Background ingest with user notification in WMS

Current practice

The WMS allows users to select one or many objects to ingest. The objects are ingested immediately regardless of the user selection, the status of ingest is displayed in a pop-up window, and the ingest messages are saved in the WMS database. If the user closes the pop-up window before the completion of the ingest process, the process continues until all the objects are ingested. The ingested objects are removed from the Record List but are still in the WMS database. No notification messages are sent to the WMS user.

Proposal for Background ingest

There is a concern that the ingest process may take too long if the digital files are very large, and it may be an inconvenience for the WMS user to wait. We propose that all objects, regardless of the size, should be ingested in the background. A new button labeled “View Ingest Status” will be added to the WMS ingest screen to monitor the status of the ingest process.

The background ingest process will be something like the following.

1) The WMS user selects object(s) to ingest.
2) The ingest process is submitted to background. No pop-up windows or log messages are sent to the screen.
3) The WMS user may continue to work in WMS or log out.
4) The ingest process continues.
5) If any resource failed the ingest process, the detailed ingest information listing all the steps and status for this resource is written into the WMS ingest status log. See figure 3 for detailed failure messages.
6) The Fedora Ingest page lists all the resources that need to be ingested. There are 4 possible situations for the display of this list:
A) If a resource has never been ingested, the status column should display “OK” indicating all minimum system requirements for metadata and digital objects are in place and are ready to be ingested.

B) If a resource is being ingested and the ingest process has not finished, the resource will remain in the list with a status of “In progress” in the status column. If multiple resources are selected, all selected resources will remain in the list with a status of “In progress”.

C) If a resource has been ingested successfully, it will disappear from the list. These resources are still in the WMS database but only the WMS users with access to administration will be able to view these objects.

D) If a resource failed the ingest process, it will stay in the list with a status “Failed” in the status column, and it will be hyperlinked so the WMS user can view the individual log message.

E) If a resource has been ingested successfully, but there was an error during the ingest process, the status will be changed to “Error”.

7) Successful ingestion messages are written into the ingest log.

8) The ingest log for a resource will be manually deleted in a timely fashion.
Figure 1: WMS ingest screen 1
Figure 2: WMS ingest screen 2
## Ingest Status

<table>
<thead>
<tr>
<th>ID</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>63886</td>
<td>Test release six point one</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Checking parent collection</td>
<td>Failed</td>
</tr>
<tr>
<td></td>
<td>Checking handle server</td>
<td>Failed</td>
</tr>
<tr>
<td></td>
<td>Getting Fedora PID</td>
<td>Failed</td>
</tr>
<tr>
<td></td>
<td>Renaming externally archived digital files (if applicable)</td>
<td>Failed</td>
</tr>
<tr>
<td>65066</td>
<td>Ron's article: test for search XML test 3 PID = rutgers-lib:200725</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Creating handle ...</td>
<td>Error</td>
</tr>
<tr>
<td>65266</td>
<td>Test for search XML test 3 PID = rutgers-lib:200729</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Creating handle ...</td>
<td>Error</td>
</tr>
<tr>
<td>65521</td>
<td>Ingesting Video test 3 PID = rutgers-lib:200731</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Streaming video (for video only)</td>
<td>Error</td>
</tr>
<tr>
<td>65521</td>
<td>Ingesting Video test 3 PID = rutgers-lib:200732</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Streaming video (for video only)</td>
<td>Error</td>
</tr>
<tr>
<td></td>
<td>Indexing Solr/Lucene search engine</td>
<td>Error</td>
</tr>
<tr>
<td></td>
<td>Updating WMS item status</td>
<td>Error</td>
</tr>
</tbody>
</table>

One of these conditions may cause the ingest to fail and the object is not in the repository.

Objects were ingested successfully

But

Some other processes may have failed.

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Figure 3: Sample View Ingest Failure Status Screen
User notification

To avoid cluttering the WMS user’s mailbox, we propose that we send only one email message indicating that the ingest process is completed.

Sample email message:

Failure message: The ingest process is completed but some objects gave some errors. Please log in to view the ingest status.

Successful message: All the objects have been ingested successfully.

New Request: Provide a report to list all the resources that failed or have errors during ingestion process.

Questions for discussion:

1) How long should the ingest status log be retained in WMS?
   Answer: When the resources are deleted, the ingest log will also be deleted.

2) Should we automate deletion of the ingest status log?
   Answer: No. The WMS administrator and project managers will manually delete the objects and the ingest log.

3) Should we include successful ingestion messages in the ingest status log?
   Answer: Yes.

4) Should we include the number of objects failed in the email notification?
   Answer: No.