



## **HOW TO CABLE A NETWORK SWITCH USING THE CE COMM CABLE MANAGEMENT BRACKET**

Cisco switches have a fan blade mounted vertically on the left side of the chassis. The line cards are horizontally mounted to the right of that fan blade. The fan assembly is critical to the operation of the switch. If it fails, the switch will overheat and shut itself off. Older switches with older supervisor cards running older software may not shut off and may be damaged.

The CE COMM Cable Management Bracket allows the switch blades to be completely cabled. The other end of these cables is the back of labeled patch panels, creating a distributed patch panel field. There are several advantages gained by pre-cabling the switch blades: the switch only needs to be touched once, which virtually eliminates future ESD-related risks when connecting cables; the risk of inadvertently dislodging already connected cables while connecting other cables is significantly reduced; the cables at the switch can be kept neat and orderly; blade replacement is simplified and downtime associated with that replacement is much shorter if the cables are already numbered and orderly; the LED's on the blades are clearly visible, which helps in troubleshooting connectivity issues.

Best practice is to install the CE COMM Cable Management Bracket on the rack, then feed the cables in from the right. CE COMM's bracket makes that fairly easy. Start at the bottom-most line card and work up from there. The arms of the Bracket have groups of shallow cutouts designed to hold the cables being connected to the ports on the line card. Each line card should have the cables connected to the ports starting with port 48, then work to the left. Before connecting the cables to the ports, the cables should be labeled 1-48, with cable 48 going into port 48, etc. (This will be handy if the line card needs to be replaced. The cables will be numbered, so the amount of time required for the card swap is reduced.)

For each line card, run the cables behind the vertical arm support of the Bracket. Start with the higher-numbered ports and work right-to-left. The cables to be connected to the odd numbered ports (1, 3, 5, etc) should come into the line card above the horizontal arm of the Bracket. Cables going to the even-numbered ports should come in below the arm. As each cable is connected to the port on the line card, fit the cable into the cutout on the arm. Keep the cables reasonably dressed as the work progresses. We have found that straightening the cables as they're connected results in a neater finished product. We've also found that the cables should be fed in from the right and then into the switch. Connecting all the cables to the blade first, then feeding them through the Bracket, results in a less orderly appearance and also takes longer.

As each group of 12 cables is done, use a Velcro tie to secure them temporarily and then move to the next group. When each line card is finished, remove the temporary Velcro ties and tweak the cable bundles so they feed into the Bracket arm fairly straight, and then put Velcro ties around each group of cables to secure them to the arm. Dress the cables up and through the vertical wire manager and then into the patch panels. Cable slack should be put in either the horizontal or vertical cable manager. If the switch is some distance away from the patch panels, slack can be put in the cable tray. CE COMM's 6x4 cabling solution can be ordered with proper staggers at each end of the 6-cable bundle, which allows the cable ends to fall naturally into the switch ports and the patch panels.

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