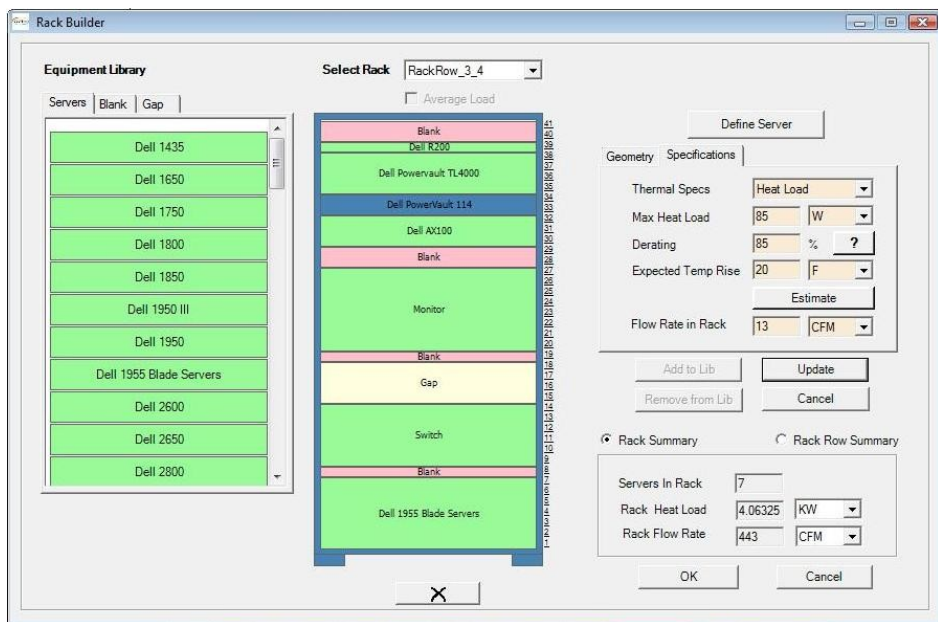


CoolSim 3.2 Adds Fidelity to Data Center Modelling

CoolSim 3.2 offers many new features for the rapid creation and analysis of data centres, including the ability to model individual servers, blanks, and gaps within equipment racks, supply ducts and diffusers for non-raised floor applications, and CRAC failure scenarios.

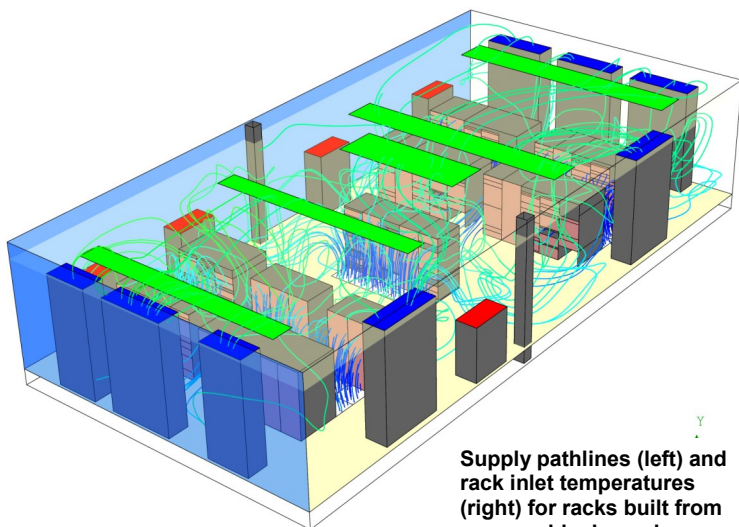
The Rack Builder Tool

In CoolSim 3.2, the Rack Builder Tool (RBT) is used to construct racks from servers, blanks, and gaps. The RBT has a graphical user interface (GUI) where you can select servers from an extensive equipment library and position them in a rack, starting from the floor and working up. If your equipment is not listed in the library, you can enter the necessary information and add the equipment to the library, where it will become available for your future use. Once positioned in the rack, servers

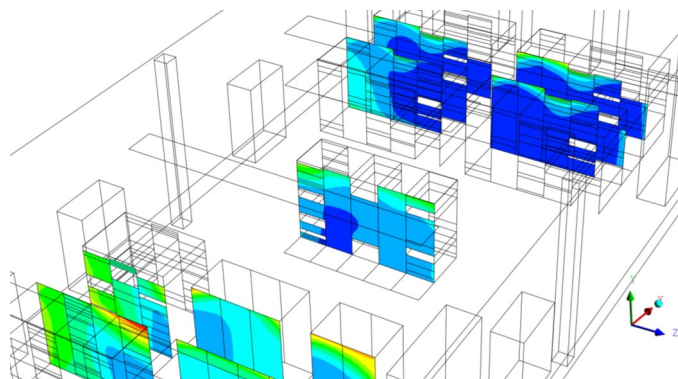


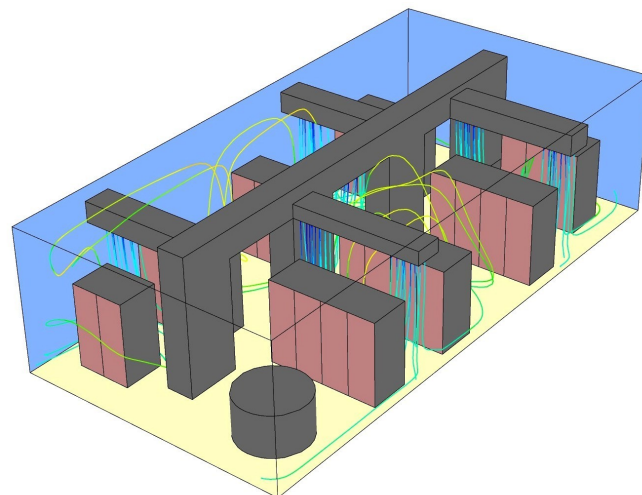
The Rack Builder Panel in CoolSim 3.2

can be de-rated for reduced operating demands. Rack and rack row summaries for heat load and flow rate are available during setup. All racks in a row need not have server-level detail; any one can be modeled using an average heat load. Once a detailed rack row has been built, it can be copied to another location on the floor and its orientation can be changed.



Supply pathlines (left) and rack inlet temperatures (right) for racks built from servers, blanks and gaps



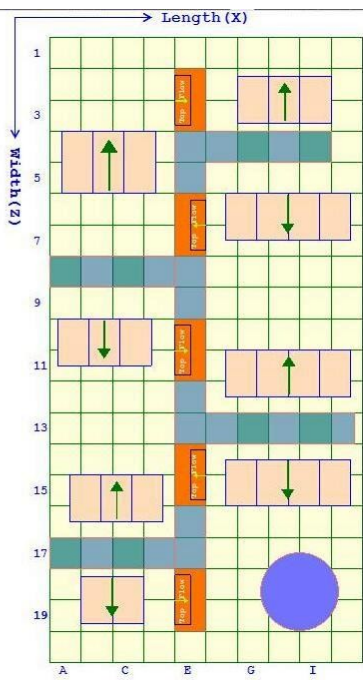
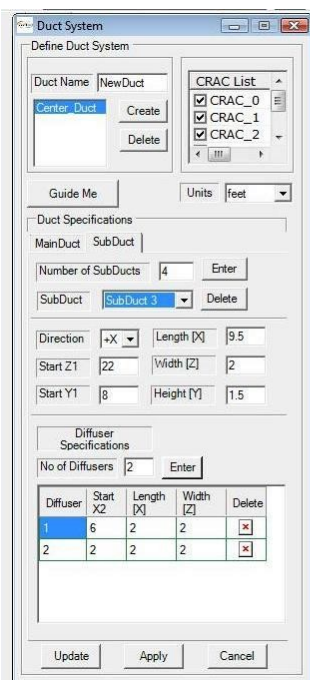


Supply Ducts and Diffusers

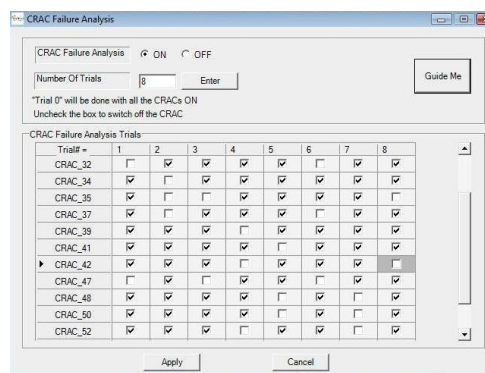
For non-raised floor data centers, topflow CRACs are available as the primary cooling source. (Frontflow CRACs and overhead supplemental cooling units are also available.) With CoolSim 3.2, overhead ducts with diffusers can be added to the room to model the supply air distribution. First, a main duct is created connecting two or more CRACs. The main duct can contain diffusers of arbitrary size, if desired. Second, one or more subducts are attached, each with one or more diffusers. Each duct system emits supply air from the participating CRACs at the fully mixed CRAC supply temperature and with uniform flow rates that add to the total flow rate for the duct system. The return air reenters the CRACs in the room near the base of each unit with the flow direction indicated by an arrow during the problem setup. Ducts and diffusers may be added to data centers with a ceiling plenum, overhead cable trays, and rack vertical exhaust ducts.

CRAC Failure Analysis

One of the most critical aspects of data center management is understanding ahead of time the consequences of one or more CRAC failures. In CoolSim 3.2, a series of studies can be launched concurrently in which selected CRACs are disabled. A simple interface allows CRACs to be selected for each of the failure trials. Once the simulations are complete, the results can be downloaded individually or all at once for comparative analysis.



The Duct System Panel and Plan View



The CRAC Failure Analysis Interface

Hardware / Connection Requirements

- Desktop or laptop PC running Windows 2000, XP, or Vista
- 256 MB RAM required; 512 MB recommended
- 500 MB swap space
- High-speed internet connection

Contact Information

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