

Is Java EE Right for Your Organization?



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Previous Module

- Java ecosystem
- Enterprise application
- Java Enterprise Edition
- Simplified programming model
- Java EE internal architecture
- Services
- Java EE in action

Module Outline

- IT challenges
- Pros and cons of Java EE adoption
- Business concerns
- Technical concerns
- Recap
- Leave you to decide if Java EE is right for you

IT challenges

- Globally competitive world
- Business is more and more complex
- Reducing costs
- Using standard, robust and agile technologies
- Maintaining legacy systems
- Coordinating technological diversity
- Highly available, scalable, and secure

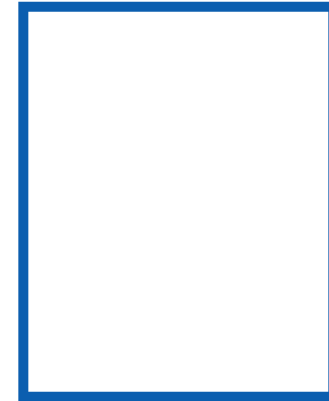
Questions

- Am I really using the right technology?
- Am I afraid of change?
- Is everything smooth?
- What are the pain points?
- Am I stuck with legacy?
- Shouldn't be a barrier to change if needed



Business Concerns

- Technology is everywhere
- Keep customers happy
- Speeding up development
- Reducing costs
- Increase revenue
- Aware of impact of a technical decision

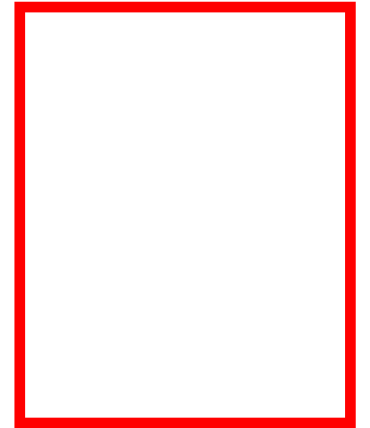


Standard

- Application to be alive and maintained in 5/10 years
- Java EE created in 1998
- Has since been updated
- Backward compatible
- Standardized by the JCP (Java Community Process)
- IBM, Oracle, RedHat, Fujitsu, Intel, Twitter, HP...

Trendy

- Standardizing takes time
- Java EE updated every 3 to 4 years
- Use some pieces of Java EE
- Connect components to Java EE



Open

- Rigor of the JCP standardization
- Dynamism of open source
- Open communities
- Java Platform open sourced in 2006
- Access Java EE source and documentation

Support

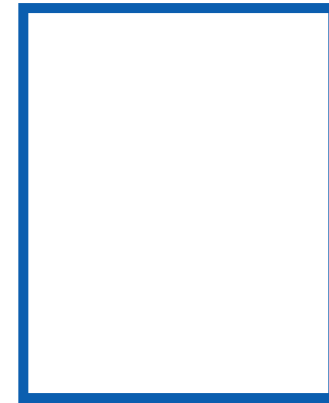
- Commercial products
- Open source companies
- Provide support to keep your business running
- Financial benefits
- Start for free
- Then pay for support

Recruiting and Training

- Millions Java developers
- Recruiting Java EE developers is easy
- Experienced Java EE developers
- Common knowledge
- Collectively learning

Technical Concerns

- No need to reinvent the wheel
- Java EE has all the needed services
- Tools, frameworks, technics...
- Developing complex applications is easy
- Technical limitations of Java EE



Portability

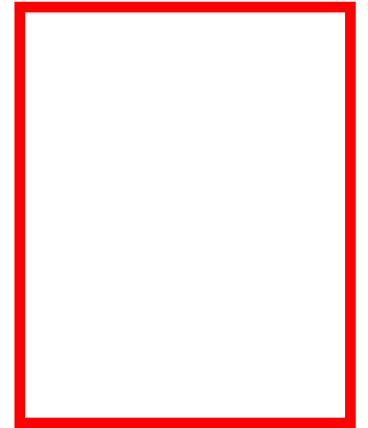
- Java language is portable
- It executes on a JVM
- On most operating systems
- Write once, run everywhere
- Container brings extra portability
- Deploy an application to different containers

Integration

- External systems
- HTTP and HTTPS
- Web services
- Messaging and connectors
- Heterogeneous systems
- Legacy systems

Clients

- Java ME and Java SE as clients
- Java EE doesn't leverage JavaScript, HTML or CSS
- Describe a web page using the Facelets language
- Reactive, responsive web application
- JSON, HTTP and WebSocket are part of Java EE
- Mobile devices
- Internet of things



Scalability

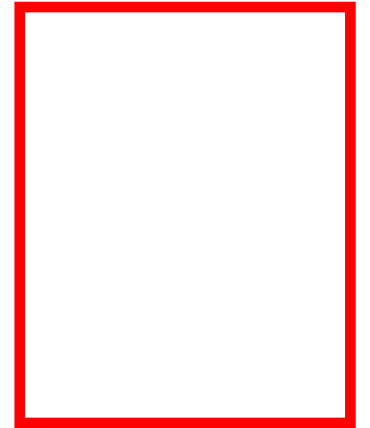
- Distribution
- Load balancing
- Clustering
- Concurrency
- Threads
- Pools

Security

- Sensitive resources
- Authentication
- Principal and roles
- Enforce access controls
- Plug authorization service provider

Big Data

- Gather and maintain huge collections of data
- NoSQL databases
- Machine learning
- Data mining
- Statistics



Extensibility and Modularity

- APIs to build extensions
- 3rd party frameworks can be plugged in
- Plug-and-play
- Modular
- Micro-services

Recap

Business Concerns

Standard

Trendy

Open

Support

Recruiting and Training

Technical Concerns

Portability

Integration

Clients

Scalability

Security

Big Data

Extensibility and Modularity

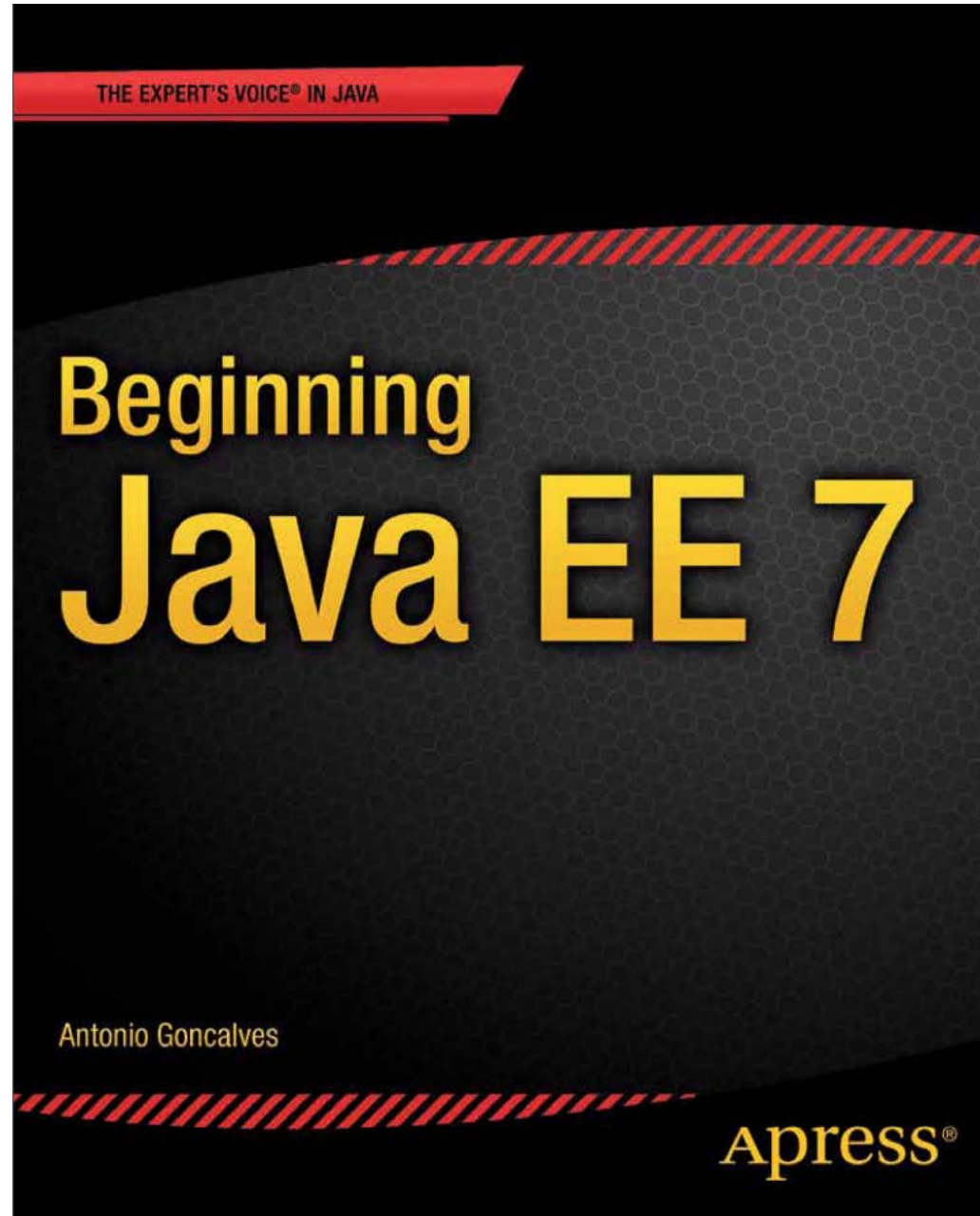
Summary

- The Java Platform and Java EE
- Enterprise application
- Java EE programming model
- Java EE architecture
- Services
- Is Java EE right for your organization?
- Business concerns
- Technical concerns

References

- Java EE 7 specification
 - JSR 342
 - <http://jcp.org/en/jsr/detail?id=342>
- Pluralsight courses
 - Bean Validation
 - Java Persistence API (JPA)
 - Context & Dependency Injection (CDI)

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Java EE: Big Picture



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