FEATURE DIRECTORY · AS OF 11 SEPTEMBER 2026

ITRoomCAD Suite

Four applications covering the whole life of an IT room: from the LiDAR scan through survey, planning and rack population to audit, re-inspection and report. This directory describes every feature by what it does on site.

SURVEY & PLAN	AUDIT & RE-INSPECT	CAPTURE	COLLABORATE
CAD	CHK	SCN	SRV
ITRoomCAD	**ITRoomCheck**	**ITRoomScan**	**Server & web client**
Data-centre CAD: floor plan, fit-out, racks, cabling, checks and output.	Audit walkthrough with findings, photo evidence and follow-up — inspect, not draw.	LiDAR pre-capture of a room as a rough sketch and 3D model.	Central storage, tenants, permissions, web CAD, infrastructure GIS, ACI planning and reports.
iPad · iPadOS 15+	iPhone and iPad · iOS 15+	iPhone Pro with LiDAR · iOS 16+	Container · browser

SCN scan → CAD iPad ⇄ check out · check in ⇄ SRV server ⇄ check out · check in ⇄ CHK phone

One rule, every screen

Calculation rules such as room check, walkthrough or rotation live once in the shared core. iPad, phone and web client provably compute the same cases the same way.

Offline on site

Checked-out rooms can be edited without a network. Only returning them needs the server — and that creates a new version.

Bilingual, light and dark

Interfaces, question catalogues and reports are available in German and English; the appearance follows the system or is set explicitly.

Nothing gets lost

Output files carry a timestamp in their name, sign-in data survives updates, and every return is a version of its own.

Feature list

94 features · 4 applications

CAD ITRoomCAD

iPad app to survey, plan, populate, check and document.

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CHK ITRoomCheck

Audit and re-inspection for phone and iPad.

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SCN ITRoomScan

LiDAR capture for iPhone — capture only, then hand over.

1 · CAPTURE

SCN 1.1	LiDAR room scan
SCN 1.2	Preview and room data
SCN 1.3	Naming detected objects

2 · HAND OVER

SCN 2.1	Package for the iPad
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SRV Server & web client

Central platform in a container, operated from the browser.

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SRV 7.2	Key figures per room

CAD **ITRoomCAD**	DEVICE	ROLE	DATA
	iPad with iPadOS 15 or later (iPad Air 2 onwards)	Survey, plan, populate, check, document	`.itroom` package, offline; synchronised through the server

Data-centre CAD on the iPad. From the first measurement in the server room to the finished plan with its punch list, everything happens in one app — with a finger, the Apple Pencil or a laser distance meter.

CAD 1 DRAWING AND SURVEY

CAD 1.1 Walls with true mitres

Walls are drawn as a chain, point by point. The drawn line is the inner face; the wall grows outwards by its thickness. Corners are formed as true mitres, even at acute angles, without wall slabs shooting past the corner.

- The last point can close the room at a right angle; orthogonal snapping aligns it with the first point.
- Wall points and open ends can be dragged afterwards; an end snaps to the open end of another wall.
- A self-check reports walls without thickness, interrupted wall bands and free-standing slabs.

CAD 1.2 Type dimensions, snap, align

Every segment can be set numerically: type the length, the start point stays and the end point moves along the direction. Grid snapping and object snapping to corners and edges help with free drawing; a typed number always takes precedence over snapping.

Floor area and perimeter of the room are shown live in the footer.

CAD 1.3 Laser measuring via Bluetooth

A Bosch GLM laser distance meter pairs over Bluetooth LE; the protocol has been verified on a real device (GLM 50 C). Every dimension field has a measure button — the next reading lands exactly in that field.

- Measurement series: take several fields of an editor (rack, cooling unit, equipment, opening) in a row without typing in between.
- The measure key on the device triggers the transfer; the connection stays up for the session.
- A diagnostics line shows channels, received packets and recognised readings; at start-up a banner points out blocked Bluetooth.

CAD 1.4 Parametric dimensions

Dimensions snap to elements and carry a reference (“measured from”). Changing the value moves the object with it — the distance between a rack and the wall, for example, is set directly through its dimension. Draggable handles reposition the dimension line and reference points.

CAD 1.5

Doors, windows and wall penetrations

Openings sit in the wall and pass exactly through the wall body without protruding beyond it. When a wall point is moved, the openings in that segment move along.

- Doors with swing arc, single or double leaf, leaf widths, hinge side and opening direction, height reference to subfloor or raised floor.
- Windows with sill height; wall penetrations with medium, diameter and fire-stop marking.

CAD 1.6

Levels and heights

Every object category sits on its own layer that can be shown or hidden. Named heights (such as subfloor, raised floor, ceiling) are applied to all objects in one step and define their elevation in 3D.

CAD 1.7

Lines, freehand and Apple Pencil

The “Line” tool draws straight lines or free strokes with a selectable line style — for cable routes, markings or outlines that have no dedicated tool. Freehand strokes are simplified when saved and can be converted into walls.

With Apple Pencil, the pencil draws and the finger pans; the palm is ignored and pressure sets the stroke width.

CAD 1.8

Labels and callouts

Free text and text boxes with a leader point to the spot they explain. Objects also carry their own label, which appears in the plan, in the 3D model and in exports.

CAD 1.9

Selection, multi-select and rotation

A tap selects one object; a drawn frame selects every object lying completely inside it. The selection can be moved, deleted, duplicated or moved to another layer together — each as a single undo step.

Every element can be rotated to fit the room: single objects, a multi-selection, the PDF underlay and walls.

- Handle on the object: drag rotates freely, tap rotates by 90°, long press aligns the object with the nearest wall.
- Angle field in the editor for the exact value; directions such as rack front or air outlet rotate along.

CAD 1.10

Navigation, undo, keyboard shortcuts

Two fingers zoom where they rest and pan at the same time; “Zoom to all” fits the whole room. Every change can be undone and redone.

With a keyboard: ⌘Z / ⌘⇧Z, ⌘F for search, `Esc` and `Delete`, plus letters for the tools.

CAD 1.11

Object search

“Where is R-17?” — the magnifier in the title bar finds objects by name, ignoring case and separators: “r17” finds “R-17”. Exact matches come before partial ones, and a hit brings the object to the centre of the screen.

CAD 1.12 Room templates

The “New document” dialog offers the shell of a typical technical room in one step — walls and doors, with your own dimensions taking precedence. Templates deliberately bring no fit-out such as racks or cooling.

CAD 2 IMPORTING A FLOOR PLAN

CAD 2.1 Import from vector PDF

From a vector PDF the app reads the drawing commands themselves and builds closed wall chains from them — offline and without AI. Steps: pick the file, pick the page, tap the room. The result is dimensionally accurate and editable straight away.

CAD 2.2 Import from scan or photo

From scans, photos or scanned PDFs the app detects wall edges in the pixels. The result is explicitly a suggestion to be checked; if it does not hold, the image serves as a plan underlay.

CAD 2.3 Plan underlay for tracing

An image or PDF page lies to scale behind the drawing. The scale comes from a known length: tap two points in the image (door width, grid line, dimension chain) and enter the real distance. The underlay can be rotated, locked and removed; drawing on top uses the normal snapping.

CAD 2.4 LiDAR pre-capture

On iPads with LiDAR, Apple RoomPlan captures walls, doors and windows as a rough sketch; scans from ITRoomScan arrive via “Drawings → Import”. All scanned dimensions count as unverified and are shown in yellow until they are re-measured with the laser or by hand.

CAD 3 FITTING OUT THE ROOM

CAD 3.1 Racks and rack rows

Racks are placed with width, depth and rack units, with front and rear doors and therefore a clear cold-aisle and hot-aisle side. Each rack carries its planned power rating in kW; the default for new racks is set in the settings.

A rack row is created from two points: draw a line, and as many racks as fit are placed — aligned and named in sequence with the next free row letter (“C01 … C08”).

CAD 3.2 Cooling units and airflow

Cooling units come from a catalogue and carry their cooling capacity. The air outlet direction is set with four direction buttons without rotating the unit itself. Intake ducts connect to the unit’s top; perforated floor tiles mark where cold air leaves the raised floor.

CAD 3.3

Raised floor with stairs and ramp

The raised floor is generated as a tile grid and clipped to the room; cut-outs can be placed, moved, rotated and edited. Stairs and a ramp provide access to the floor level.

- Dragging sets the position, dimensions set the size: orientation, number of steps, riser and tread are inputs.
- Values are checked against the German workplace rule ASR A1.8 — n risers have n−1 treads, and heights without a permissible stair are named.

CAD 3.4

Obstacles, cable trays and lines

Columns, cable ducts and pipes stand as obstacles over the full room height. Cable trays and lines are drawn with their own adjustable elevation — above the ceiling, below the raised floor or in between.

CAD 3.5

Other equipment

A catalogue of building services around the IT room: fire protection, electrical, security, ventilation and IT — for example aspirating smoke detection, motion detectors, sub-distribution boards or UPS systems. Each item knows its mounting type (floor, wall, ceiling), mounting height and dimensions; this determines its symbol in the plan and its correct position in the 3D model.

CAD 3.6

Resistance classes

Walls, doors and windows can be labelled with standardised classes: fire resistance according to EN 13501-2 (for example EI 90), burglar resistance according to EN 1627 (RC 1 to RC 6) and bullet resistance according to EN 1522. The standards check compares doors and windows with the class of their wall.

CAD 3.7

Escape routes

A door becomes an escape door, a window a rescue window — marked in safety green according to ISO 7010 and additionally labelled so that it stays legible in greyscale prints. The check follows the German workplace rule ASR A2.3: width depending on the number of people (875 mm for 5 people up to 2400 mm for 400) and the swing direction, which must open in the direction of escape from 20 people upwards.

CAD 3.8

Photos on every object

Every insertable element — rack, cooling unit, equipment, opening, obstacle, finding — takes photos: straight from the camera, from the photo library or from Files and Dropbox. The images live in the document package and go to the server on check-in.

CAD 4 RACK POPULATION AND CABLING

CAD 4.1

Front and rear rack view

Population is planned in rack units, in front and rear view. Devices sit at the front, at the rear or across the full depth; occupied units, power and weight add up automatically. The data model follows FNT Command: device, ports, card slots, power.

CAD 4.2

Server type catalogue

Device types are created once and reused in every room: manufacturer, type, equipment variants and ports by category (power, copper, fibre, out-of-band management) with connector type and count. When signed in, the centrally maintained catalogue comes from the server and stays available offline.

CAD 4.3

Device configurator with expansion cards

A device's rear view shows its fixed ports and PCIe slots. Expansion cards from the catalogue — FC HBAs, network cards — are dragged from the palette onto a slot; the device's ports and power draw update immediately. Whole standard sets of device and cards can be placed into a rack.

CAD 4.4

Device recognition from a photo

A photo of the rating plate is enough: text recognition runs offline on the device and reads type, height in rack units, name and model. The recognised device is proposed in the next free position in the rack — the exact position cannot be derived from a photo and is confirmed by hand.

CAD 4.5

Rack PDUs and PDU catalogue

Power strips sit as 0U PDUs on the left and right of the rear or as 19″ PDUs in rack units. Every PDU carries manufacturer, model, phases, fusing, power, outlets (C13, C19, Schuko …) and its A or B feed.

- Maintainable PDU catalogue with a starting stock researched from real data sheets; CSV import and export for manufacturer price lists.
- Site template: power feed, metering and switching, residual current monitoring (RCM), outlets per phase with colour coding.

CAD 4.6

Cabling and cable lengths

Connections between components — copper, fibre, power — with connector type and speed. The cable length follows from the mounting positions plus a safety allowance and is given as an order length; cables appear in the plan, and PDU phase load is tracked.

CAD 4.7

Patch panels and cabling plan

Patch panels between cabinets or rooms are recorded and assigned to individual servers port by port. The assignment produces the cabling plan; empty panels are reported as unused.

CAD 5 CHECKING AND ASSESSING

CAD 5.1

All defects at a glance

One button, one list: everything that is wrong with the room, sorted by severity — from room check, standards check, risk assessment and walkthrough. Filters narrow the list to one source, tapping a defect leads to the object in the plan, and the foot of each list opens the matching detail sheet.

CAD 5.2

Room check: cooling and power

The room check answers whether the room can carry what is in it — a one-sentence verdict at the top, findings and figures below.

- Cooling: IT load against cooling capacity, reserve, load per rack row and n+1 — is there still enough cooling if the largest unit fails?
- Power per rack: PDU overload, warning above 80 % utilisation, A/B redundancy (the weaker side must carry the full load alone) and a missing second feed.
- Set per room: calculate with planned values (default) or with the installed components.
- IT load and cooling reserve appear as a traffic light in the footer.

CAD 5.3

Standards check

All standards checks of the drawing on one sheet: stairs and ramps according to ASR A1.8, escape routes according to ASR A2.3, resistance classes of doors and windows compared with their wall, and the model check of the 3D build-up. Notes do not count as violations. If there are findings, the report is attached as the second page of the plan PDF.

CAD 5.4

Risk assessment following HSE

A complete module following the five steps of the UK Health and Safety Executive: identify hazards, decide who might be harmed, evaluate risks and decide on precautions, record the findings, review regularly.

- 5×5 risk matrix of likelihood and severity, before and after measures.
- Templates for the data centre: inert gas extinguishing, raised floor, UPS batteries, continuous noise in the cold aisle and more — as a proposal to be confirmed on site.
- Acceptance of residual risk with name, date and signature field; next review date.
- From class “high” upwards a finding is created in the punch list. Output as PDF and CSV.

CAD 5.5

Audit and punch list

Findings are part of the drawing and can be located in the plan — also afterwards, straight from the list. Each item carries number, title, description, category, priority, status (open, in progress, done, verified/closed, obsolete), discipline, responsible person, due date, photos and a history across all audit rounds.

The discipline says who fixes it — for example facility management for a fire damper — and is deliberately separate from the category, which says what it is about. The list can be exported as CSV; the module is enabled in the settings.

CAD 5.6

Guided walkthrough

One question per sheet, three answers: Yes, No, N/A. Questions are phrased so that Yes is the good answer — every No immediately becomes a finding with title, category and priority taken from the question.

- Photo evidence: per question, “Yes” can require a photo first; confirmed evidence appears in the audit report.
- Follow-up questions: a “No” can trigger further questions, up to three levels deep; “Back” removes them again.

CAD 5.7

Question catalogue and audit concepts

The question catalogue can be composed freely — rename, reorder, disable, add and reset categories and questions — with every question in German and English. Audit concepts are named, versioned catalogues for different audit subjects.

- Included: IT Room Concept and Secure Area according to ISO/IEC 27001:2022, Annex A, chapter 7.
- Copy a template, edit it as a draft, release it — every release becomes an unchangeable version, and the changes between versions are shown.
- Audit baseline per room: the walkthrough runs against the selected version, and every finding records where it came from.

CAD 5.8

Follow-up at the next audit

“Start new audit” leads through the open items of the previous round. For each item: the old finding, responsibility, photos, then “Done” or “Not done” and a photo of today’s state. The result is recorded in the history with the round number; an item that is not done keeps its status.

CAD 6 PLANNING, VIEWING, COMPARING

CAD 6.1

Planning phase and go-live

A room is either in planning or in live operation; the state is shown as a chip next to the room name. A planning room is created from scratch — over a PDF underlay, for example — or as a copy of an existing room. “Put into operation” turns it into the live state; the plan is kept as a record.

CAD 6.2

Planned-versus-built comparison

What was built differently from the plan? The comparison fetches the other state from the server and lists what is additional, missing, moved or changed. Objects are matched by their identifier; moves are only reported from 5 cm. A switch overlays the deviations on the plan.

CAD 6.3

3D view

The room as a 3D model: semi-transparent walls with openings, raised floor, racks with marked cold and hot side, cooling units, equipment at its mounting height, and labels. The camera follows your fingers or is steered from a side panel; the rendering mode can be switched. The model check reports build-up errors right in the view.

CAD 6.4

Campus plan

Fibre plans maintained on the server are visible on the iPad: as a map with OpenStreetMap and route course, or as a stored plan image. Every route has a detail page with capacity, end points down to the room, installation data and test reports. The view is for reference and changes nothing.

CAD 7 OUTPUT

CAD 7.1 Plan PDF with title block

A true vector PDF to scale, with frame and a title block at the bottom right as on construction drawings: project, location, scale and date, author with contact details, and the tenant's logo and company name. North arrow, scale bar and dimensions are included.

- Findings appear as numbered markers; the punch list sits on the same sheet, sorted by status and priority.
- If the standards check has findings, its report follows as the second page.
- All labels follow the app language — German or English.

CAD 7.2 Element and rack report

A report on the fit-out: every opening with its data fields and photos, every populated rack with key figures, device list including ports and cards, front and rear elevation, and its PDUs with outlets.

CAD 7.3 DXF export

The drawing as DXF in AutoCAD 2000 format (AC1015) with layers and correctly encoded special characters — for further work in any CAD program.

CAD 7.4 Export for FNT Command

FNT imports data through its data model, not through the drawing. The app therefore writes one CSV table per object class — semicolon-separated with a UTF-8 marker, so that a German-language Excel recognises the columns directly.

CAD 7.5 Share and store

All outputs take the same route: share them or save them to Files, including network drives and Dropbox. Every saved file carries a timestamp in its name, so the second export of a room never overwrites the first.

CAD 8 PROJECTS, TEAM AND ACCOUNT

CAD 8.1 Projects and header data

Any number of drawings as `.itroom` packages with photos, saved automatically. Drawings can be saved under a new name and exchanged via Files, Dropbox or AirDrop.

Every room carries header data: location, building, room, customer, date and where its documentation is stored, on a network drive or in the cloud. Author and contact for the title block are entered once per device.

CAD 8.2

Working with the server

After signing in, the app lists the tenant’s rooms. Checking out locks the room for everyone else and loads the current state onto the iPad; work continues offline. Checking in creates a new version, uploads the photos and releases the lock. A check-out can be cancelled without creating a version.

Address, user and access live in the keychain and survive updates and reinstallation.

CAD 8.3

Central master data

Device catalogue, question catalogue, audit concepts and the tenant’s branding come from the server — the same state as in the web client and on the phone. Branding is cached and stays available without a network.

CAD 8.4

Language, appearance and help

The app is fully available in German and English, including calculated check results and reports. The appearance follows the system or is set to light or dark — canvas, rack view and 3D included; plan PDFs always stay dark on white.

A welcome tour explains the features on first launch. The manual is built into the app and works offline, in eight chapters from the first room to teamwork.

CAD 8.5

Pro subscription and trial

ITRoomCAD Pro is a monthly App Store subscription with a seven-day free trial, which Apple grants once per Apple account. Offer codes can be redeemed in the app. During the trial every output carries a watermark so it cannot be used as a deliverable.

CHK **ITRoomCheck**	DEVICE iPhone and iPad with iOS 15 or later	ROLE Audit and re-inspection — inspect, not draw	DATA The same check-out and check-in as on the iPad

The audit app for a one-handed walkthrough. It fetches the question catalogue or audit concept from the server, guides through the questions, records findings with photos, works through the items of the last audit and returns the room — without a data path of its own, so every finding lands where the iPad looks for it.

CHK 1 SIGN IN AND FETCH A ROOM

CHK 1.1 Sign-in that works in the basement

The same accounts as on the iPad and in the web client. “Test connection” tells a wrong address apart from a wrong password. If the server stays silent, the app retries the sign-in by itself and shows which attempt it is on. Sign-in data can be remembered permanently and survives updates.

CHK 1.2 Check out a room

The room list shows the tenant’s rooms; a room is checked out and thereby locked on the server for others — stated explicitly, so nobody blocks a room overnight by accident. Exactly one room is inspected at a time.

CHK 2 INSPECTING ON SITE

CHK 2.1 Guided walkthrough

One question per screen, three large buttons: Yes, No, N/A. Questions come from the room’s audit baseline — the question catalogue or the selected version of an audit concept. After a “No” the app stays on the newly created finding so that a note and photo are taken right away. Progress survives an app restart.

CHK 2.2 Photo evidence and follow-up questions

If a question requires a photo as evidence, “Yes” stays locked until the photo is taken, and the reason is shown below. If the question is answered “No” instead, the photos move to the new finding. Follow-up questions after a “No” appear directly behind it and are marked as such.

CHK 2.3 Recording findings

Everything the iPad keeps on a finding, in the order it is needed on site: title and description, category and priority, status, discipline and responsible person, photos — camera first, photo library as an addition. The history from earlier audits sits below and is read-only.

CHK 2.4 Find a rack by QR code

Racks in a data centre almost always carry a label. The app reads the QR code with the camera or takes the number as input (“R12”) and finds the rack even inside longer code lines such as “RZ1/R12/Row A”. A new finding therefore lands on the right object instead of somewhere in the room.

CHK 3 RE-INSPECT AND HAND IN

CHK 3.1 Follow-up of open findings

At the top are the items from earlier audits that need re-inspection this time; below them all findings of the room. For each old item: done or not, with a photo of today’s state — the result goes into the item’s history.

CHK 3.2 Audit report

The report comes from the server and therefore has the same form as in the web client: company logo, header data, key figures, punch list with photos, and evidence. It appears in the language the app runs in and can be shared directly.

CHK 3.3 Hand-in to the server

Before handing in, the app shows the scope: findings, confirmed evidence and photos. Checking in creates a new version, uploads the images and releases the lock. Without a network everything stays on the phone until the hand-in succeeds — with a clear message instead of silent loss.

SCN **ITRoomScan**	DEVICE	ROLE	STATUS
	iPhone Pro with LiDAR (iPhone 12 Pro onwards), iOS 16+	Capture only — editing happens on the iPad	Ready for use; separate App Store listing on hold

The small companion for the first step: walk the room with an iPhone and capture it as a rough sketch. Dimensions count as unverified until they are re-measured on the iPad — the scan saves drawing, not measuring.

SCN 1 CAPTURE

SCN 1.1 LiDAR room scan

Apple RoomPlan captures walls, doors, windows and furnishings while you walk the room. The room height is taken from the scan. Alongside the floor plan, the complete 3D model of the scan is saved as a USDZ file.

SCN 1.2 Preview and room data

After the scan, a top view shows walls in yellow and openings in turquoise with segment dimensions in millimetres. Room name and wall thickness are set here before the scan is handed over.

SCN 1.3 Naming detected objects

RoomPlan only knows living-room vocabulary: it reports a 19″ rack as “storage” and a CRAC unit occasionally as “refrigerator”. Afterwards each detected object is assigned to a real data-centre type — nothing is guessed — so that it arrives correctly in ITRoomCAD and other programs.

SCN 2 HAND OVER

SCN 2.1 Package for the iPad

The scan is packed as an `.itroom` package and passed on via AirDrop or Files. In ITRoomCAD, “Drawings → Import” opens the package as an editable drawing, with the 3D model included. File names carry a timestamp.

SCN 2.2 Straight to the server

With the same credentials as on the iPad, the app uploads the scan to the server as a new room. There it appears as version 1 in the room list and can be continued on the iPad or in the web client.

SCN 2.3 Test scan without LiDAR

A built-in test room runs the complete chain — conversion, preview, package, server — even on devices without a LiDAR sensor. The hand-over can be demonstrated and checked before the first real room is scanned.

SRV	OPERATION	ROLE	ACCESS
Server & web client	Container on premises or hosted	Storage, permissions, master data, web CAD, infrastructure, reports	Browser; interface for iPad, phone and scan app

The shared centre of the suite. All rooms of a tenant live here with their versions, catalogues and audit concepts are maintained here, and in the browser you can keep drawing, checking and planning — all the way to fibre routes across the campus and the distribution of a Cisco ACI fabric.

The web client's interface is in German; button names are quoted as they appear.

SRV 1 PLATFORM, TENANTS, SECURITY

SRV 1.1 Container operation and backup

One container with a database and a data volume — no further services. The backup delivers a consistent state of the entire database at any time, even while it is being written, and is collected automatically every day. Stored key figures are recalculated with the current rules on start-up.

SRV 1.2 Tenants

Each tenant sees only its own rooms, users, catalogues and concepts; the separation applies to every query. Requests for another tenant's rooms are treated as if those rooms did not exist.

SRV 1.3 Roles, permissions and sites

Four base roles — administration, planning, audit, view only — and freely definable custom roles. Individual permissions can additionally be granted or revoked per user. Releasing audit concepts requires a permission of its own, separate from editing.

Users are assigned to sites; ACI planning shows each user only the rooms of their sites.

SRV 1.4 Sign-in and session protection

- Passwords stored only as scrypt hashes; policy of at least 10 characters and no trivial words.
- Login throttling after 5 failed attempts; sessions end after 12 hours or 120 minutes of inactivity.
- View your own sessions, sign out individually or everywhere; changing the password ends all other sessions.
- Disable users (without being able to lock yourself out), security log of all sign-in events, strict HTTP security headers.

SRV 1.5 Tenant branding

Company colour, company name and logo are entered once and appear in the web client, on the iPad, in the title block of plans and in the audit report. The company colour yields three values — for surfaces, for buttons with white text and for text — each based on measured contrast, so no company colour can make the interface unreadable.

SRV 2 ROOMS AND COLLABORATION

SRV 2.1 Room list and dashboard

The room list shows every room with version, lock status, key figures and whether it is in planning or live since a given date. The dashboard summarises all rooms: number of rooms and racks, open items, IT load and cooling capacity, checked-out rooms. A room's details include its version history.

SRV 2.2 Check-out and check-in

Hard check-out: whoever checks out locks the room; a second access is refused. Checking in saves a new version and recalculates the key figures. Your own lock can be released without a new version; someone else's only by an administrator.

SRV 2.3 Planning and live operation

"Neue Planung" (new plan) creates a planning room from scratch or as a copy of an existing room. "Live schalten" (go live) takes the plan into operation — as a new version of the original for a refurbishment, or as a new live room for a new build — and the plan stays frozen as a record. A plan that is no longer needed can be discarded; the original remains unchanged.

SRV 2.4 Photos

Photos of objects, findings and evidence are stored per room and delivered only after sign-in. They come from the iPad, the phone or the browser walkthrough and are available wherever the object is shown.

SRV 3 WEB CAD

SRV 3.1 Drawing in the browser

Every drawing from the iPad can be viewed in the browser; editing starts after check-out, just as on the iPad. Click selects, double-click opens the properties. Tools for walls, racks, text, equipment and lines, a property panel per object, and floor plan import from PDF.

Undo and redo reach back 60 steps; the button names what it would take back.

SRV 3.2 Same rules as on the iPad

Multi-select, rotation, freehand lines, room templates, object search, stairs and ramps, resistance classes, room check, standards check and risk assessment calculate in the browser with the same rules as on the iPad. Automated browser checks run the same cases as the iPad app's tests.

SRV 3.3 3D in the browser

The room in 3D without additional software: semi-transparent walls with mitred corners, racks, cooling units and equipment. Dragging rotates, the mouse wheel changes the distance, double-click fits the view; from above it is drawn without vanishing point as a true plan view.

SRV 3.4

Racks, cabling and patch panels

Racks are populated in the browser in front and rear view; expansion cards are dragged onto slots. Connections and patch panels are maintained port by port — with the same data the iPad sees at its next check-out.

SRV 3.5

Fibre links between racks

Plan fibre patch panels between two racks of a room in one window: manufacturer system (Metz Connect OpDAT, Telegärtner, Corning), fibre type OS2, OM3, OM4 or OM5, connector LC-D, SC-D or E2000, polish UPC or APC, and fibre count.

The length follows the route along the cable tray including risers, reserve and a 10 % allowance, rounded to the available assembly lengths. Panels are installed from the top down; a missing cable tray triggers a warning.

SRV 3.6

Defects, deviations, concepts

The web CAD header offers the same checks as the iPad: “Mängel” (defects) with room check (including the switch between planned values and installed components), standards check, risk assessment and walkthrough; “Abweichungen” (deviations) with the planned-versus-built list and markers in the plan; “Konzepte” (concepts) to choose the audit baseline.

SRV 3.7

Audit walkthrough in the browser

The walkthrough from the app, at the desk or on a laptop on site: Yes, No, N/A, with the language switchable between German and English. Evidence photos are uploaded, follow-up questions are inserted after a “No”, and every No becomes a finding in the drawing.

SRV 3.8

Question catalogue and concept editor

Categories and questions in German and English, with finding category, priority, “active” and “photo required”. Follow-up questions for a “No” can be added under each question, up to three levels deep; the catalogue can be reset to the shipped state at any time.

Audit concepts are maintained with name and description in both languages, copied from templates, released and compared across versions; an older version can be restored as a new draft.

SRV 4 MASTER DATA

SRV 4.1

Device catalogue with cards and sets

The shared device master data for web and iPad, maintained by administration and planning:

- Base components with variants and ports, separated by front and rear.
- Expansion cards (FC, network) and drives.
- Standard sets composed graphically: drive bays at the front, fixed ports and slots at the rear, cards dragged onto slots, with a power total.

SRV 4.2

Question catalogue as a shared source

iPad, phone and web client ask the same questions because the catalogue lives on the server. Without a custom catalogue the shipped version applies, with 84 questions in 11 categories, fully bilingual, plus the concept templates IT Room Concept and Secure Area.

SRV 5 INFRASTRUCTURE AND FIBRE

SRV 5.1

Organisation structure

One tree per tenant with adjustable levels, preset as tenant → country → city → campus → building → floor → room. Nodes can be expanded, collapsed and pinned, carry images such as floor plans and link to the rooms in the room list. Buildings can be taken over from OpenStreetMap.

SRV 5.2

Fibre GIS

Any number of fibre plans per node, either on the OpenStreetMap map or on a calibrated plan image. Routes are drawn with their course and type — within a building, between buildings, between campus sites.

- Per route: fibre count and occupancy, end points down to the room, installation data.
- Test reports with attached measurement files per route.
- Routes are available to ACI planning and to the campus view on the iPad.

SRV 5.3

GIS import

Existing geodata is imported instead of redrawn: GeoJSON, KML and KMZ, GPX, and shapefiles as ZIP or individually. A preview shows what was recognised before it is taken over.

SRV 6 ACI NETWORK PLANNING

SRV 6.1

ACI placement

Distribute a Cisco ACI fabric across the rooms of a site according to the rules. Steps: choose the site, tick the rooms, mark anchor racks per room, choose a template — Remote Leaf, Small, Medium, Large or XLarge, with an editable number of spines, leafs and APICs.

- Spines and APICs are spread across rooms; an APIC cluster never sits entirely in one room.
- Leafs come in pairs, with vPC partners in two different racks; each room adds an out-of-band switch and a console terminal server.
- Rack units are assigned from the top and never collide with existing devices; rules and locks are checked before applying.
- “Anwenden” (apply) checks out each room, places the devices and checks it back in.

SRV 6.2

ACI cabling and bill of materials

Alongside the distribution, the module calculates the cabling: leaf-spine full mesh at 100G, APICs at 25G to both leafs of a pair, out-of-band management and console per room.

- Direct cables only within the same rack or to the neighbouring rack up to 1.6 m; all other links run through automatically planned patch panels and the cable tray.
- Links between rooms use the route from the fibre GIS; warnings for a missing route, copper over 90 m or too few free fibres.
- Result: a cable table with type, route, length and assembly, plus a bill of materials including transceivers.

SRV 7 REPORTS

SRV 7.1

Audit report as PDF

The report that stays with the customer: company logo at the top right, header with customer, audit round, date, storage location and the audit concept and version checked against. Below that key figures, the punch list by status and priority with responsible persons, due dates, history and up to two photos per item, and finally the evidence confirmed with photos.

In German via “Audit-PDF” or in English via “Audit-PDF (EN)”; ITRoomCheck fetches it automatically in the app language.

SRV 7.2

Key figures per room

On check-in the server calculates for every room: floor area, racks, devices and PDUs, rack-unit occupancy in percent, IT load against cooling capacity with reserve, open items and how many of them are high priority, number of cables and order metres. IT load follows the room’s setting — planned values or installed components.

As of 11 September 2026 ITRoomCAD 1.7.70 · ITRoomCheck 1.7.70 · Server 0.2.0

Deutsch · English