Java Enterprise (JEE) Applications Performance

**SPECjEnterprise2010**
- System benchmark measurement and characterization of performance of Java EE 5 servers and supporting infrastructure such as JVM, Database, CPU, disk and servers.

**Workload Scenario**
- Modeled after end-to-end real world business case
- Emulates automobile manufacturer, incorporates:
  - CRM
  - Manufacturing
  - Supply Chain Management
  - Brokers and Providers Insurance Module
- Utilizes EJB 3.0 and WSEE component architecture

**Metric**
- jEnterprise Operations Per Second (EjOPs) = \( \sum \) successfully completed workflows
- Dealer Domain Business Transactions: Browse, Purchase, Manage
- Manufacturing Domain Business Transactions: 50% EJB, 50% web services
- Insurance Transactions completed

**SPECjEnterpriseNext (under development)**
- Full-system performance for Java Enterprise Edition (Java EE 7) application servers and supporting infrastructure including software (JVM, Database, OS) and hardware (Processors, Network, Storage)
- Entire SPECjEnterprise2010 functionality implemented as micro services
- Utilized Java EE and HTML technology
  - CDI 1.1, EJB 3.2, JAX-RS 2.0, JPA 2.1, JMS 2.0, WebSocket 1.0 and HTML 5
  - New insurance module with web profile technologies
  - New security features and REST services

**History**
- 2002: ECperf 1.1
  - Donated to SPEC
  - Increased scalability
- 2010: SPECjEnterprise2010
  - Java EE 5
  - J2EE 1.3
  - Scientific purposes
  - v1.08 (EASTress)
- 201X: SPECjEnterpriseNext
  - Java EE 7
  - New insurance module
  - New security features
  - REST services