



**INTEL[®]
INNOVATION
DAY**



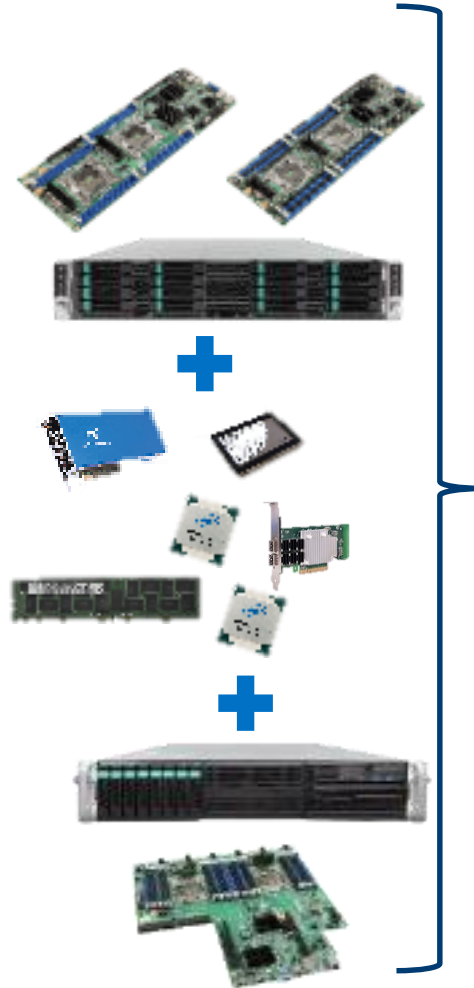
ОБЛАЧНАЯ ИНФРАСТРУКТУРА INTEL ДЛЯ УДАЛЕННОГО ТЕСТИРОВАНИЯ

Василий Лизунов

Менеджер по развитию бизнеса Intel

Для чего сделали

- Гибкая инфраструктура для различных задач:
 - Демо
 - Бенчмарки
 - Проверка совместимости с железом
 - Вовлечение конечного заказчика
 - Удаленные «образцы»
 - Открыты для работы с ODM партнерами



Мне то что?

- Быстро показать клиенту, как новые технологии работают, без заказа образцов
 - Xeon (Cascade Lake), Omni-Path, Optane/Apache Pass, FPGAs, Networking (10/25/100G), SSDs
 - HPC and standard rack FF systems
 - Management (IPMI / OpenBMC & RedFish etc)
- Хорошая инженерное сопровождение как дополнительный «бонус» к использованию лаборатории
 - Даже если компания не в списках на выделенную поддержку
- Богатый склад (mem/CPUs/platforms/AICs) и гибкие конфигурации

Как начать сотрудничество

- Убедитесь, что у вас есть NDA с Intel
- Письменный запрос к вашему аккаунт менеджеру (с описанием сделки)
 - Если акк мгр нет – пишите Vasily.Lizunov @ intel.com
- После того, как запрос принят, обсуждаются
 - Конфигурации
 - Время тестирования
 - Все остальное

Результаты 2017-2018

- Плотное сотрудничество с CRT командой
- HPC (L)OEM-ы – основные клиенты
- CSP-ы стали видеть преимущества такого подхода к тестированию новых технологических продуктов
- Всего около 50 запросов (25/год) поддержано (сделок на ~\$80M)



ЧТО ДЕЛАЕТ ADC

Exploration

Planning

ADC Design-in support coverage

Development

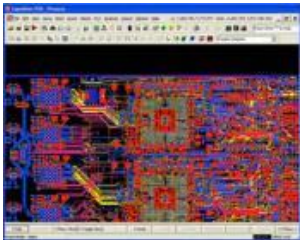
Production

Deep technical engagement



- Provide access to documentation
- Drive technical issues to resolution
- Be the design-in resource

Design Services



- Schematic review
- Board layout review
- Tool delivery & support

Training



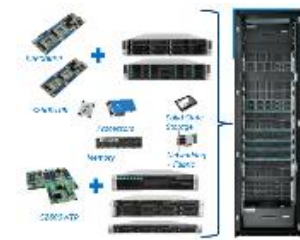
- Design-In visits
- Technology workshops
- Technical Solutions Training

Platform Test & Debug



- Issue debug/resolution
- Test Events & Platform Readiness Workshops

Cluster scale testing



- Cluster sizing (performance)
- Power/Thermal testing
- Functional testing, Software
- Remote access to customers

Ecosystem Enablement



- Influence industry
- Enable debug tool vendors

ADC turns Design-wins into Production-wins (billings)

ADC ЛАБОРАТОРИЯ В НИЖНЕМ НОВГОРОДЕ



Test-station with oscilloscope for observing the changes of an electrical signals while troubleshooting malfunctioning electronic equipment



Testing client setup for issue replication and running benchmarks



PCSD systems are checked out for stress testing, issues replication and components compatibility sanity check



BGA rework station for complicated CRB rework (SPI flash, chipset, CPU socket soldering/unsoldering work)



Cluster for performance scaling, power and thermal evaluation as well as testing of configuration and software tools.

ДЕМО

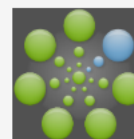
User Portal



Guacamole



Bright View



Grafana



Overview

Home

Message of the day

Welcome to the cluster user portal.

Here you can get an overview of the configuration, available hardware and documentation.

Shrine Pass R2600SR system is available for testing

Apache Pass sandbox system is available for testing (4x 128GB AEP ES2)

01/10/2018 Available hardware list updated

Documentation

General information:

- [Hardware List](#)
- [Operating Systems List](#)
- [Tools and Software](#)

FAQ:

- [Who else can access my node?](#)
- [How to access BIOS setup screen?](#)

Contact

Please use the contact details below for any questions, issues or feedback:

- alexey.ponomarev@intel.com
- darya.dogadova@intel.com
- ilyax.antipin@intel.com

Cluster overview

The following configurations are available for full customization and testing. Please check samples availability via Documentation -> Available Hardware page.

HPC - Purley	<ul style="list-style-type: none">7x Wolf Pass + 16x Buchanan Pass nodesAny available SKL CPUAny available fabrics, SSD, accelerators and accessoriesNVMe BeeGFS over OPA, HDD ceph over 1/10GbE	Cloud - Microsoft Azure Stack	<ul style="list-style-type: none">7x Wolf Pass nodes + HLH (Hardware Lifecycle Host)Intel Xeon Scalable 61xx Family CPUAll flash storage (NVMe+SATA)10GbE network
HPC - Groveport	<ul style="list-style-type: none">8x Adams Pass nodesAny available KNL/KNM CPUAny available fabrics, SSD, accelerators and accessoriesNVMe BeeGFS over OPA, HDD ceph over 1/10GbE	Cloud - Microsoft S2D	<ul style="list-style-type: none">4x Taylor Pass 24HDD nodes + management nodeAny available HSW/BDW CPU, fabrics, SSD, accelerators and accessoriesAll flash storage (NVMe+SATA)10/25/40GbE network
HPC - Grantley	<ul style="list-style-type: none">2x Wildcat Pass + 12x Kennedy/Taylor Pass nodesAny available HSW/BDW CPUAny available fabrics, SSD, accelerators and accessories	Cloud - VMWare VSAN	<ul style="list-style-type: none">4x Taylor Pass 24HDD nodes + management nodeAny available HSW/BDW CPU, fabrics, SSD, accelerators and accessoriesAll flash storage (NVMe+SATA)

Fabric Manager GUI - cluster

Subnet Configure Help

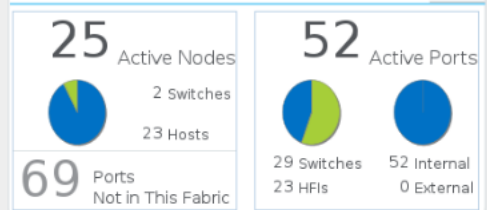
Home Performance **Topology** Admin

- Device Types
 - cluster
 - HFIs
 - Switches
- PM Port Groups
- Virtual Fabrics

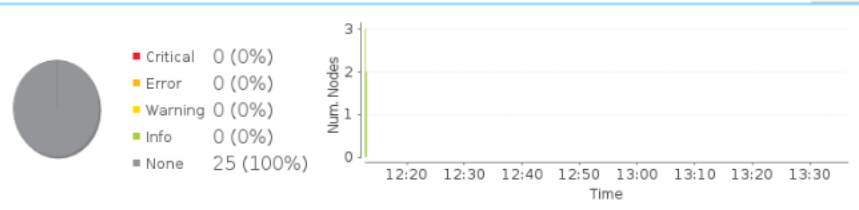
Performance

Subnet Summary

Statistics

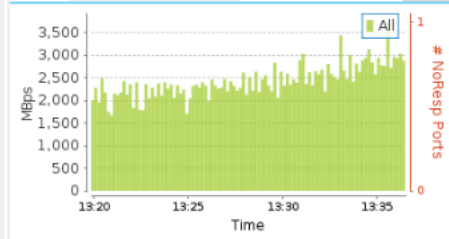


Events

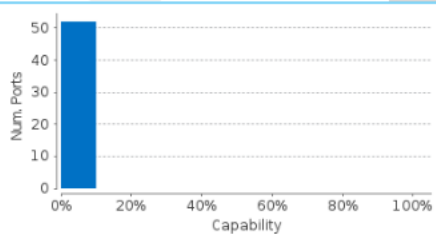


General Summary

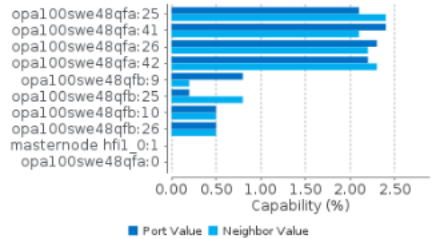
Trend ALL Current



Histogram ALL

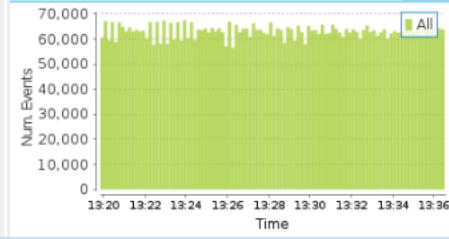


Top 10

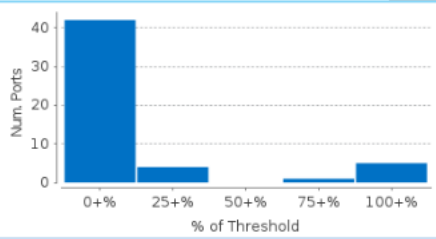


Bandwidth Packet Rate

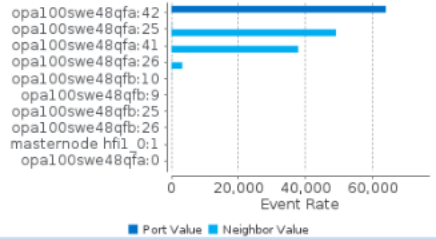
Trend ALL Current



Histogram ALL



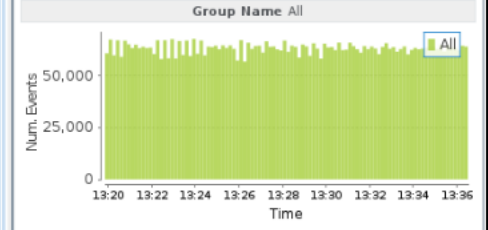
Top 10



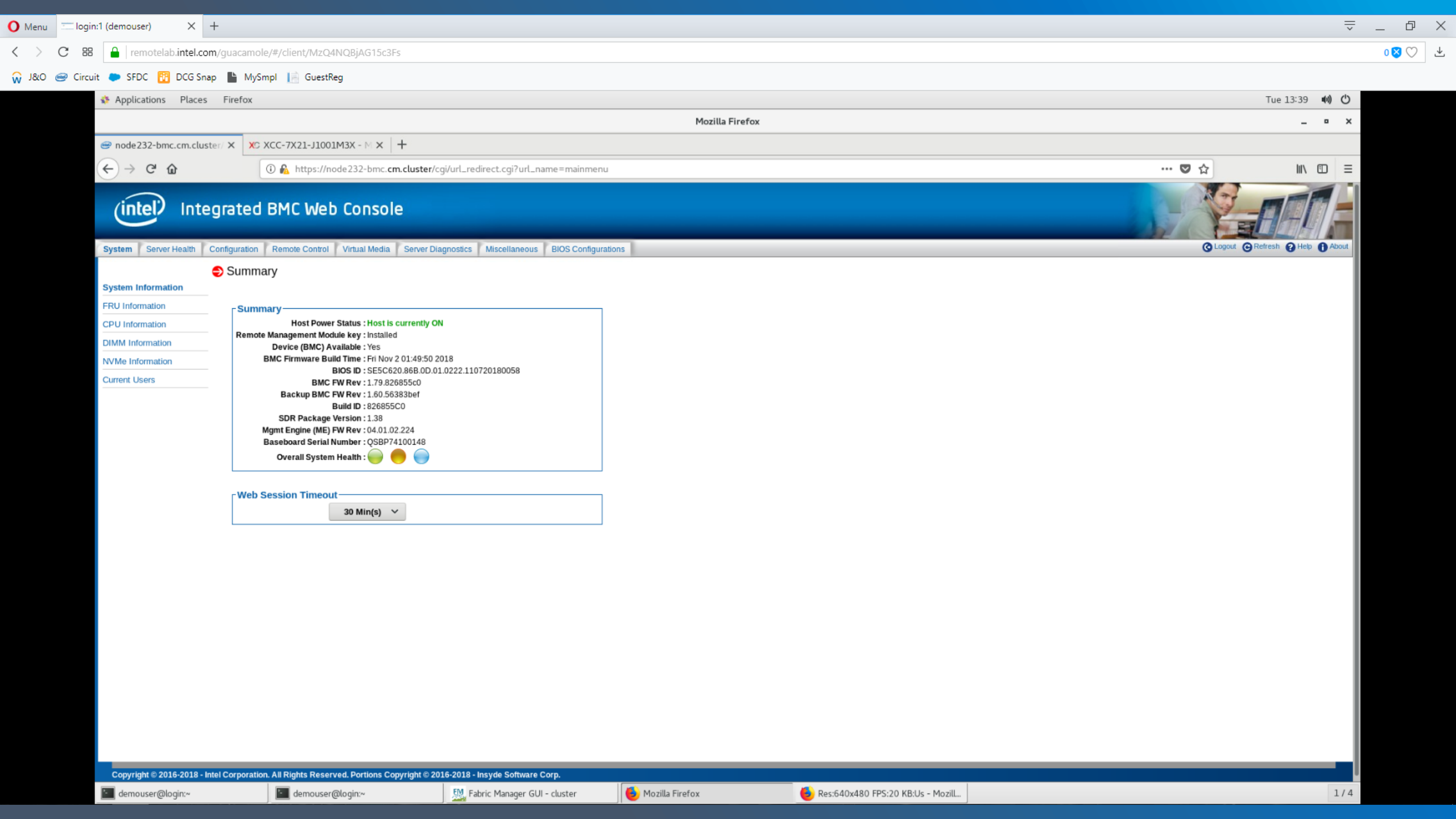
Nodes Distr. on Severity Levels

- Critical
- Error
- Warning
- Info

Congst Trend



Name Search Tree



intel Integrated BMC Web Console

- System
- Server Health
- Configuration
- Remote Control
- Virtual Media
- Server Diagnostics
- Miscellaneous
- BIOS Configurations

Logout Refresh Help About

Summary

- System Information
- FRU Information
- CPU Information
- DIMM Information
- NVMe Information
- Current Users

Summary

Host Power Status : **Host is currently ON**

Remote Management Module key : Installed

Device (BMC) Available : Yes

BMC Firmware Build Time : Fri Nov 2 01:49:50 2018

BIOS ID : SE5C620.86B.0D.01.0222.110720180058

BMC FW Rev : 1.79.826855c0

Backup BMC FW Rev : 1.60.56383bef

Build ID : 826855C0

SDR Package Version : 1.38

Mgmt Engine (ME) FW Rev : 04.01.02.224

Baseboard Serial Number : QSBP74100148

Overall System Health : ● ● ●

Web Session Timeout

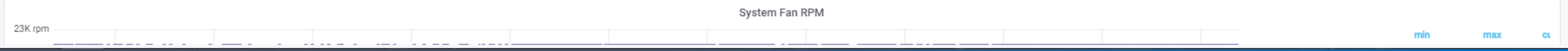
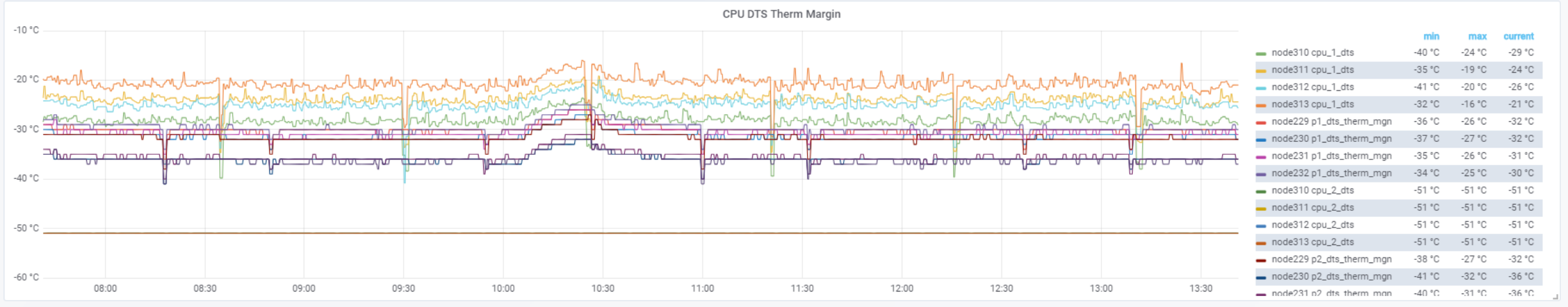
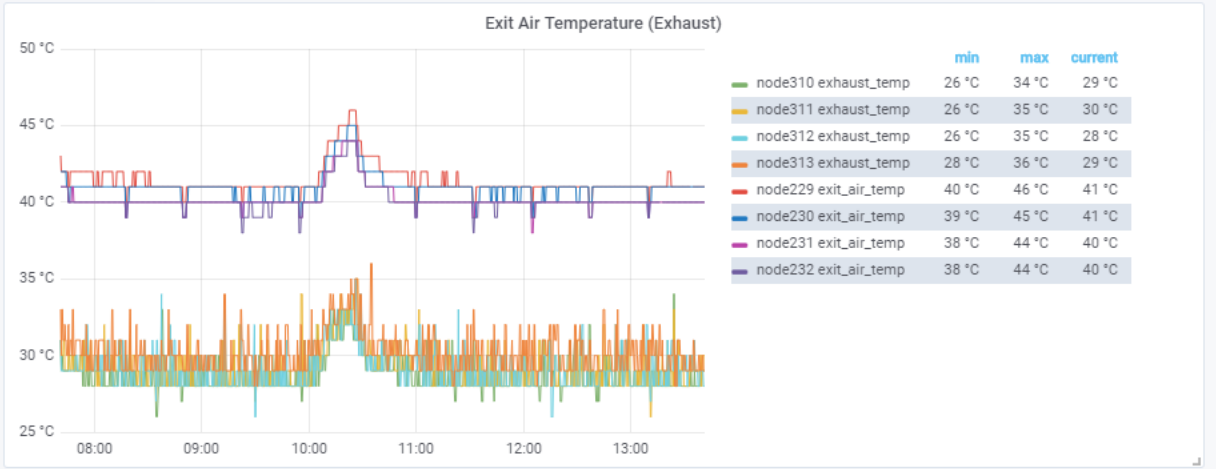
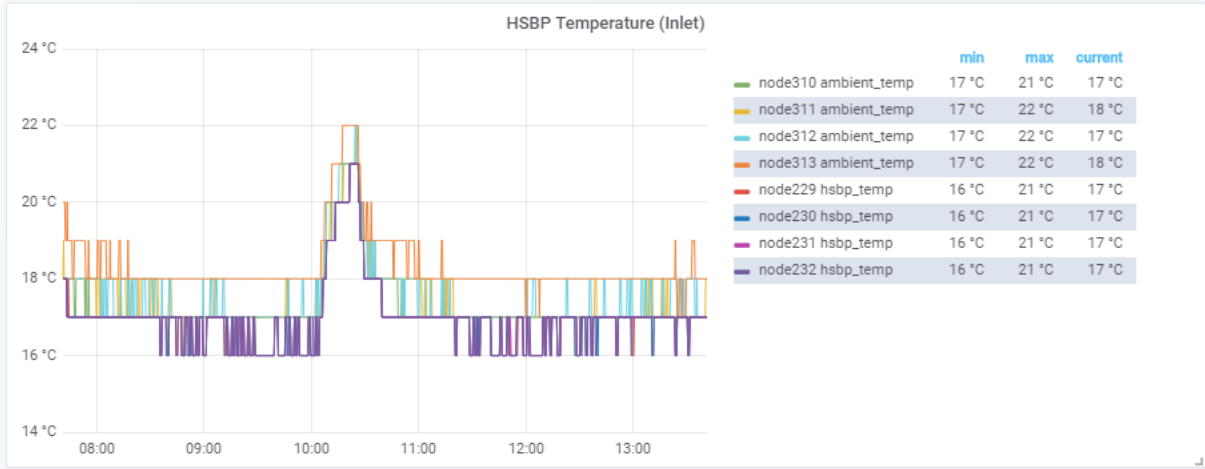
30 Min(s) ▼

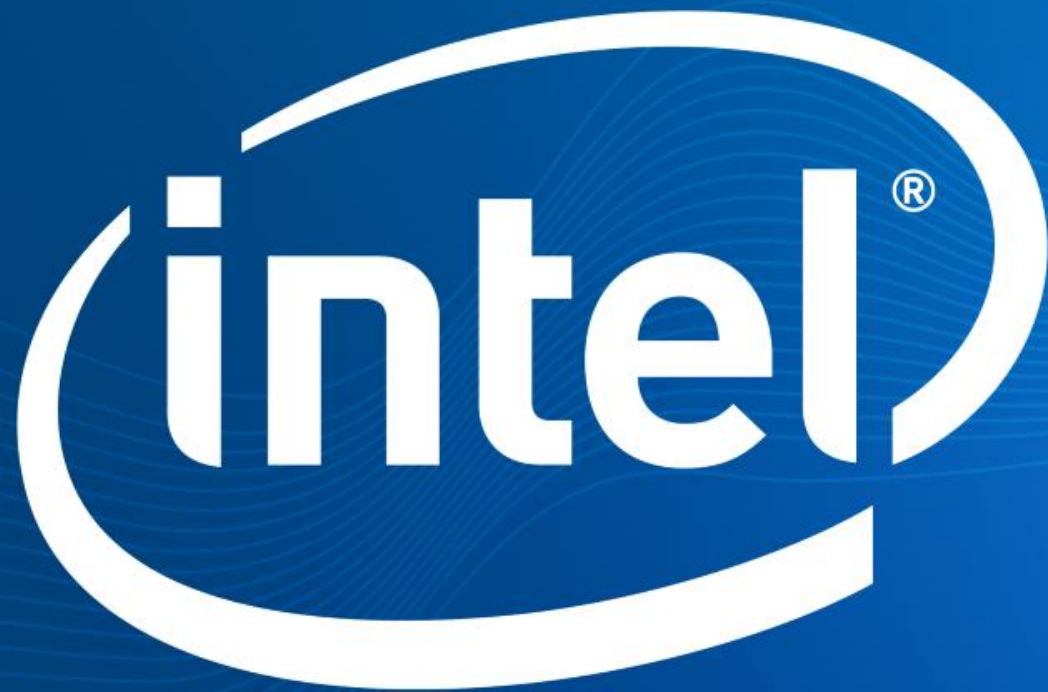
Level : Node

Last 6 hours Refresh every 30s

hostname node229 + node230 + node231 + node232 + node310 + node311 + node312 + node313

Metrics : Environmental





The image features a dark blue background with abstract, flowing wave patterns in yellow and orange. A bright lens flare effect is positioned on the right side, overlapping the text. The text is centered and reads "INTEL® INNOVATION DAY" in a large, bold, white sans-serif font, with "В РИТМЕ ТЕХНОЛОГИИ" in a slightly smaller, bold, white sans-serif font below it.

INTEL® INNOVATION DAY
В РИТМЕ ТЕХНОЛОГИИ