



ILLUMINATE BLIND SPOTS AND MAXIMIZE THE POWER OF THE CLOUD

Jim Greene - Market Development Manager

Intel Corporation

Sept. 2019



Notices and disclaimers

Intel technologies' features and benefits depend on system configuration and may require enabled hardware, software or service activation. Performance varies depending on system configuration.

No product or component can be absolutely secure.

Intel does not control or audit third-party benchmark data or the web sites referenced in this document. You should visit the referenced web site and confirm whether referenced data are accurate.

Intel, the Intel logo, and Intel Xeon are trademarks of Intel Corporation in the U.S. and/or other countries.

*Other names and brands may be claimed as property of others.

© 2019 Intel Corporation.

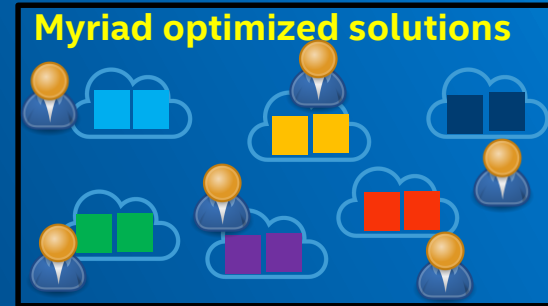
“I need a cloud. I don’t want to care about the infrastructure any more”

– -Pretty much any CIO since 2015...

Efficiency? Agility? Cloud Tech Alone Is No Solution

Thesis: Using Hardware Abstraction and cloud allows simplification

- But true Hardware Abstraction is actually inefficient



Resulting choices mean:

- Compromised performance, availability, responsiveness; and/or
- Increased management burden on the least scalable resource: People

You Cannot Manage What You Cannot See

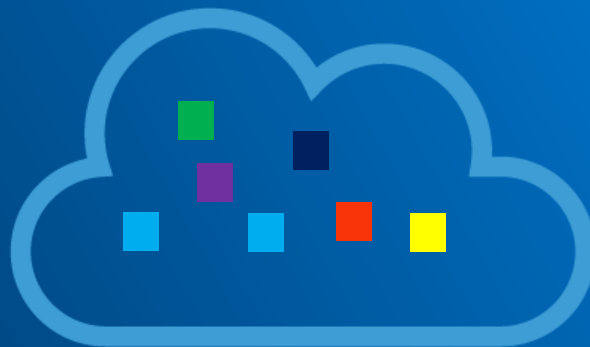


So Let's Help



Hyperscalers have Extensive Vision, and Incredible Levels of Automation

Data Helps



Compute

Storage

Network



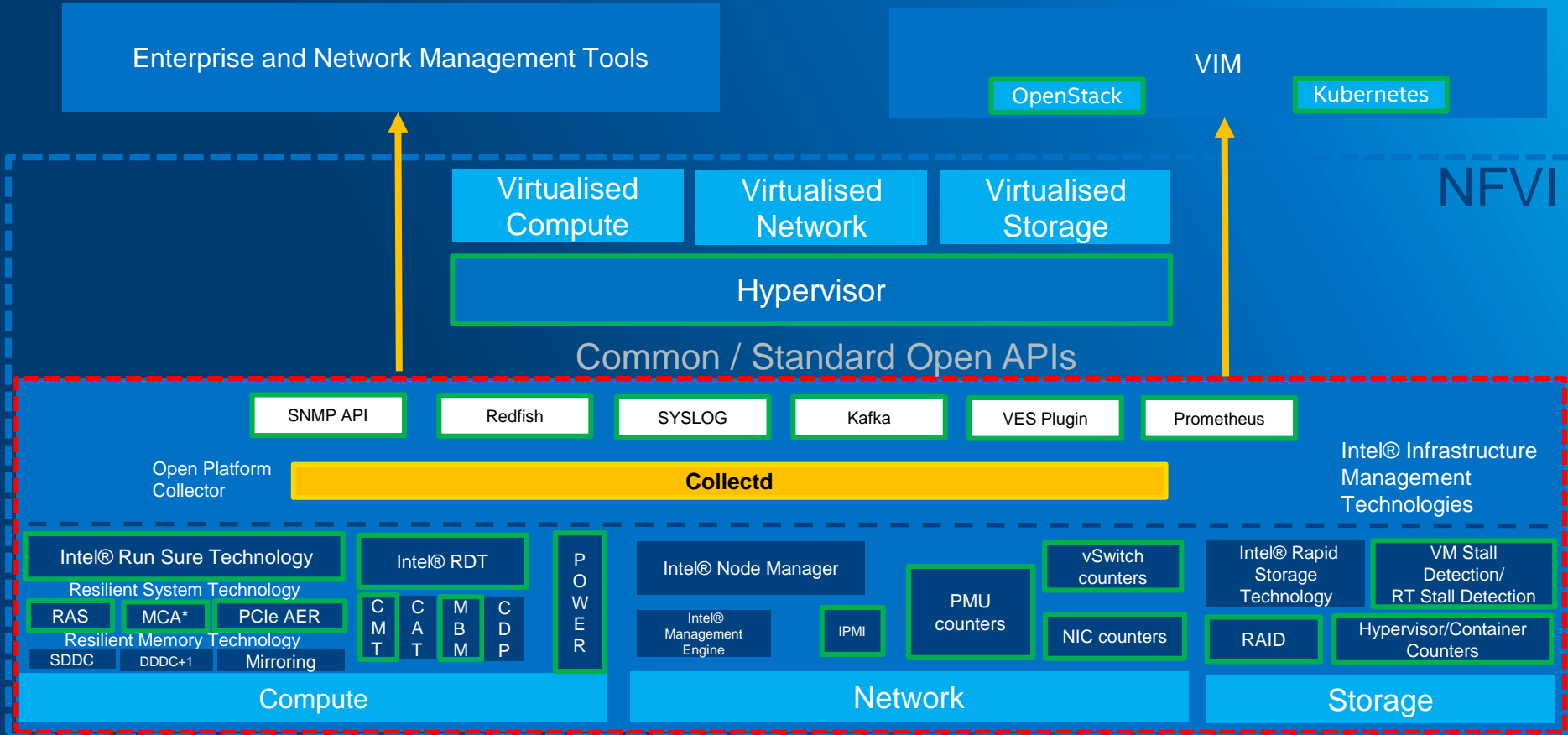
Telemetry: The key to more complete visibility
and control...
...And so much more

Where Can More Data Be Found?

- Intel server platforms include valuable features* which provide a rich and growing set of data and control points that can be used for configuration, reporting, monitoring and managing workloads and data.
- Functions that are detectable and reportable and configurable to allow software to monitor, manage, and control the resources more efficiently
- Workload and systems can be managed based on data and telemetry covering critical criteria such as:
 - Energy Efficiency
 - Faults
 - Security
 - Utilization
 - I/O
 - Storage
 - Thermal
 - Performance
 - Capacity

Foundational for Optimal Use of IT Resources for “Software Defined”
Environments

Making The Intel Telemetry Available



Seeing is Good, Automating is Better

Today

Observability (Open Loop)

- Collecting, storing and visualising metrics
- Coarse-grained insights into how the network infrastructure is behaving
- Flash a light - notifications to operations centre – roll a truck



Tomorrow

Integration (Open/Closed Loop)

- Integrate with standard monitoring and analytics solutions
- Integrate with proprietary analytics and MANO solutions



Future

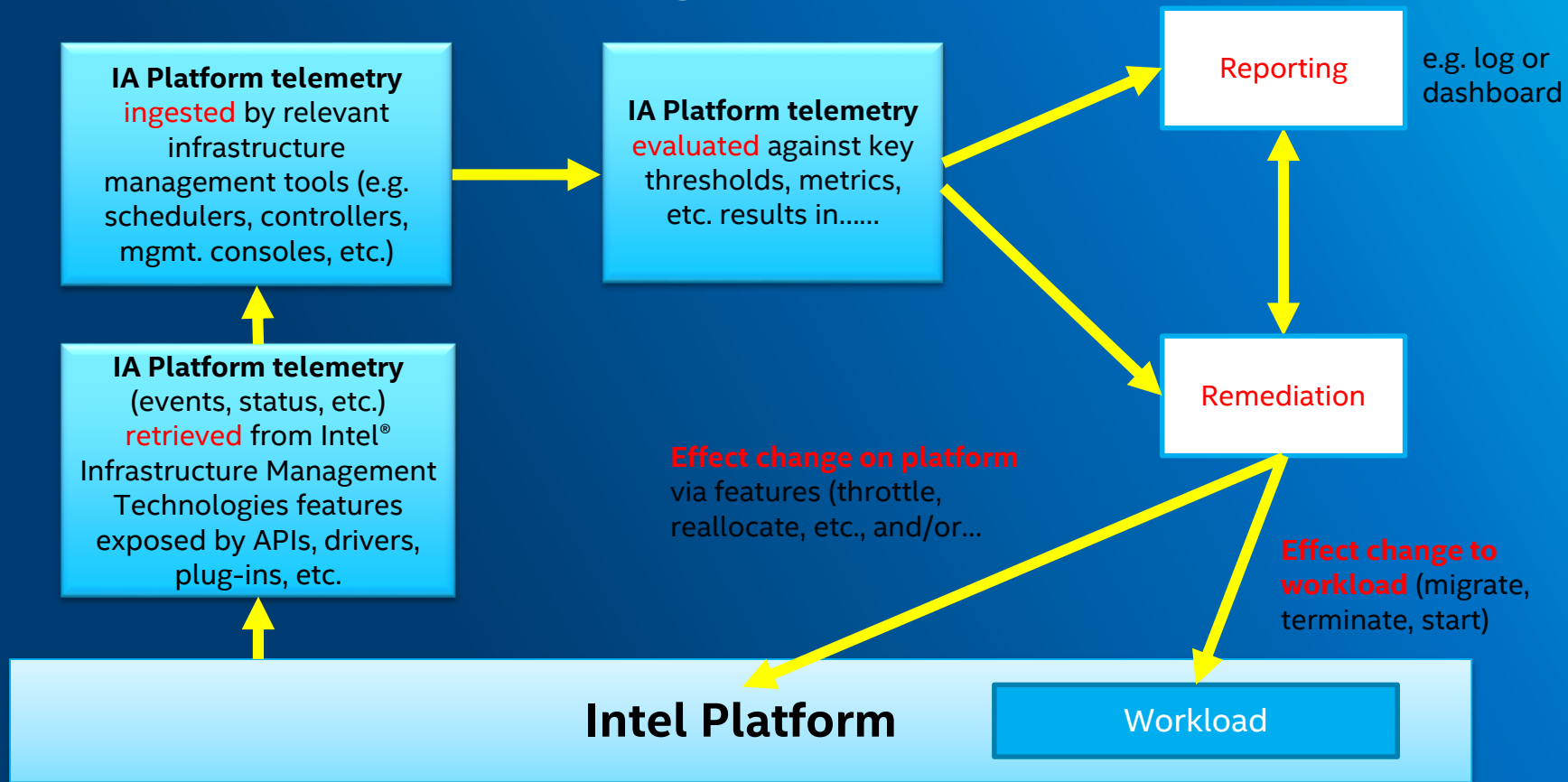
Closed Loop Automation

- Use IA platform features in automated solutions to delivery:
 - Improved QoE
 - Application QoS
 - Power Optimisation
- Zero Touch Automation

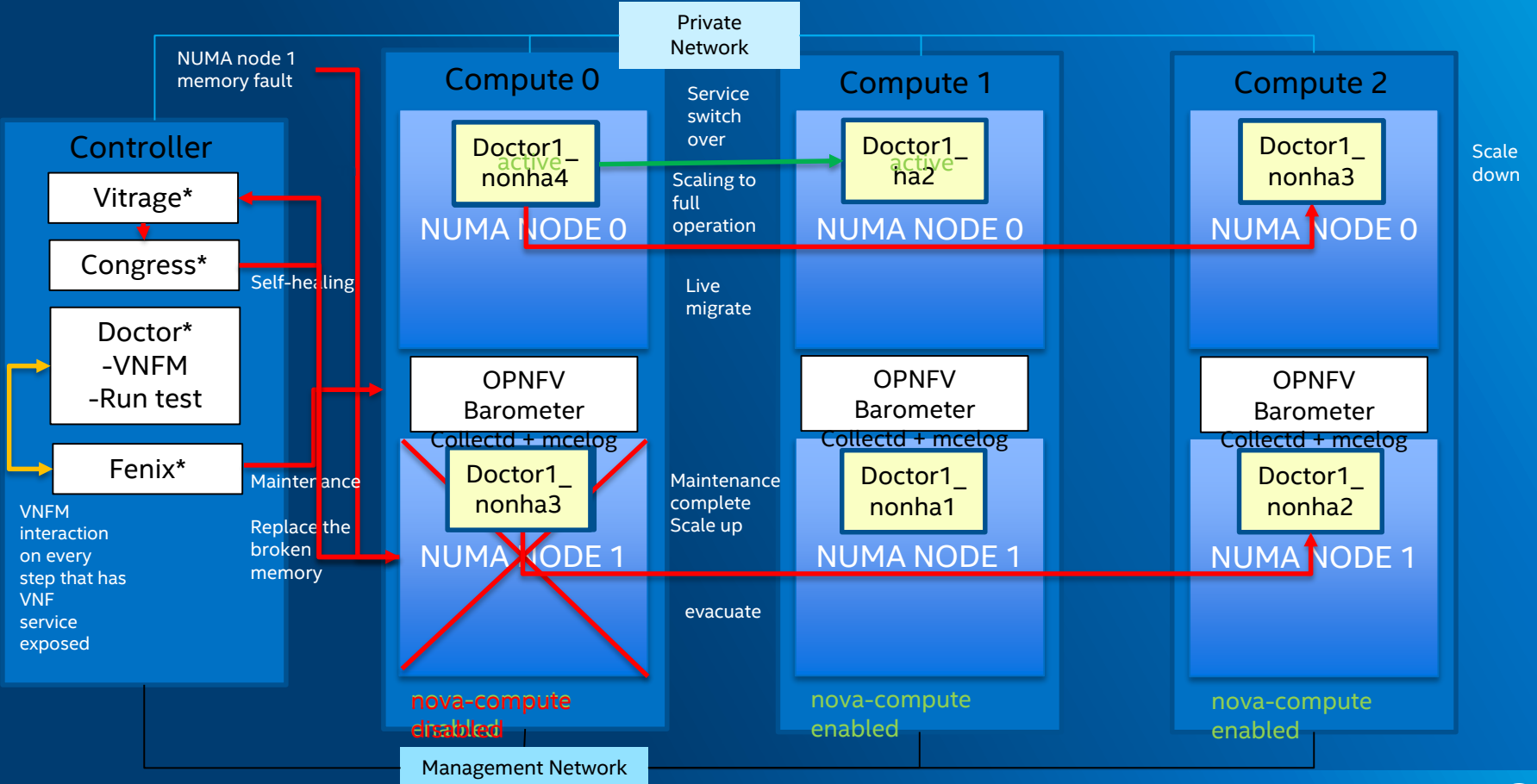


Hyperscalers have Extensive Vision, and Incredible Levels of Automation

How Telemetry is Enabling a Closed Loop System



OpenStack Resiliency + Maintenance Demo



Cloud Based on Intel Platform Help Close the Gap

“Software Defined” is a great concept but risks diminishing the value of the infrastructure investments – One size does not fit all!

- **Orchestration:** Which platform is best equipped (horsepower, capacity, availability, memory, etc) to run this workload? How do I know when something needs to change?
- **Security:** How can I put adequate protections on my data in virtual environment? Which are trusted? Where are they? Which have high speed crypto? Which have other capabilities? Can I prove compliance?
- **Service Provisioning and SLA:** How can I guarantee customer service levels and implement and monitor controls for reporting into standard Service Assurance or billing systems?

Intel has **many features (and more on the way)** that legitimately help answer these questions (as **part** of solutions and use models)

Our focus is on enabling easier use of these features so more customers can gain the benefits of control and automation within their IT infrastructure

It is OK to “Care” about the Infrastructure
Just Eliminate the Pain of Caring today

For more information

Learn more from these helpful sites:

- Efficiency in power management through telemetry: [Video](#)
- <https://networkbuilders.intel.com/network-technologies/serviceassurance>
- <https://wiki.opnfv.org/display/fastpath/Barometer+Home>
- <https://wiki.openstack.org/wiki/Telemetry>
- <https://01.org/openstack/blogs/2015/openstack-enhanced-platform-awareness-white-paper>

