

# FlexPod and You

## Navigating to and thru the core of the Modern DataCenter

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# Neurology of a FlexPod - Application Domination

Part I - Applying and Unlocking the power of FlexPod

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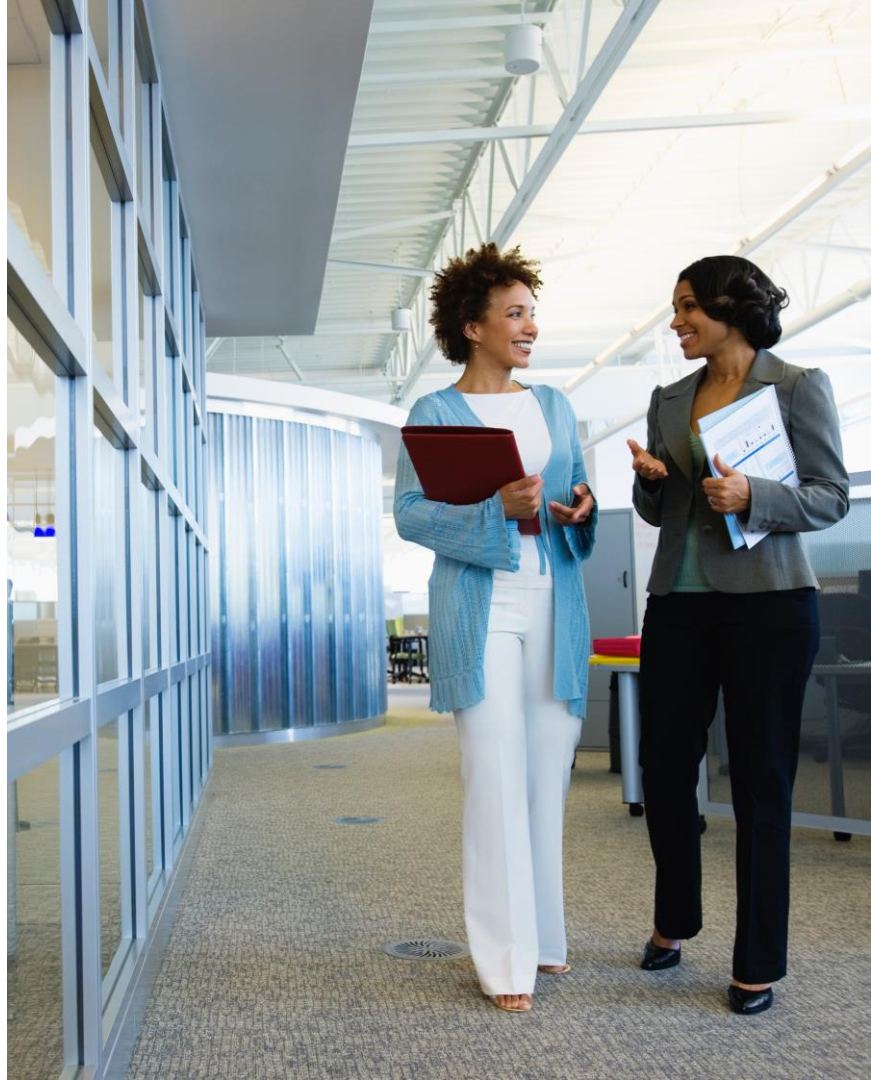


# Course Modules

This course focuses on enabling you to do the following:

## Module 7:

- Understanding the application requirements.
- Tuning the environment based on application demand.
- Focusing on Mission critical applications such as SAP, Oracle and EPIC.



# Empowering the Most Demanding Workloads



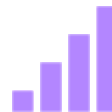
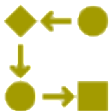
**Consolidation**



**Simplified Management**



**Automation**



**Scale Up & Out**



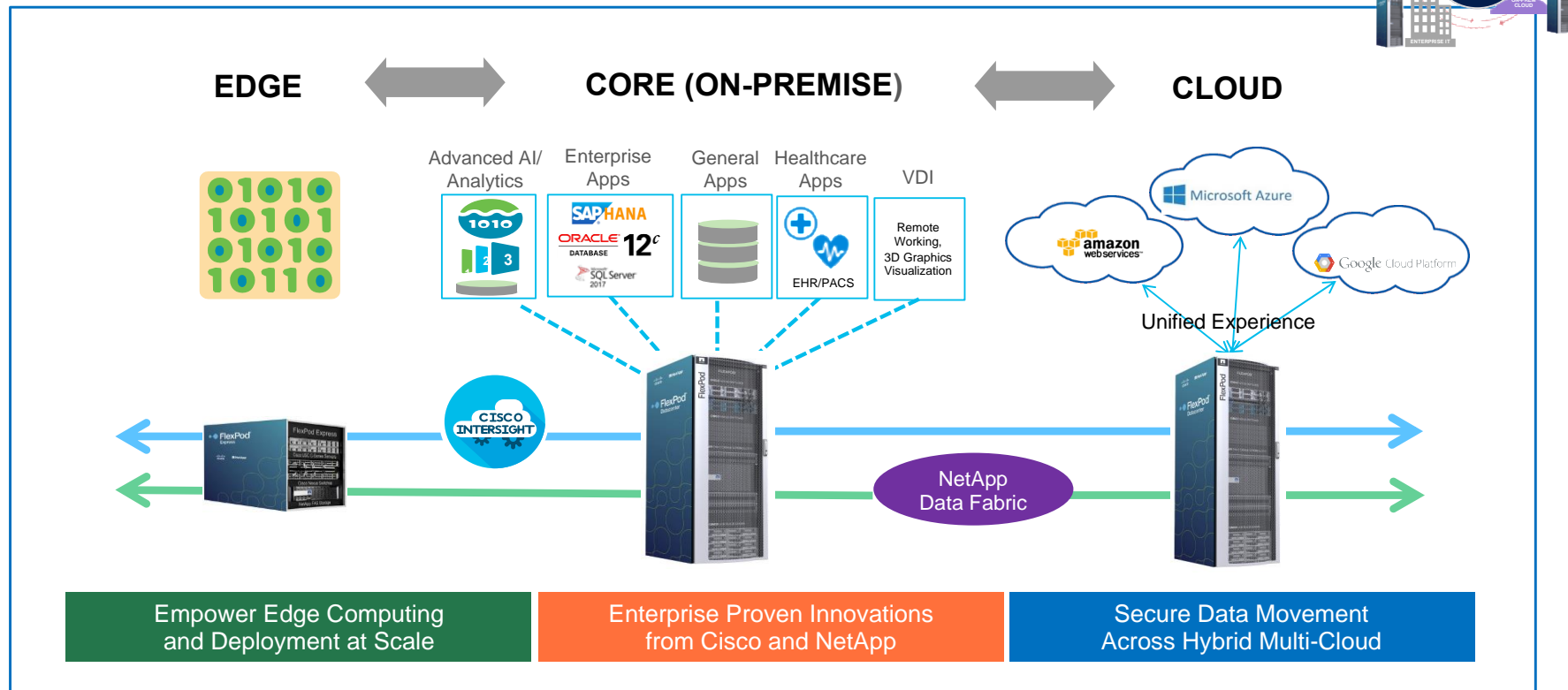
**Cloud Connected**



**Time-to-Value**



# FlexPod for Edge-Core-Cloud



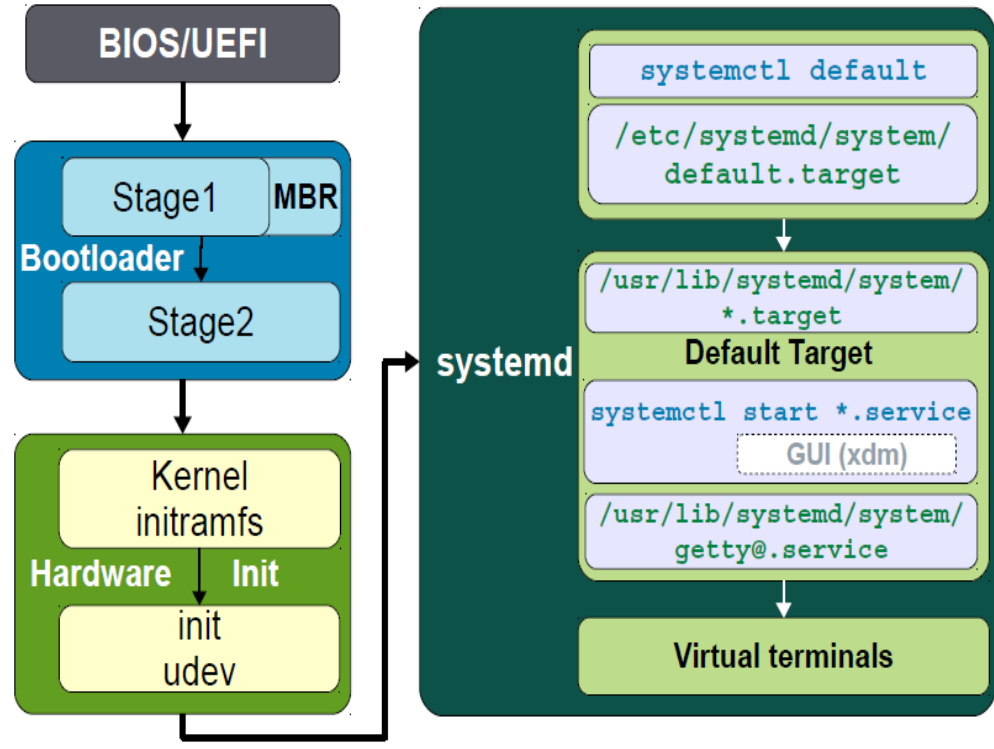
# Linux Server Boot Options

## Linux Boot Process

**Systemd** – Starts services and mounts file systems, handles the actual booting of the system.

**Virtual Terminals** – You can have up to six virtual terminals (F1-F6) running on the system. F7 represents the Graphical User Interface (GUI).

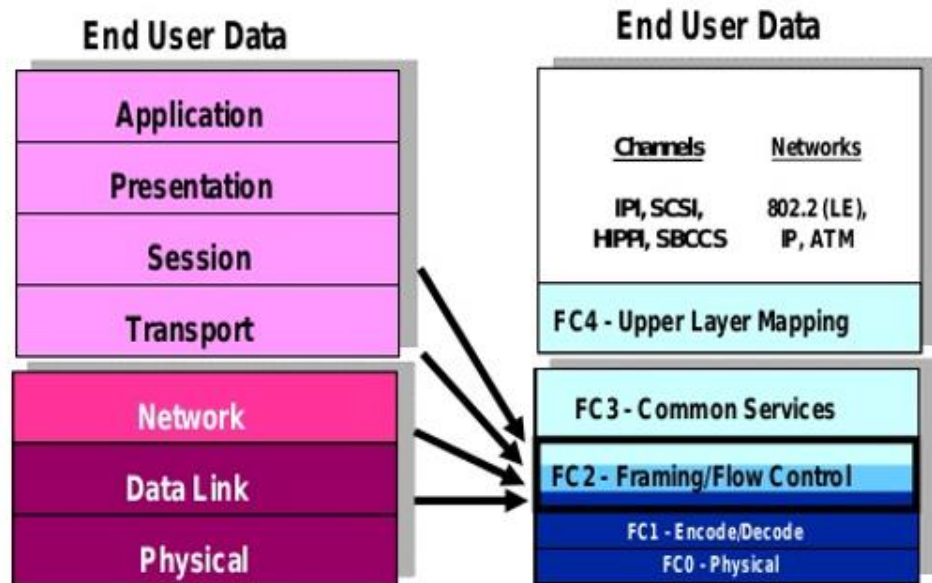
Switch between individual terminals by pressing **Ctrl+Alt+FX**. Determine the terminal currently used from the ttyX number displayed at the login prompt of the terminal.



# Methodology

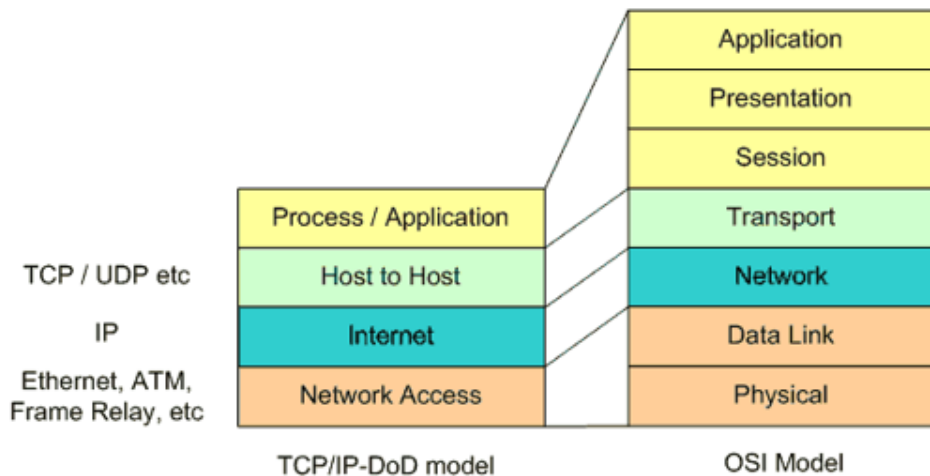
# Methodology

# OSI to FC Stack

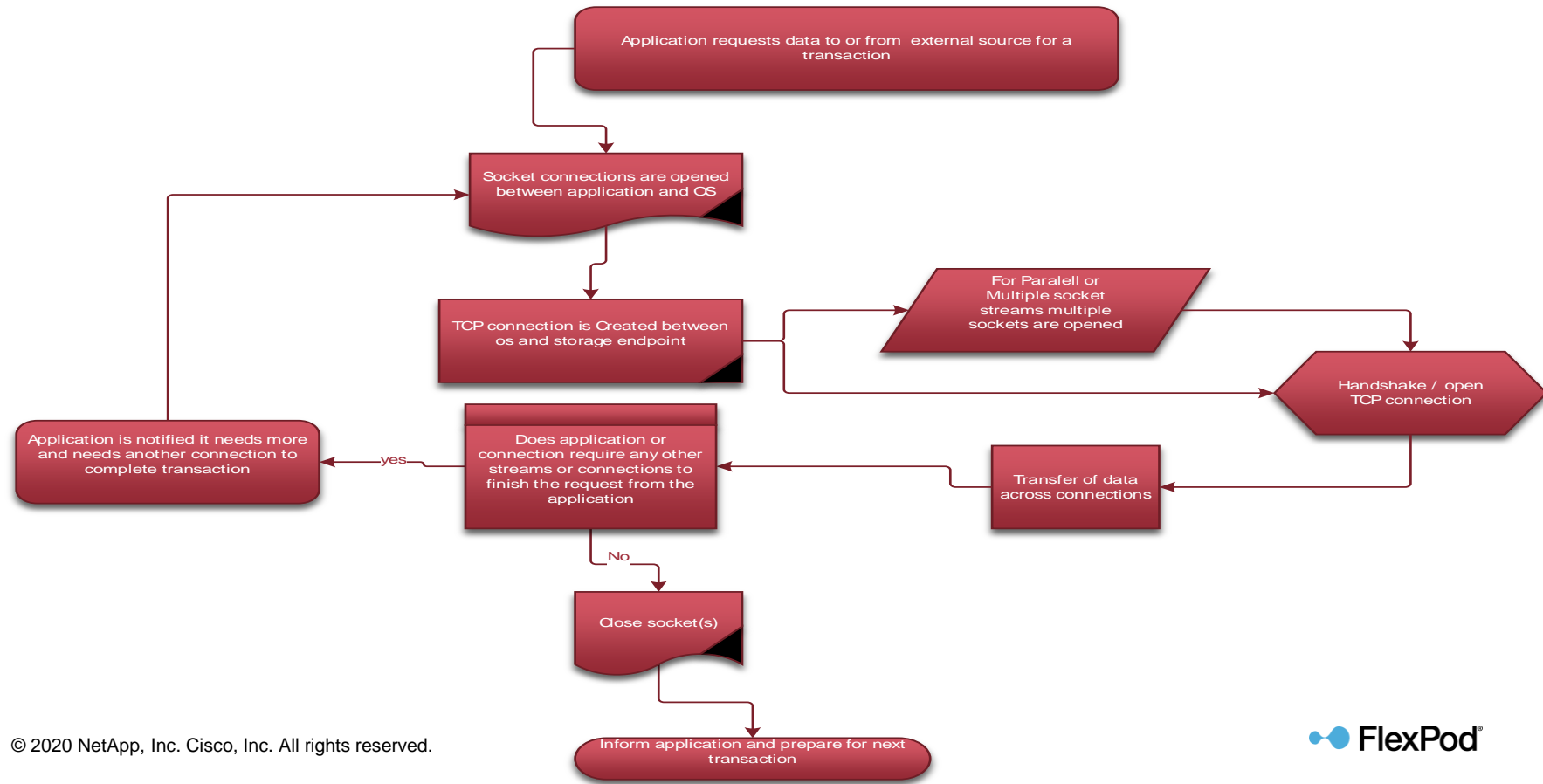




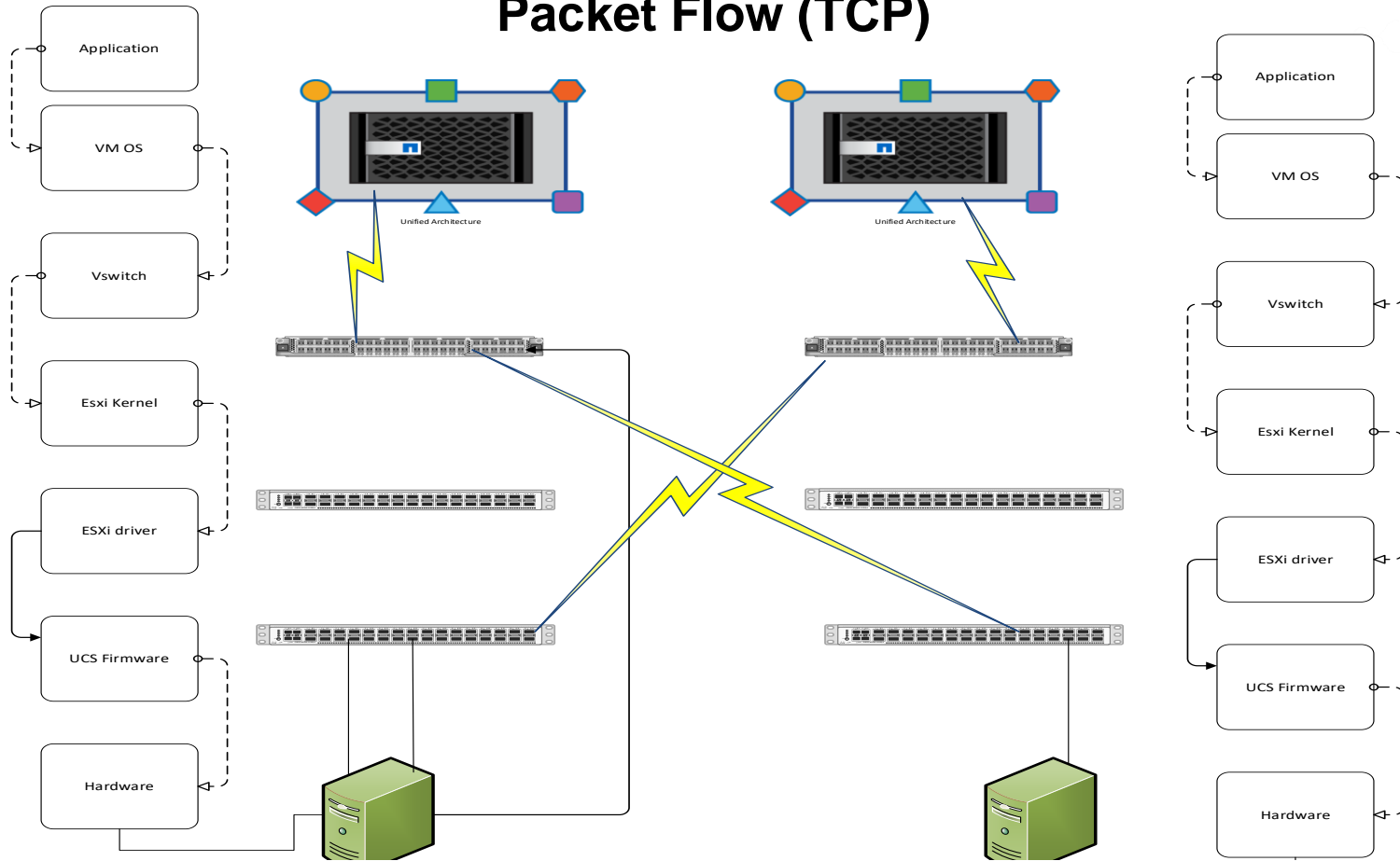
# DoD to OSI model



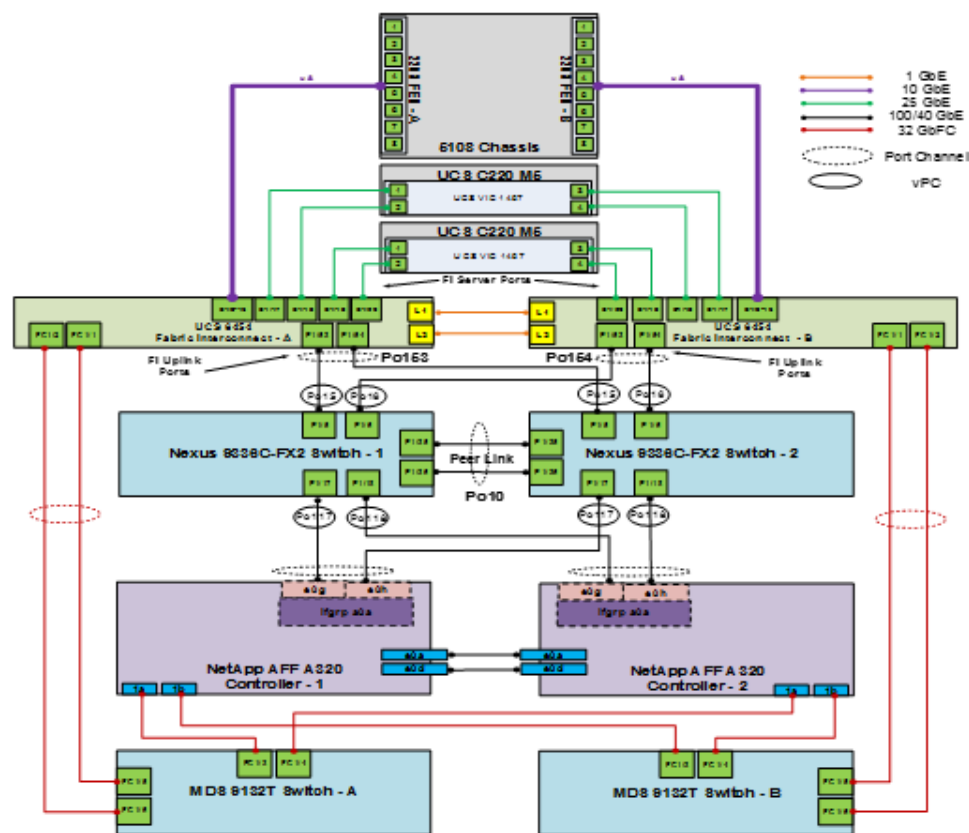
# Application Flow (TCP)



# Packet Flow (TCP)



# FlexPod FC Connectivity



# References

- TR-4036: FlexPod Datacenter Technical Specifications
  - <https://www.netapp.com/pdf.html?item=/media/12424-tr4036.pdf>
- TR-4293 FlexPod Express Technical Specifications
  - <https://www.netapp.com/pdf.html?item=/media/12425-tr4293pdf.pdf>
- Cisco UCS Virtual Interface Adapters
  - [Cisco UCS VIC Datasheets](#)
  - [UCS VIC Tuning Guide](#)
  - [Optimal Adapter settings whitepaper with 93180fx and VIC1400-series](#)
  - [Cisco Transceiver Compatibility Matrix](#)

# References

- **Linux TR doc for FLexpod Linux Optimization links**

## Oracle Tuning docs

<https://access.redhat.com/solutions/39188> Tuning Red Hat Enterprise Linux for Oracle and Oracle RAC performance

[https://access.redhat.com/documentation/en-us/reference\\_architectures/2017/html/deploying\\_oracle\\_rac\\_database\\_12c\\_release\\_2\\_on\\_red\\_hat\\_enterprise\\_linux\\_7/index](https://access.redhat.com/documentation/en-us/reference_architectures/2017/html/deploying_oracle_rac_database_12c_release_2_on_red_hat_enterprise_linux_7/index) — Deploying Oracle RAC Database 12c Release 2 on Red Hat Enterprise Linux 7

[https://access.redhat.com/documentation/en-us/reference\\_architectures/2017/html/deploying\\_oracle\\_database\\_12c\\_release\\_2\\_on\\_red\\_hat\\_enterprise\\_linux\\_7/index](https://access.redhat.com/documentation/en-us/reference_architectures/2017/html/deploying_oracle_database_12c_release_2_on_red_hat_enterprise_linux_7/index) — Deploying Oracle Database 12c Release 2 on Red Hat Enterprise Linux 7

## Redhat performance tuning guide

### Rhel 8

[https://access.redhat.com/documentation/en-us/red\\_hat\\_enterprise\\_linux/8/html/monitoring\\_and\\_managing\\_system\\_status\\_and\\_performance/index](https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/8/html/monitoring_and_managing_system_status_and_performance/index)

### How to begin network debugging

<https://access.redhat.com/articles/1311173>



# References

## SAP -for HANA related information

Recommended SAP settings for SuSE: <https://www.suse.com/support/kb/doc/?id=000019526>

<https://wiki.scn.sap.com/wiki/display/SAPHANA/Linux+Operating+System+with+SAP+HANA+Reference+Guide>

<https://www.sap.com/documents/2015/03/74cdb554-5a7c-0010-82c7-eda71af511fa.html> ← SAP HANA TDI-Storage Requirements

<https://www.sap.com/documents/2016/08/1cd2c2fb-807c-0010-82c7-eda71af511fa.html> <-- SAP HANA Network Requirements

<a href="#">2000003</a>	FAQ: SAP HANA
<a href="#">2235581</a>	SAP HANA: Supported Operating Systems
<a href="#">1944799</a>	SAP HANA Guidelines for SLES Operating System
<a href="#">2009879</a>	SAP HANA Guidelines for Red Hat Enterprise Linux (RHEL)

# Thank You