TIRED OF THE SAME OLD DATA CENTER ELECTRICAL AND AIR DISTRIBUTION METHODS?

Finally…an Engineered Solution that Provides Maximum Effectiveness, Efficiency and Profitability

If you're planning a new Data Center, at some point, you're going to have to answer a question that will affect the lifetime functionality and profitability of your facility…

"What method are you going to use to distribute power, cabling and air throughout the Data Center?"

Up until now your choices have been limited to a couple of less-than-optimal options…and neither are attractive in today's competitive marketplace.

OPTION #1: RAISED FLOOR

Drawbacks

- Expensive.
- Only 5kW cabinets can be cooled with airflow from under a raised floor.
- Only the bottom ⅓ of a cabinet can be cooled using a raised floor.
- Ramps and steps take up too much floor space.

More importantly, you know that running electrical services and trying to reliably distribute air in the same space under a single level raised floor is doomed to failure.

OPTION #2: ON-SLAB FLOODED ROOM

Drawbacks

- In a typical flooded room, i.e., a room having 9 kW cabinets, 17 % of the server fans have to work harder to draw air into the servers.
- To decrease (not eliminate) blow-by air at the initial cabinets the width of the cold aisles must be widened from the normal 4'-0" to lower the air velocity entering the cold aisle.
- To decrease high velocity air from entering the cold aisle the distance from the cooling discharge to the first cabinets must be increased.
- It is difficult to achieve practical and affordable redundancy of the cooling equipment.
- When using required containment, the fire protection methods and lighting often need to be re-configured when aisle widths change and cabinets are repositioned.
- The cost to install structured cabling overhead is 25-30% more expensive than underfloor.
- Overhead busway can be 25% more expensive than power cables.
- There has to be a containment system used to separate cold air from hot air, there's all different types and can range from $500 to $1,500 per cabinet.

- In most cases there is a drop/false ceiling to isolate the return air.
- The building's roof structure has to be reinforced to support the added weight of cabling and busway suspended from it.
- Deployment time is longer for design, engineering and construction.

Overall, a flooded room design costs more to build, it's more complicated and costly to reconfigure, and you use about 20% more useable floor space.

THERE IS A FAR SUPERIOR OPTION

Interstitial Systems' TIER E/A electro-mechanical distribution system overrides the drawbacks of both design methods described above.

With TIER E/A you can equip your Data Center with an air and electrical distribution methodology that:

- optimizes the building design and floor space so you can typically install 20-25% more cabinets in the same space;
- allows you to use higher density cabinets—up to 30 kW;
- provides precision air distribution for all cabinets anywhere in the room. This now means those expensive precision air conditioning units will finally be effective by getting air precisely where it belongs;
- distributes power and cable under the floor in a dedicated unsightly wireway. Therefore, roof and/or ceiling structures do not need reinforcement;
- doesn't need costly containment devices because controlled airflow can be efficiently and effectively delivered precisely to the servers. This saves time for engineering and construction, and a considerable amount of money. It also simplifies fire suppression, detection and lighting initially and on-going;
- provides genuine effective N+1 redundancy by using good design practices that are not achievable with raised floors or on-slab flooded room designs.
- allows floor slabs to be designed with lighter loads because the truss like structure distributs cabinet weights over a larger area;
- makes moves, adds and changes easier and user-friendly;
- has faster deployment time because design engineering is easier, more dependable and quicker as is the installation and construction process;
- was specifically designed to solve the problems that have plagued data centers for decades.

There is no product known to the data center industry that is more effective and efficient at providing dozens of short-and-long term operational enhancements, while simultaneously lowering cost and increase revenues and margins.

NEXT STEP: Contact us and let's discuss your needs and HOW we can save you time and money with our unique data center air and wire distribution system.

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