Java Parallel Proccessing Framework

An Open Source Alternative to Grid Computing

Agenda

- What is JPPF?
- Features at a glance
- JPPF Architecture
- J2EE Integration
- Administration and monitoring
- Roadmap

What is JPPF?

- General-Purpose Grid Toolkit
  - Federate computing resources working together
  - Handle large computational applications
  - Handle data-intensive problems
- A Java framework
  - Ubiquitous programming platform
  - OS and hardware independent
  - A platform for integration, extension, customization
- An Open-Source Grid Environment
  - Flexible licensing (Apache v2.0)
  - Source code guarantees transparency
  - Community-driven development process

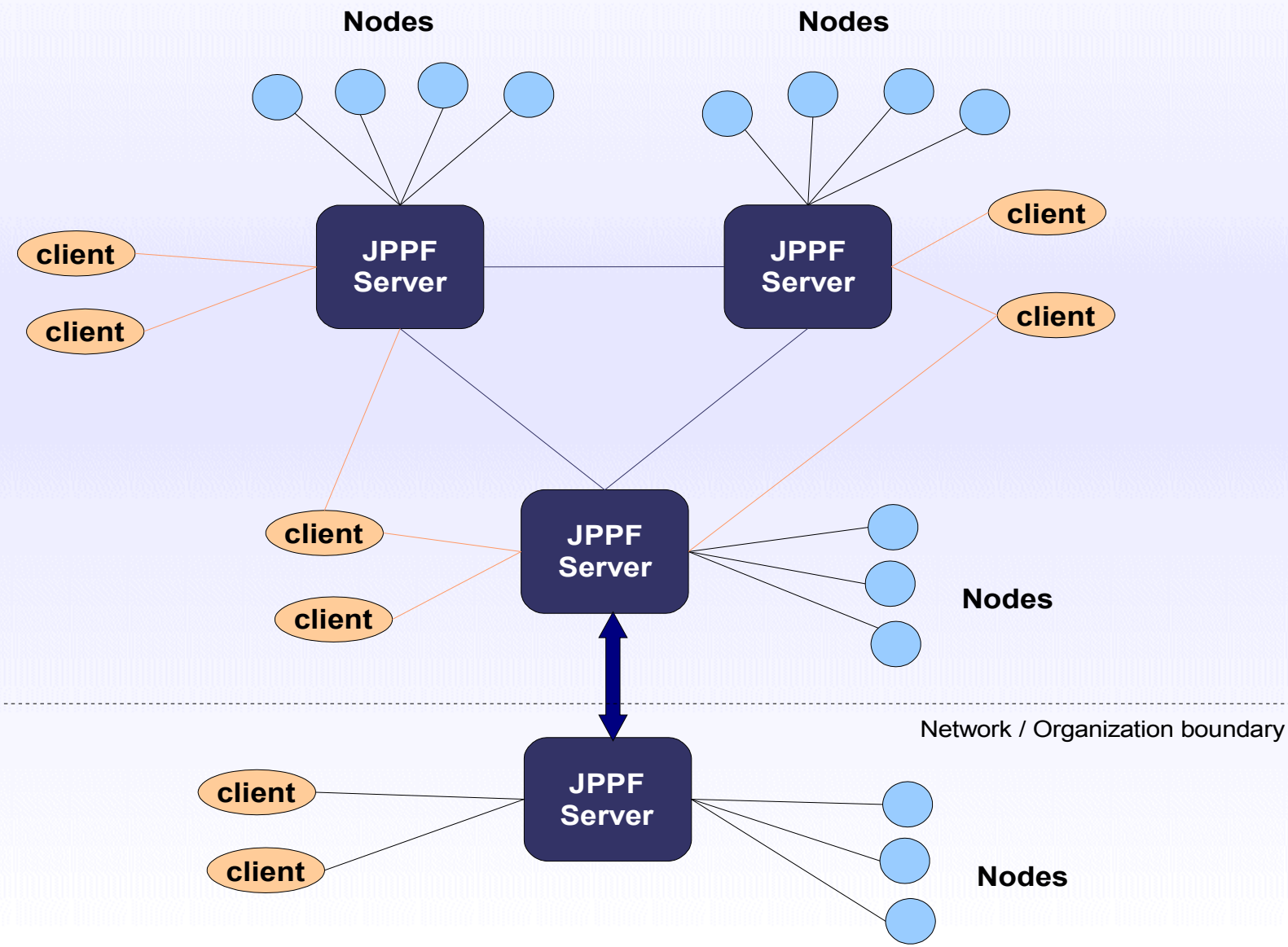
Features

- Ease of use and deployment
  - write once, deploy once, execute everywhere
- Scales from small to large networks
- Multiple deployment options
  - standalone, OS services, JPPF@Home
- Configurable security
- Easy programming model
  - abstracts the complexity of distributed parallel programming
- Flexibility of integration

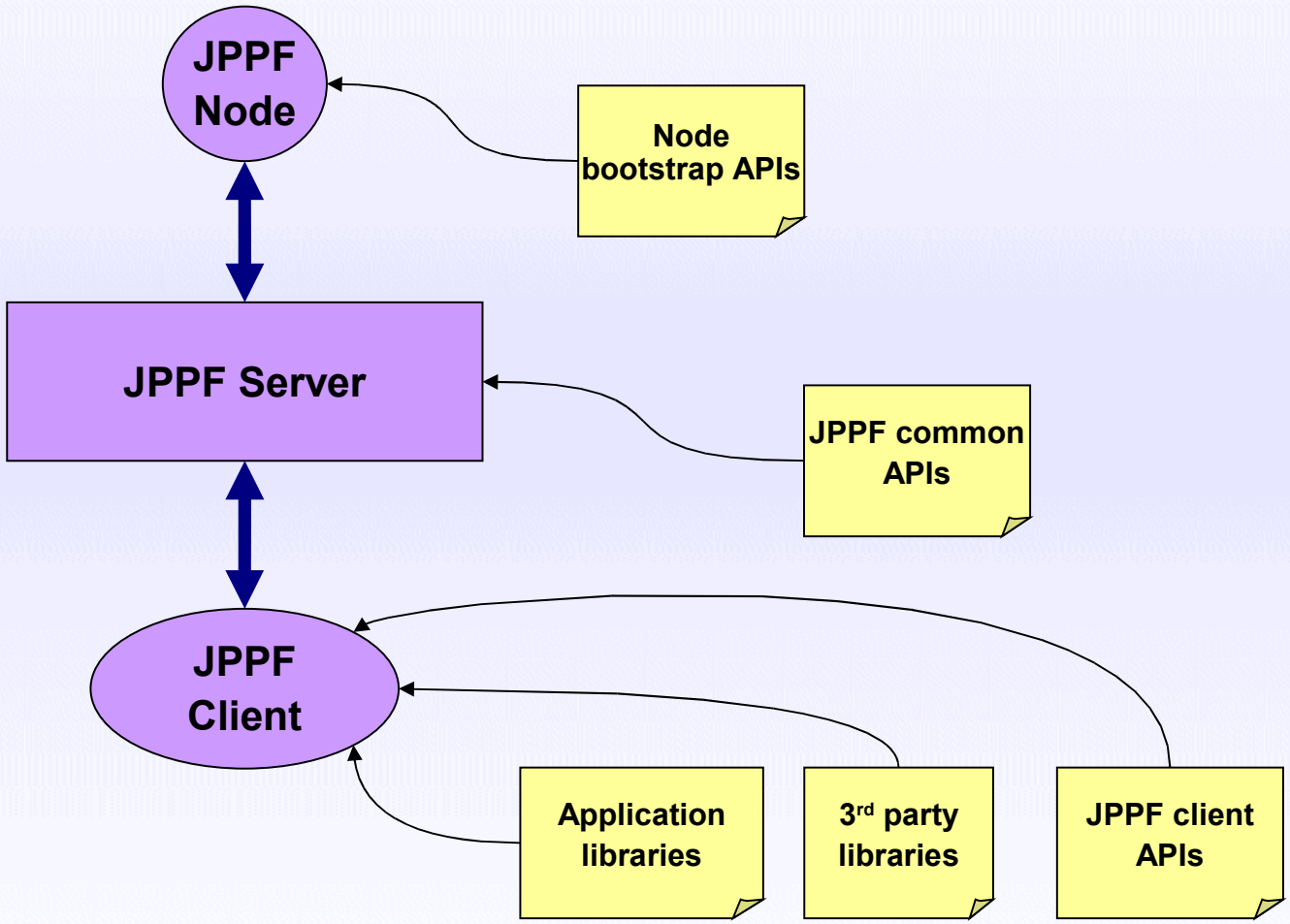
Features

- Scalable distributed communication model
  - Consistent protocol between components
  - Adaptive load balancing
  - Optimized bandwith usage
- Robustness
  - Built-in failover
  - Finely tunable recovery behavior
  - No single point of failure
- High performance
  - Small framework overhead
  - Asynchonous, non-blocking I/O
  - Continuous, feedback driven performance optimization

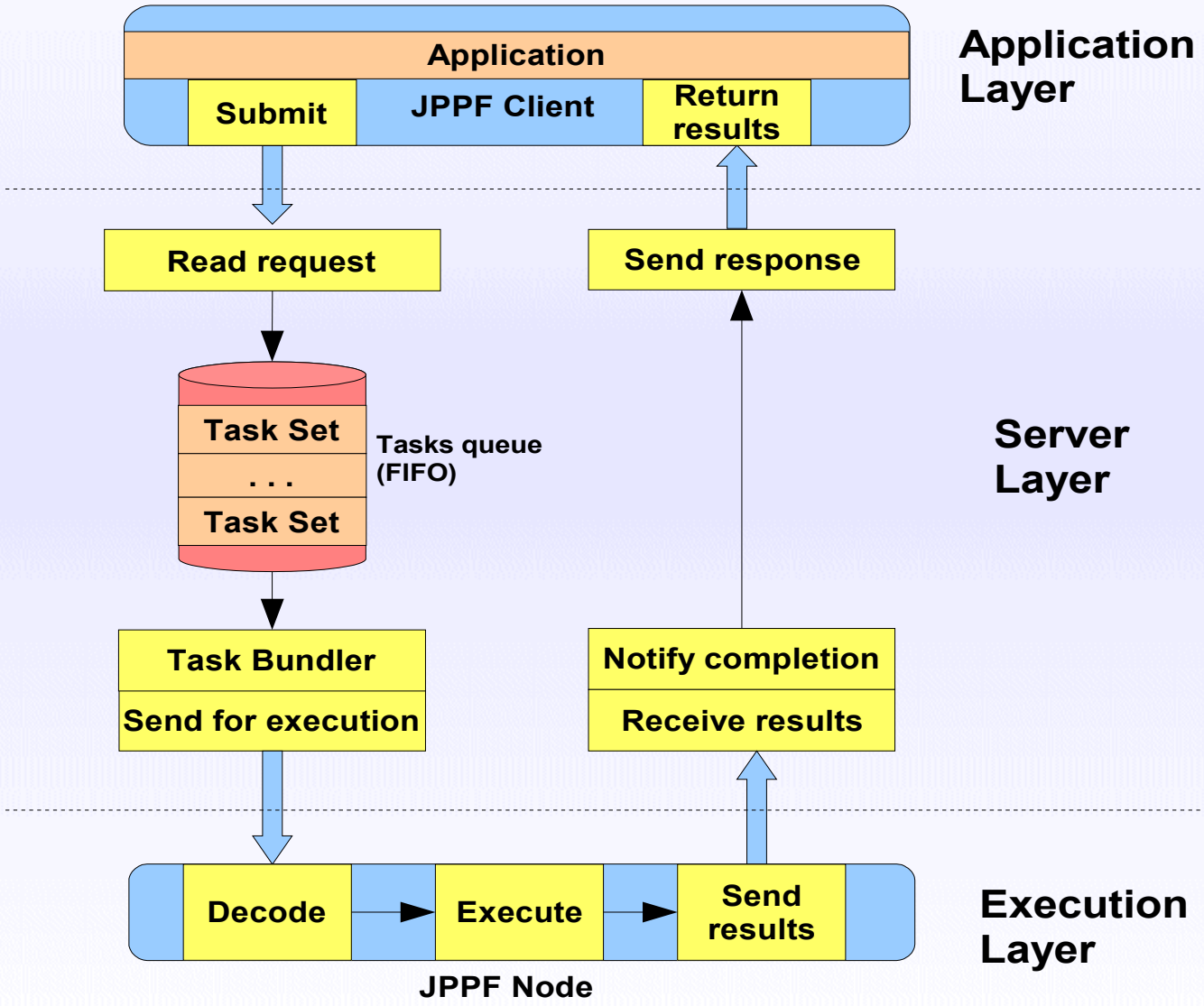
Redundant Topology



Deploy Once, Execute Everywhere



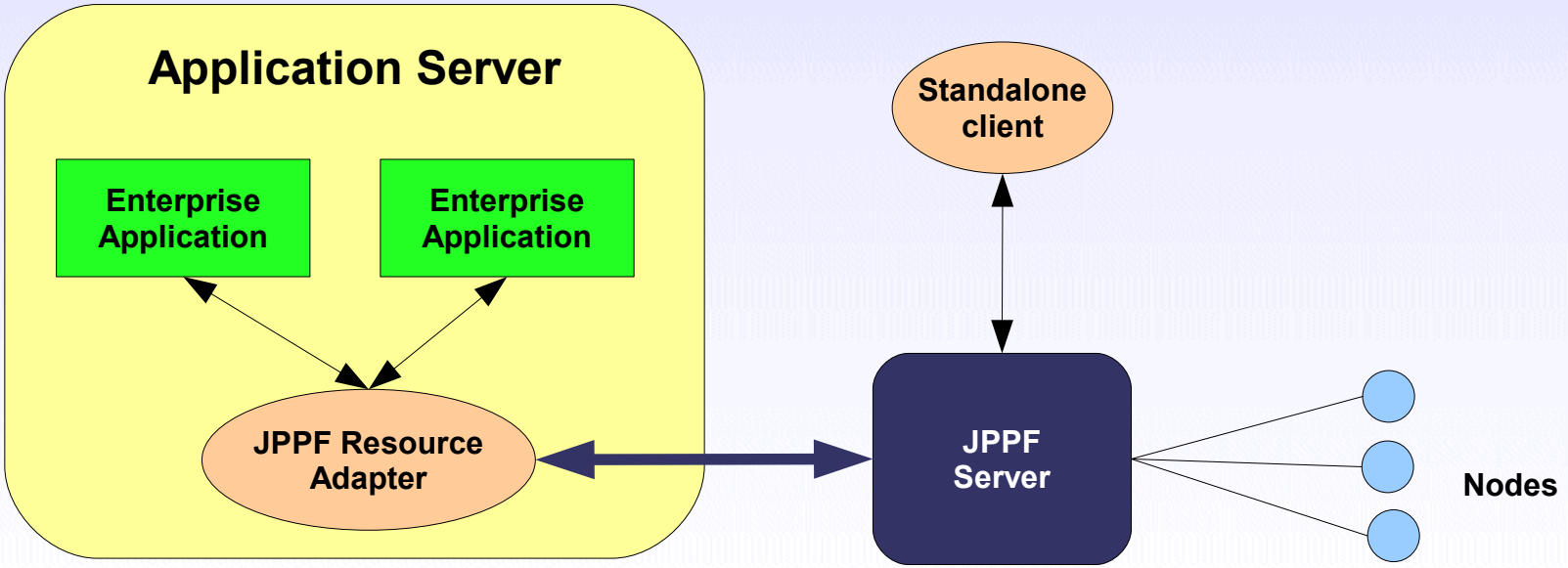
Sound engineering



Using idle CPUs

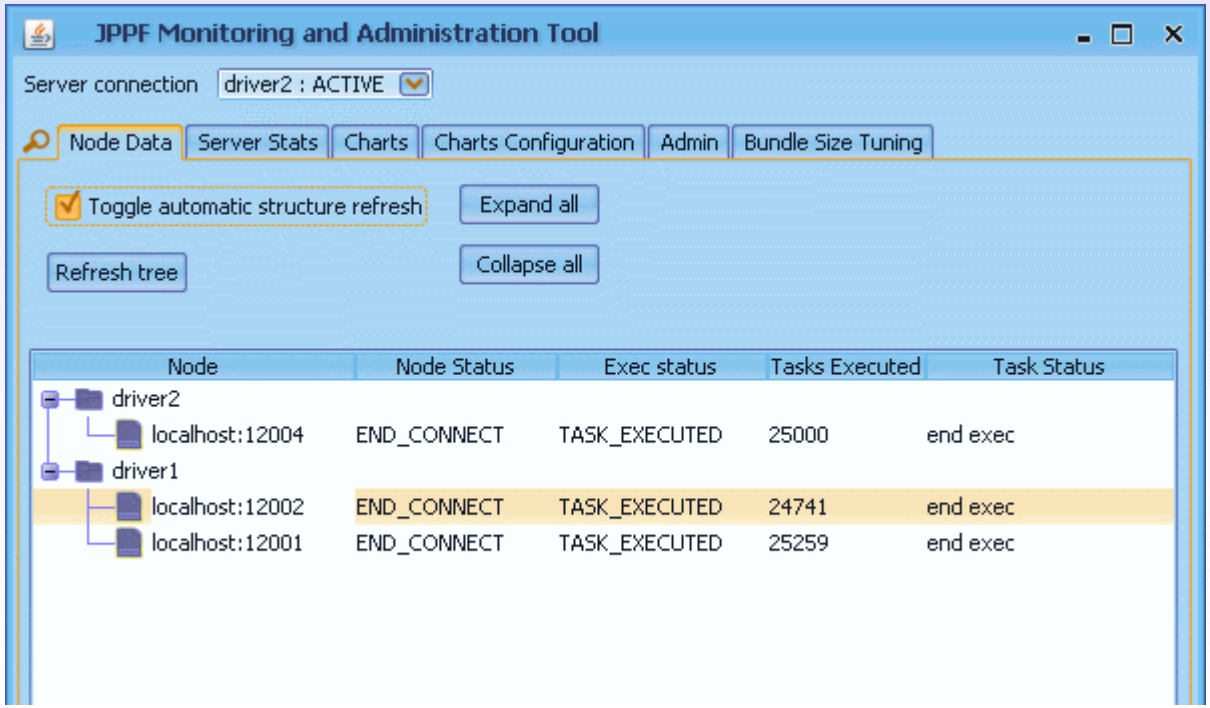
J2EE Integration

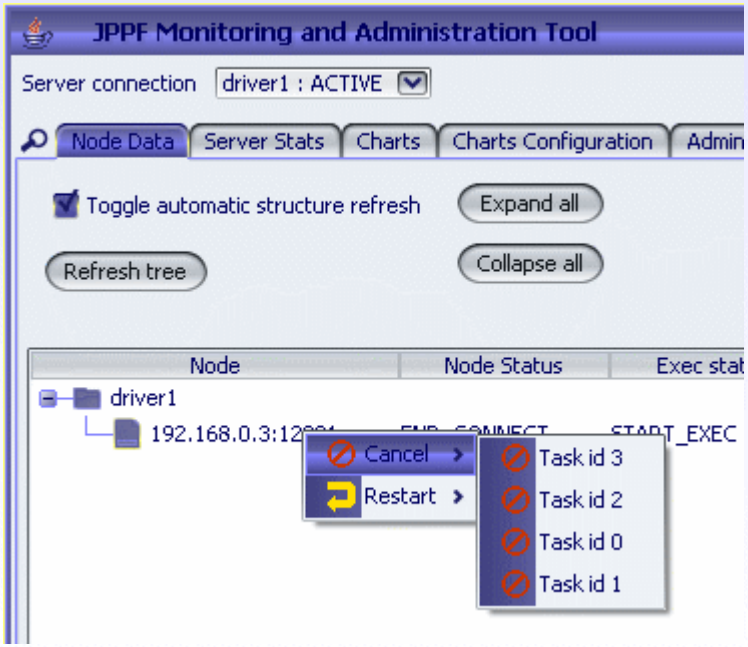
- Works with leading application servers
  - JBoss, Websphere, Weblogic, OC4J, SunAS
- Leverages JCA 1.5
  - seamless J2EE integration
  - vendor independance
- Works as a JPPF client



Monitoring and Management

- Fully customizable graphical interface
- Multi-Server, multi-node administration
- Fine Grained administration
- Customizable charts
- Internationalization support





Monitoring and Management

Roadmap

Project vision

- ETL integration
- Business Intelligence back-end solution
- Globus & GigaSpaces integration
- Web Services integration
- Framework management automation
- Pluggable services
- Business Rule Engine integration

Thank You