, LTE modem

- **Desktop – Performance (D-PRO-16C)**

- **Dock (DK-USB4-90W)**

- **Monitor 27" (MN-27-4K)**

- **Headset (HS-ANC-USB)**

- **Starter Kits**: `KIT-ANALYST`, `KIT-EXEC`, `KIT-FIELD`

3.2 Request Form — Fields & Behavior

Route: Catalog → choose item/kit → **Request**
 Form Sections: Recipient, Business Case, Costing, Delivery, Accessories, Need By, Attachments, Summary

- **Recipient**: Self / Someone Else (lookup by email).

- **Business Justification**: 300–600 chars; live counter; phrases like "just need it" trigger hint "manager may reject for insufficient detail."

- **Cost Center** (auto from HR), **Project Code** (format `PC-####-YY`), **Spend Type** (Capex/Opex).

- **Delivery Mode**: `PICKUP-HQ`, `SHIP-DOMESTIC`, `SHIP-INTL` (INTL forces document upload: customs letter).

- **Accessories**: checkboxes; kit auto-populates.

- **Need By**: must be ≥ 3 business days; if earlier, enable **Priority Override** justification (appears only to Manager).

- **Attachments**: up to 10 files, 50MB each; allowed types: PDF, PNG, JPG, DOCX, XLSX; virus scan required.

Dynamic Validation

- Replacements within **730 days** for same category show yellow banner, require Manager comment to proceed.

- If **two monitors** already assigned in inventory, third monitor lines are auto-removed unless exception roles present.

Upon Submit

- Request ID assigned: `SAPR-YYYY-NNNNN` (e.g., `SAPR-2025-00427`)

- Status: `SUBMITTED` → `PENDING_MANAGER_APPROVAL`

3.3 Duplicate Guard

Submitting near-identical requests (<14d) prompts "Looks similar to SAPR-2025-00411; Continue?" with preview.

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4) Approvals (Manager → Finance → Security)

4.1 Manager Approval Queue

- Bulk Approve/Reject (multi-select)

- **Card fields**: Recipient, Items/Qty, Accessories, Justification preview, Need Date, Replacement window status, Monitor count, Priority Override toggle

- **Reject reasons** (required): Insufficient Justification / Not in budget / Duplicate / Role not eligible / Other

- **SLA**: First Response **2 business days**, else escalates to Manager's manager

4.2 Finance Review

- View: Cost Center, Project Code, Spend Type; estimated tax and shipping; **Budget Bucket** (dropdown — `BU-PROD`, `BU-GROWTH`, `BU-SEC`)

- **Capex Flag**: automatic if item in Capex category; Finance may switch with comment

- **SLA**: 2 business days; exceptions log under `FIN-EXC-…`

4.3 Security Review

- **Checklist**: EDR license availability (`EDR-VALKYRIE 9.x`), encryption mandate, geo shipping constraints, VPN eligibility

- **Temporary Exception** (max 14d) with reason; sets post-activation task to remediate

- **SLA**: 1 business day for standard kits; 3 business days for custom builds

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5) Fulfillment: Work Orders, Imaging, QC, Handover/Shipping

5.1 Work Order Creation

When request hits `APPROVED`, Sapphire generates a **Work Order** (`WO-SAPR-YYYY-NNNNN`) with:

- **Asset Reservation**: pulls from location pool (e.g., NYC)

- **Assigned Asset Tag**: `SAT-YY-LOC-####` (`SAT-25-NYC-1432`)

- **Image**: `IMG-STD-11.1`

- **Bundle**: `BL-A1` (Office, VPN agent, EDR, MDM bootstrap)

- **QC Checklist**: keyboard test, LCD pixel test, ports, Wi-Fi, webcam, battery health ≥ 90%, speaker/mic, BIOS version `B-1.34`

5.2 Imaging Console

- **Actions**: Start Imaging, Pause, Abort, Retry last step

- **Logs** panel shows each phase with timestamps (PXE, Apply Image, Driver Pack, Domain Join, EDR Install, VPN Profile seed)

- Imaging failures produce error codes:

  - `IMG-401` Credential expired

  - `IMG-502` Driver pack mismatch

  - `IMG-522` Disk encryption pre-existing

  - `IMG-590` MDM bootstrap failed

5.3 Quality Control (QC)

- Toggle each checklist item; attach photo if cosmetic note added

- Battery cycle count threshold: ≤ 10 for new, ≤ 150 for refurbished

- Mark **QC Passed** to unlock Handover/Shipping step

5.4 Handover (Pickup) & Shipping

- **Pickup**: schedule window; verify photo ID; capture e-signature on handover device; auto-prints A4 **Handover Receipt** with barcode

- **Shipping**: enter box dims, weight; Sapphire prints label; **Carrier** dropdown (`TXP`, `AirSpan`, `BlueGo`)

- Tracking number posted to **Delivery** tab; webhook keeps ETA status updated (In Transit, Out for Delivery, Delivered)

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6) Activation & Online Verification

6.1 Sapphire Connect (VPN)

- Pre-seeded profile: `SC-ETP-01` **(Enterprise Tunnel Profile)**

- First launch prompts end-user consent to install and grants device VPN permissions

- Post-connect, **5-minute sustained tunnel** required

6.2 Compliance Gate

Device must report:

- **Encryption**: ON (BitLocker/FileVault)

- **EDR Heartbeat**: present within last 15 minutes

- **MDM Enrollment**: healthy

- **OS Build**: matches `IMG-STD-11.1` or higher

If any fail: Activation status `FAILED-COMPLIANCE` with red banner on request.

6.3 Online Verification

- Telemetry event `sapphire.vpn.activated` followed by `sapphire.inventory.synced` within 10 minutes → flips request to `ONLINE_VERIFIED`

- If sync not received within **24h**, a **Resync** button appears for Fulfillment Techs

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7) Inventory

7.1 Assets List

Filters: Status (IN_STOCK/ALLOCATED/IN_SERVICE), Location, Model, Owner, Age bucket
Columns: Asset Tag, Serial, Model, Owner, Status, Age, Location, EDR, Last Seen, Notes

7.2 Reclaim & Disposal

- **Reclaim**: schedule pickup or mail-back kit; upon return → sanitize & re-image

- **Disposal**: generate **Certificate of Destruction**; capture vendor and lot ID

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8) Reports & KPIs

- **Cycle Time (Submit→Online)**: median target **≤ 5 business days**

- **Approval SLA Hit Rate**: **≥ 95%**

- **Imaging First Pass Yield**: **≥ 97%**

- **Activation Failures (7d)**: **< 1.5%** of activations

- **Stockout Alerts** when stock < **7 days** of historical demand

Exports: CSV with dictionary headers (see §15)

9) Admin — Settings & Feature Flags

9.1 Catalog Admin

- Items, Kits, Images, Bundles

- **Soft delete** with 90-day restore

- Price lists per region, effective-dated

9.2 Policy Engine

- Replacement windows (days)

- Monitor max (2 default)

- Role exceptions (list)

- Delivery modes by location (HQ only vs Ship allowed)

- Compliance rules (encryption/EDR/OS build)

- Approvals sequence (locked order)

9.3 Notifications

Templates (variables in `{{ }}`):

- `REQ_SUBMITTED`: to requester & delegate

  - Subject: `Sapphire {{request.id}} submitted`

  - Body: name, items, need-by, next step

- `MGR_PENDING`, `FIN_PENDING`, `SEC_PENDING`

- `WO_READY_PICKUP` (includes QR code for pickup)

- `SHIP_DISPATCHED` with carrier & tracking

- `ACTIVATION_FAILED` with troubleshooting steps

- `ONLINE_VERIFIED` close notice

9.4 Integrations

- **Directory**: nightly full sync; 30-minute delta

- **Inventory (`INV-SAPPHIRE`)**: write-through on Online Verification

- **Carriers**: webhook `ship.update`

- **EDR**: webhook `edr.posture`

- **MDM**: device enroll/retire events

- **Finance**: export of capex/opex monthly

9.5 Branding

- Logo upload, color tokens, email footers per region

9.6 Feature Flags (per tenant or environment)

- `ff.dual_approval_finance` (Finance + Controller for > $5k)

- `ff.priority_override_manager_only`

- `ff.strict_compliance_activation` (block Online unless all green)

- `ff.bulk_import_requests` (admin only)

10) Background Jobs & Schedules

- **`job.sla.reminders`**: every 30m; nudges pending approvals

- **`job.stock.reorder_suggest`**: nightly; suggests POs by location

- **`job.telemetry.gc`**: hourly; prunes stale device heartbeats > 30d

- **`job.audit.seal`**: daily; hashes prior day's audit log to immutable chain

- **`job.activations.stuck`**: every 15m; flags `VPN_ACTIVATION_PENDING` > 24h

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11) Error Codes (surface to end users when safe)

Code	Message (User)	Cause (Internal)	Resolution
`REQ-VAL-301`	"Justification too short."	<300 chars	Expand the business case
`APP-SEQ-409`	"Approval order violated."	Attempt to skip Finance	Follow Manager→Finance→Security
`IMG-502`	"Imaging driver pack mismatch."	Model map outdated	Update driver pack; retry
`ACT-401`	"Activation failed: EDR not reporting."	No heartbeat	Ensure EDR agent running; reboot
`ACT-410`	"Activation failed: Encryption off."	BitLocker/FileVault off	Turn on encryption; retry
`ACT-598`	"Activation network unstable."	Tunnel drops	Move to stable network; retry
`INV-422`	"Asset tag conflict."	Duplicate tag posted	Merge or reassign tag

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12) Keyboard Shortcuts & Power User Tips

- **Global search**: ⌘/Ctrl+K

- **New Request**: n then r

- **Approve focused card**: a; Reject: x

- **Fulfillment**: g then f (go to Fulfillment), Shift+i (Start Imaging)

- **Open recent**: . (shows last 10 records)

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13) Accessibility & Mobile

- WCAG 2.2 AA compliant components

- Form labels and hints are announced; error summaries focus first failing field

- Mobile layout: Catalog → Request wizard with collapsible sections; Fulfillment screens are tablet-optimized

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14) Security, Audit & Retention

- SSO (OIDC) with conditional access; session idle timeout 30m (configurable)

- Audit trail: actor, IP, field-level before/after; daily sealed by `job.audit.seal`

- Retention: Requests 7y, Activation telemetry 18m rolling, Shipping docs 3y

- PII minimization: no DOBs; only work emails/employee IDs

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15) Data Dictionary (selected fields)

- `request.id` (string, PK) — `SAPR-YYYY-NNNNN`

- `request.recipient_email` (string)

- `request.cost_center` (string)

- `request.project_code` (regex `^PC-\d{4}-\d{2}$`)

- `request.need_by` (date)

- `approval.status` (enum: PENDING/APPROVED/REJECTED)

- `work_order.id` (string, `WO-SAPR-YYYY-NNNNN`)

- `asset.tag` (string, `SAT-YY-LOC-####`)

- `imaging.image_id` (string, `IMG-STD-11.1`)

- `activation.vpn_profile` (string, `SC-ETP-01`)

- `activation.sustained_minutes` (int)

- `inventory.last_seen_at` (timestamp)

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16) Troubleshooting (user-facing flows)

A) "I never got the approval request."

- Check spam? If not there, open **Approvals → My Approvals**; ensure you are listed as Manager in Directory. If not, ask HR to correct your manager mapping.

B) "Imaging failed at 52%."

- In Work Order → **Logs**, note code (likely `IMG-502`). Asset Manager updates driver pack; Fulfillment clicks **Retry last step**.

C) "Delivered, but Activation keeps failing (EDR)."

- Keep device on AC, connect to stable Wi-Fi, open **Sapphire Connect**, attempt again; if EDR still missing, run **EDR Repair** tool from Start Menu (bundled). If failure persists, open "Sapphire Activation" support with logs.

D) "Need-by date is sooner than allowed."

- Manager can enable **Priority Override** with justification; Finance/Security SLAs remain.

E) "Two monitors already assigned, need a third for a week."

- Manager adds temporary **Role Exception** note; Asset Manager issues loaner monitor with return date; system logs **Exception (MON-3TEMP)**.

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17) Paste-Ready Snippets (internal comms, no links)

- **Approval Nudge**: "Hi {{manager}}, Sapphire {{request.id}} for {{recipient}} is pending your approval. Need-by {{need_by}}. Please approve or reject with a brief comment."

- **Pickup Reminder**: "Your Sapphire order {{request.id}} is ready. Bring photo ID to Dock 3, Level 1, between {{slot}}."

- **Activation Help**: "Open Sapphire Connect and keep the tunnel connected 5 minutes. Ensure encryption and EDR are green (Settings → Security). If not, run EDR Repair and retry."

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18) Release Notes (v3.2.0 highlights)

- Added **Delegate** role & directory-based scoping

- New **Resync** button for stuck activations

- Dual Finance approval feature flag for >$5k

- Imaging log export as JSONL for analytics

- Keyboard shortcuts for Approvals

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19) Glossary (Sapphire-specific)

- **Sapphire Connect**: internal VPN client/profile manager

- **Online Verified**: device reported via VPN + inventory sync within 10 minutes

- **Bundle** (`BL-A1`): baseline software set for new devices

- **Policy Engine**: rules enforcing replacement windows and limits

- **Sealed Audit**: daily hashed archive of changes