Oracle Policy Automation
The modern enterprise advice platform

Release 17D features and benefits
(November 2017)

v1.01
Program agenda

1. Overview of Oracle Policy Automation
2. New features in 17D release
3. For more information
Program agenda

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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.
Modern service delivery requires many types of policies

- Service and Advice Rules
- Organizational Best Practices
- Regulations
- Legislation
- Government Policies
- Product Decisions and Eligibility Rules
Customers expect simple, accurate and personalized advice
Personalized experiences that directly answer the customer’s question
With Policy Automation you can

Tailor customer experiences with contextualized, personalized immediate advice
Seamless advice
across every channel
across your organization
With Policy Automation you can

Deploy the same advice through any channel

Seamlessly connect to existing applications
Immediate responses to customer enquiries, changing business requirements and regulators
With Policy Automation you can

Empower business users to write 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

Integrated Customer Experience Foundation
- Social Network
- Mobile
- Analytic KPIs & Dashboards
- Predictive Analytics
- Integrations
Program Agenda

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Highlights of Policy Automation 17D release

✓ Dynamic reference data loading
   Provide up to date advice as catalog items change

✓ Engagement Cloud interview styling
   Easily deliver a consistent application experience

✓ Identity Cloud Service integration
   Standardize management of OPA Hub users
Provide up to date advice as catalog items change
17D: Dynamic Reference Data Loading

**CAPABILITY HIGHLIGHTS**

- **Load any additional data** from Service Cloud or the connected application, even if unrelated to the contact, opportunity etc. for the interview
- **Define conditions** for which reference data items to load, using filters and rules
- **Data is retrieved automatically** during an interview session, as soon as conditions are met

**KEY BENEFITS**

- **Ensure great performance** for interviews that need to load data dynamically from a large set of reference data such as orders or products
- **Maintain a single source of truth** for product catalogs, so that up to date guidance to the most suitable products is always provided
Easily deliver a consistent application experience

17D: Engagement Cloud Interview Styling

**CAPABILITY HIGHLIGHTS**

- **Choose an interview theme** that matches the default Engagement Cloud look and feel, and update as needed to match actual Engagement Cloud theme configuration.

- **Tailor any interview** with new features to change the appearance of buttons, put buttons inline with navigation bar, move question text beside the control, and more.

**KEY BENEFITS**

- **Provide a consistent look and feel** for OPA interviews that are used with Sales and Engagement Cloud.

- **Adopt compact layouts** that work responsively on both mobile and desktop screens.
Standardize management of OPA Hub users

17D: Identity Cloud Service Integration

CAPABILITY HIGHLIGHTS

- Centrally administer OPA Hub user lifecycle through a linked IDCS tenancy
- Provide Single Sign-On for OPA Hub users - including authoring, administration, mobile and API user roles
- Fine-grained permissions are still managed within OPA Hub administration experience

KEY BENEFITS

- Easily synchronize employee access to OPA hub with their onboarding and offboarding lifecycle
- Simplify management of OPA user access, particularly for large user populations such as mobile field agents, and with other Oracle cloud applications

**Identity Cloud Service**

- Authorize OPA access
- Revoke OPA access

**OPA Hub**

- Manage OPA roles
- Set access permissions

Automatic user sync

Single sign-on
Feature Deep Dive

Dynamic reference data loading
Dynamic reference data loading – Overview

Provide up to date advice as catalog items change

- Load data during an interview
  - Data is retrieved on demand only when it is needed by rules in the project
- Map in from any application objects
  - Pull in reference data from product catalogs, sales history or anywhere else even if unrelated to other mapped in data
- Filter loaded data based on user input
- Debug and run test cases when offline
  - Define sample data in Excel for testing rules in Policy Modeling
Dynamic reference data loading – Mapping

Use any connection data to help inform decisions and advice

- Use the same connection as for data loaded at the start of the interview
- Map in any application object
  - All fields on the object are available
  - Loads all instances of the object up to the specified limit
- Also map in related child objects
  - E.g. product detail under sales orders
  - All reference data is read-only – updates are not supported
Dynamic reference data loading – Filtering
Load only data that is needed at current point in the interview

- Specify what to load based on user input or other interview data
  - Reference data is automatically loaded only when it is actually needed
  - Data caching ensures good performance
  - 100% compatible with dynamic interviews

- Maximum rows returned is limited
  - Limit is required, but can be changed
  - Default limit is 20

Select items from the list below:

<table>
<thead>
<tr>
<th>Amount</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
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<td>$0.00</td>
<td>$73.00</td>
<td>$1,245.00</td>
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<tr>
<td>$500.00</td>
<td>$500.00</td>
<td>$2,000.00</td>
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</tbody>
</table>

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<td>$75.00</td>
</tr>
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<td>$500.00</td>
<td>$500.00</td>
<td>$2,000.00</td>
</tr>
</tbody>
</table>

Example items:
- 11/03/2017 $599.99 Electronics Home Theatre Package with DVD-Audio/Video Play
- 16/03/2017 $1,232.16 Photo SMP Telephoto Digital Camera
- 10/02/2017 $73.43 Peripherals and Accessories Multimedia speakers - 3" cones
Dynamic reference data loading – Filter syntax

Describe what data to load in a business-friendly language

- Design time assistance is provided
  - Similar rule syntax to OPA rules
  - Use any field from the chosen application object, even if the field is not mapped in

- Simple query language
  - Perform comparisons with constants or with OPA attributes
  - Functions usable on data fields are Not, IsNull, StartsWith, Contains and EndsWith
  - Single table only (no joins/relationships)
Dynamic reference data loading – Offline testing
Run test cases and debug rules even when not connected

- Debug rules and screens while offline
  - “Dynamic” data is actually loaded from static data provided in the project
  - Allows rule and interview logic to be debugged without deploying the project
  - Tip: interview screens must be submitted before “loaded” data visible on Data tab

- Create consistent test cases for rules
  - Test cases also load static data as needed
  - Ensures that rules that rely on dynamic data are still being tested across a variety of expected values
Dynamic reference data loading – Testing data
Define static data to be used for debugging and running test cases

- Manage sample data in Excel
  - Create sample data file automatically from Policy Modeling Testing tab
  - Manually enter rows of data in each sheet
  - Use keys to associate records together
  - (Uncertain) and (unknown) are also permitted, as in test cases

- Keep data in sync with mapping
  - Mapped in columns added automatically whenever workbook is opened
  - Validate to identify any errors in each cell with a comment, as with test case results
Dynamic reference data loading – How it works

Ensure highly responsive experiences even when data loads dynamically

- Just like other rule logic, data queries are only executed when required
  - If a screen needs to show loaded data
  - If loaded data is needed to reach an answer to display, or to decide which screen to show next

- Other performance features
  - Results are cached
  - Queries are reissued only if filter conditions change (e.g. user updates an answer) and no matching result in cache
Dynamic reference data loading – Connector support

Use with Service Cloud out of the box, with other applications when updated

- Service Cloud is fully supported
  - All objects and fields can be mapped in
  - All filtering features supported
- For other applications, implement new 12.2.9 WSDL (see left)
  1. QueryRequest action, including filter:
     - And, or, =, <, <=, >, >=, StartsWith, Contains, EndsWith, IsNull, IsNotNull
  2. Use not-queryable flag for any tables and fields that must not be queried
Feature Deep Dive
Engagement cloud interview styling
Engagement cloud interview styling – Overview

Easily provide a consistent experience with Fusion CRM

- Easily apply engagement cloud theme
  - Matches the default sales and engagement cloud look and feel
  - Update interview styles as needed

- Adopt compact layouts
  - Labels beside controls
  - Back / next in navigation strip
  - Highlight required fields
Engagement cloud interview styling – Navigation strip

Provide compact navigation strip style

- Use compact Engagement Cloud themed navigation
  - “Thermometer” fills in with progress
  - Back and next buttons at ends of strip
  - Exit and restart also in strip, if present
Engagement cloud interview styling – Controls

Place question text beside input controls

Interview styles:

- **Question position:** Beside
- **Question width:** 150

Screen and container settings:

- **Choose position of control text**
  - Engagement cloud theme defaults to putting text beside each input control
  - Override this placement at the screen level and at the container level
  - Also set the question text width at the interview, screen and container level

- **Optionally highlight required fields that are skipped**
  - Provides subtle feedback before screen is submitted or error is shown
Engagement cloud interview styling – Buttons
Match button styles to any Engagement Cloud theme

- Flexible button styles to match any configured Engagement cloud theme
  - Button size – large or small
  - Border color
  - Gradient fill – start and end color
  - Active color – for feedback while button is pushed
  - Buttons now automatically highlight on mouse over

Gradient fill | Mouse over | While clicking
Feature Deep Dive
Identity Cloud Service integration
Identity Cloud Service integration – Overview

Standardize management of OPA Hub users

- Connect OPA site to an IDCS tenancy
  - Turn on IDCS integration any time after OPA site is provisioned

- Manage Hub user lifecycle from IDCS
  - Grant or revoke access to OPA application
  - Users are auto-provisioned in OPA Hub for permission assignment
  - **Note:** Does not apply to interview users

- Supports API integrations
  - Continue with existing hub API clients
  - Manage OAUTH API clients in IDCS
Identity Cloud Service integration – Connecting

All integration is handled through a single OPA application in IDCS

- OPA application in IDCS catalog
- “Cookbook” in IDCS documentation
- Outline of steps involved:

1. Create OPA application in IDCS
2. Configure OPA to use that application
3. Create API Client for provisioning (in both IDCS and OPA)
4. Configure IDCS OPA application to use that API client for provisioning
Identity Cloud Service integration – OPA Configuration

Turn on IDCS as identity provider for any OPA site

✔ Easily connect OPA to IDCS
  • On OPA Hub Permissions tab, choose Identity Management Settings
  • Choose to use IDCS as identity provider, and supply credentials for new admin
  • If credentials are valid for the chosen IDCS tenancy, that user is given Hub admin role and Hub is now in IDCS authorization mode
  • If credentials are not valid, the Hub is left unchanged

✔ Can also revert to OPA native mode
Identity Cloud Service integration – User lifecycle
Automate provisioning of OPA Hub users by managing them in IDCS

Built-in provisioning from IDCS to OPA
- Assign users to OPA application in IDCS to automatically add them to OPA Hub
- If OPA application access is revoked, user is also removed as an OPA Hub user

Manage permissions in OPA Hub
- No change here – users are assigned roles and collection access in OPA Hub by any user with OPA Hub administrator role
- Can also use OPA Hub Users REST API to automate specific entitlements

Fred Smith is assigned to the OPA application in IDCS
So his login automatically appears in OPA Hub
Identity Cloud Service integration – Login experience
Seamless single sign on for all interactive OPA Hub and OPA Mobile users

- Single sign on uses the IDCS login page
  - Any user that attempts to access an OPA Hub URL is redirected through IDCS
  - If valid IDCS login session already exists, user is logged in automatically to OPA Hub without being prompted to login
  - Otherwise they are prompted to login via IDCS standard login screen
  - Once logged in, the requested OPA Hub page is shown
Identity Cloud Service integration – API Clients

Two ways to authorize direct callers of OPA APIs

1. Local API clients
   - Formerly called Integration clients
   - ID/secret (formerly username/password) is managed only in OPA Hub
   - Continue to work when an OPA site is switched to IDCS authorization mode

2. IDCS API clients
   - Create application client in IDCS
   - Add corresponding client in any connected OPA Hub
   - Must obtain OAUTH2 token from IDCS, then pass in any API calls (SOAP or REST)
Identity Cloud Service integration – Mashup applications

Interactive users can also call OPA APIs, in the context of authorized apps

- No change for non-IDCS managed sites
  - Users can call APIs directly, if given the Determinations API role

- Secure mashups with IDCS authorized OPA sites
  - Hub users cannot call APIs directly
  - Determinations API role is not available
  - Instead, grant the application calling OPA APIs access to the OPA API Resources
  - Users can call APIs that the application and their OPA Hub permissions allow
Other Enhancements
## Other enhancements

### Interview Modeling
- Configure submitted form name and location
- Easily debug generated forms
- Round-trip test case debugging
- Provide names for screen layout containers
- Collect global / parent data on entity screens

### Interview Experience
- Change language during an interview
- Show icons for optional questions

### Interview Integration
- Set attribute values in resume URL
- Seed entity level data via startsession URL

### Hub
- Set default channels for any collection

### Rule Modeling
- If and Default rule functions
- Faster migration of Word documents from 10.4
Configure submitted form name and location
Simplify finding and identifying generated forms in connected applications

- Configure generated form name
  - Change the name of the attachment per session, with substitution
  - Optionally override the default signature attachment name

- Save attachments to any entity
  - For non-global entities, a copy of the attachment appears on each entity where *Attach if* condition is true
  - E.g. if multiple opportunities are created, a summary document could be generated and added to each one
Easily debug generated forms

Ensure the correct appearance and behaviour of generated documents

- Understand which forms will be attached on submit
  - See the list of forms that would be submitted for the debug session
  - For forms with *Attach if* conditions, easily debug that condition

- Preview generated forms directly from debugger
  - Simply click a link to generate any form for the current debug session
Round-trip test case debugging
Update existing test cases directly from the Debugger

- Navigate from a test case to the debugger and back again
  - See which test case is being debugged, if Policy Modeling Debugger was launched from a testing document
  - Navigate to where a test case value is defined while debugging: simply right click an attribute and choose View in Testing Document
Provide names for screen layout containers
Simplify maintenance of nested interview layouts

Use meaningful container names to explain their purpose

- Click in any container in the screen tree view to edit its name
- Provide descriptive names to remind yourself and others of how they contribute to the screen layout
Collect global/parent data on entity screens

Easily update certain data on every screen of an interview

- Collect data for global and parent entities on multiple screens
  - E.g. update product choices, or add to a global notes field
  - Can update data previously collected
  - **Tip:** Must ensure the first input on the screen is child entity data

- Use interview extensions to further configure layout
Change language during an interview
Connect with the user in their preferred language at all times

Design time:

Interview experience:

✓ Start in one language, continue in another
  • Change language option can be shown in Header, Footer, or both
  • Configure which icon to show

✓ Works with interview extensions
  • Use APIs to list available languages, and change to a different language
  • Allows any extension on the interview page to change the current interview language
Show icons for optional questions
Easily indicate which questions are optional

- Use an icon to indicate questions that are optional
  - When optional questions are less frequent than mandatory ones, a visual indicator of only the optional questions simplifies the interview experience
Set attribute values in resume URL

Trigger reviews or other special behaviour when an interview is resumed

✓ Trigger particular behavior when an interview is resumed
  • Provide the value of one or more global attributes in the resume URL in JSON format
  • For example, if an interview is being resumed more than 14 days after it was started, require the interview user to reconfirm provided answers

http://mysite.com/web-determinations/resumesession/KYC/?seedData={session_date:"2017-08-15"}

(JSON in URL shown non-encoded, for clarity)
Seed entity level data via startsession URL

Pre-populate entity collections or provide some dynamic reference data

Provide entity level data to an interview when it is launched

- Provide values for attributes in one or more entity instances
- Can set values on inferred entities if identifying attribute is provided
- Can pre-populate some or all data for entities that will be collected
- Or use for reference data that can change between interview sessions – e.g. exchange rates
- Limited by the maximum URL length

http://mysite.com/web-determinations/startsession/
HealthyEating?seedData={children:[{child_name:"alfred", child_servings_fruit:"3"},{child_name: "bob", child_servings_veg:"2"}]}

(JSON in URL shown non-encoded, for clarity)
If rule function

Simplify rules that use nested conditions

Without If():

**the family is having a good day if**

ForAll (the family members, the family member is having a good day)

**the family member is having a good day if**

both

- the family member is an adult and
- the family member has money

or

- the family is not an adult and
- the family member has ice cream

With If():

**the family is having a good day if**

ForAll (the family members, If (the family member is an adult, If (the family member has money, the family member has ice cream))
Default rule functions
Simplify rules that use nested conditions

Without Default():

```
the person's income = the person's income from wages + the person's other income

the person's income from wages

the person's entered income from wages | the person's entered income from wages is certain
0 | otherwise

the person's other income

the person's entered other income | the person's entered other income is certain
0 | otherwise
```

With Default():

```
the person's income = Default(the person's income from wages, 0) + Default(the person's other income, 0)
```

✅ Use Default() function to replace *uncertain* with a specific value
   - Good for interviews where answers were skipped, and for APIs where mapped in data is missing

✅ Use DefaultWithUnknown() to replace *uncertain* and *unknown*
   - Good for interviews where some questions may never be asked, and for APIs where no mapping is in use
   - Use with caution, since additional data can cause decisions to change
Set default channels for any collection

Eliminate unnecessary post-deployment configuration steps

- Ensure new deployments are available on the right channels
  - Deploying from Policy Modeling uses default channels for target collection

- Prevent channels on existing deployments from being changed
  - Lock channels for a collection if no others should ever be used
  - If not locked, project admins can change channels for the deployment in OPA Hub
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Where to get more information

Oracle Policy Automation

Overview on Oracle Technology Network
Documentation Library (latest version)
Community Forum

Oracle Service Cloud

Overview at oracle.com
User Guide
Community Forum
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