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CASE STUDY :

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## PLENUM FAN SOLVES A HOT SPOT PROBLEM



Recently, Flight Safety in Toronto needed to replace one of their ailing Computer Room AC units. Our engineers looked at the application and discovered that they had air flow problems at the servers close to the AC unit. This came as no surprise since air flow from centrifugal fans generate high velocity pressure and low static pressure close to the AC unit. The problem was compounded by the fact that the raised floor plenum is only 12 inches high and has significant cable obstruction in certain areas.

ClimateWorx proposed to supply a plenum fan unit in order to create high static pressure at low velocities very close to the AC unit.

The results are drastically different than what they were experiencing with the previous unit. The server that was “always hot” is now as cool as the remainder of the room.

“Previously, you could actually feel the difference in temperature from one side of the room to the other, and now the entire room feels cool” says Darren Graham of Flight Safety.

Since the problem server is only 3 ft away from the AC unit, the previous centrifugal fan unit was not capable of creating sufficient static pressure to deliver cool air from the floor plenum.

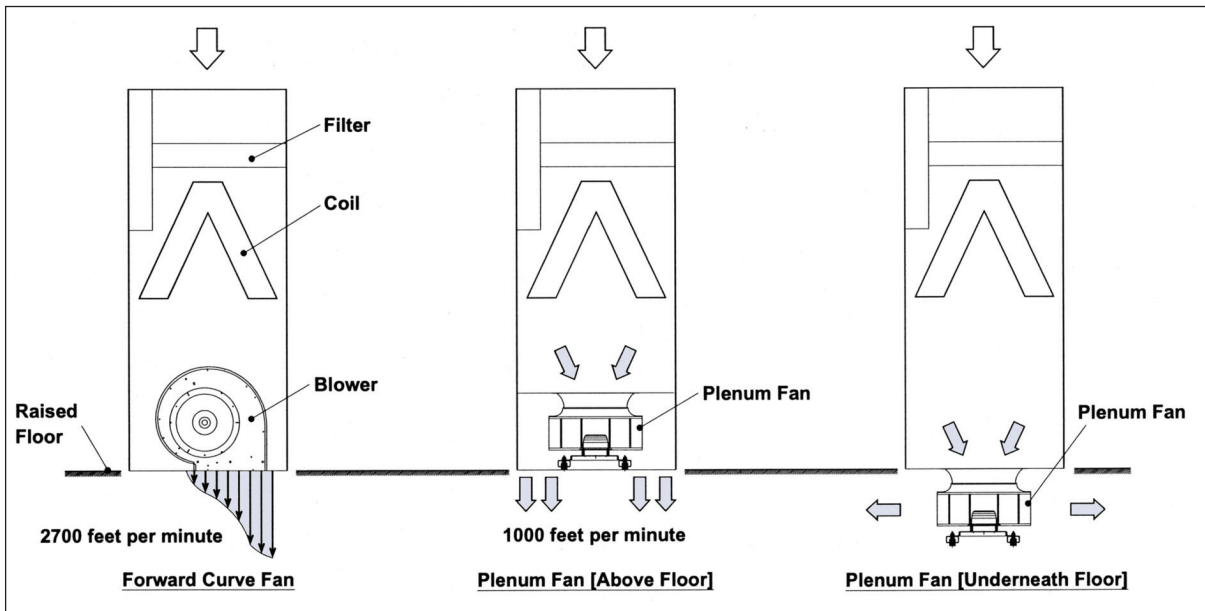
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The “hot spot” began with the server only 3 feet away and extended to an area 12 feet away.



The Plenum fan pressurizes the compartment with *static* pressure as opposed to *velocity* pressure with centrifugal fans.

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