IDF Room Best Practices

IDF Room best practices authored by Preston Holder and Doris Yeh, designed by Alvin Chan. Below is what we believe to be some of the factors to consider for an IDF buildout.

10 Factors to Consider for IDF Rooms

1. **Rack Positioning**
   Place your racks in pathway of the cold air so that it is blown into the front fans of your appliances. Introducing cold air to your appliances will increase their longevity. The return air duct should be in the back of the rack so the exhausted hot air rises and is sucked up into the return. When the density of your IDF increases, your IDF may become warm and at this time containment within the IDF should be considered.

2. **Location of Power Source**
   Very often, the power source in IDF is on the wall. We recommend that power sources be put on the top of the racks. Place wiremold above the ladder racks. Be sure to leave 2 inches from the ladder rack to the wiremold in case cabling needs to pass through. We also recommend the use of locking outlets to prevent power cables from being detached accidentally detached. Busways must be considered as opposed to a wiremold.
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3 Spec Out the Correct UPS
Choosing the correct load for your UPS is important. Consider run time, tech support, and length of warranty. Are the power cords long enough to reach your power source? Consider a bypass on the UPS so you do not need to turn off all your appliances for maintenance and troubleshooting. With just one incidence the bypass will pay for itself.

4 Deploy Cable Management
We cannot stress enough the importance of cable management, both vertical and horizontal. Have you seen a cabling birdsnest? Usually one of the main culprits is the lack of a cable management system. When considering cable management, make sure it is wide enough to hold all the cables you need to hold.

5 Surveillance and Temperature and Humidity Sensors
Installing cameras mean knowing exactly who has been in your IDF, at what time and what are they up to. Knowing what cables are moved and which appliance are missing will save you time and money. Choosing the right surveillance is important as well. When an incident happens in the middle of the night, can you find that event in a matter of minutes or hours? Have a temperature and humidity sensor installed. The sensors notify you when your IDF becomes too hot which is very important.

6 Power to Your IDF
As density continues to grow, we recommend you start your IDF with at least 208V 30 Amp power. We advise you go vertical as vertical power strips allow for better air flow due to the shorter power cords needed. Some IDF’s even use colored power cords to identify A and B or UPS feeds. Also, utilize Z brackets to make for a cleaner, more organized install. Check out some of the different types of mounting brackets on our web site.

7 Labeling Your Racks
Label your racks on both the front and the back for easy visual identification. Utilize a data center labeling kit to label both the racks and your cables.

*Note: Use labels that can withstand heat otherwise they will deteriorate over time.

8 Cabling Guidelines
Do you color code your cables? Some suggestions to do so are use blue for network, white for wifi, green for redundant and yellow for out of band. Determine your color code chart and display it on the wall of your IDF. Set aside some time to show anyone that has access to your IDF what your best practices are. Use serialized cables with labeling on both sides. This makes pulling cables from one end to the other a breeze to identify.

9 Stock the Necessities
Make sure you have ample stock of velcro, cage nuts and screws, cage nut tools and patch cords. It’s important to always have some of these on hand. Have a place for each of these items - We highly recommend stackable bins as they help with organization.

10 Out of Band Management
Consider console servers. Console servers are the best way to avoid a late night drive into your IDF. Console servers provide you with an alternate path to your datacenter. Looking for backup? Cellular out of band console servers are available, giving you that connection you need in case your network is down.

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