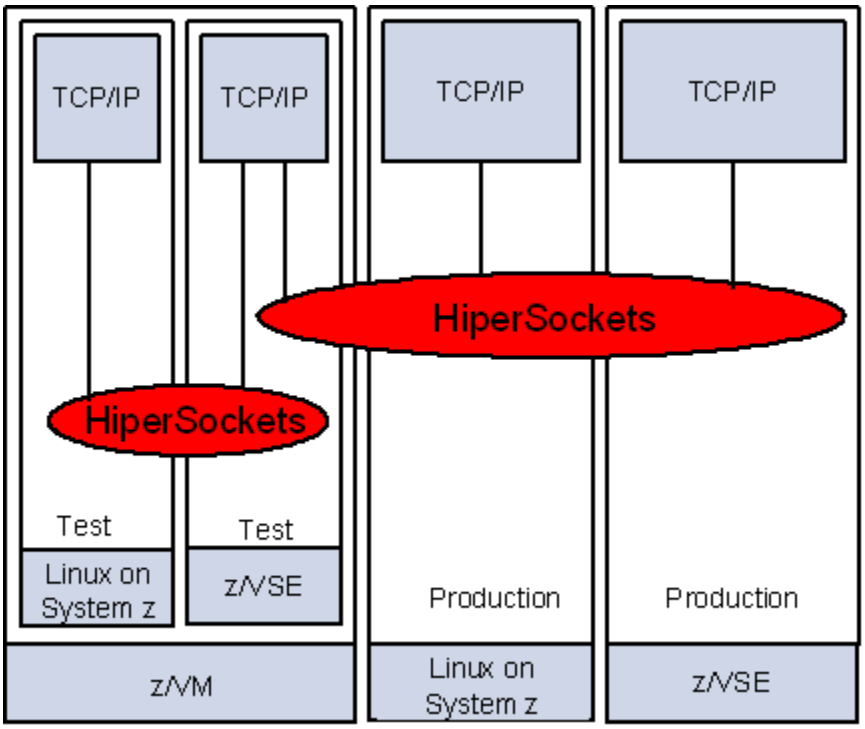
Modern Networking Technologies

Modern IT environments need fast and reliable networking capabilities. OSA Express Adapter and HiperSockets support is the key for modem networking solutions.

Overview



HiperSockets is a feature of the IBM Z mainframes. It is available on all IBM Z. It allows to define up to 16 internal networks 'in the box'.

It allows to interconnect several operating systems running on a IBM Z server. The interconnection can be between LPARs or guests under z/VM running in the same or even in different LPARs. These networks are very reliable and secure. The speed of these HiperSocket networks is the speed of a memory copy. Therefore, distributed applications working in a such network have low network latency.

The OSA Express Adapter should be the network adapter of your choice if you want to interconnect the z/VSE system with a real network. z/VSE supports OSA in traditional and in Queued Direct I/O (QDIO) mode which is designed for high data transfer rates.

Benefits

Fast and reliable network communication between operating systems inside the box (HiperSockets):

- Very stable network
- Very secure (no outside wire)
- High speed because of a hardware function

OSA Express allows fast connections with distributed environments and different network topologies.

Software prerequisites

The following software requirements must be meet in order to implement this solution:

- VSE/ESA 2.6 or later
- TCP/IP for VSE/ESA
- IBM Z hardware

How to get started

To work with a HiperSockets or OSA Express Adapter networks in a IBM System z server definitions have to be done:

- Define the device in IOCDS
- Define the device (3 CUUs per adapter) in z/VSE ADD as OSAX
- Define a TCP/IP link in TCP/IP for z/VSE with type OSAX
- Make sure you have enough PFIXed storage (1 MB per link)

Note: The *portname* should only use uppercase letters, and is given by the first one who accesses the device. The 3 CUUs should be an even odd pair (e.g. 120, 121) plus an *datapath* CUU.

A good starting point is the Rebook-like document from Stephen Gracin:

- z/VSE Connectivity To Linux For IBM System z (PDF, 2.3MB)
  Stephen Gracin, Advanced Technical Support, IBM

Additional information

Additional information for this solution scenario can be found:

- TCP/IP for z/VSE documentation

Trademarks

Comments and Questions

Comments or questions on this documentation are welcome. Please send your comments to:
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