

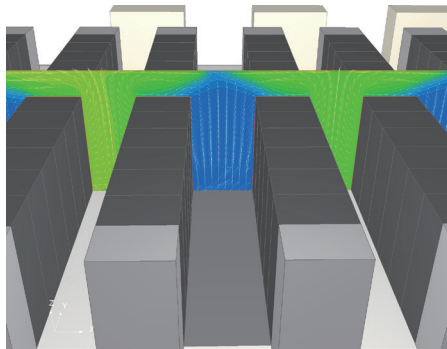
Management of Airflow and Temperature of a Data Center

Case Study of scSTREAM

scSTREAM simulates the control of cold aisle & under-floor airflow and the temperature variation during recovery after power outage

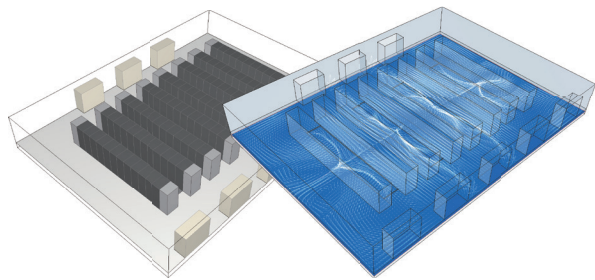
Thermal Management in the Data Center

Thermal management of the data center is important for operations. Designers of the data center examine many different cases of thermal management in the design phase.



Management of under-floor airflow

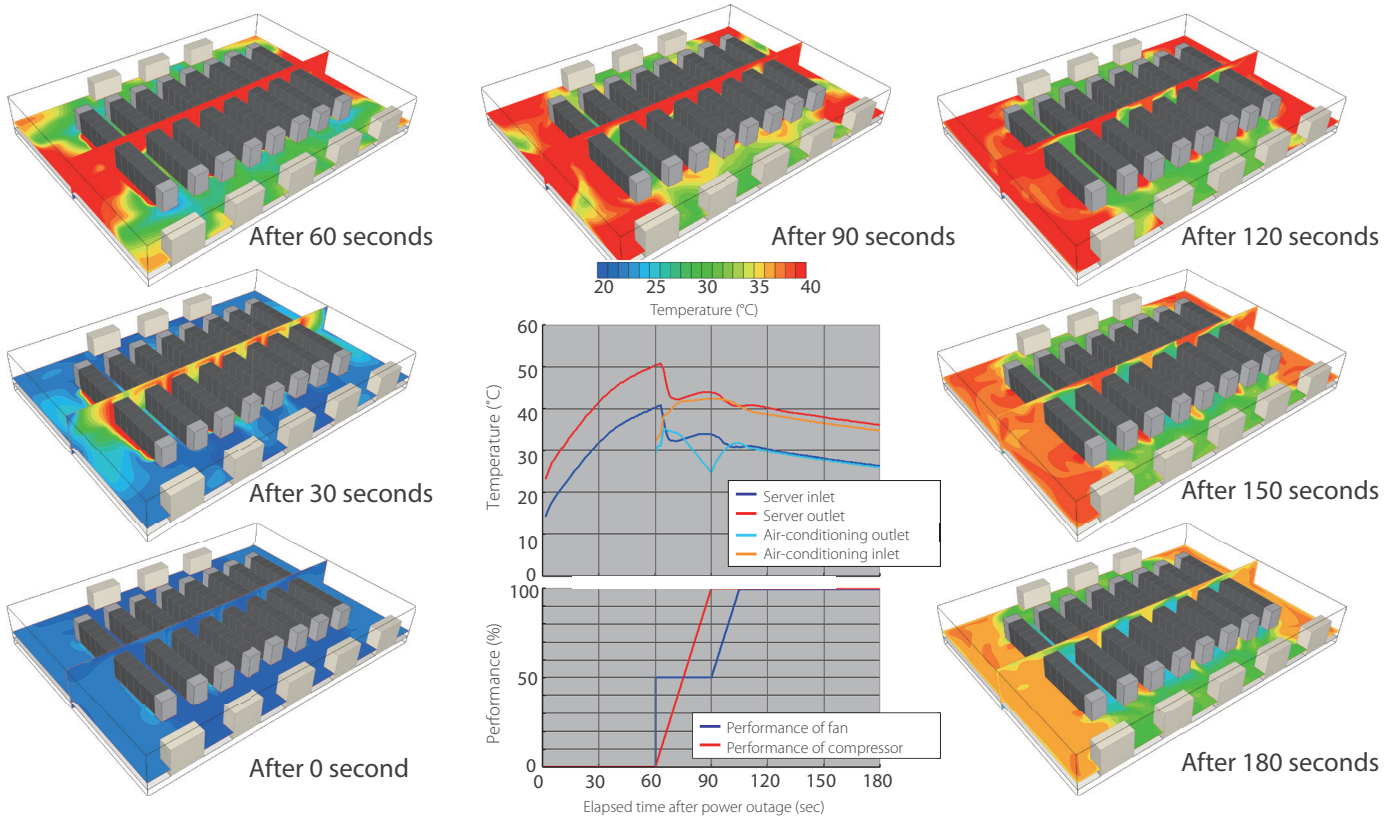
The under-floor airflow is studied to prevent stagnations of airflow and unevenness of flow volumes going into cold aisles.



Vector plot of under-floor airflow

Prediction of temperature change during power recovery

scSTREAM can predict the temperature variation of the data center with the consideration of power recovery process of air-conditioning equipment.



Notes

The performance of air-conditioning equipment is decided based on the rate of heating of servers to design the air-conditioning of the data center. The examination of 3D distributions of airflow in the data center is essential to achieve an efficient air supply to servers, and 3D CFD analysis using scSTREAM enables the user to execute the study easily and effectively. scSTREAM can also predict temperature change over time such as the simulation during the power recovery process.