



Extreme Scale HPC

Building Million Core Univa Grid Engine Clusters in AWS



Who is Univa?

Largest independent provider of cluster management and orchestration software

- Software-defined computing infrastructure (SDI) solutions to modernize mission-critical workloads and accelerate hybrid cloud migration
- Focused on Global 2000 customers across every type of infrastructure and software stack
- Thousands of diverse applications, workflows and millions of tasks every day
- Founded in 2011 / Privately held / 50 employees
- Offices in Toronto, Chicago and Munich



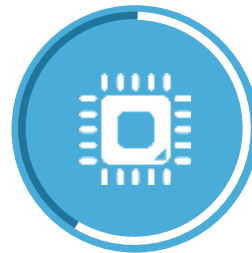
250

Global Customers



1,000

Integrated Applications



2,500,000

Compute Cores



7,000,000

Jobs Per Day



1 Million Core Demonstration

Univa Demonstrates Extreme Scale Automation by Deploying More Than One Million Cores in a Single Univa Grid Engine Cluster using AWS

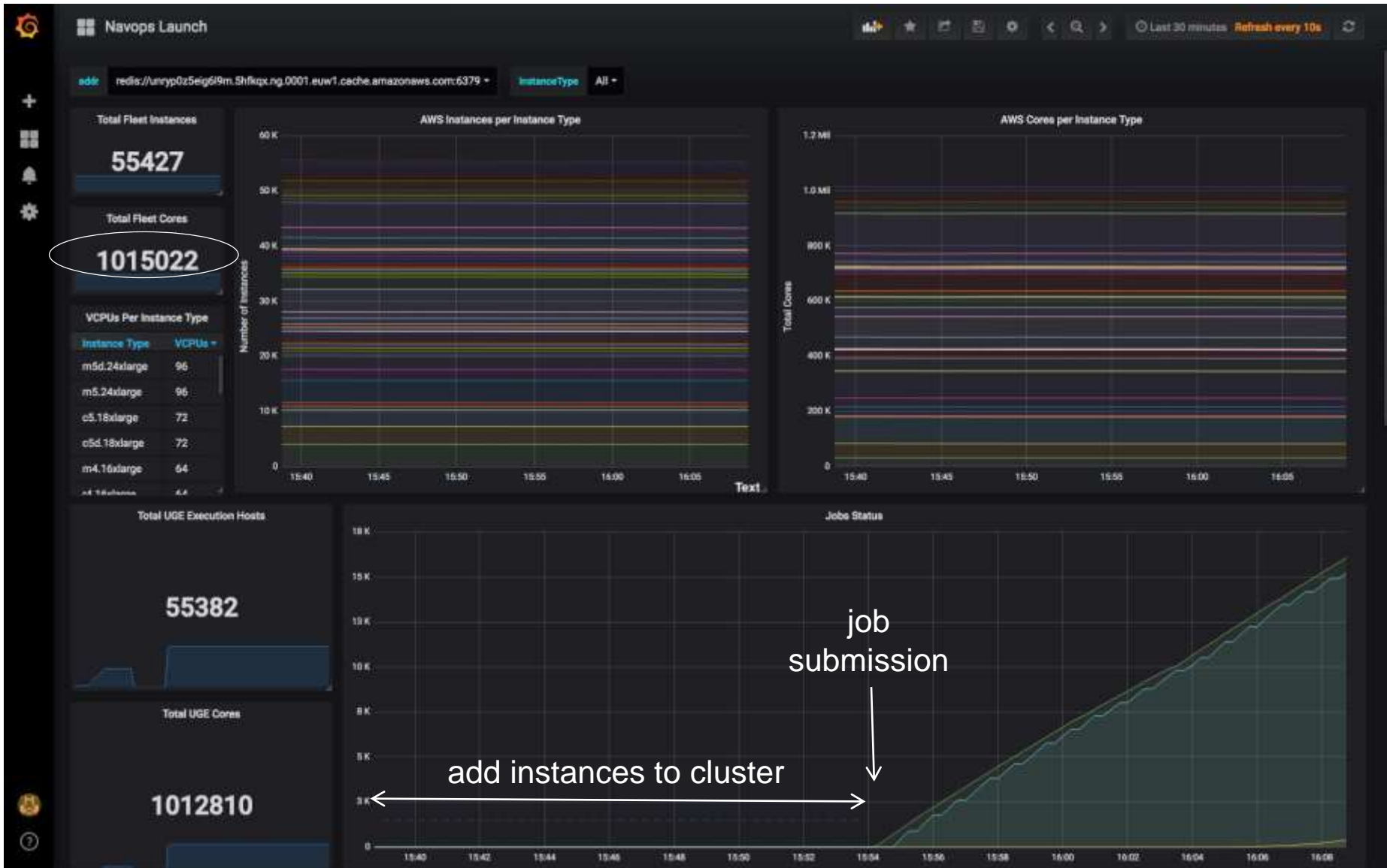
🕒 June 24, 2018 👤 Cameron Brunner, Director of Engineering, Univa

📁 All, Navops, Uncategorized, Univa Grid Engine

🏷️ Amazon Web Services, AWS, AWS Marketplace, Cloud, EDA, GPU, GPUs, HPC, ISC18, ISC2018, Navops Launch, NVIDIA, Univa, univa grid engine

To demonstrate the unique ability to run very large enterprise HPC clusters and workloads, Univa leveraged AWS to deploy 1,015,022 cores in a single Univa Grid Engine cluster to showcase the advantages of running large-scale electronic design automation (EDA) workloads...

- **1M+ cores**
- **Single Univa Grid Engine cluster**
- **Automated, repeatable set-up with Navops Launch**
- **3 Availability Zones in the AWS Ireland domain**
- **~56K instances**
- **30+ instance types**
- **Acquired via AWS spot fleet requests**
- **>2.5 hours to build cluster**







THANK YOU

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