

Network and port requirements

For proper communication, the IBM StoredIQ components must be able to connect to each other.

You must enable network connectivity from the following locations:

1. The data server IP address to the gateway IP address on port 11103
2. The gateway IP address to and from the application stack IP address on port 8765 and 5432
3. Ports 80, 443, and 22 from the administrative workstation to the application stack and data server IP addresses
4. Port 22 from the administrative workstation to the gateway IP address.

TCP: port ranges for the firewall

To ensure the network access for desktop volumes, the following port ranges must be open through a firewall

1. 21000-21004
2. 21100-21101
3. 21110-21130
4. 21200-21204

Default open ports

The following ports are open by default on the IBM StoredIQ.

SSH port 22

By default, port 22 is open on all IBM StoredIQ hosts. The port is used for Secure Shell (SSH) communication and allows remote administration access to the VM. In general, traffic is encrypted using password authentication. To add a layer of security, you can establish key-based authentication for passwordless SSH logins to any of the IBM StoredIQ nodes in your environment as described in “configuring SSH key-based authentication” on page 45.

Default open ports on the AppStack

Port number	Protocol
22	tcp
80	tcp
443	tcp

Default open ports on the IBM StoredIQ data server

Port number	Protocol	Service
22	tcp	PROD-ssh
80	tcp	Prod-web
443	tcp	PROD-https (UI and Web Services APIs)
111030	tcp	PROD-transport (IBM StoredIQ transport services; communication between the gateway and the data server)

Table 1: Default open ports on the IBM StoredIQ data server

Port Number	Protocol	Service
22	tcp	PROD-ssh
80	tcp	PROD-web
443	tcp	PROD-https (UI and Web Services APIs)
11103	tcp	PROD-transport (IBM StoredIQ transport services; communication between the gateway and the data server)
11104		

Enable or disable ports or services on the IBM StoredIQ data server

To manage ports, you can use the `/usr/local/storediq/bin/util/port_handler.pyc` script with the appropriate parameter:

```
python /usr/local/storediq/bin/util/port_handler.pyc -parameter
```

-s

To list the current rules in iptables

-l

To list the supported services

-d port_number|'port_range'

To delete a port or a range of port numbers from iptables, for example:

```
python /usr/local/storediq/bin/util/port_handler.pyc -d '21200:21299'
```

-e 'service_name'

To enable a specific service, for example, to enable HTTPS services:

```
python /usr/local/storediq/bin/util/port_handler.pyc -e 'PROD-https'
```

-d 'service_name'

To disable a specific service, for example, to disable HTTPS services:

```
python /usr/local/storediq/bin/util/port_handler.pyc -d 'PROD-https'
```

Default open ports on the nodes in the Elasticsearch cluster

Port number	Protocol	Service
21	tcp	ftp
22	tcp	sshd
80	tcp	sshd

Port number	Protocol	Service
80	tcp	
443	tcp	
8888	tcp	SimpleHTTPServer (used for copying the siqelasticsearch.yml configuration file from the Elasticsearch node to the data server)
9200	tcp6	docker-proxy (listening for REST requests) You can restrict access to this port by either enabling Search Guard or by setting up a firewall. For more information, see “Securing Elasticsearch cluster communication with Search Guard” on page 51 or “Restricting access to port 9200 on Elasticsearch nodes” on page 52.
9300	tcp6	docker-proxy (internode communication)

Table 2: Default open ports on the IBM StoredIQ gateway

Port Number	Protocol	Service
22	tcp	PROD-ssh
80	tcp	PROD-web
443	tcp	PROD-https (UI and Web Services APIs)
5432	tcp	PROD-postgres
5434		PROD-transport (IBM StoredIQ transport services; communication between the gateway and the data server)
8765		
7766	tcp	
11102		
11103		
11104		

Supported chain and rules on the IBM StoredIQ gateway

In iptables, the following firewall and chain rules are defined:

```
'PROD-transport': ['5434', '8765', '7766', '11102', '11103', '11104'],
```

```
'PROD-https': ['443'],
```

```
'PROD-ssh': ['22'],
```