Content

Days

1

Introduction

Data

Streaming and Continuous Event Processing

Distributed Computing

The Project

Introducing Apache Ignite

Data Storage Locations The CAP Theorem Durable Memory and Native Persistence Data Structures Deploying Ignite Clusters

Getting up and Running

Overview Glimpse at the Cluster The Data Setup Ignite Monitoring and Management Configuring the Cluster First Look at the Code Spring XML Configuration Configuration in Code Starting the Server Loading Data

The REST API

Examining Clustering in Ignite

Overview

Cluster Nodes

Cluster Groups

Cluster Groups Demo

Discovery

IP Finders

The Multicast IP Finder Static IP Finder Ignite Ports Common Registration IP Finders Internode Security

Examining the Ignite Data Grid

2

Overview

Introduction to the Data Grid

Caches

Cache Mode

Memory Mode

Write Synchronization

The JCache API

Durable Memory

Native Persistence

Querying Data in Ignite

Overview

The SQL Grid

Affinity and Collocation

Fat Keys

Continuous Queries

SQL Queries

The SQL API and DML

Entry Processor

Affinity Function

Data Streamers

Stream Receiver

Stream Transformer

Stream Visitor

Demo: SQL Query

Demo: SQL Joins

Developing Service in Ignite Overview Writing a Service Service Configuration Service Distribution Demo: Creating the Service Cache Demo: Creating the Service Demo: Passing Events to the Service

Exploring Distributed Computing with Ignite

3

Overview

Distributed Closure Execution

ComputeTask

ComputeJob

Distributed Task Session

Demo: Affinity Run

Ignite Transactions

ACID Compliance

Optimistic and Pessimistic Transactions

Ignite Messaging and Events

Distributed Messaging

Event Handling

Ignite Security

Authentication and Authorization

Encryption and SSL

Monitoring and Management

Logging and Monitoring Tools

Performance Tuning