

# Network Security with ClustrixDB

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ClustrixDB requires a number of ports to allow internode communication. Depending on your specific deployment platform, you can:

1. Open your security to allow all communication between nodes (recommended)
2. Open the specific ports required for your cluster.

## Ports required by ClustrixDB

This page summarizes the list of ports used by ClustrixDB. If using network security such as firewalls or security groups, the following network traffic must be allowed.

### Internal Access Between ClustrixDB Nodes

These network ports are required for communication between ClustrixDB nodes. They must each be accessible by other nodes within the cluster.

Protocol	Port	Use	Reason
TCP	22	SSH	Administration and upgrade
TCP, UDP	2048	Control Port	ClustrixDB specialized administrative tool
TCP, UDP	2424	Nanny Port	<a href="#">nanny</a> - ClustrixDB process manager
TCP	3306	SQL	Database communication
TCP	7888	clxdbi	Database interface for <a href="#">ClustrixGUI</a>
TCP, UDP	24378 - 24410	Multiport	ClustrixDB internode communication

### External Access

These network ports are used to access ClustrixDB externally from your applications and for cluster administration.

Protocol	Port	Use	Reason
TCP	22	SSH	Remote management and cluster access
TCP	8080*	HTTP	<a href="#">ClustrixGUI</a>
TCP	3306	SQL	Database access
TCP	3581	Health Check	Heartbeat monitor for cluster

\*For root installation, ClustrixGUI uses port 80.

If you are using a firewall (like iptables) between the nodes, please open the specific ports.

### Multiport

The multiport feature allows internode communication to and from any core of a cluster. It can improve performance under heavy load.

Starting at port 24379, (for both TCP and UDP), open the same number of ports as there are cores or hyper-threads licensed for a node. The maximum number of licensed cores per node is 32, hence the suggested maximum range of 24379 - 24410.

ClustrixDB does not support mixed-mode usage of multiport. That is, all nodes must uniformly have multiport enabled (default) or disabled, or the nodes will be unable to form a cluster.

See [Modifying Startup Configuration Options](#) for instructions on how to disable multiport, if necessary.