iSCSI

In Computing, **iSCSI** stands for "**Internet SCSI**" or "**Internet Small Computer Systems Interface**". It is an internet protocol which works on the top of [TCP (Transport Control Protocol)](https://www.javatpoint.com/tcp). It is a protocol which is used for linking the data storage components or facilities.

Using the SCSI commands over the [TCP/IP](https://www.javatpoint.com/computer-network-tcp-ip-model) network, it transfers the data over the intranet.

It allows the block-level SCSI data transport between the client and the storage over the Transport control protocol/Internet protocol networks. It can also be used for transmitting the data over the [LAN](https://www.javatpoint.com/wireless-lan-introduction), WAN, or the [internet](https://www.javatpoint.com/internet).

It connects the computing devices to the network storage. This [internet protocol](https://www.javatpoint.com/ip) uses the initiators for sending the commands of SCSI to the storage devices on the remote servers.

Fibre Channel is also an iSCSI, which is used for creating the [SAN (Storage Area Network)](https://www.javatpoint.com/san). ISCI uses the two ports of TCP, whose names are 80 and 3260. It also offers the high-level encryption of data packets which are being transferred.

How Does iSCSI work?

In Iscsi, block-level data is transferred between the client (iSCSI initiator) and the storage device (iSCSI target). There are lots of iSCSI devices that allow this communication between the client and the storage devices.

When an application or end-user sends a request to access a file, the server converts the SCSI commands into the iSCSI command, and after then packets are sent over the IP network using the point-to-point connection. When the packets have arrived at the receiving side, then the iSCSI protocol disassembles the packets. It then converts these packets into SCSI commands and, finally, issue them to the storage.

Advantages of iSCSI

Following are benefits or advantages of iSCSI:

* One of the main benefits of iSCSI is that it uses the TCP/IP protocol to enable long-distance IP routing without the requirement of any external gateway hardware. And, it also increases flexibility by using the TCP/IP.
* It uses the standard ethernet, so there is no need for any expensive component to be built.
* As compared to the Fibre channel, it offers the cheap connectivity network for transferring the files at the block level.
* Reusability is also another advantage of iSCSI. The existing server can also be reused for the iSCSI implementation.
* As it is used for block storage, so it is very fast and efficient than other file transfer protocols (FTP).
* It is very simple to understand and configure, so users do not need much knowledge about the iSCSI storage system.