

Fingerprint to detect bad iSCSI cable in ESXi

The following ESXi command can provide a “fingerprint” or “signature” that problems are happening on iSCSI ports, such as a bad cable.

The command is run from an ESXi ssh login session as root:

```
esxcli network ip connection list | egrep "Proto|:3260"
```

When the system is running normally, the “Send Q” column will contain zeros or very small numbers, like a few thousand bytes. This column is the output queue length in bytes. When we had the cable problem, the “Send Q” would expand to several hundred thousand bytes (over 250,000 was seen), which is not normal. Another aspect of this fingerprint is that the TCP queue backup is only on *one* of the iSCSI paths, not both paths.

Good behavior fingerprint, “Send Q” is zero or a few thousand.

```
esxcli network ip connection list | egrep "Proto|:3260"
```

Proto	Recv Q	Send Q	Local Address	Foreign Address	State	World ID	CC Algo	World Name
tcp	0	0	10.0.1.68:19040	10.0.1.2:3260	ESTABLISHED	33564	newreno	vmkiscsid
tcp	0	0	10.0.1.68:55904	10.0.1.2:3260	ESTABLISHED	33564	newreno	vmkiscsid
tcp	0	0	10.0.1.68:28167	10.0.1.2:3260	ESTABLISHED	32806	newreno	idle0
tcp	0	0	10.0.0.168:30850	10.0.0.2:3260	ESTABLISHED	32806	newreno	idle0
tcp	0	0	10.0.0.168:31725	10.0.0.2:3260	ESTABLISHED	33564	newreno	vmkiscsid
tcp	0	0	10.0.0.168:48374	10.0.0.2:3260	ESTABLISHED	32806	newreno	idle0
tcp	0	0	10.0.0.168:62504	10.0.0.150:3260	ESTABLISHED	32806	newreno	idle0
tcp	0	0	10.0.1.68:51109	10.0.1.151:3260	ESTABLISHED	32806	newreno	idle0
tcp	0	0	10.0.0.168:43242	10.0.0.18:3260	ESTABLISHED	33564	newreno	vmkiscsid

Here is an example of the bad behavior

```
esxcli network ip connection list
```

Proto	Recv Q	Send Q	Local Address	Foreign Address	State	World ID	CC Algo	World Name
tcp	0	0	127.0.0.1:8307	127.0.0.1:29529	ESTABLISHED	36139	newreno	hostd-worker
tcp	0	890	127.0.0.1:29529	127.0.0.1:8307	ESTABLISHED	34248	newreno	xxxxxxxxxxxxxx
tcp	0	0	127.0.0.1:443	127.0.0.1:29965	ESTABLISHED	680261	newreno	xxxxxxxxxxxxxx
tcp	0	865	127.0.0.1:29965	127.0.0.1:443	ESTABLISHED	1149555	newreno	python
tcp	0	255952	10.0.1.61:38818	10.0.1.2:3260	ESTABLISHED	1148128	newreno	xxxxxxxxxxxxxx

(MARGINAL CABLE)

If you are properly dual-path enabled, you can disable the path using the VMware admin GUI.

You can create a Python “fabric” or Ansible script that can run the command against multiple ESXi hosts. You can then run the script against the VMware servers to confirm all is well.

On unvirtualized Linux hosts, the “netstat” and “ss” command can provide similar information showing TCP queue backup. On a virtualized Linux VM, this behavior may be masked and only seen at the hypervisor level.