

DuraCloud - Eucalyptus Project

Goals

1. Install Eucalyptus Private Cloud on a couple of machines along with Walrus Storage. Design the generic S3ApiProvider.
2. Create a new Storage provider and develop Eucalyptus Storage Adapter (Walrus). Redesign the Amazon Storage Adapter to extend the generic S3ApiProvider. Write unit-test cases for the implementation.
3. Test and prove the integration of Duracloud with the installed Eucalyptus Private Cloud.
4. Deploy a service like 'Duplicate on Upload' or 'Duplicate on Demand' which processes the content from two storage providers. Test also with 'DuraCloud Sync Tool' and 'DuraCloud REST API' as they are important utilities in DuraCloud. This functional and stress testing will help to probe any limitations with the eucalyptus integration.
5. Once tested on a local Eucalyptus installation, if we get access to any remote Eucalyptus Walrus storage, we can test it with that too. Otherwise, document the project.

Workplan

Period from May 23rd to July 15th

1. before May 23rd (access and setup)
 - a. get read/write access to wiki and subversion repository
 - <https://svn.duraspace.org/view/duracloud-contrib/branches/eucalyptus/>
 - b. download, build, and install DuraCloud baseline
 - c. demonstrate connectivity to S3StorageProvider
2. May 23- June 3 (local eucalyptus)
 - a. have an Eucalyptus Private Cloud setup ready with Walrus storage registered to it.
3. June 4 - June 28 (WalrusStorageProvider)
 - a. create the new Eucalyptus Storage Provider(duplicating the existing S3StorageProvider) and develop the WalrusStorageProvider.
 - b. Make changes to the code and test the integration first.
4. June 29 - July 11 (S3ApiProvider)
 - a. Port changes to the new eucalyptus branch.
 - b. Add all functions to WalrusStorageProvider similar to existing storage providers.
5. July 12 - July 18 (refactor)
 - a. Create unit tests.

Period from July 19th to August 15th

1. If the development/testing of the new S3StorageProvider hasn't yet done, work on it. During the first week of this period, test and prove the integration of DuraCloud with the installed Eucalyptus Private Cloud.
2. In the second week, deploy a service like 'Duplicate on Upload' or 'Duplicate on Demand' which processes the content from two storage providers.
3. In the next week, test with 'DuraCloud Sync Tool' and 'DuraCloud REST API', as the sync tool is an important utility in DuraCloud and REST API has to be tested. Once this is done, depending upon the test case results, probe the limitations with this integration.
4. If we get access to a remote Eucalyptus Walrus Storage, test the developed integration with it. Otherwise in the remaining period, start documenting the code and the implementation of the Walrus Storage Adapter.

Period from August 16th to August 22nd

1. During this last one week, write any tests which are left, improve the documentation, work on the additional functionalities etc. and get the code ready for submission.
2. Submit the code for final evaluation to Google.