Next Generation of On-Premise Business Applications

OpenEdge Advanced Development:
Enhancing Productivity, Agility & Visibility with Progress Corticon BRMS and Progress OpenEdge BPM

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Senior System Engineer
Progress Software
Agenda & Timeline

- Goals, introductions & logistics
- OpenEdge BPM: overview, demo, **hands-on lab** & discussion 60m
- Corticon BRMS: overview, demo & **hands-on lab** & discussion 60m
- Agility in Action: **hands-on lab** 30m
- Closing discussion

[Image of fresh drinks & snacks] Fresh drinks & snacks @ 10:30 & 2:30
Today’s Goals

- Understanding of Corticon & OpenEdge BPM
- Hands on familiarity & experience
- See value of Corticon BRMS and OpenEdge BPM
- Spark some ideas

PLEASE… Interact… Learn… Think of a use case… Experiment…
Introductions

David Atkins, Solutions Engineer, Progress (Massachusetts)

Abhinav Agarwal, Principal OpenEdge-BPM Engineer, Progress India

Suresh Inavolu, Principal OpenEdge-BPM Engineer, Progress India

Jawahar Surapaneni, Senior OpenEdge-BPM QA Engineer, Progress India
BPM and BRMS in “Next-Gen” OpenEdge Reference Architecture
CEO, Owner, Sales Director Must…

Improve Decision Making

Gain greater visibility into business operations, leading to process optimization that was difficult or impossible to previously achieve
Business Analysts Must…

- Quickly innovate and respond to change
- Define and optimize process steps without involving Engineering
- Maintain and validate business rules to meet business objectives
Developers Must…

Implement Systems Faster and Cheaper

Enrich process models, connecting process steps to business logic without complex coding, resulting in fewer mistakes/errors

Deploy and integrate business rules into OpenEdge applications
Drivers for Next Gen Apps

<table>
<thead>
<tr>
<th>Drivers</th>
<th>Requirements</th>
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| Volatility               | ▪ Adapt logic & workflow rapidly  
                            ▪ Simplify customization                                                      |
| Visibility               | ▪ Prove regulatory compliance  
                            ▪ Accessible to business users                                                |
| Empower Business Users   | ▪ Closer to business needs  
                            ▪ Free up ABL resources                                                        |
| Complexity               | ▪ Detect and avoid ambiguity or incompleteness in logic                       |
Scenario for Lab Exercises: Simplified Loan Application Process

Accept -> Acknowledge -> Approve -> Price -> Notify

- Going from:
  - OpenEdge GUI for .NET front end
  - ABL logic for automated loan approval & loan pricing
  - Manual acknowledgements, notifications & approval routing

<table>
<thead>
<tr>
<th>Lab 1</th>
<th>Lab 2</th>
<th>Lab 3</th>
</tr>
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<tbody>
<tr>
<td>Re-use existing ABL approval and pricing logic</td>
<td>Adds business rules for more complex automated loan approval &amp; for loan pricing</td>
<td>Steps through business rule and process change cycles</td>
</tr>
<tr>
<td>Adds web UI option for loan application</td>
<td></td>
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<tr>
<td>Automates acknowledgements, notifications and approval routing</td>
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</tbody>
</table>
Questions and Discussion
OpenEdge BPM enables agile model-driven workflow design and automation, improving consistency and real-time end-to-end visibility.
Roles and Products Usage

Model

Implement

Improve

Monitor
Key Components of OpenEdge BPM

- Process Modeler
- BPM Server
- BPM Portal
- BPM-enabled Progress Developer Studio
- OpenEdge AppServer
- OpenEdge / Other UI
**OpenEdge BPM Incremental Adoption Paths**

| Modeling | Formal unambiguous definition of process  
| Monitoring | Hook apps into processes via BPM APIs  
| Exception Automation | Incrementally add automated work steps to handle exceptional scenarios  
| Full Automation | Gradually remove workflow logic from code  

OpenEdge BPM models and automates both application-level workflows AND the broader business process contexts within which OpenEdge applications participate.
Demo – Building a Simple Business Process
Questions and Discussion
Hands On Workshop: Lab 1 (BPM)
Connect to Your Arcade Instance

- Check email for hostname of your Corticon Workshop Arcade image

- Connect with Remote Desktop client:
  - Username: Administrator (no domain)
  - Password: Exchange2014

- Further details in Workshop Labs document

- Once connected, PDF version of Workshop Labs doc can be found on VM desktop
Exercise 1: Create Loan Approval Business Process Application (45 Minutes)

- Layout process model
- Define data slots
- Assign performers
- Configure adapters
- Deploy process to BP Server
- Test the process application
Review Exercise 1: Create Loan Approval Business Process Application

**Intuitive process modeling UI**
- Accessible to non-technical users
- Productive UI enables rapid process prototyping

**Defined & configured Adapters**
- Similar config approach across all adapters
- Highlights simple OpenEdge integration

**Assigned performers & defined data slots**
- Performer-specific work step config & UI design
- Data slots map to workstep parameters or UI components

**Deploy & test the process**
- Deployment integrated within Progress Developer Studio for OpenEdge
- BPM Portal provides real-time status of process instances
Questions and Discussion
Progress Corticon is software to help make the Right Decision at the Right Time with Business Agility
Automating Business Rules – The Problem

Traditional approach is programming-based

- Simple rules difficult to automate, sophisticated ones impossible
- Single change can impact hundreds of rules/processes

"That change requires 2 years & 5M"

Corticon enables organizations to make better, faster decisions by automating business rules
The Solution: Progress Corticon Business Rules Management System

- Separate decision logic from code
- Empower business users
- Ensure performance & scalability
- Enable fast, safe changes

Model Rules with Integrity

Execute as Open Standards Decision Services

Decision Modelers

Enterprise Data Sources

Apps: OpenEdge / Rollbase / Other

BPM

Enterprise Systems

Decision Consumers
Demo – Build a Simple Decision Service
Corticon Differentiation

Model-driven Development
• Automate rules without coding

Guaranteed Rules Integrity
• Ensure safe changes

Performance & Scalability
• Do more with less

OpenEdge Integration
• Rapid and pain free adoption

Ease of use
Reliable
Fast
Fast
CHALLENGE

- Meridian Health Plan needed to expand healthcare claims processing business into new states and keep up with changing regulations as HIPPA and the Affordable Care Act (“Obamacare”)

SOLUTION

- Use Progress Corticon BRMS to modernize existing OpenEdge architecture

BENEFIT

- Empower healthcare domain expert to manage volatile decision rules outside of the OpenEdge ABL
- Accelerate application customization covering the needs of each customer as well as state/local regulatory schemes
**Guaranteed Rule Integrity Compresses Development Lifecycle**

**Traditional Approach**

Often contains errors and performance issues

Reduce development and change cycles by 90%

**Corticon Approach**

Higher quality, higher performance, agility

* Requires Technical Resource
## NCAA Case Study: Proven Productivity Benefits of Corticon

**Sample ROI Analysis** – Automation of single, decision-making task

<table>
<thead>
<tr>
<th></th>
<th>1st Generation</th>
<th>Corticon</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Initial Development</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analyze</td>
<td>20 hours</td>
<td>20 hours</td>
</tr>
<tr>
<td>Prepare – Design</td>
<td>5 hours</td>
<td>N/A</td>
</tr>
<tr>
<td>Prepare – Implement</td>
<td>200 hours</td>
<td>2 hours</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>225 hours</td>
<td>22 hours</td>
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### Change Cycle

<table>
<thead>
<tr>
<th></th>
<th>1st Generation</th>
<th>Corticon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyze</td>
<td>15 hours</td>
<td>0.5 hours</td>
</tr>
<tr>
<td>Prepare – Design</td>
<td>7 hours</td>
<td>N/A</td>
</tr>
<tr>
<td>Prepare – Implement</td>
<td>28 hours</td>
<td>1.5 hours</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>50 hours</td>
<td>2 hours</td>
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*Per NCAA customer testimonial.

10x Improvement

25x Improvement
Performance & Scalability

- Traditional rule engine algorithm is Rete
  - Scales well with increasing number of rules
  - Degrades exponentially with increasing complexity of data – the “Rete Wall”

- Corticon’s patented DeTi (Design Time) algorithm
  - Scales linearly with number of rules and complexity of data
OpenEdge and Corticon

1. Simple, fast ABL API
   - Simple API hides most invocation complexity & abstracts transport
   - ABL apps can reuse existing metadata as i/o (ProDataSets, Temp Tables)
   - Productivity macros: BR-CONNECT, BR-INVOKE and BR-GETMSG

2. Design-time Meta-data integration
   - Create Corticon vocabulary from existing TempTables and ProDataSets

3. Enterprise Data Connector: dynamic code-free OpenEdge DB integration
   - Enrich request data with dynamic OE DB lookup
   - Add or update data in OE DB direct from Corticon decision service

4. Corticon complements OpenEdge BPM
Why Use Corticon?

- Enables **business domain experts** (as well as IT) to maintain volatile decision logic
- Allows some decisions to be managed in a **separate tier** with a more agile lifecycle
- **Accelerates** development and **reduces** maintenance time
- Frees up valuable OE **resources**
- Improves ease of use through **good visual tooling**
- Integrity checks improve application **quality**
Hands On Workshop:
Lab 2 (BRMS)
Exercise 2: Create Corticon Loan Approval Decision Service (45 minutes)

1. **Create Vocabulary**
2. **Model Business Rules**
3. **Create & Execute Tests**
4. **Deploy Decision Service**
5. **Update ABL to invoke DS**
Review Exercise 2: Model Corticon Decision Service

Create Vocabulary
The business friendly terms that rules are written against

Model Business Rules
No coding, drag & drop, complete validation of business logic

Create & Execute Tests
Real data to see real decision outcomes

Deploy Decision Service
Quickly publish decision to one or more Corticon Servers

Call DS from ABL & BPM
OE Rules ABL API abstracts complexity of underlying protocol and message format needed to invoke Decision Services
Questions and Discussion
Hands On Workshop: Lab 3 (Change)
Exercise 3: Update Business Process & Decision Service (20 Minutes)

- Update existing Rulesheet
- Re-deploy the Decision Service
- Evolve existing Business Process
- Re-deploy the Business Process
- Test updated business process
Review Exercise 3: Update Decision Service

Change in place logic & workflow

- Updates to application logic are governed by rule models
- Updates to workflow are governed by process models
- No need to update ABL code to update app behavior

Hot deploy decision services & processes

- No need to cycle server

Monitor results

- Corticon Server console shows executions for all versions
- OpenEdge-BPM Portal shows changed behavior of updated process instances
Questions and Discussion
What Next?

TODAY

PLEASE… Interact… Learn… Think of a use case… Experiment…

TOMORROW

Brainstorm use cases with your team – and with your Progress team

Experience a demo of Corticon and/or OpenEdge-BPM applied in your context

Evaluate Corticon Studio and/or OpenEdge-BPM (in Progress Dev Studio for OpenEdge)

Build out a proof point use case – it doesn’t take long – and we’ll help!

AND…
Related Breakout Sessions

Consider attending these breakouts to find out more about Corticon & OpenEdge BPM:

**Corticon BRMS**

**Wed@11:00**: “Progress® Corticon®—Understanding Business Rules and When to Use Them” (Mark Allen, Progress)

**Wed@2:45**: “Customizing Your Application, NO PROBLEM!” (Carole Miller, Progress)

**OpenEdge BPM**

**Tue@4:15**: “What’s New in OpenEdge BPM 11.4” (Suresh Inavolu, Progress)

**Both**

**Tue@11:00**: “Modern Business Application Development” (Peter Judge, Progress)

**Tue@2:45**: “Using OpenEdge, Corticon, Rollbase and Node.js to Create a Dynamic, Rule- and Model-Driven Web-UI text” (Mike Liewehr, Akioma)

**Wed@1:30**: “Corticon Integration with OpenEdge & BPM (OpenEdge-Corticon-BPM)” (Jawahar Surapaneni, Progress)
To Learn More…

Evaluate Corticon & OpenEdge BPM

Evaluate Corticon & OpenEdge BPM

Watch Corticon & OpenEdge-BPM in Action on YouTube

http://www.youtube.com/user/ProgressSW

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