Standing at a Crossroads
Oracle ADF and Oracle JET

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Oracle ADF

A **complete** development framework that **simplifies** development of **Java** based enterprise applications focusing on **declarative and visual** development approach
Oracle JET

A modular, enterprise-ready toolkit that simplifies development with a JavaScript/HTML5/REST stack
Toolkit !== Framework
Two Very Different Worlds Unified Common Standards

- JET UI
- Router

Alta

Accessibility

I18n

- ADF Faces
- Controller
- MDS
- ADF BC
- Infrastructure
- OPSS
What to do?
Reality is Often Unburdened by Architecture

- Cutting corners to meet arbitrary management deadlines
- Does it work? Just leave it alone.
- Real World
  - Rewriting Your Front End Every Six Weeks
  - The Definitive Guide
  - O RLY
  - @ThePracticalDev

- Essential
  - Copying and Pasting from Stack Overflow
  - O'REILLY
  - The Practical Developer
  - @ThePracticalDev

- Software can be chaotic, but we make it work

Covers credit to Ben Halpern
@ThePracticalDev

O RLY
@ThePracticalDev
The Architecture Game
Let's Play!

<table>
<thead>
<tr>
<th>Questions</th>
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<tbody>
<tr>
<td>Are most of your skills in JavaScript?</td>
</tr>
<tr>
<td>Are most of your skills in Java?</td>
</tr>
<tr>
<td>Do you need to run on wide range of non-WebLogic platforms?</td>
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<tr>
<td>Do you need to integrate with any page written in any web technology?</td>
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<tr>
<td>Do you need accessibility support (keyboard &amp; screen reader)?</td>
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<tr>
<td>Do you need internationalization and bi-di support?</td>
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<tr>
<td>Do you need declarative security throughout your application?</td>
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Are We Done Yet?

**Questions cont.**

- Do you need centralized monitoring, traceability and incident reporting?
- Do you want a great UI including cool charts and diagrams!
- Do you require API stability over several years?
- Do you require backports and patches to old versions
- Do you need an upgrade safe extensibility framework?
- Do you need ultimate UI flexibility?
- Do you need to run as an on-premises application?
The Architecture Game
## Let's Remind Ourselves of the **Key** Differences

<table>
<thead>
<tr>
<th>JET</th>
<th>ADF</th>
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<tr>
<td>Major release every 6 months, backports only to prev.</td>
<td>Support 5 + 3 + Unlimited, no backport limitations</td>
</tr>
<tr>
<td>No guarantee of API stability</td>
<td>APIs are stable</td>
</tr>
<tr>
<td>Cloud</td>
<td>Cloud or on-Premis</td>
</tr>
<tr>
<td>Code focused</td>
<td>Metadata focused</td>
</tr>
<tr>
<td>Client only solution</td>
<td>Full stack solution</td>
</tr>
<tr>
<td>Can be used &quot;anywhere&quot;</td>
<td>Has to &quot;own&quot; the page</td>
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However, both frameworks can create modern responsive rich UIs for Desktop and Mobile Web that support Oracle standards for accessibility and I18n
- Don't assume you have to go to JET to look "modern"
- Don't assume that JET will automatically be more performant
Can I migrate?
Don't be "That" Developer

We want to .... in a HTML login page designed in OJET. Can we use the jstl tags in the page?

I'm getting a "can't set property of undefined" error – what should I do?

Can I get a backport to Jet 1.0.0?

I'm getting following CORS error ... How can I fix it in JET?
Transactions and Services

• The transaction model is the key mindset change
  – Can your services / data model support a stateless model?
  – Does the user interaction in the application support a stateless model?
  – Don't assume that there will be less browser ↔ server traffic

• Will you need to shape your services for the convenience of the UI?
  – e.g.
    • Paging data sources
    • Pre-computation
    • Attribute reduction
    • Mega-endpoints
Security

- JET / JS based UIs have a broader attack surface
  - Multiple service endpoints to consider as well as the page
- Your cache and all the data in it is now visible
  - What if you need to do calculations across the whole dataset?
- All your UI logic is now visible
- Your model layer will have to be much more robust
  - Are you checking all inputs for SQL-injection or XSS today?
And Don't Forget

• Look at the support policy again!
• Amount of coverage provided by the stack
  – UI only, you still need to provide your service
  – Much more is up to you – e.g. MDS functionality, declarative infrastructure, security etc.
  – There is not UI parity, some ADF features will never make it to JET and visa-versa
Schnecke Chart™ – Should I Be Even Thinking of Migrating?

- On-Premis Deployment
  - Yes: Cross Product modules
  - No: Backwards Compatibility
  - Yes: Declarative Development
  - No: Upgrade safe Extensibility

- Coexist with other Stacks
  - Yes: JET Support Policy OK?
  - No: Need Client Side app?
  - Yes: Start

- JET
  - Start

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"Mixology"

Embedding JET in ADF and other coexistence models
Models of Coexistence

• Service Level Integrations (You need this no matter what)
  – Rethinking your services to support Stateless transactions
    • Payload complexity
    • Current row management
    • User context

• Module Level Separation ✔
  – Different UIs for different use cases
  – Separate entry points, no worries about shared sessions

• In-Module & JET Islands ✗
  – Attempting to mix content in the same module, page or view
Issues With the Island Approach

• No shared session
• Duplicated caches
• No shared transaction
• Separate session timeouts
• Geometry management
• Popups and glasspane
• Incompatible drag and drop
• Library setup and continuing maintenance
Wrap Up

• JET or ADF for brand new projects?
  – Support policy, required environments and skills are key factors

• Migration to JET from ADF?
  – Existing transactional architecture is now the most important consideration

• Integration of JET inside an ADF application?
  – Stick to module level
  – Be super-careful about mixing and matching in-view
But Remember

Don't be blind to the additional implications of using JET

- Overall system design is harder (for traditional Oracle shop)
- Deployment can only reasonably be cloud based
- You still need a model somewhere
- Security becomes a much bigger concern
- Ongoing maintenance costs