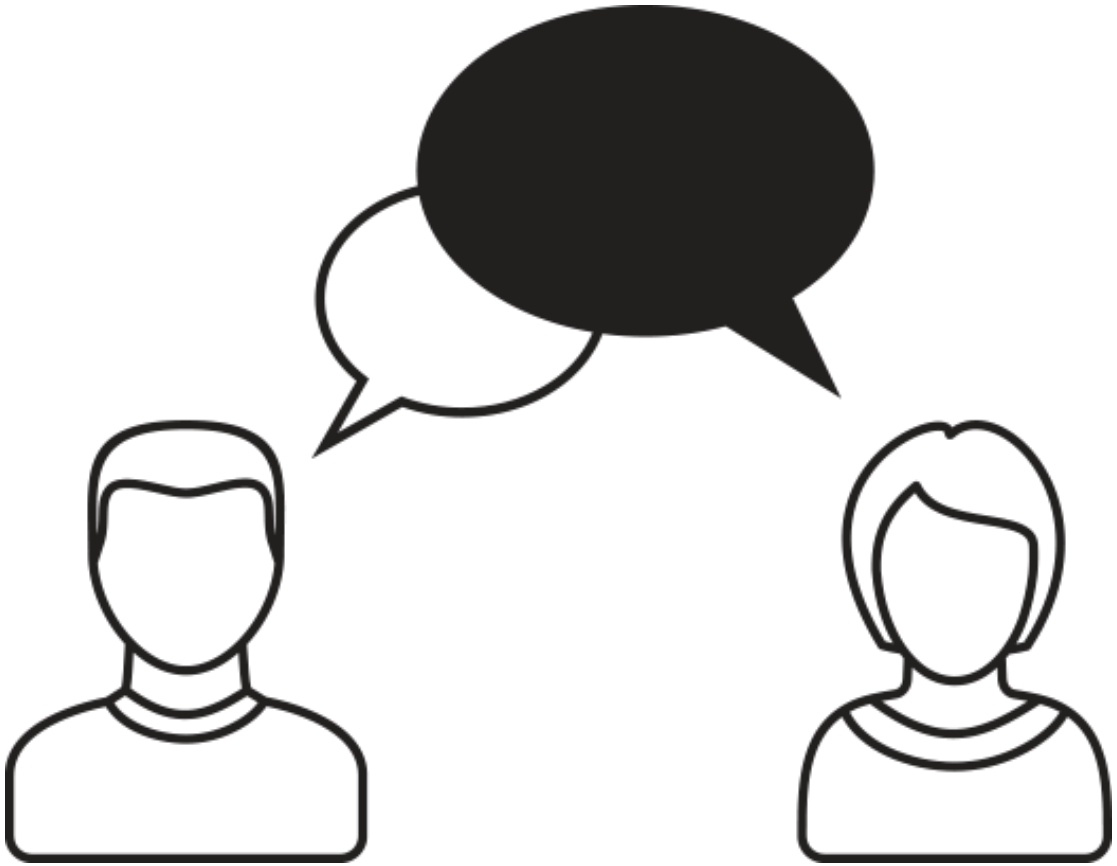
regoUniversity 2017
Read/Process an Attachment Flat File from a Process | Lab
Your Guide: Yogesh Renapure and Ben Rimmasch

Introductions

- Take a moment
- Turn to a Person Near You
- Introduce Yourself



Agenda

- Establish a Use Case
- Background
- CA PPM Configuration
- GEL Script Development
- Testing

Part I:
Use Case

Scheduled Announcements in CA PPM

regoUniversity 2017

Let Rego be your guide.

Use Case

- There are many reasons to use this type of functionality.
  - Import Transactions/Actuals
  - Import Resources
  - Import Projects
  - Import Tasks
  - Modify OBS
- The basis of most use cases is that comma separated data will be pulled from the attached file and processed into CA PPM.

Use Case

- Today we will mock up an announcement module that would display on a user's home page
- The module will allow scheduling of announcements
- Custom object to contain announcement information such as the message
- Custom sub-object to contain the dates that the announcement should be displayed to the user
- HTML Portlet would execute a SOAP web service call to a NSQL that provided information from the custom objects and display the information to the user

Use Case

- Parent Object: Announcement Item
- Child Object: Date
- An attachment field will be created on the announcement item to load a file which will facilitate easy creation of announcements with many date ranges.
- For example, we want to show to the user a message that timesheets are due every Thursday and Friday. Instead of requiring the administrator to configure 52 different date instances per year they can easily create the output from a formula and copy/paste, export to CSV and upload a file to the attachment field to automatically create the date instances

Part II: Background

Knowledge Necessary to Process an Attachment Attribute

regoUniversity 2017

Let Rego be your guide.

Background

- Where are attachments stored?
  - A CSA setting determines if the files are stored on the file system or inside the database
  - Most environments (SaaS environments included) store documents on the file system
  - The base directory for files sits inside the bin directory in <CLARITY_HOME>
  - Three folders contain information about the files and their directories
    - CLB_DMS_FILES – This contains the file information
    - CLB_DMS_VERSIONS – Since the knowledge store files are also stored in these directories there will only ever be one version for attachment attributes but this folder stores versions of file information
    - CLB_DMS_FOLDERS - This contains information about the folder name. The rest of the folder name information comes from substrings of the version id

Background

- The following query will return the information necessary to find a file on the file system

```
select
   v.id version_id
   ,substr(v.id, 2, 3) || '/00' || substr(v.id, 1, 1) dir_name
from odf_ca_ats_announce_item ai
join clb_dms_files f on f.parent_folder_id = ai.ats_document
left join clb_dms_versions v on f.id = v.file_id
```

Background

- From this query we can construct the file's path in the following way

${filestoreDir}/Clarity/Files/${attachment.dir_name}/${attachment.version_id}

  - filestoreDir – The directory from the properties file set in the CSA. Typically "ca/ppm/filestore"
  - dirName from the query above
    - Starting at the second character of the version id three characters is taken for the first directory.
      - Example: Version ID == 5**004**001 then first directory is 004
    - Starting at the first character of the version id one character is taken and appended to 00 for the second directory
      - Example: Version ID == **5**004001 then secondo directory is 005
    - Version ID is the actual name of the file on the file system

Background

- The following query contains extra data helpful for the developer to determine if the correct file was found

```
select
  v.id version_id --this is the actual name of the file on the file system
  ,substr(v.id, 2, 3) || '/00' || substr(v.id, 1, 1) dir_name
  ,f.name name_of_file
  ,f.last_updated_date
  ,d.path_name
  ,folder_type --ats_announce_itemFolder aka object_id + 'Folder'.  This is true of all object based attachment fields.  Knowledge store files have a folder_type of 'ProjectFolder'
  ,f.parent_folder_id
  ,ai.code ai_code
from odf_ca_ats_announce_item ai
join clb_dms_files f on f.parent_folder_id = ai.ats_document
left join clb_dms_versions v on f.id = v.file_id
left join clb_dms_folders d on f.parent_folder_id = d.id
where ai.id = ?
and folder_type = 'ats_announce_itemFolder'
```

Part III:
CA PPM Configuration

Configure Objects, Attributes and Views

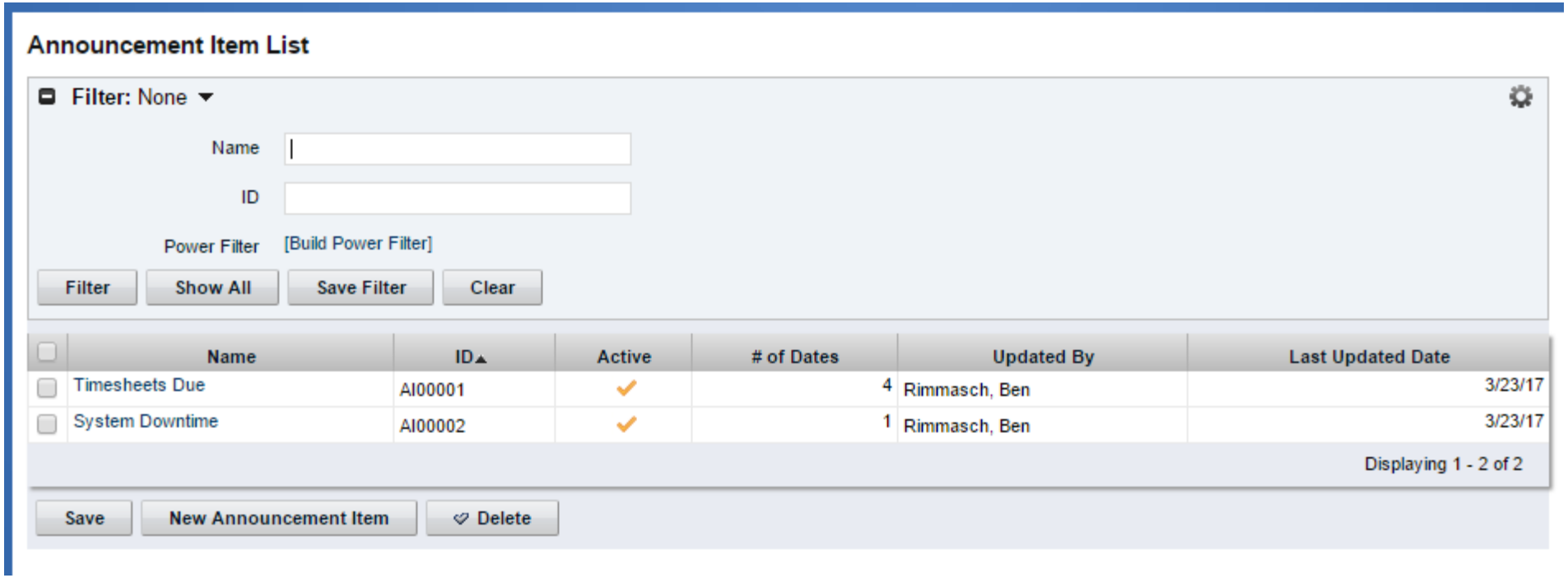
regoUniversity 2017

Let Rego be your guide.

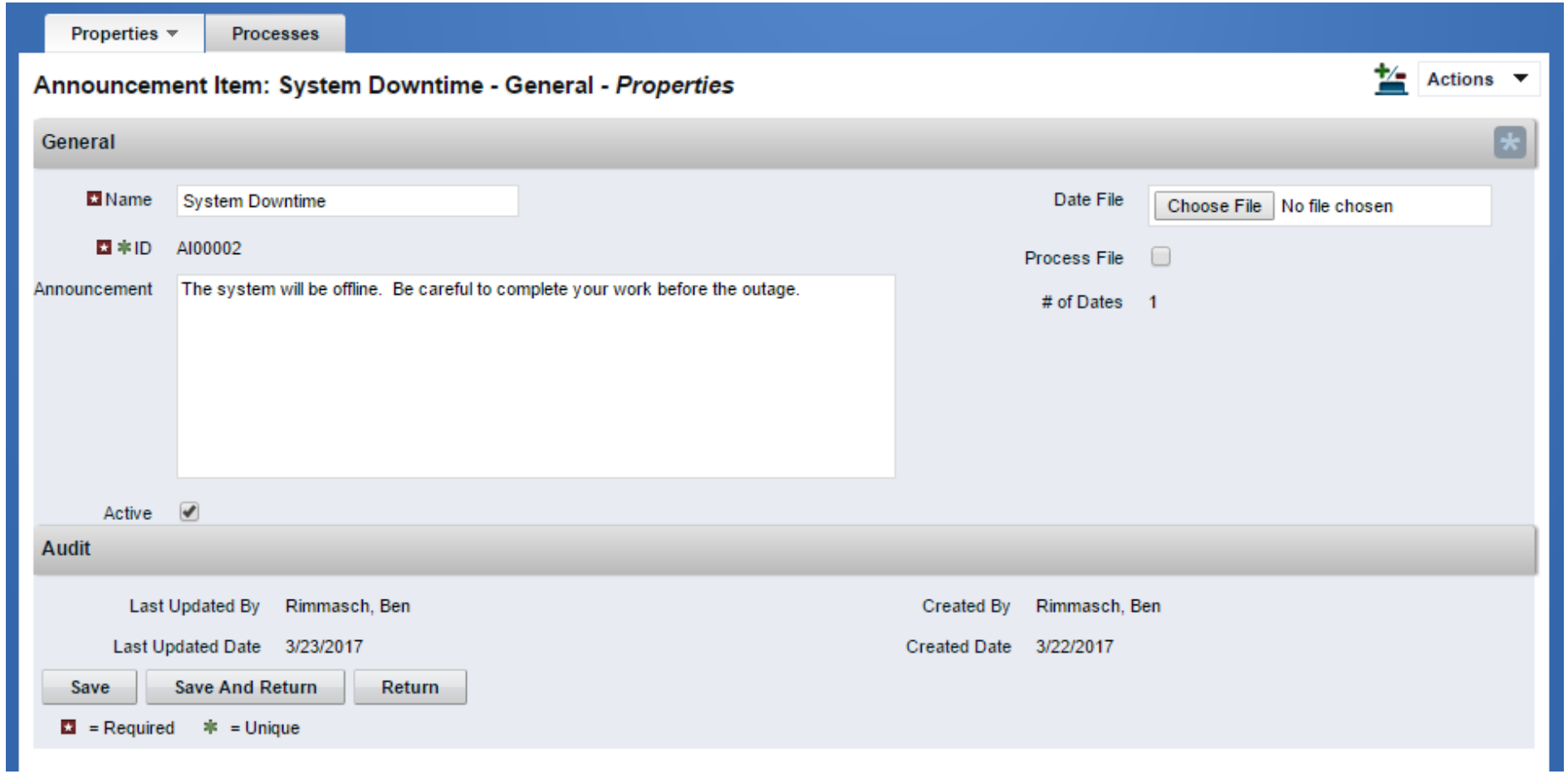
CA PPM Configuration

- Create a custom object
  - Create an announcement message String attribute
  - Create an attachment attribute
  - Create a Boolean attribute
  - Configure all views
- Create a sub-object under the custom object
  - Create a start date attribute
  - Create a finish date attribute
  - Configure all views

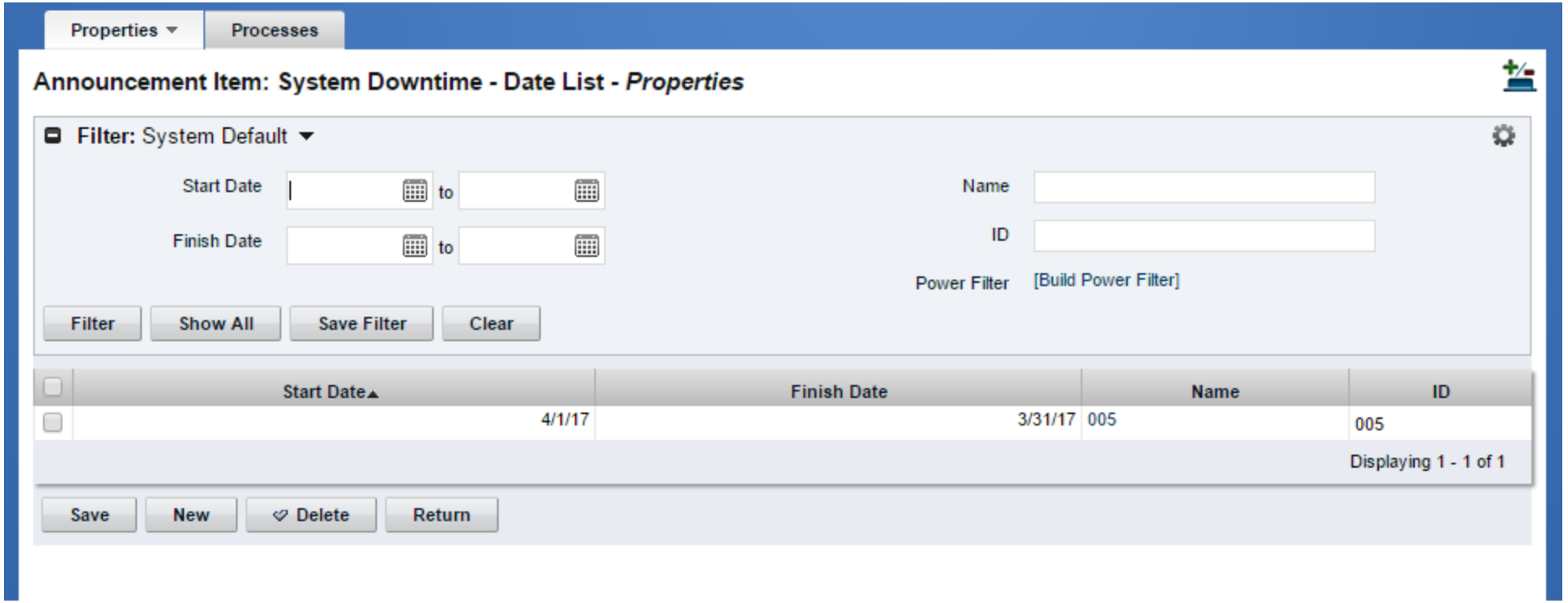
CA PPM Configuration



CA PPM Configuration



CA PPM Configuration



Part IV:
GEL Script Development

Create a GEL Script to Read the File Data and Create Date Object Instances

regoUniversity 2017

Let Rego be your guide.

GEL Script Development

- Create a process
  - Associate it to the Announcement Item
  - Set an auto-start condition to start when the Boolean flag is set true
  - Add a custom GEL script to do the heavy lifting
  - Unset the Boolean flag

GEL Script Development

- Tags to use
  - Jelly Core's invokeStatic and set

```
<!-- Configuration Manager -->
<core:invokeStatic className="com.niku.union.config.ConfigurationManager" method="getInstance" var="config" />
<core:set value="${config.getProperties().getSearchServer().getFilestoreDir()}" var="filestoreDir" />
```

  - Jelly SQL's query

```
<sql:query var="attachmentQuery">
  ...
  <sql:param value="${gel_objectInstanceId}" />
</sql:query>
```

  - Any tags necessary to process the file. For the Announcement Item example, tags to perform a XOG will be used

GEL Script Development

- A possible solution

Questions?

regoUniversity 2017

Let Rego be your guide.

Thank You For Attending regoUniversity

Instructions for PMI credits

- Access your account at pmi.org
- Click on **Certification**
- Click on **Maintain My Certification**
- Scroll down to **Report PDU's**
- Click on Course Training (or other appropriate category)
- Enter **Rego Consulting**
- Enter Activity- **Enter Name of Course**
- Enter **Description**
- Enter **Date Started**
- Enter **Date Completed**
- Provide Contact Person **Name of Person to Contact**
- Provide Contact E-Mail **E-Mail of Person to Contact**
- Enter Number of **PDU's Claimed** (1 PDU per course hour)
- Click on the **I agree this claim is accurate box**
- Click **Submit** button

Let us know how we can improve!
Don't forget to fill out the class survey.

Phone
888.813.0444

Email
info@regouniversity.com

Website
www.regouniversity.com