

# DATA CENTER BUILD-OUT CHECK LIST

Data centers must deliver high availability of all their systems to be successful. This checklist outlines the process to set up and install cabling for a data center correctly.

## ☐ SCOPE OF WORK (SOW):

- ➔ General Scope of Work and overview of the entire project
- ➔ Include a description of the services required to complete the build
- ➔ Details included for each piece of equipment

- Staging requirements
- Labeling requirements
- Power up and burn-in requirements
- Module installation requirements
- Cabling requirements for each port
- Cable labeling requirements
- Logical requirements
- Packing requirements
- Shipping requirements

- ➔ Additional instructions for the various build and engineering teams.

## ☐ LEVEL OF EFFORT (LOE):

- ➔ Determine Level of Effort required to complete the build
- ➔ Determine the window of time you have to build on-site
- ➔ Determine how many technicians and engineers you will need for the duration of the project

- Each task will need an estimated time associated
- PMs and Project Engineers will include time required to design and manage the project
  - Receiving, Inventory and asset management
  - Pre-installation activities such as smoke test or
  - Staging, Rack and stack
  - Cabling and Labeling
  - Logical configuration

- A total estimate will be calculated for sales

## ☐ BILL OF MATERIALS (BOM):

- ➔ Have a detailed Bill of Materials and identify lead times so orders are placed in time to minimize any risk of missing or late equipment.

- Racks and Cabinets and associated hardware
- Network, Systems and Storage Equipment
- Power and Network Cables
- Other non-serialized hardware

## ☐ DATA CENTER LOCATION:

- ➔ Select a Data Center location based upon:

- Location in relation to users, service providers, historic record of natural disasters and risks of other human events
- Power reliability, availability and redundancy
- Security, both physical and logical
- Space for current build and future growth

## ☐ RACK ELEVATIONS:

- ➔ Determine elevation early so the cable BOM will be accurate and the installation team will know how the equipment will be mounted.

- Excel front and rear
- Visio front and rear

## ☐ CABLE MATRIX:

- ➔ Excel format is recommended for ease of use and making changes
- ➔ Cable labeling requirements
- ➔ Wiring diagrams

## ☐ LOGICAL CONFIGURATION:

- ➔ OS or Firmware upgrade/downgrade
- ➔ Configurations and Logs
- ➔ BIOS Settings
- ➔ RAID Configuration
- ➔ Management IP
- ➔ Automation QA output

## ☐ PRODUCT INFORMATION:

- ➔ Product specifications
- ➔ Product or materials special handling instructions
- ➔ Submittals used to sell products to customer

## ☐ PROOF OF CONCEPT/FIRST ARTICLE BUILD (POC/FAB):

- ➔ New rack builds will require a POC/FAB for best design
- ➔ This may take several extra days to determine final design
- ➔ For custom length cabled racks a fully built rack can help determine cable lengths without unneeded extra slack
- ➔ This is also essential for testing network architecture, configurations or compatibility prior to deployment
- ➔ POC is not required for rack builds that have a proven design

## ☐ PROJECT PLAN:

- ➔ The onsite date required by the customer will dictate the shipping and deployment dates
- ➔ The LOE will determine the project plan working backwards from the completion date with extra time to mitigate risk of missing deadlines.
- ➔ The BOM and equipment will need to be ready and in the loading dock, storage area or pre-stage area prior to the first day of the build.
- ➔ Any delays in equipment or information may delay the project plan milestones or completion date.

## ☐ WORKBOOK:

- ➔ Workbooks are developed as a comprehensive as-built document for every rack build
- ➔ These tabs/sheets are standard for rack build project workbooks

- Project Title and Project Team
- Revision Control
- Task Checklist
- Customer Data (provided by customer)
- Rack Design
- Rack Elevation
- Cable Matrix
- QA/QC Checks
- BOM/Ship Sheet