IHE Radiation Oncology

Test Tools Scenario Descriptions

Contents

Archive Scenario

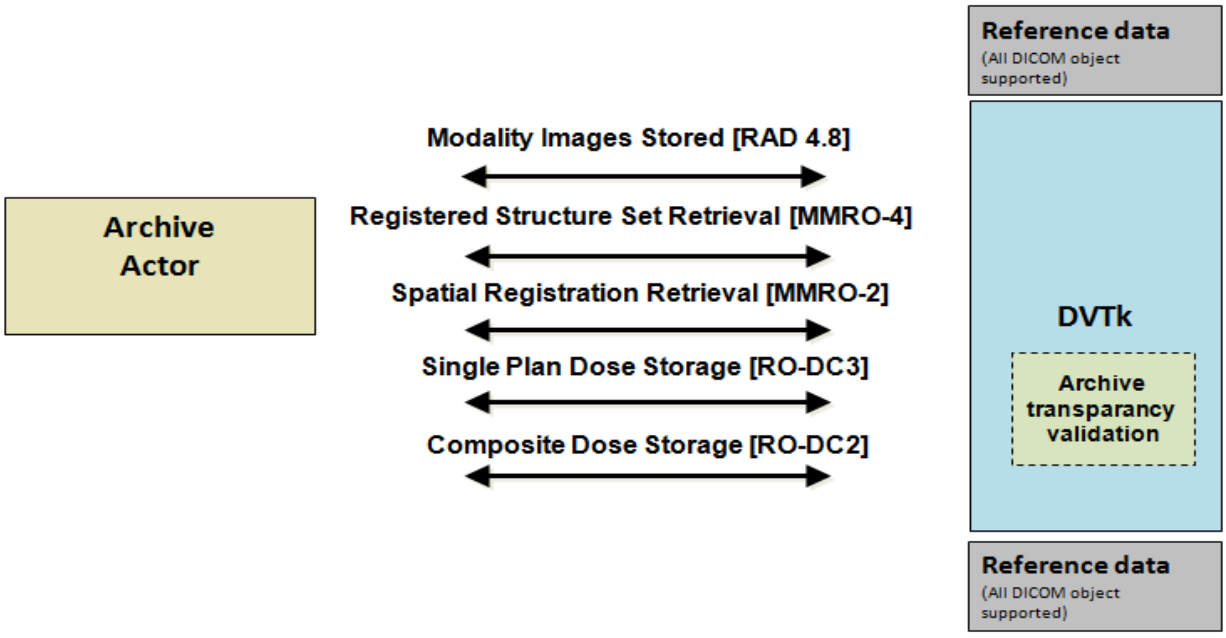
Description:
This scenario will test that the output from the Archive is consistent with its input: the retrieved data ` should not be changed by the archive.

The Archive actor should be able to support the following SOP classes:

- CT Image Storage
- MR Image Storage
- Positron Emission Tomography Image Storage (PET)
- Spatial Registration Storage
- RT Dose Storage
- RT Structure Set Storage

For this Archive test scenario DVTk as generic actor will:

- store the reference test data objects to the Archive
- retrieve the reference test data objects from the Archive
- compare the test data objects received with the original reference test data
- check level 2 SCP conformance



Transactions sent to actor:
RAD 4.8 (Modality Images Stored)
MMRO-4 Registered StructureSet Retrieval
MMRO-2 (Spatial Registration Retrieval)
RO-DC2 (Composite Dose Storge)
RO-DC3 (Single Plan Dose Storage)

Expected transactions from actor:

RAD 4.8 (Modality Images Stored)
MMRO-4 Registered StructureSet Retrieval
MMRO-2 (Spatial Registration Retrieval)
RO-DC2 (Composite Dose Storge)
RO-DC3 (Single Plan Dose Storage)

Used scenario dataset:

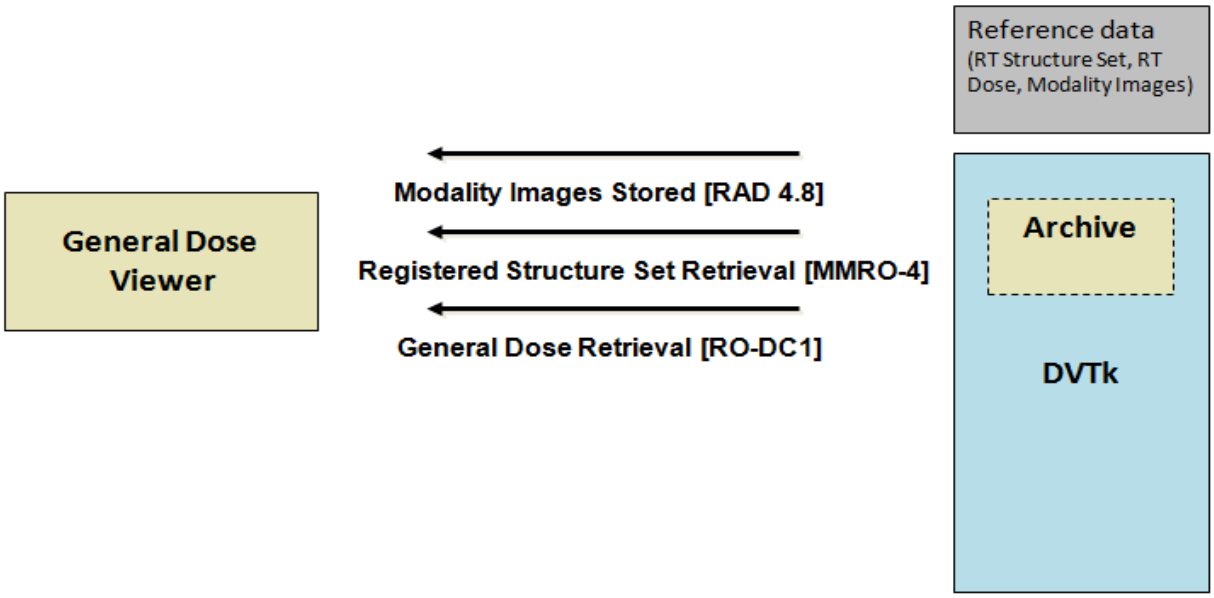
This scenario uses the reference test dataset.

General Dose Viewer Scenario

Description:

This test scenario provides the general dose viewer actor with RAD 4.8, MMRO-4 and RO-DC1

- Checks the correct storage of Single/contoured CT series dataset (DICOM assoc. & interaction level)
- Checks the correct storage of the Structure set (DICOM association & interaction level)
- Checks the correct storage of the Dose (DICOM association & interaction level)



Transactions sent to actor:

RAD-4.8 (Modality Images Stored)

MMRO-4 (Registered Structure Set Retrieval)

RO-DC1 (General Dose Retrieval)

Expected transactions from actor:

n.a.

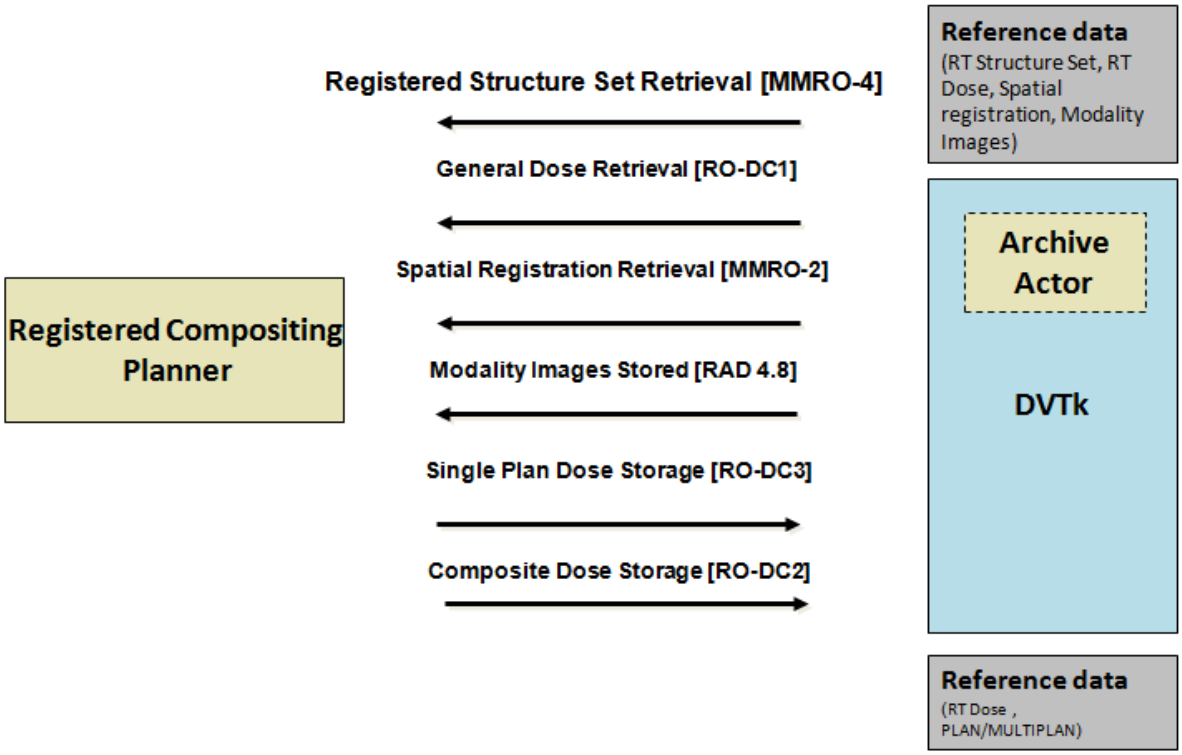
Used scenario dataset:

This scenario uses the reference test dataset.

Registered Compositing Planner Scenario

Description:
This test scenario provides the registered compositing planner actor with RO-DC1, MMRO-II-2 and RAD 4.8 and receives RO-DC2 and RO-DC3

- Checks the correct storage of Single Series CT dataset (DICOM association & interaction level)
- Checks the correct storage of Spatial Registration dataset (DICOM association & interaction level)
- Checks the correct storage of General Dose dataset (DICOM association & interaction level)
- Validation of the created Single Plan Dose (RO-DC3) (including RO critical modules)
- Validation of the created Composite Dose (RO-DC2) (including RO critical modules)
- Verifies the critical attribute mapping requirements



Transactions sent to actor:
MMRO 4 (Registered Structure Set Retrieval)
RO-DC1 (General Dose Retrieval)
MMRO 2 (Spatial Registration Retrieval)
RAD-4.8 (Modality Images Stored)

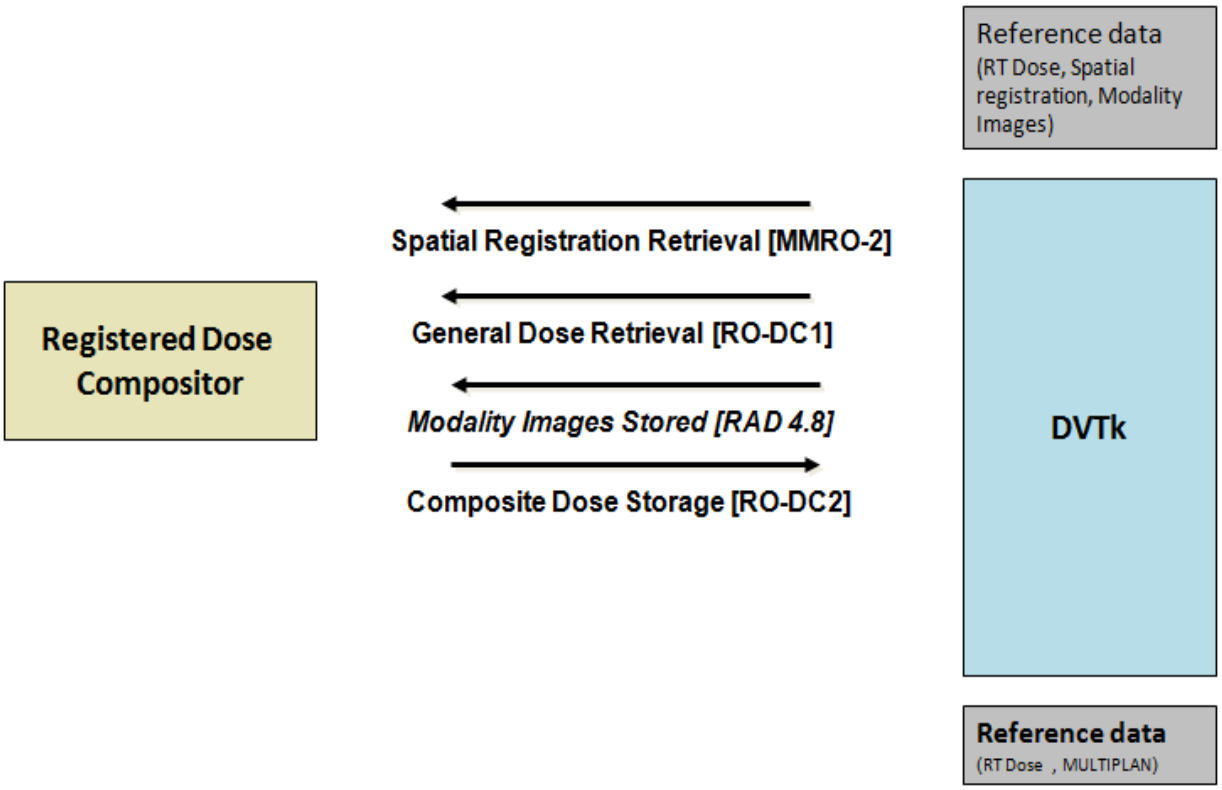
Expected transactions from actor:
RO-DC3 (Single Plan Dose Storage)
RO-DC2 (Composite Dose Storge)

Used scenario dataset:
This scenario uses the reference test dataset.

Registered Dose Compositor Scenario

Description:
This test scenario provides the registered dose compositing planner actor with RO-DC1, MMRO-II-2 and RAD 4.8 and receives RO-DC2

- Checks the correct storage of Single Series CT dataset (DICOM association & interaction level)
- Checks the correct storage of Spatial Registration dataset (DICOM association & interaction level)
- Checks the correct storage of General Dose dataset (DICOM association & interaction level)
- Validation of the created Composite Dose (RO-DC2) (including RO critical modules)
- Verifies the critical attribute mapping requirements



Transactions sent to actor:
MMRO-2 (Spatial Registration Retrieval)
RO-DC1 (General Dose Retrieval)
RAD-4.8 (Modality Images Stored)

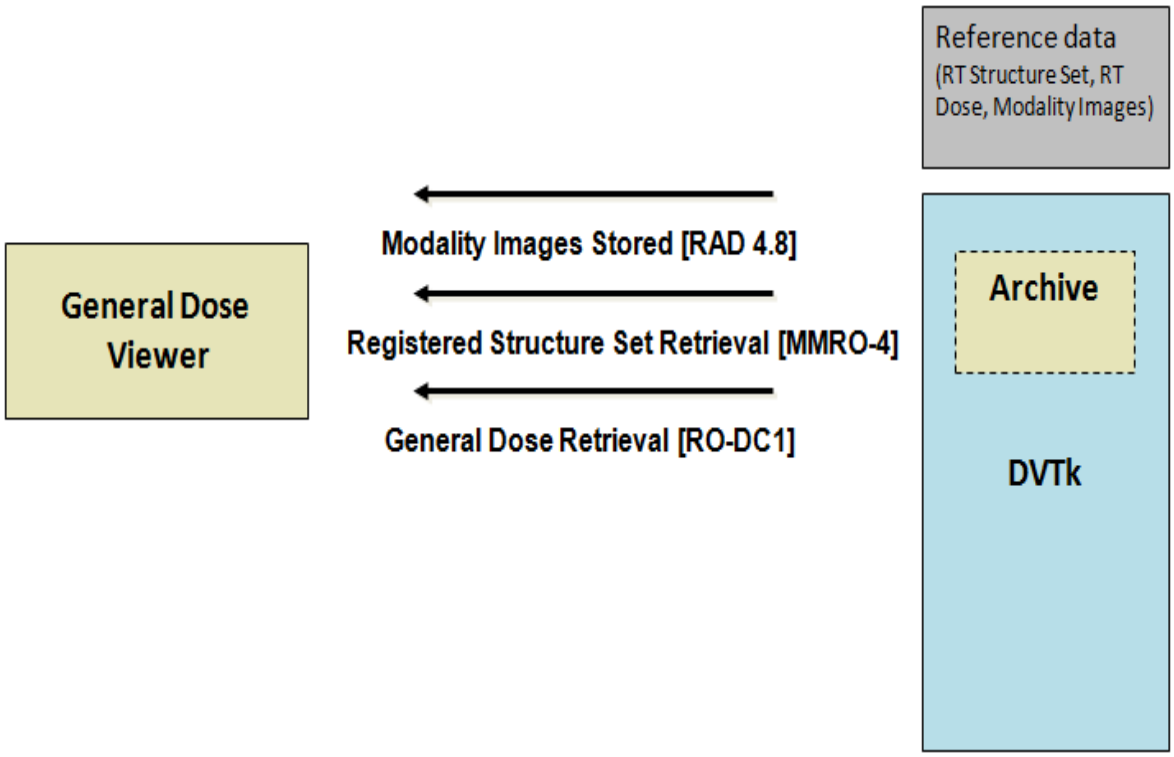
Expected transactions from actor:
RO-DC2 (Composite Dose Storge)

Used scenario dataset:
This scenario uses the reference test dataset.

Registered General Dose Viewer Scenario

Description:
This test scenario provides the registered general dose viewer actor with RAD 4.8, MMRO-4, RO-DC1 and MMRO-II-2

- Checks the correct storage of Single/contoured CT series dataset (DICOM assoc. & interaction level)
- Checks the correct storage of the Structure set (DICOM association & interaction level)
- Checks the correct storage of the Dose (DICOM association & interaction level)
- Checks the correct storage of the Spatial Registrations (DICOM association & interaction level)



Transactions sent to actor:
MMRO-4 (Registered Structure Set Retrieval)
RAD-4.8 (Modality Images Stored)
MMRO-2 (Spatial Registration Retrieval)
RO-DC1 (General Dose Retrieval)

Expected transactions from actor:
n.a.

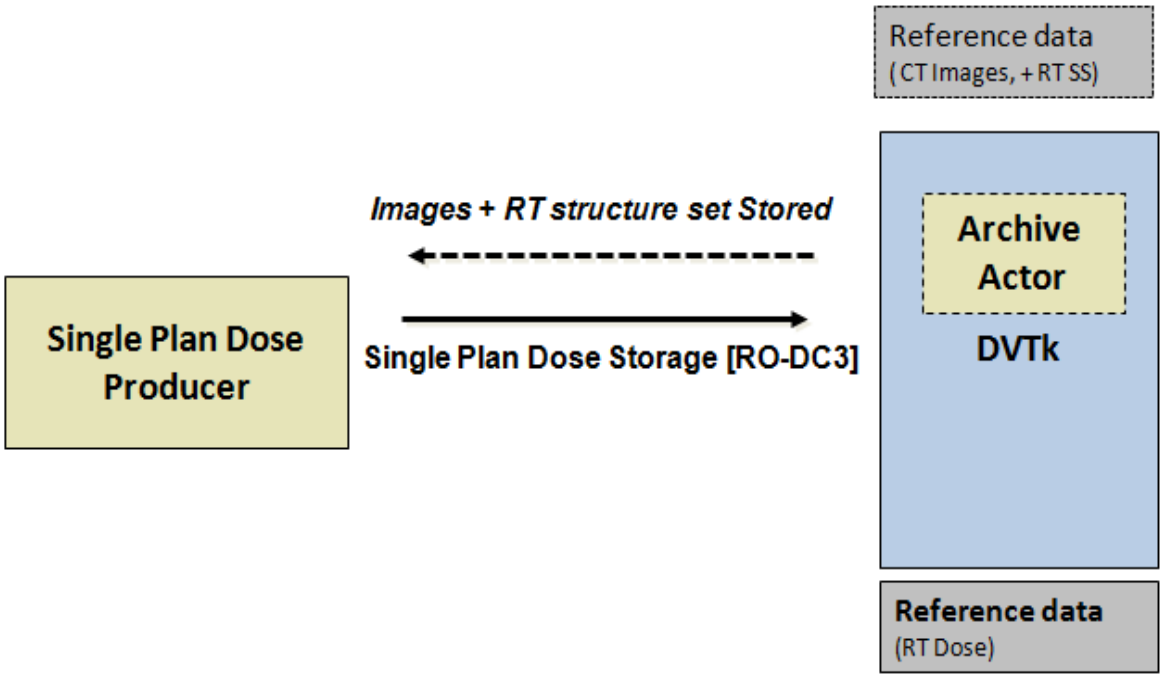
Used scenario dataset:
This scenario uses the reference test dataset.

Single Plan Dose Producer Scenario

Description:

This test scenario will check RO-DC3 recieved from the single plan dose producer

- Verifies the critical attribute mapping requirements
- Validation of the created RT dose (RO-DC3) (including RO critical modules)



Optional Transactions sent to actor:
RAD 4.8 (Modality Images Stored)
MMRO 4 (Registered structure set)

Expected transactions from actor:
RO-DC3 (Single Plan Dose Storage)

Used scenario dataset:
This scenario uses the reference test dataset.