**SCP taking long time to copy**

SCP (Secure Copy Protocol) is a popular file transfer protocol used to transfer files securely between hosts. The pace of transfer can occasionally be slow, especially when sending huge files or doing so over long distances.

A screen shot of a computer

Description automatically generated with medium confidence

**Syntax:**

|  |
| --- |
| **scp –[options] filename remoteuser@host:/path** |

**Example:**

|  |
| --- |
| **scp -rp /tmp/test joey@10.143.78.10:/home/joey** |

In this blog we will discuss the errors that we could get using SCP, factors that can affect SCP speed and solutions to improve SCP speed.

**Possible Errors while using SCP**

1. **Getting stalled message while copying the file** – You can get below error while copying the file, the reason behind this is you might be using public Ip address. Try using private Ip address to copy, and the speed will increase.

[**host01:#**](mailto:host01:)[**scp**](host01://var/mqm/trace#scp)**file1.zip**[**user01@165.135.77.240**](mailto:user01@165.135.77.240)**:**

**/home/user01/**

**user01@165.135.77.240's password:**

**file1.zip                                                                                         0% 2112KB 909.2KB/s- stalled –**

1. **No such file or directory error** – This error can be caused by number of reasons:
   1. **Incorrect command** – We need to keep in mind about the file path, either we are in the directory and give the file name to copy. Or we can give the absolute path.
   2. **Port Number** - It's also conceivable that no port number has been selected for copying files between computers. Before attempting to copy files between two hosts, the proper port needs to be forwarded.
   3. **File permissions** - The files that need to be copied occasionally have "Read-Only" permissions set. This may make it impossible for the server to access the files or copy them. And sometimes it can be also from the target directory.

**Factors Affecting SCP Speed**

1. **Network Latency** - Data packets' latency is the time it takes them to move between two points. Greater latency denotes a longer travel time to the intended location.
2. **Bandwidth Limitations** - SCP transfers data using the TCP protocol, which has some drawbacks. TCP can reduce transfer speed if there are packet losses or errors because it is meant to provide reliable data transport.
3. **Encryption** - Secure data transfer via SCP involves encryption, which slows down the transfer process. The transfer speed may be slowed by encryption since it calls for more computing power, especially on dated or underpowered systems.

**Solutions to improve SCP Speed**

1. **Compressed Data** – First compress the files you want to transfer which will reduce the data, effectively transfer large files.
2. **Multiple Transfer** – Multiple files can be transferred simultaneously with SCP's parallel transfer capabilities.
3. **Limit Bandwidth usage** - Speeds can be increased by limiting SCP's bandwidth usage, especially when other network traffic is vying for the same resources. SCP allows for bandwidth throttling, which can slow down transfers and keep SCP from overloading the network.

SCP can be a sluggish file transfer protocol, but there are a few ways to speed it up. You can transfer data more quickly and effectively by implementing these suggestions, which range from using a different protocol to compressing files before transferring. Keep in mind that your situation will determine the specific strategy that will work best for you.