Simplifying GridGain and Apache Ignite Management with the GridGain Control Center

Greg Stachnick

Director of Product Management

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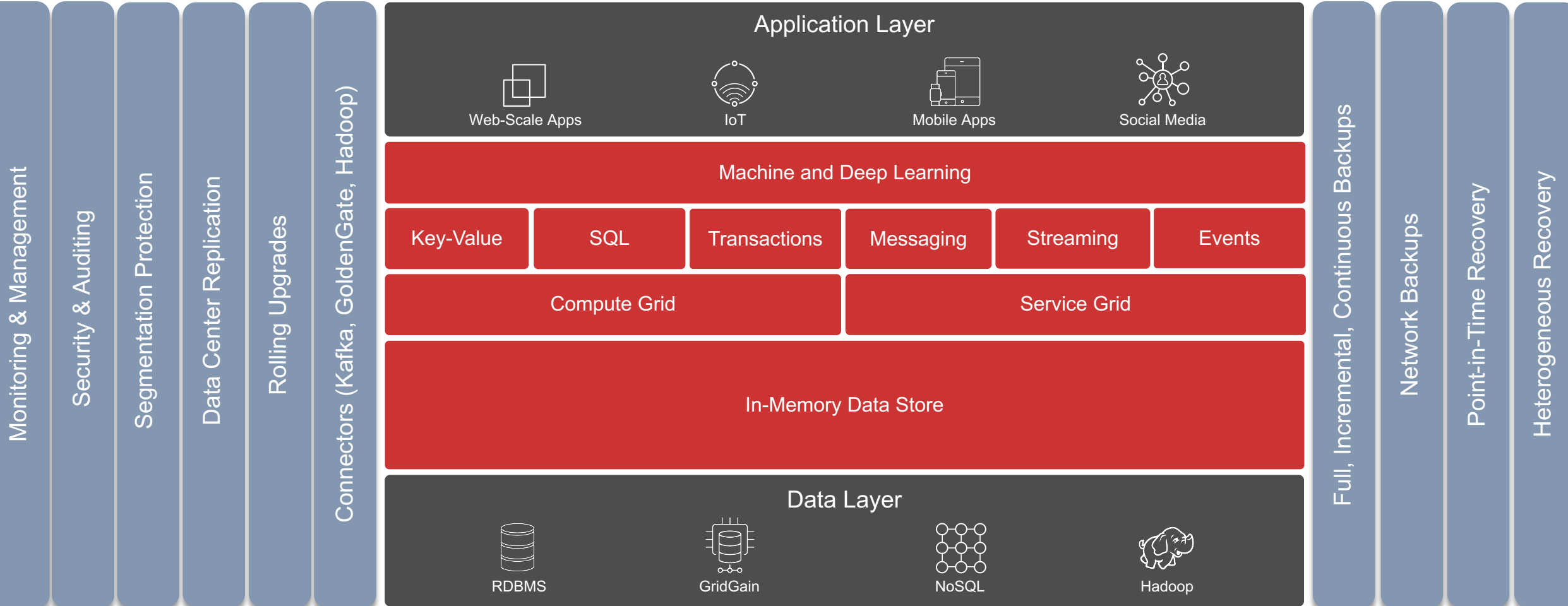# Agenda

- GridGain & Ignite Overview
- Control Center Basics
- Control Center Features
- Getting Started
- Demo
- Q&A

Photo by Taylor Simpson

Ignite & GridGain In-Memory Computing Platform

Monitoring & Management

Security & Auditing

Segmentation Protection

Data Center Replication

Rolling Upgrades

Connectors (Kafka, GoldenGate, Hadoop)

Application Layer

Web-Scale Apps   IoT   Mobile Apps   Social Media

Machine and Deep Learning

| Key-Value | SQL | Transactions | Messaging | Streaming | Events |

Compute Grid   **Service Grid**

In-Memory Data Store

Data Layer

RDBMS   GridGain   NoSQL   Hadoop

Full, Incremental, Continuous Backups

Network Backups

Point-in-Time Recovery

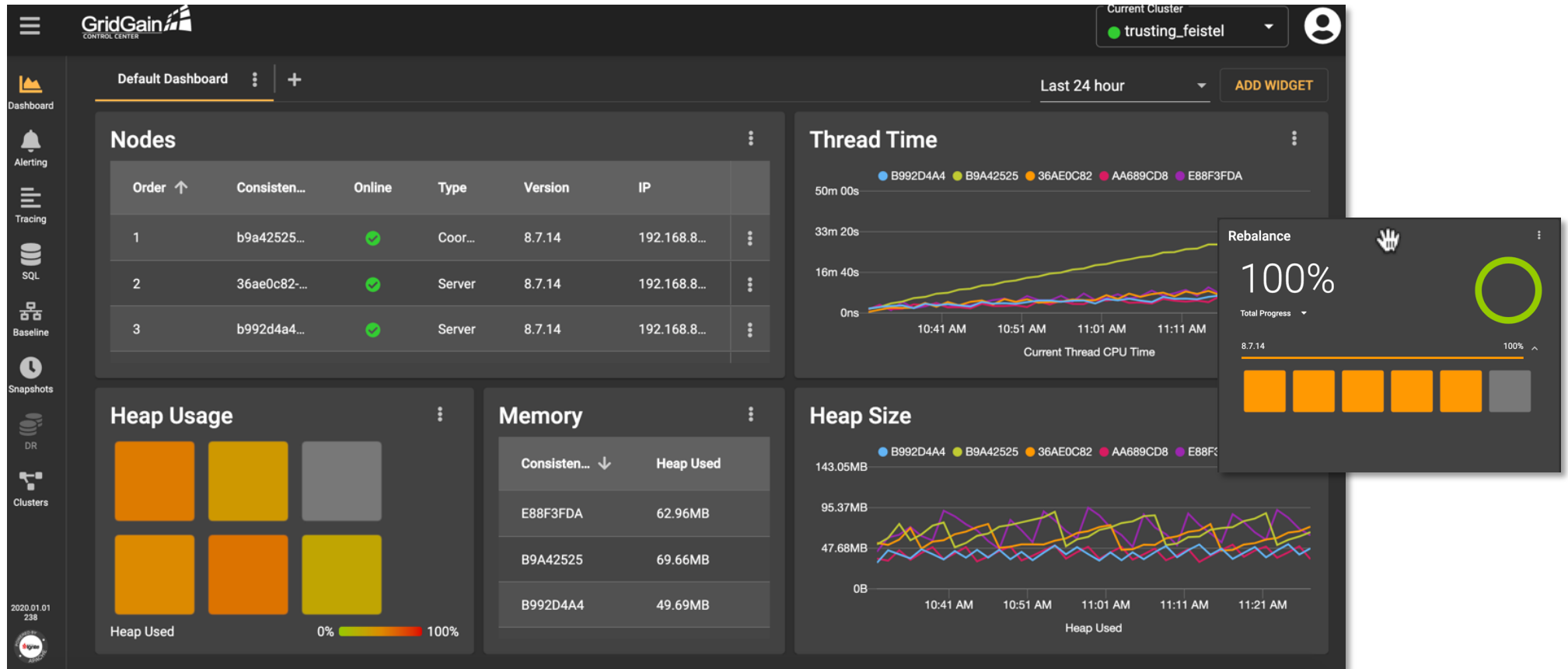Heterogeneous Recovery

GridGain

GridGain Control Center Overview

- Comprehensive Cluster Management and Developer Tool for GridGain and Apache Ignite

- Supported Products
  - Built for GridGain 8.7+ and Apache Ignite 2.8+
    - Apache Ignite requires Control Center Agent install

Modern Interface with Drag & Drop Flexibility
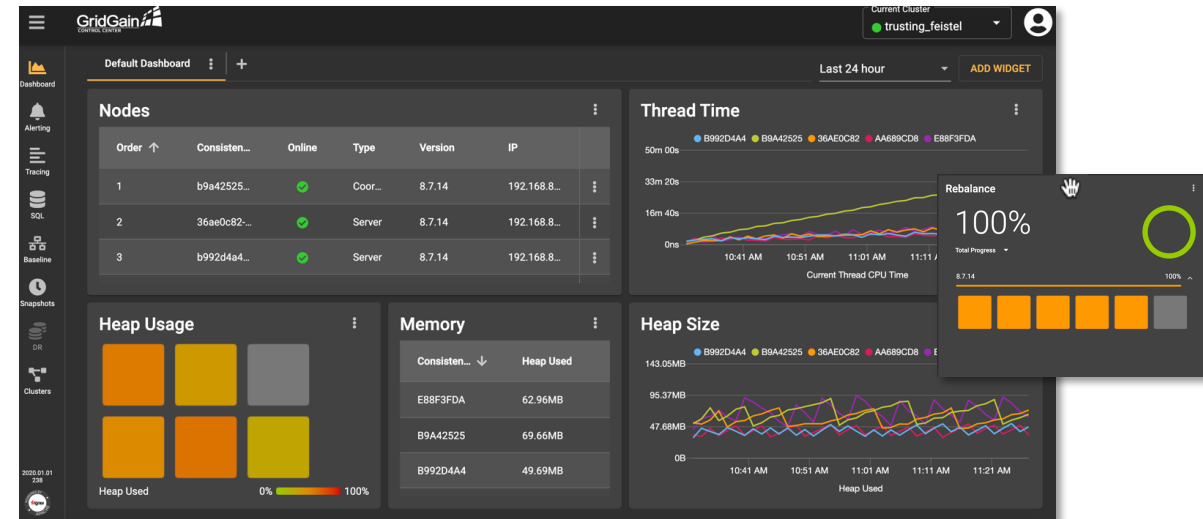
Features for IT Admins, DevOps and Developers

	IT Admins	DevOps	Developers
Cluster Management	●	●	
Baseline Topology	●	●	●
Performance Monitoring	●	●	
Alerts	●	●	
Backup & Recovery	●	●	
Cluster Upgrades	●	●	
Data Rebalancing	●	●	
API Tracing		●	●
Query Monitoring & Analysis		●	●
Query Development			●

GridGain

Customizable, Intuitive Dashboard

- ## Easy to Use with Visual Cues
  - Visualize cluster status and manage behavior

- ## Highly Flexible
  - Drag and drop panes to view metrics of interest
  - Tracks over 200 cluster metrics
    - Open Census compliant

User-Defined Production Alerts

- Quickly Identify and Resolve Issues with Configurable Alerts
  - Create custom active alerts on any metric
  - Monitor cluster, node, and cache events
  - Configure flexible notifications
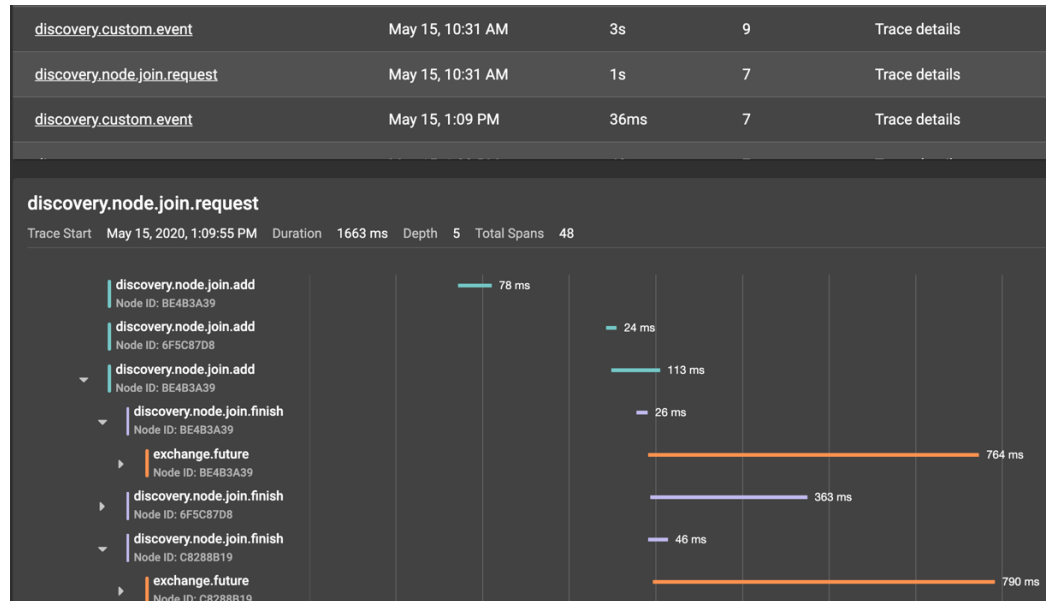   - Email and SMS

2020 © GridGain Systems

GridGain

Monitor Rolling Upgrades & Cluster Rebalancing

- Monitor Rolling Upgrades
  - View cluster upgrade progress
  - GridGain Enterprise and Ultimate Editions only

- Monitor Data Rebalancing
  - Visualize data resilience processes
  - Identify and isolate problematic nodes
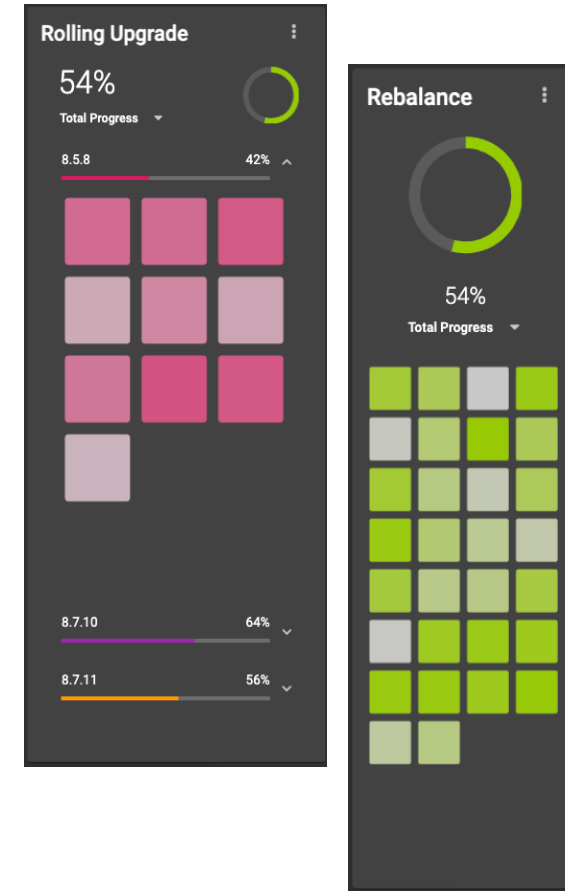
Active Tracing & Root Cause Analysis

- Easily Track API Call Execution
  - Identify all response times for API calls
  - Single view of stack traces and logs from all nodes
  - Follow execution across the cluster
  - Combine with application traces
  - Open Census compliant

- Setup:
  - Copy *ignite-opencensus* from */libs/optional* to */libs/*
  - Add Tracing to Cluster Configuration

<bean class="org.apache.ignite.spi.tracing.
opencensus.OpenCensusTracingSpi"/>

GridGain

# Disaster Recovery & Backup Management

- Easy Configuration of Backups
  - Fully managed backups and comprehensive data recovery tools
  - GridGain Ultimate Edition only

- Comprehensive Backup Monitoring and Management
  - Create full and incremental backups
  - Validate backup integrity
  - Recover state from a specific point in time
  - Automate backup creation lifecycle

Query Development Tools

- Accelerate Query Development
  - Fine tune for optimal performance

- Develop and Run SQL Scripts
  - Introspect SQL execution
  - Analyze performance of long running queries and query history
  - Display all clusters, caches, and schemas in real-time
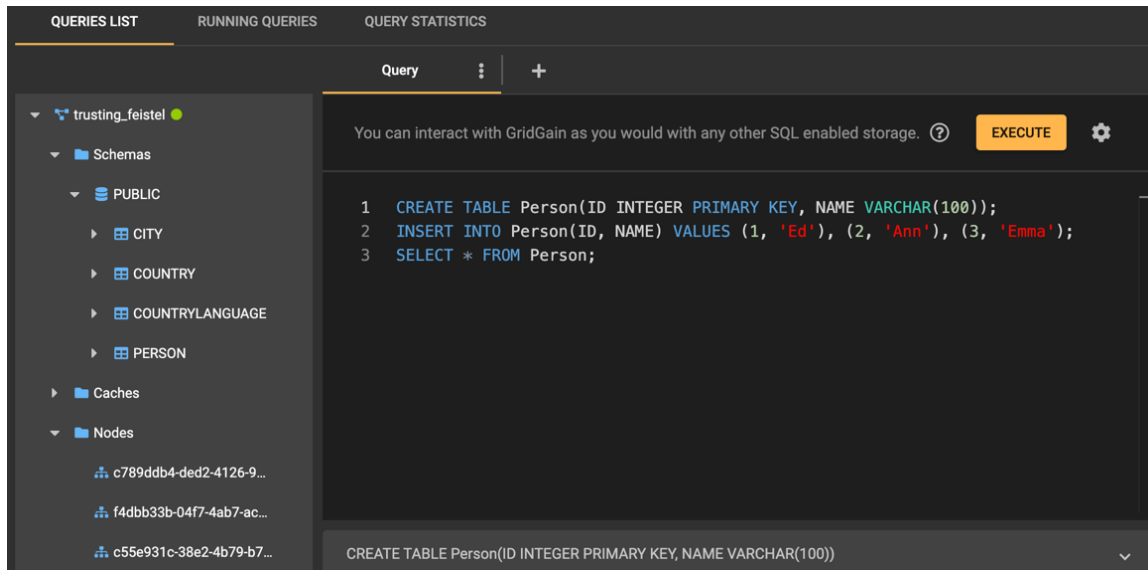
Control Center Options

Online Version

Full functionality

Available for free

https://control.gridgain.com

Developer Version

Full functionality up to 2 nodes and 36 cores

Available for free download (coming soon)

Commercial Version

Full functionality for any size cluster

Installable on-premises (coming soon)

Price based on nodes in your cluster(s)

GridGain

Getting Started with Ignite & Gridgain
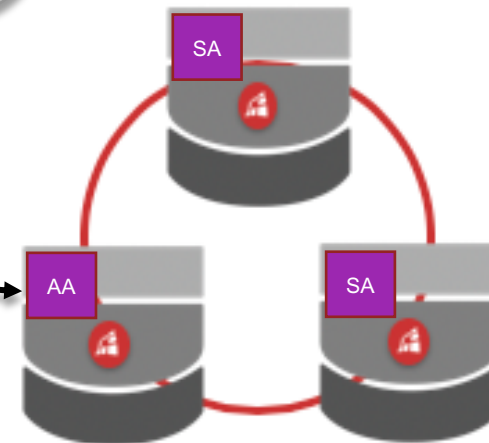
- ## Apache Ignite
  - Download Agent
    - Maven
    - Gridgain.com
  - Extract To /libs
  - Start Cluster
  - Add Cluster ID to Control Center

- ## GridGain
  - Copy Agent from /libs/optional to /libs
  - Start Cluster
  - Add Cluster ID to Control Center

Demo

- Local GridGain Community Edition Cluster
  - world.sql schema
- Local GridGain Ultimate Edition Cluster
- Local Control Center

Photo by Josh Redd

GridGain

Q&A

Photo by Emily Morter

GridGain Resources

- GridGain Control Center
  - Visit https://control.gridgain.com

- Webinars
  - Visit https://www.gridgain.com/resources/webinars

- Developer Portal
  - Visit https://www.gridgain.com/developer

- Documentation
  - Visit https://www.gridgain.com/docs/control-center/latest/overview

- Free 30-Day Ultimate, Enterprise or Professional Edition Trial
  - Visit https://www.gridgain.com/resources/download

GridGain

Thank you

Greg Stachnick, Director of Product Management

greg.stachnick@gridgain.com

@gstachni

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