

SPIRE DP Acceptance Test Plan for SOVT1

SPIRE-RAL-DOC-003115

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1. Preparation For The Tests

Result of discussion between Ken, Ed and Sarah (12 June 08).

1.1 Input Data

Input data to this test is a database containing AOT observations and a product pool containing AOT data processed through the SPIRE pipeline. Both sets of data should be present at HSC before execution of the test. As the HSC will execute the End2End 3.7 test before the execution of this test we propose to make use of the input database and output products from that test.

1.2 Operational Setup

Assumptions:

- We should create different pools for each test that is executed and not mix up data from different tests in one pool.
- For DP Acceptance Testing, the authors should run their own scripts in the testing - as they should know whether errors are due to their script or the new HCSS build. However, for later tests (RMS, SOVT), it should be run by someone who didn't write it.
- The test will be run with HCSS 0.6.3. This will need to be installed and acceptance tested before the DP tests are carried out.

1.3 Preparation

The activities necessary at RAL in preparation for the test are:

- 23Jun08 Huw create accounts for Michael, Mikos. Andreas, Pete, George (Sarah, Ken) on leicester/coventry
- Steve, Huw & Sunil install and acceptance test HCSS v0.6.3 on leicester, wakefield, chesterfield, coventry
- Setup the directories for the pools on winchester (large disk) in the operational area (Sunil) - [Completed: can be found at /misc/winchester1/dptest063](#)
 - ◆ The highest level directory should be named 'dptest063'
 - ◆ Under this directory there should be one called 'operations', and within that separate ones for 'logs', 'trend_analysis', 'health_monitoring',...
- Setup Pools (Steve)
 - ◆ To ensure that scripts give the same output no matter who runs them and to automatically read from and write to the correct paths then we need to have a configuration/properties file centrally made to set these properties and to make sure that personal setups aren't used. This means that people will have to log on to servers to run HCSS, not run directly from their own machines.
- Get Web access to TM working on Wakefield (Steve) - [Completed](#).
 - ◆ The telemetry server (to access the databases) has now moved. A future build will set the default correctly, but as a temporary solution you can set the property: `hcss.access.url = http://wakefield.bnsc.rl.ac.uk/hcss/tm` . User names and passwords are unchanged.

- Get PAL http pool access working on Wakefield (Steve) - **Completed**. Here is a *temporary* way of accessing it as these things should not be hard-coded!

```
from herschel.ia.pal.pool.http import HttpClientPool
pool = HttpClientPool ("http://wakefield.bnsc.rl.ac.uk/hcss/pal", "spg", user-name, pa
st = ProductStorage (pool)
```

- Get HCSS installer for the version to be used outside RAL (Sarah) - **Completed: We are using SPIRE build 114 on top of user release 0.6.3. The HCSS installer for this can be down loaded from <ftp://ftp.rssd.esa.int/pub/HERSCHEL/csdt/releases/installer/hcss-new-current/install.htm>**
- Complete Acceptance Test of HCSS user release (Sunil)
- 23Jun08 Sarah create a new database DPTest063 on chesterfield
- 24Jun08 Steve populate this database with part of the input database at the HSC (as part of the DP Acceptance Tests the rest of the input database will be propagated into this database).

1.4 Configuration

HCSS version: 0.6.3 installed and acceptance tested on leicester, wakefield, chesterfield, coventry

Database: DPTest063@chesterfield

Pools Location: DPTest063

2. Tests

Test 1: Database Proagation HSC -> ICC

Update a database at the ICC from the HSC using propagation

Actor : Operator

Starting Conditions :

- A complete database at the HSC
- The same database, but not complete, at the ICC

Scenario(s) tested:

- Scenario 1

Procedure :

- Start propagation mechanism on the selected database
- Monitor progress
- Check databases are identical

Test 2: Tranfer of Files HSC -> ICC

Actor : Operator

Starting Conditions :

- A set of auxilliary files (AHF, OOL ...) available at the HSC

Scenario(s) tested:

- Scenario 2

Procedure :

- FTP to HSC server
- Request copy of files into Auxilliary Files Folder
- Check all files copied correctly

Test 3: Access Products From ESAC Using HSA Browser

Actor : Consortium Astronomer not @ RAL

Starting Conditions :

- A set of pipeline products available in the HSA
- Actor set up as Authorised User of HSA

Scenario(s) tested:

- Scenario 4.1

Procedure Summary:

- Part1
 - ◆ Logon over web to HSA as Authorised User
 - ◆ Select products in HSA
 - ◆ Retrieve data from HSA into local pool
- Part2
 - ◆ Start HIPE
 - ◆ Browse HSA files
 - ◆ Import Products into local pool

Full Procedure for using HSA Browser

Test 4: Access Products From ESAC Using HAIO

Actor : Operator

Starting Conditions :

- A set of pipeline products available in the HSA

Scenario(s) tested:

- Scenario 4.2

Procedure :

- Run Product copy script for one OD
- Check correct copy of products into local pool

Test 5: Interacting With TM On Local Versant Database

Actor: Instrument Engineer /Calibration Specialist @ RAL

Starting conditions:

- A complete database at RAL (i.e Test 1 completed successfully)

Scenario(s) tested:

- Scenario 3.1 (Local access part)

Procedure:

- Start HIPE
- Select database @RAL
- Start browser
- Browse on available Observations, Instrument, ObservingMode, etc.
- Extract selected HK parameter by time range as raw values
- Extract selected HK parameter by time range as converted values
- Extract selected HK parameter by OBSID/BBID as raw values

- Extract selected HK parameter by OBSID/BBID as converted values
- Extract selected HK parameter by queries
- Plot HK parameters versus time as raw values
- Plot HK parameters versus time as converted values
- Plot HK parameters versus each other
- Save plot as JPEG
- Sent plot to printer
- Select a range in the extracted HK and apply mathematical operations (fitting, statistics, filtering)
- Save extracted HK as a product to a local data pool

Test 6: Interacting With TM On Remote Versant Database

Actor: Instrument Engineer /Calibration Specialist not @ RAL

Starting conditions:

- A complete database at RAL (i.e Test 1 completed successfully)

Scenario(s) tested:

- Scenario 3.1 (Remote access part)

Detailed Procedure

Test 7: Interaction With Level-0 Products In A Local Pool

Actor: Instrument Engineer /Calibration Specialists (one @ RAL, one elsewhere)

Starting conditions:

- A local pool
 - ◆ At RAL this will be the pool generated following successful completion of test 4
 - ◆ At other sites this will be the pool generated by successful completion of test 3

Scenario(s) tested:

- Scenario 3.2 (Local access part)

Procedure:

- Start HIPE
- Select local pool
- Browse on available Observations, and by Instrument, Observing modes, Uplink information
- For an observation
 - ◆ Extract selected HK parameter by time range as raw values or converted values
 - ◆ Extract selected HK parameter by time range as converted values
 - ◆ Extract selected HK parameter by OBSID/BBID as raw values
 - ◆ Extract selected HK parameter by OBSID/BBID as converted values
 - ◆ Compare selected HK parameter timeline to that obtained (and saved) in test 5 or 6
- Extract selected HK parameters by queries into a product
- Using Table PLOTter
 - ◆ Plot timeline for a parameter
 - ◆ Plot one parameter against another

Test 8: Interaction With Level 0 Products In A Remote Pool

Actor: Instrument Engineer /Calibration Specialist not @ RAL

Starting conditions:

- A remote pool (this will be the pool generated following successful completion of test 4)

Scenario(s) tested:

- Scenario 3.2 (Remote access part)

Procedure:

- Start HIPE
- Select remote pool
- Browse on available Observations, and by Instrument, Observing modes, Uplink information
- For an observation chose one or more from
 - ◆ Extract selected HK parameter by time range as raw values or converted values
 - ◆ Extract selected HK parameter by time range as converted values
 - ◆ Extract selected HK parameter by OBSID/BBID as raw values
 - ◆ Extract selected HK parameter by OBSID/BBID as converted values
 - ◆ Compare selected HK parameter timeline to that obtained (and saved) in test 6
- Extract selected HK parameters by queries into a product
- Using Table Plotter
 - ◆ Plot timeline for a parameter
 - ◆ Plot one parameter against another

Detailed Procedure

Test 9: Operational Day Processing

Actor : Operator @ RALStarting conditions:

- A local pool Scenario(s) tested:
- Scenario 5: Operational Day Processing

Detailed Procedure

Test 10 Browse and Access Products From Remote Pool

Actor : Instrument Engineer / Calibration Specialist not @ RAL

Starting conditions:

- A remote pool (this will be the pool generated following successful completion of test 4)

Scenario(s) tested:

- Scenario 6.1: Browse and Access Products (Remote Pool part)

Procedure:

- Start HIPE
- Select available Remote Pool
- Start Product Browser
- Extract Products into HIPE session
- Browse available Tasks for Spectroscopy and Photometry
- Browse available Tasks for a specific Product
- Inspect the History of a Product
- Browse Products in a Session using DatasetInspector

Detailed Procedure

Test 11: Browse and Access Products From Local Pool

Actor : Instrument Engineer / Calibration Specialist (one @ RAL, one elsewhere)

Starting conditions:

- A local pool
 - ◆ At RAL this will be the pool generated following successful completion of test 4
 - ◆ At other sites this will be the pool generated by successful completion of test 3

Scenario(s) tested:

- Scenario 6.1: Browse and Access Products (Remote Pool part)

Procedure:

- Start HIPE
- Select available Local Pool
- Start Product Browser
- Extract Products into HIPE session
- Browse available Tasks for Spectroscopy and Photometry
- Browse available Tasks for a specific Product
- Inspect the History of a Product
- Browse Products in a Session using DatasetInspector

Detailed Procedure

Test 12: Access Documentation

Actor: Instrument Engineer / Calibration Specialist

Starting conditions:

- HIPE started
- Products extracted into HIPE session (this should be done following the completion of Tests 3 or 4)

Scenario(s) tested:

- Scenario 6.2: Access Documentation

Procedure:

- Access User Manual
- Print a Chapter of a User Manual
- Click on a Product to get view/possible pipeline applications/product description
- Get pipeline scripts (code) related to a certain Product
- Get synopsis of a certain Task

Detailed Procedure

Test 13: Browse and Access Calibration Products

Actor: Instrument Engineer / Calibration Specialist

Starting conditions:

Scenario(s) tested:

- Scenario 6.3: Browse and Access Calibration Products

Procedure:

- Start HIPE
- Get an overview about available SPIRE calibration data
- Access calibration data
- Modify calibration Products
- Save modified calibration Products in private pool
- Put calibration Product into test environment
- Deliver new calibration Product

Test 14: Process Products On RAL Computer

Actor: Instrument Engineer / Calibration Specialist @ RAL

Starting conditions:

- HIPE started
- Products extracted into HIPE session (this should be done following the completion of Test 4)
- Calibration Products available from private pool (this should be done following Test 13)

Scenario(s) tested:

- Scenario 6.4: Process Products (processing at RAL computer part)

Procedure:

- Stepwise execution of the pipeline standard processing steps
- Visualization of temporary results
- Modify input parameter for a pipeline step
 - ◆ Get GUI command into command line history if GUI is used
- Command line support by command completion mechanism
- Compare results
- Load private calibration Product
- Use private calibration Product for a pipeline step
- Compare results (Display and Plot)

- Plug in of private Jython and Java Tasks without restarting HIPE
- Reloading of Jython and Java Tasks without restarting HIPE
- Execute private or modified Jython/Java Task
- Browse History of Products

Test 15: Process Products Outside RAL

Actor: Instrument Engineer / Calibration Specialist (outside RAL)

Starting conditions:

- HIPE started
- Products extracted into HIPE session (this should be done following the completion of Test 3)
- Calibration Products available from private pool (this should be done following Test 13)

Scenario(s) tested:

- Scenario 6.4: Process Products (processing outside RAL part)

Procedure:

- Stepwise execution of the pipeline standard processing steps
- Visualization of temporary results
- Modify input parameter for a pipeline step
 - ◆ Get GUI command into command line history if GUI is used
- Command line support by command completion mechanism
- Compare results
- Load private calibration Product
- Use private calibration Product for a pipeline step
- Compare results (Display and Plot)
- Plug in of private Jython and Java Tasks without restarting HIPE
- Reloading of Jython and Java Tasks without restarting HIPE
- Execute private or modified Jython/Java Task
- Browse History of Products

Test 16: Run Pipeline @ RAL

Actor: Instrument Engineer / Calibration Specialist @ RAL

Starting conditions:

- A local pool (generated following successful completion of test 4)

Scenario(s) tested:

- Scenario 6.5: Run Pipeline @ RAL

Procedure:

- HIPE started
- Select pool
- Start automatic pipeline application connected to pool
- Operator monitor this process

Test 17: Trend Analysis Using Remote Pool

Actor: Instrument Engineer / Calibration Specialist not @ RAL

Starting conditions:

- A remote pool (this will be the pool generated following successful completion of test 4)

Scenario(s) tested:

- Scenario 6.6: Trend analysis (Remote Pool part)

Procedure:

- Start HIPE
- Select available Remote Pool
- Perform Query on product metadata
- Perform Query on data contents
- Perform Query on indexed parameters in the HSA

Test 18: Trend Analysis Using Local Pool

Actor: Instrument Engineer / Calibration Specialist (one @ RAL, one elsewhere)

Starting conditions:

- A local pool
 - ◆ At RAL this will be the pool generated following successful completion of test 4
 - ◆ At other sites this will be the pool generated by successful completion of test 3

Scenario(s) tested:

- Scenario 6.6: Trend analysis (Local Pool part)

Procedure:

- Start HIPE
- Select available Local Pool
- Perform Query on product metadata
- Perform Query on data contents
- Perform Query on indexed parameters in the HSA

Test 19: Workspace Handling

Actor: Instrument Engineer / Calibration Specialist

Starting conditions:

- HIPE started
- Products present within HIPE

Scenario(s) tested:

- Scenario 6.7 : Workspace handling

Procedure:

- Save Workspace (command history, parameter settings, Products,...)
- Restore crash: Restore last saved Workspace