

## What is required to allow Exaquantum/Batch to access data through a firewall?

Exaquantum/Batch accesses data using both OPC Protocols and standard Windows network file access.

Control Recipe (Batches) and Equipment Hierarchy are read via the OPC Batch Protocol and the requirement is the same as for any Exaquantum system. The firewall requirements are documented in the Exaquantum Engineering Guide Volume 2.

It should be noted that if restricting the number of dynamically allocated DCOM ports the information provided in the manual in regard to the actually port numbers are only meant as an example. They also need to be configured in the firewall and also in the DCOM configuration on the Exaopc/Batch and Exaquantum Server. The DCOM Port Range configuration is not performed by the installation of either Exaquantum or Exaquantum/Batch.

Note If the Exaopc server is installed using standard model security then the DCOM port range will have been limited by the IT Security Setting tool to 50 ports in the range 20501 – 20550.

Master Recipe information is read from the HIS Batch Server using Windows network file access via network shares. It also uses the ICMP protocol (ping) in order to ensure that the server is accessible. This means, that TCP ports 139 and 445, UDP Ports 137 and 138 and the ICMP v4 Protocol must be allowed through the firewall in order for Master Recipe information to be collected.

## Exaquantum /Batch Releases Affected

All