TIRED OF THE SAME OLD DATA CENTER?

INTERSTITIAL SYSTEMS

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

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

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

"What method are you going to use to distribute power, cabling, air and piping 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

- Unnecessary, expensive, and problematic.
- Only 5kW cabinets are effectively cooled with airflow from under a raised floor.
- Only the bottom 1/3-1/2 of a cabinet can be cooled effectively 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, with cold aisle containment 32.6 % of the server fans are working harder for resulting in a skewed PUE.
- 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.
- Adding piping in accordance with best practices and standards such as NFPA 75 shall not be installed over the ITEquipment.
- It is difficult to achieve practical and affordable redundancy of the cooling equipment.
- 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.
- 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.
- The building's roof structure has to be reinforced to support the added weight of cabling and busway suspended from it.

Overall, a flooded room design costs more to build, it's more complicated and costly to reconfigure, is not functionally sustainable using more space, materials and energy.

THERE IS A FAR SUPERIOR OPTION

Interstitial's electro-mechanical distribution system overrides the drawbacks of both design methods described above.

With Interstitial you will equip your Data Center with an electro-mechanical distribution methodology that:

- Is more sustainable compared to an on-slab air-cooled data center. Right size the building design by reducing the white space and in-turn building by 30%;
- Allows you to use higher density cabinets—up to 50 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;
- Is easily adaptable for any combination of air and/or liquid cooling for a hybrid or purpose built Next-Gen facility—LifeLong sustainability;
- Distributes piping, power and cable under the floor in a dedicated unsightly upper utility plenum. Therefore, roof and/or ceiling structures do not need reinforcement;
- Doesn't need costly containment devices because controlled airflow is efficiently and effectively delivered precisely to the servers. This also simplifies fire suppression, detection and lighting methods 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;
- Makes moves, adds and changes easier, safer 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, efficient and sustainable at providing dozens of short-and-long term operational enhancements, while simultaneously lowering cost and increasing 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.

INTERSTITIAL SYSTEMS

Sustainability Follows Functionality

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