



SERVICE SPECIFICATION / DATA CENTER

Data-center structured cabling

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Carrier, distribution, and equipment areas connect through managed copper and fiber patch fields with planned topology, density, polarity, labels, and tests.

Intended outcome

Labeled panels, trunks, and ports with verified performance, controlled polarity, usable patching access, and an as-built connectivity record.

Service scope

Data-center cabling combines topology and administration with physical media. Main, horizontal, intermediate and equipment distribution areas can provide structured transition points appropriate to the facility scale.

Fiber type, connector format, polarity and breakouts must follow the planned switch and server interfaces. High density saves space only when technicians can still inspect, patch, trace and replace components safely.

How the system fits together

01 Core/distribution	Primary switching and inter-area connectivity
02 Structured patch field	Managed cross-connect or interconnect points
03 Row/rack distribution	Trunks, panels and breakouts serving equipment zones
04 Equipment link	Final patching to compute, storage or network ports

Typical project triggers

- Direct equipment-to-equipment runs obstruct change
- Port growth exceeds panel or pathway capacity
- A speed migration changes optics, polarity or connector density
- A/B cabling cannot be followed from rack to source



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Delivery and acceptance

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The final project scope identifies quantities, locations, dependencies, and the evidence required at each delivery stage.

01 Port and topology model

Map equipment ports, speeds, media, patch points, A/B relationships and forecast growth.

Acceptance evidence: Port matrix and logical-to-physical topology

02 Physical design

Select panels, trunks, polarity, cable lengths, pathways, labels and maintenance access.

Acceptance evidence: Rack elevations, bill of material basis and polarity map

03 Stage and install

Prelabel, inspect and place cable systems in sequence with cabinets and network equipment.

Acceptance evidence: Installation/inspection log and end-to-end mapping

04 Test and reconcile

Run specified media tests, resolve exceptions and align records with live port assignments.

Acceptance evidence: Test files, port reconciliation and as-built patch schedule

Handover deliverables

- Physical connectivity and port matrix
- Rack/panel elevation and polarity map
- Labeled trunks, panels and patch fields
- Copper/fiber acceptance-test files
- As-built cable and patching schedule

Closeout: GHT and the customer review the agreed evidence, record unresolved exceptions and owners, and confirm acceptance against the signed project scope.



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Planning and scope boundaries

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Customer and site inputs

- Port count, speed, media and interface by equipment
- Topology, A/B and failure-domain requirements
- Rack elevations and pathway capacity
- Connector density, polarity and migration method
- Testing, labeling and change-record standards

Constraints and coordination

- Live-equipment access and approved maintenance windows
- Density versus inspection and serviceability
- Polarity and transceiver compatibility
- Pathway separation, airflow and cable-volume limits

Commercial scope and responsibilities

This specification describes the service framework. The signed statement of work defines included equipment, quantities, software licenses, integrations, access windows, schedule, pricing, warranty, and support coverage. Additional construction, electrical work, recurring subscriptions, and ongoing support require an explicit line item.

The customer appoints an acceptance owner and provides authorized access, required site information, and decisions. GHT records assumptions, coordinates assigned work, and submits changes for agreement before expanding the scope.

Technical references

Telecommunications Industry Association — TIA-942: Telecommunications Infrastructure Standard for Data Centers | Source review: 2026-08-20

Telecommunications Industry Association — TIA-568: Commercial Building Telecommunications Cabling Standards | Source review: 2026-08-20

BICSI — BICSI Library of ICT Manuals and Standards | Source review: 2026-08-20

IEEE 802.3 Working Group — IEEE 802.3 Ethernet | Source review: 2026-08-20

Service guide and project discussion | Source review: 2026-09-06