October 22–25, 2018

SAN FRANCISCO, CA

ORACLE OPEN WORLD

#OOW18

HOL6684
Computational Fluid Dynamics

Flavio Pereira

Jamal Arif

Eli Schilling

oracle.com/openworld

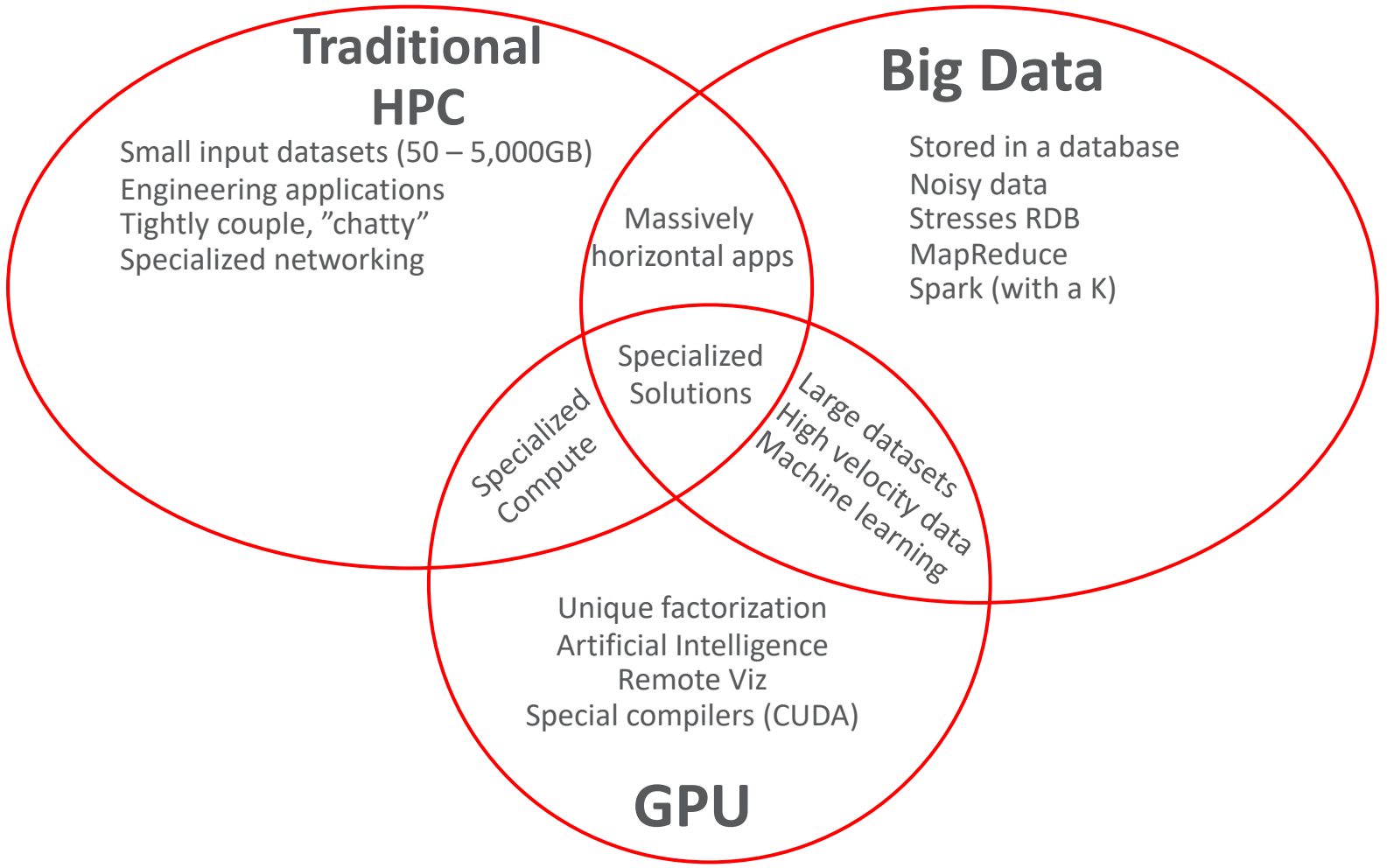
ORACLE

Safe Harbor Statement

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

What do we define as HPC?

ORACLE
Cloud Infrastructure



HPC Capable Hardware

ORACLE Cloud Infrastructure

Bare Metal Standard
52 Cores, 768 GB RAM,
up to 1 PB Block Storage

Bare Metal DenseIO
51.2 TB of local NVMe SSD
2x 25Gbe Network Interfaces

Bare Metal GPU
28 Cores, 192 GB RAM,
2x Tesla P100 GPUs
Pre-Configured Images

Bare Metal GPU V2
52 Cores, 768 GB RAM,
8x Tesla V100 GPUs
NVLINK Interconnect

File Storage Service
Managed distributed file service
POSIX, NFSv3 mount point

Block Storage
50 GB-2 TB volumes
Up to 400K IOPS per host

Bare-Metal HPC
36 cores, 3.7 GHz
192GB RAM
6.7 TB NVME, RDMA

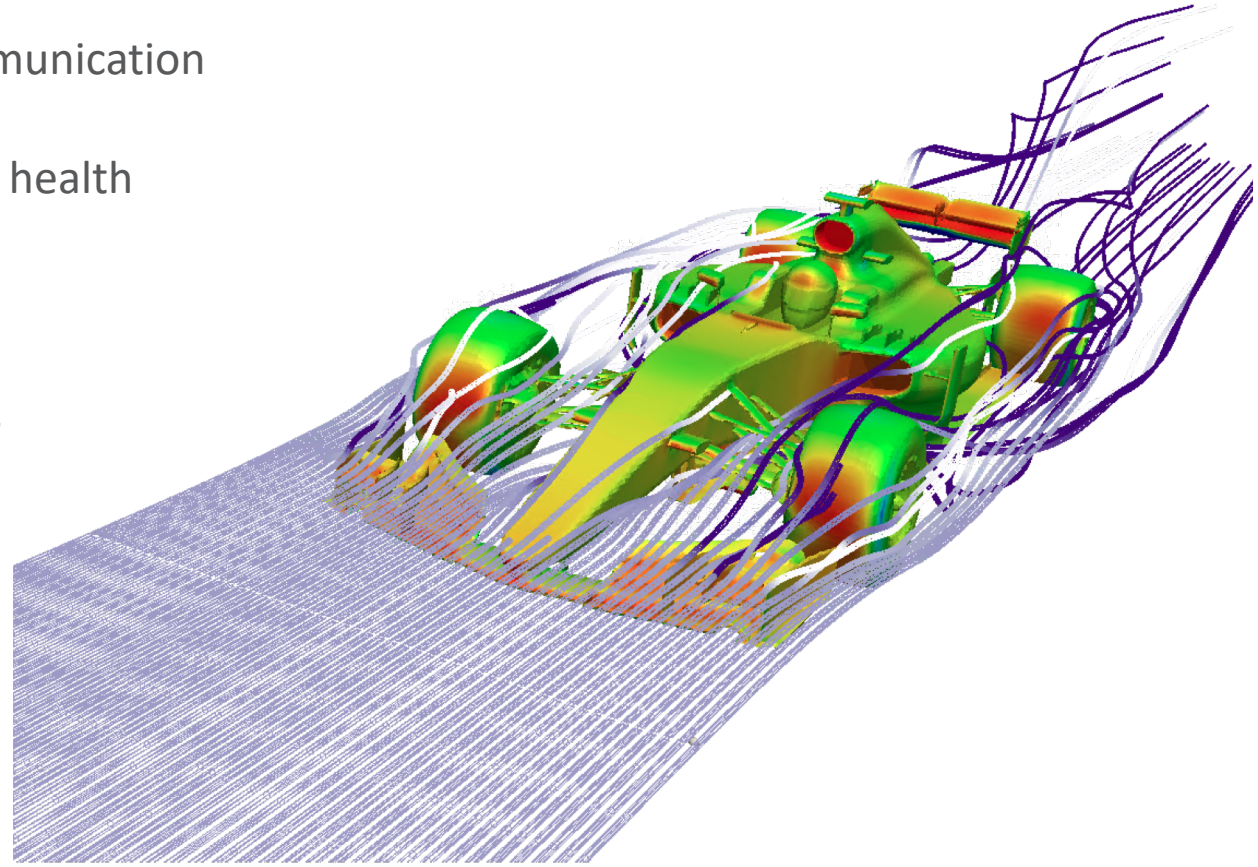
GPU Visualization
P100 GPU
NVIDIA Quadro Enabled
Teradici & Citrix Support

ORACLE

HPC Use Cases

ORACLE
Cloud Infrastructure

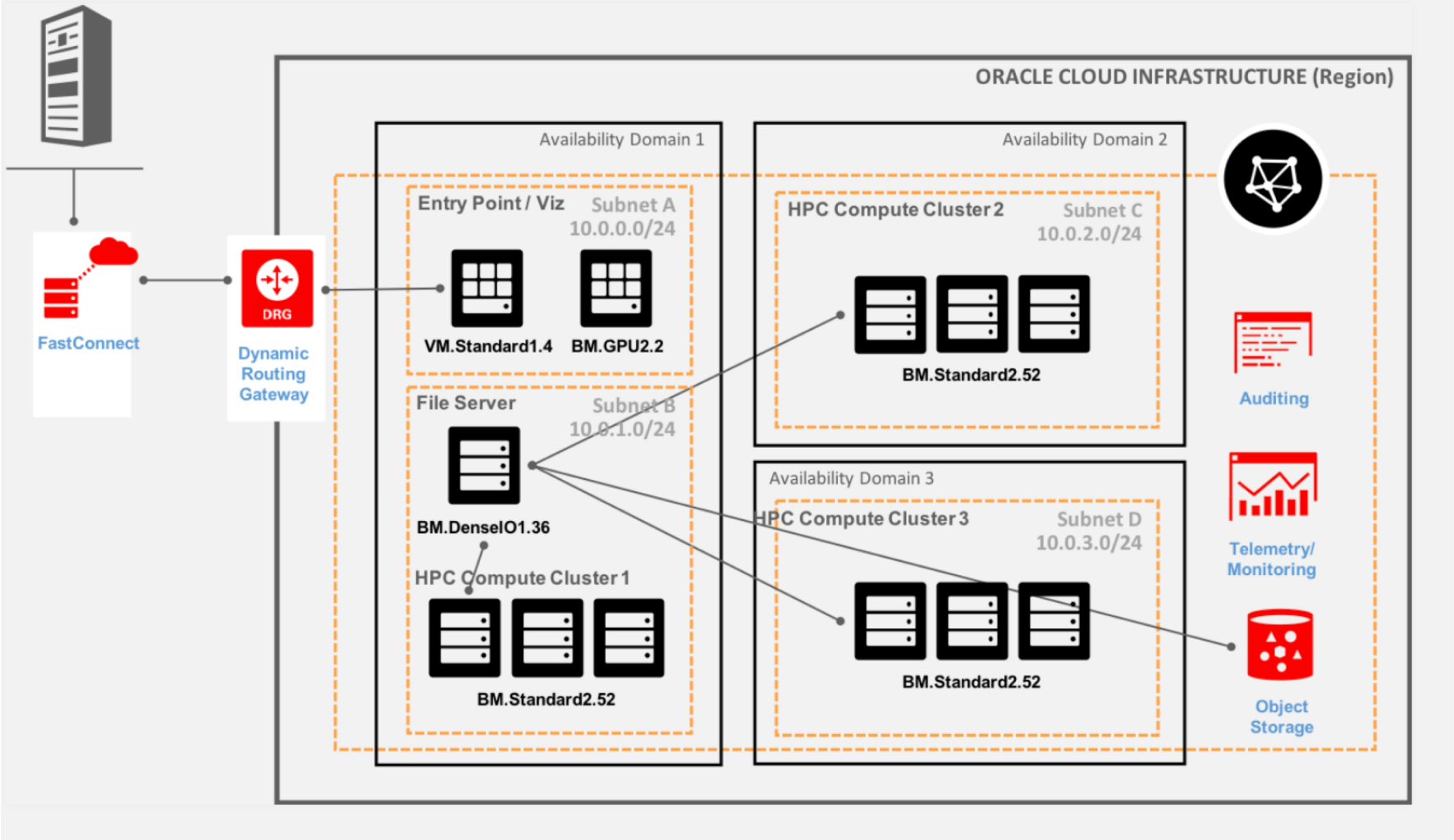
- Compute Intensive (CI)
  - Simulations that do not require internode communication (embarrassingly parallel)
  - Financial modeling, some oil and gas modeling, health sciences and genomics
- Remote Direct Memory Access (RDMA)
  - Simulations that are ‘chatty’ or ‘tightly coupled’
  - Large engineering simulations
  - Physics simulations



ORACLE

HPC Basic Architecture

ORACLE
Cloud Infrastructure



Hands-on Labs

ORACLE
Cloud Infrastructure

http://bit.ly/HPC-LAB

ORACLE

October 22–25, 2018

SAN FRANCISCO, CA

#OOW18

ORACLE OPEN WORLD

HOL6684
Computational Fluid Dynamics

Flavio Pereira

Jaml Arif

Eli Schilling

oracle.com/openworld

ORACLE