Testing Port Connectivity

netcat

The following commands are used on Linux and MacOS devices. The le ers ncare used for the netcat command along with a host and a port . Net stands for networking. Cat comes from the Unix command line program cat, sho for concatenate, which means to link things together in a chain or series.

nc [options] Example command: nc google.com 80

This command tries to establish a transmission control protocol (TCP) connection to the host on the specified port .

Listed below are some of the options available for you to use in testing port connectivity,

nc -u <host> <port>

Tell netcat to open a user datagram protocol (UDP) connection, instead of a TCP connection.

nc -z <host> <port>

Stands for zero input/output and tells it to scan for open ports.

nc -n <addr> <port>

Prevents domain name server (DNS) lookup. Use this when you have an IP address and numeric po to use for the connection and you want to avoid the overhead of DNS or if it is not working properly.

Test-NetConnection

The following commands are used on Windows PowerShell devices. The command, Test-NetConnection is case sensitive and uses capitals unlike netcat.

Test-NetConnection Example command: Test-NetConnection -ComputerName google.com -Port 80

This command tests ping connectivity and displays diagnostic information for a connection from the host google.com on port 80.

Listed below are commands for Test-NetConnection,

Test-NetConnection -InformationLevel "Detailed"

Tests ping connectivity with detailed results.

Test-NetConnection -ComputerName [remote host]

Tests a connection to a remote host.

Test-NetConnection -ComputerName [remote host]-DiagnoseRouting

Performs route diagnostics to connect to a remote host. This can require administrator privileges, so you may have to run a powershell window as administrator.