

## Keeping Cables Off The Floor

TECHNICAL ISSUES CONCERNING KEEPING CABLES OFF THE FLOOR

1. Leeching. Concrete that the raised floor is installed over often has a process that occurs over time called leeching. This occurs even if the concrete has been fully cured; there are processes that will stop leeching of concrete or impede its progress, but they are expensive and not typically used on most jobs. Leeching dramatically impacts the performance of your cable because of how it deteriorates the jacket of the cable allowing the elements to get closer to the copper.
2. Moisture infiltration. If any water were to penetrate the floor or walls that lead to the underfloor area, the cable is in direct contact with the water which can lead to major problems. Sometimes this can occur without anyone knowing about the problem for weeks; tray is just extra piece of mind that your cable is off of the floor and away from any water that might infiltrate the data center.
3. Air Flow Problems. Over time if the cable is just laid on the concrete floor, it will accumulate into a large mass. This creates a problem known as "air dams", which doesn't sound like a big deal, but is the most crucial for data center applications. The first 4 inches off of the floor and the last 4 inches before the bottom of the flooring tiles are most prime areas to keep free of any impediments for optimal air flow. This is especially true if the end user is using "blade servers" as this type of server is growing in acceptance and is becoming the norm. Blade servers generate an enormous amount of heat and require the most air flow available for cooling.
4. Separation of Power and Data Cables. Using tray allows for dedicated pathway for your data cables, which keeps them separate from any power cables. Especially critical in data center applications where the density of cables is increasing and will continue to increase.