Program agenda

1. Overview of Oracle Policy Automation
2. New features in 18B release
3. For more information
Safe Harbor Statement

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle’s products remains at the sole discretion of Oracle.
Program agenda

1. Overview of Oracle Policy Automation
2. New features in 18B release
3. For more information
Modern service delivery requires many types of policies
Customers expect simple, accurate and personalized advice
Smarter Advice

Personalized
Agile
Transparent
Mission 1: Provide Personalized Experiences

Directly answer the individual’s question
With OPA you can

Tailor customer experiences with contextualized, personalized, immediate advice
Mission 2: Provide Agility

Quick to create

Easy to deploy across all channels
With OPA you can

Author rules in natural language using familiar tools
Write once deploy across multiple languages and channels
Mission 3: Provide Transparency
See how decisions were made and policies applied
With OPA you can

**Empower** business users to write and review rules

**Instantly** explain every decision
Oracle Policy Automation overview

Oracle Policy Automation Cloud Service

- Mobile
- Interviews
- Analytics
- Modeling
- APIs
- Connectors

Other cloud applications

On-premises applications
Oracle CX
Complete customer experience platform
Program Agenda

1. Overview of Oracle Policy Automation
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Highlights of Policy Automation 18B release

✓ Integration Cloud Service OPA assessment adapter
   Integrate consistent decisions with any application

✓ Embeddable JavaScript models
   Distribute maintainable logic to any device

✓ Inline Customer Portal interview widget
   Simplified seamless advice in portal experiences

✓ Session-based REST API licensing
   Use REST API even if only licensed for Tier 3 sessions
Integrate consistent decisions with any application
18B: Integration Cloud Service OPA Assessment Adapter

Event occurs in CX application
e.g. a medical device problem is reported

ICS integration is triggered

ICS invokes OPA to find out what to do
with this particular type of incident

OPA sends response, and rest of integration
performs any necessary actions –
e.g. save decision, invoke another process,
push data to multiple applications

CAPABILITY HIGHLIGHTS

- **OPA adapter** available in ICS to allow OPA
decision assessments to be invoked at any point
in an ICS integration

KEY BENEFITS

- **Easily incorporate decision logic** into any
application workflow, while centrally
maintaining the rules in a transparent, central,
and auditable fashion

- **Load and save with multiple applications**
simply by using ICS ability to connect to
anything – no need to build a custom connector

- **Standardize on OPA** for managing logic that
needs to be shared across applications
Distribute maintainable logic to any device

18B: Embeddable JavaScript models

**CAPABILITY HIGHLIGHTS**

- Obtain a distributable JavaScript package for any deployed policy model, that combines OPA engine with an embedded copy of the rules

- **License by deployment** for distribution to any number of IoT devices, mobile app HTML pages, and more

- Perform assessments on the device via the documented API, even without an OPA Hub or Internet connection

**KEY BENEFITS**

- Maintain and deploy the same business logic across multiple online and offline assessment scenarios

- Cost effective licensing for widespread distribution on IoT devices and for ultra-high-volume micro-calculations in browser-based interfaces

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**Web-sites** – Smart logic snippets, e.g. for low latency, high volume home loan calculators

**Things** – On-device rules. E.g. smart and auditable error escalation.

**Mobile devices** – Consistent logic for consumer-facing native apps. E.g. banking, retail, travel, loyalty.
Simplified seamless advice in portal experiences

18B: Inline Customer Portal interview widget

CAPABILITY HIGHLIGHTS

- Display latest version interviews inline in customer portal, without an iframe, allowing them to resize to the available screen real estate
- Control exact look and feel of each OPA interview, without styles accidentally bleeding through from the containing page

KEY BENEFITS

- Simplify responsive screen design for OPA interviews shown within knowledge articles, or any other Customer Portal page
- Confidently deploy OPA interviews in any interface without any unexpected visual side effects from the Customer Portal style sheet
Use REST API even if only licensed for Tier 3 sessions

**18B: Session-based REST API licensing**

### CAPABILITY HIGHLIGHTS

- **Call the Assess REST API** if licensed for Oracle RightNow Universal Policy Automation Tier 3 sessions, even if not also licensed for Oracle Policy Automation Enterprise Assessment API.
- **Pass one assessment at a time**, and be billed for one session for each – note that decision reporting is not currently available with the REST API.

### KEY BENEFITS

- **Use the API that is most convenient**, i.e. SOAP and REST are available and billed the same way.
- **Avoid unexpected session usage**: each call can only consume a single session, and is limited to a single assessment.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Tier 3 Sessions</th>
<th>Enterprise Assessment API</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess and Answer SOAP APIs</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>1 session per call</td>
<td>1 assessment per call</td>
</tr>
<tr>
<td>“Batch” Assess REST API</td>
<td>Yes – <strong>New!</strong></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>1 session per call</td>
<td>1 assessment per case</td>
</tr>
<tr>
<td></td>
<td><em>Max 1 case per call</em></td>
<td><em>Any number of cases per call</em></td>
</tr>
<tr>
<td>Interactive Web Interviews</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Quantity</td>
<td>Up to purchased # of sessions per month</td>
<td>In bundles of 1M assessments per month</td>
</tr>
</tbody>
</table>
Feature Deep Dive
Integration Cloud Service assessment adapter
ICS assessment adapter – Overview
Integrate consistent decisions with any application

- OPA Adapter in the Integration Cloud Service catalog
- Use OPA in any ICS integration
  - Calculate updated values in response to events
  - Make decisions in scheduled batch
  - Map data in or out of multiple applications
- Works with any OPA policy model deployed as a web service
ICS assessment adapter – Example Use Cases

Use OPA decisions in any enterprise application

- Useful in any industry and with any application
  - Auto-triage incidents to ensure SLAs are met
  - Calculate benefit payment using data stored in legacy system
  - Recalculate leave entitlement when regulations change
  - Calculate complex sales commissions

- Cloud Applications
- Public Sector
- Manufacturing
- Customer Experience
- Retail
- Financial Services
- Human Capital Management
- Enterprise Resource Planning
- Oracle or other Applications
- Legacy Systems
- High Technology
- Low Technology
- Financial Services
- Retail
- Public Sector
- Low Technology
- Enterprise Resource Planning
- Legacy Systems
- Oracle or other Applications

18B
ICS assessment adapter – OPA Configuration
Set up a standard API client for incoming calls from ICS to OPA

✓ Setup OPA credentials for ICS adapter to use
  • Create an API client
  • Choose an ID and Secret
  • Select Determinations API role
ICS assessment adapter – Connect to OPA
Create an OPA site connection using OPA adapter

- Create connection to any OPA site
  - Use Oracle Policy Automation adapter included in ICS catalog
  - Fill in credential information
- Available from ICS 18.2.3
ICS assessment adapter – Author policy model

Develop and design policy model just like for Assess REST API

- The OPA ICS adapter uses OPA’s Assess REST API

- Provide a “name” for attributes to be available for mapping in ICS
  - Tip: To calculate updates to data fields using OPA, use separate attributes for input vs. output
ICS assessment adapter – Deploy policy model

Deploy just like any other policy model, with web services enabled

- Deploy the policy model with an appropriate name
- In OPA Hub, ensure the “Web Service” channel is selected
ICS assessment adapter – Integrate

Add OPA as an invoke operation in any integration transition

- Add OPA invoke to integration
  - Drag connection into the flow
- Choose policy model
  - Only deployments with the “web services” channel enabled are shown in the drop down list
ICS assessment adapter – Input Mapping
Map in data for one or multiple cases in each invocation

Map data into *cases* element
- Map fields onto attributes
- Supports multiple cases
- Entities and relationships are also fully supported

Must specify list of outcomes
- Only the requested outcome attributes are returned
- Can define outcomes statically, or dynamically in integration

Map in input to OPA, and choose outcomes
ICS assessment adapter – Output Mapping

Return data for all chosen outcomes, for each case

✓ Map data out of cases element
  • Only outcome attributes chosen on input will contain data values on output
  • The mapped out values will be populated for every case
  • For attributes that belong to entity instances, the values are returned for every entity instance

Map out results from OPA
Feature Deep Dive

Embeddable models
Embeddable Models – Overview

Distribute maintainable logic to any device

**Web-sites** – Smart logic snippets, e.g. for low latency, high volume home loan calculators

**Processes** – Embedded within server-side applications, e.g. for high volume transaction processing

**Things** – On-device rules. E.g. smart and auditable error escalation.

**Mobile devices** – Consistent logic for consumer-facing native apps. E.g. banking, retail, travel, loyalty.

- Deploy rules managed in OPA to anywhere that can run JavaScript
- No limits on usage once the rules are distributed
- High performance self-contained JavaScript engine
  - The rules are bundled in with the actual JavaScript engine
- For calculations only – not interviews or audit reports
Embeddable Models – Create

Same rule language as for other deployment styles, but some restrictions

- Design policy models as usual in Oracle Policy Modeling
- Some rule language features are not supported
  - Temporal reasoning
  - Inferred entities and relationships
  - Client timezone
  - Rule loops
- Place “names” on all attributes that will be passed in or out
Embeddable Models – Deploy

Embeddable models are just another deployment channel

- Deploy policy model to OPA Hub
- Turn on JavaScript as deployment channel
- An error is shown if the policy model uses features not supported by JavaScript engine
Embeddable Models – Distribute

Obtain JavaScript model directly from Hub, and distribute as needed

- Download JavaScript model from OPA Hub URL
- Distribute anywhere
  - Mobile device
  - IoT device
  - Node.js server
  - Any web page
Embeddable Models – Use
Simple API to pass data to rules and get decisions

- Perform calculations without any OPA server roundtrip
- Fast performance using native JavaScript engine
- Decisions only, does not include
  - Interview screens or flows
  - Decision reports or explanations
  - Form generation
  - Connections to other applications

```html
<body>

<script>
var data = {
    data.isCitizen = true;
    data.monthsUnemployed = 6;
    data.children = [
        { childName: "alice", childAge: 10 },
        { childName: "bob", childAge: 15 },
        { childName: "claire", childAge: 17 }
    ],
    data.dateOfBirth = run_BenefitsAssess.yml(1950, 12, 31);
    var isEligible = run_BenefitAssess(data).isEligible;
</script>

... 
</body>
```
Embeddable Models – Licensing
Licensed per embeddable model

- Each model can be distributed as widely as needed
- No monitoring of the embeddable model once distributed
- Up to customer to distribute and maintain the model
  - Update to new policy model versions as often as needed
  - No Oracle support for models once they are distributed

Need to be licensed for three embeddable models to have these all enabled as JavaScript
Other Enhancements
Cookie-less interviews
Confidently use inline interviews everywhere

Latest version interviews no longer require browser cookies
- Same high performance
- Same scalability

Browser security settings can no longer stop interviews working
- Even if cookies are rejected by the browser, OPA interviews still work
- In particular this means that many Safari versions are fully supported that previously were not

Embed any OPA interview, from any OPA site.
Matching hostname not required. (CORS still applies)
New inline interview API version

Improved upgrade safety for embeddable interviews

```<script>
var el = document.getElementById("interviewDiv");
var webDeterminationsUrl = "https://xxxx.custhelp.com/web-determinations";
var deploymentName = "MyAdvisor";
OraclePolicyAutomationInterview.
    StartInterview(el, webDeterminationsUrl, deploymentName);
</script>
```

✓ New object name: `OraclePolicyAutomationInterview`

✓ Same methods as before
  - `StartInterview`, `ResumeInterview`, `BatchStartOrResume`

• Enforces **all** interview element styles
  • Styles won’t inherit from parent stylesheet (accidentally or deliberately!)
  • Use interview extensions to modify appearance

✓ `OraclePolicyAutomationEmbedded` behaviour is unchanged
  • This API is now deprecated – recommendation is to move to new version as soon as feasible
Support for relationship control interview extensions

Provide custom selection experiences when choosing related items

<table>
<thead>
<tr>
<th>Method</th>
<th>Applies to</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>getDataType()</td>
<td>inputs</td>
<td>Return the data type of the control. For controls collecting attributes this will be one of &quot;boolean&quot;, &quot;text&quot;, &quot;number&quot;, &quot;currency&quot;, &quot;date&quot;, &quot;datetime&quot; or &quot;time of day&quot;. For controls collecting relationships this will be one of &quot;OneToOne&quot;, &quot;OneToMany&quot;, &quot;ManyToOne&quot;, &quot;ManyToMany&quot;.</td>
</tr>
<tr>
<td>getOptions()</td>
<td>inputs</td>
<td>Returns an array of options for the control if the authored control is a list of values. Each option is an object that has text (display text), value (underlying value), and also checkedImage and uncheckedImage URIs (null if no image present). For relationships this list will represent the set of target entity instances that can be selected from.</td>
</tr>
</tbody>
</table>

☑ Relationship types are now available data types for interview control extensions
- OneToOne, OneToMany, ManyToOne, ManyToMany

☑ The options list consists of the identifier and label of each related entity instance
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Where to get more information

OPA Generally

Documentation

News, Discussion and Updates
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Integrated Cloud
Applications & Platform Services