Enabling and disabling TCP segmentation offload

Ubuntu 20.04.1 LTS   LPAR mode   z/VM guest

Offloading the TCP segmentation operation from the Linux® network stack to the adapter can lead to enhanced performance for interfaces with predominately large outgoing packets.

About this task

TCP segmentation offload is supported for OSA connections on layer 3. On layer 2 it is available as of z14 for OSA Express6S and newer adapters. Use the **ethtool -k** (see example in Configuring hardware checksum offload operations) to check whether your system supports it.

Procedure

Outbound (TX) checksumming and scatter gather are prerequisites for TCP segmentation offload (TSO). You must turn on scatter gather and outbound checksumming before configuring TSO.
All three options can be turned on or off with a single **ethtool** command of the form:

```
# ethtool -K <interface_name> tx <value> sg <value> tso <
```

where *<value>* is either on or off.

> **ⓘ** **Attention:** When TCP segmentation is offloaded, the OSA feature performs the calculations. Offloaded calculations are supported only for packets that go out to the LAN.

Examples

>

– To enable TSO for a network device eth0 issue:

```
# ethtool -K eth0 tx on sg on tso on
```

– To disable TSO for a network device eth0 issue:

```
# ethtool -K eth0 tx off sg off tso off
```

Parent topic:

→ Configuring hardware checksum offload operations