Oracle Application Express API Primer

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Speaker Qualifications:

- Josh Millinger, President, Niantic Systems, LLC
- CS degrees from UW-Madison, Johns Hopkins
- Former Oracle Sales Consultant and Founder of the Oracle Partner Technology Center
- 11+ Years of Oracle Web Development Experience
- Have Been Developing with and Teaching ApEx Since Well Before It Was Even Released as a Product! Started with Excel Migration as first project

Niantic Systems

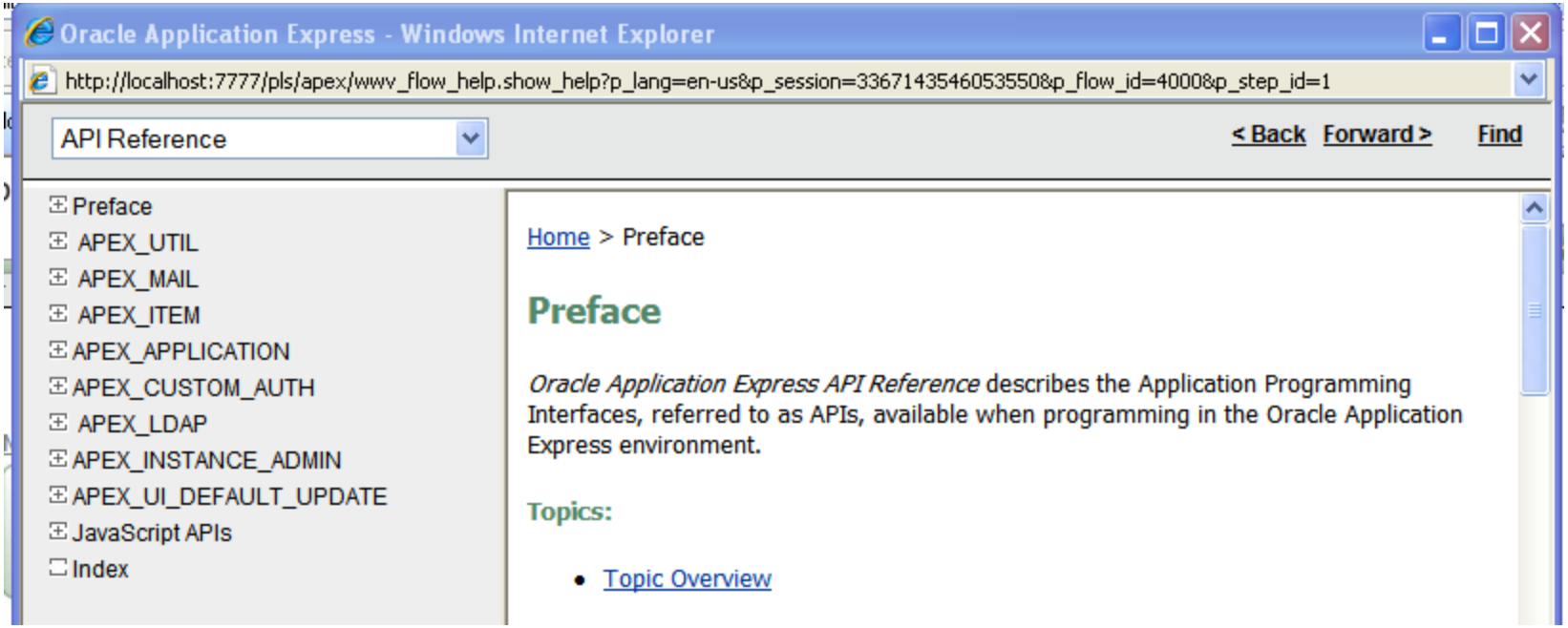
- Oracle Consulting with a Focus on Application Express
- Application Express Training
- Oracle Forms/Reports
- Discoverer
- Mentoring
- Customers in the Federal, Commercial, Healthcare, Higher Education, Construction verticals

Apex APIs

- Application Programming Interfaces (API)
  - provide built-in functionality that has been QA'd by Oracle
  - Allow for quicker development as you don't have to "roll your own"
  - Provide compatibility if underlying Apex structures change

Documentation?

- Documentation location changed in 3.2
  - Now found under API Reference



APIs

- **APEX_UTIL**
- **APEX_MAIL**
- **APEX_ITEM**
- APEX_APPLICATION
- APEX_CUSTOM_AUTH
- APEX_LDAP
- APEX_INSTANCE_ADMIN
- APEX_UI_DEFAULT_UPDATE

APEX_UTIL

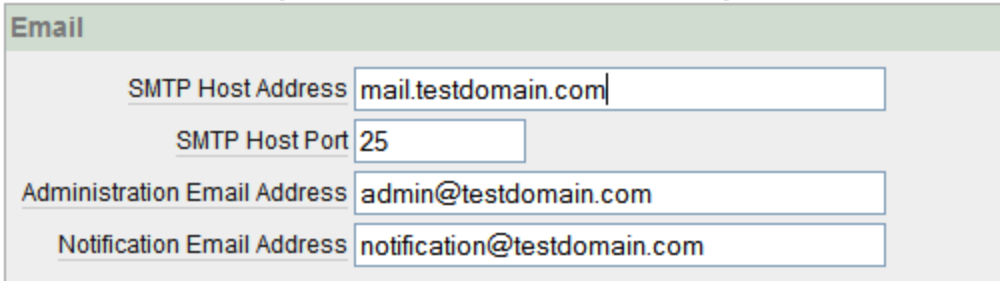
- PREPARE_URL
  - When using Session State Protection you must “prepare” any hand coded URL so the appropriate checksum will be created
- SET_SESSION_STATE
  - Allows programmatic setting of session state’
- GET_SESSION_STATE
  - Synonym ‘V’
- RESET_AUTHORIZATIONS
  - Ensure that Authorizations are re-calculated the next time they are referenced

APEX_UTIL

- REMOVE_SORT_PREFENCES
- PURGE_REGIONS_BY..
- URL_ENCODE
  - Useful for when you have to create links. It will change the URL's to be able to be read by a browser
- STRING_TO_TABLE
- TABLE_TO_STRING

APEX_MAIL

- SEND
  - To, From, Subject, Text Body, HTML Body
- ADD_ATTACHMENT
  - Can be called repeatedly
- PUSH_QUEUE
  - Sends emails to SMTP Server
- APEX_MAIL_ATTACHMENTS View
- Need to have SMTP_SERVER setup in Internal Workspace



- *Usually better practice to maintain own mail queue*

APEX_ITEM

- Allows for dynamic creation of form items
- Mainly used for manual Tabular Forms
- Every item will have unique ID
- Common ones used are
  - Checkbox
  - Hidden
  - Text
  - Select_list_from_LOV

APEX_ITEM

- Hidden Items
  - Are usually appended to other items
  - Contain primary key of record

```
select apex_item.hidden(1,userid) ||
apex_item.text(2,name)
from my_users
```

- Should also use MD5_CHECKSUM function for protecting against lost updates

APEX_APPLICATION

- Used most commonly when processing arrays after Tabular Forms
- Can also reference package variables
  - View WWV_FLOW in the install schema to view what is available

```
FOR i IN 1.. APEX_APPLICATION.G_F01.COUNT LOOP
    htp.p('element '||I||' has a value of '||APEX_APPLICATION.G_F01(i));
END LOOP;
```

APEX_CUSTOM_AUTH

- IS_SESSION_VALID
  - Checks to see whether user is in a valid Apex session. Commonly used for generic download procedures
- LOGOUT
- LOGIN

```
BEGIN
APEX_CUSTOM_AUTH.LOGIN (
    p_uname          => 'FRANK',
    p_password       => 'secret99',
    p_session_id     => V('APP_SESSION'),
    p_app_page       => :APP_ID||':1');
END;
```

APEX_LDAP

- Large percentage of customers authenticate against LDAP
- If need to do more than the built-in LDAP functionality then you can use this package
- Useful for dual authentication of users(Internal vs. External)
- Did encounter trouble with this against Active Directory

APEX_INSTANCE_ADMIN

- SET_PARAMETER
- GET_PAREMETER
- GET_SCHEMAS
- ADD_SCHEMA
- REMOVE_SCHEMA
- REMOVE_WORKSPACE
- ADD_WORKSPACE
- Useful when building a framework around Apex for management of workspaces and schema mappings
- Want to create application for setting params outside of INTERNAL workspace

APEX_UI_DEFAULT_UPDATE

- Allows for manipulation of User Interface Defaults on Tables
- UI Defaults are maintained once across all workspaces
- This may be changing in 4.0 or future releases
- Can change things like Region title, or column widths, types, alignment, format mask, height, etc.
- Not very commonly used.

Thank You!

- If you're so inclined, send me questions & comments directly:
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