DICOM Modality Validation Information - DICOM Modality Worklist/Image Storage

Modality Validation Purpose

The purpose of Validation is to determine if a specific modality device can effectively function with VistA Imaging before the device ever reaches a Veterans Affairs (VA) Hospital. This interoperability is critical for successful operations for all VA Hospitals.

There are guidelines for this interoperability. They are in the form of the DICOM Standard and IHE. In addition, there is the "Joint VA/DoD DICOM Conformance Requirements for Digital Acquisition Modalities" document. It contains functional requirements that may be specific to the VA and DoD (Department of Defense).

With no Validation, there is no guarantee the device will function effectively with VistA Imaging. It is unacceptable to VA Hospitals to discover interoperability deficiencies after the hospital purchased and installed the product. Performing the Validation test allows both the vendor and VistA Imaging to address these deficiencies in an Engineering environment before it could negatively impact the VA hospital.

Modality Validation Overview

The Validation Test is specific to DICOM and some basic IHE workflows. This test does not address other aspects of the modality device's functionality. It is possible, and likely, the modality device is required to submit to other test(s) as determined by other groups/teams within the VA entity. VistA Imaging has no control in this matter.

The Contact information contains necessary information to work with the VistA Imaging Group. The goal is to have the vendor's Engineering or Validation/Verification staff to work with the VistA Imaging Group. Experience shows these two staff groups offer benefits to this process. They generally have a better understanding of DICOM and IHE and possible problems that may occur during Validation Testing. The vendor sends an email to the VA Validation Group. A member of the VA Validation Group will respond and become the point of contact for the testing process.

The Vendor Testing Connection Information contains network connection data for the VistA Imaging Validation Machine. This machine is outside the VA firewall for vendor's accessibility. Performing an IP network Ping (ICMP) will not succeed.

The General Testing Procedure describes the basic steps of the test. Please follow these steps. When completed, contact the VistA Imaging Group to have the results reviewed. The point of contact will review the results and notify the vendor of Approval or Disapproval of the Validation Test. The criteria for the Disapproval are forward to the vendor.

Contact Information

Emails are the primary form of communication. Please send email requests to:
VHAVIDICOMValidation@va.gov.

Vendor Testing Connection Information

Validation System IP Address: 54.225.169.152
Validation System Name: IMGVALID-DICOM   Dicom.imaging.vaftl.us

Modality Worklist SCP Port Number: 60010
Modality Worklist SCP AE Title: VISTA_WORKLIST

Default Storage SCP Port Number: 60100
(Some vendors may be instructed to send images to port 60200)
Storage SCP AE Title: VISTA_STORAGE

Query/Retrieve SCP Port Number: 60090
Query/Retrieve SCP AE Title: DICOM_QR

General Testing Procedure:

The following is the general testing steps to perform validation over the Internet. The vendor can start performing the following steps once they receive this document. Testing does not require constant communication with the VA. Please feel free to contact the VA as needed. Please notify the VA, via email, when the following steps are complete. The VA will review and collect information and return the testing results.

1. Complete Table 14 (Appendix C: Conformance Checklist). The Checklist is in the "Joint VA/DoD DICOM Conformance Requirements for Digital Acquisition Modalities" document at http://www.va.gov/IMAGING/DICOM.asp.

2. Supply VA, via email, with Calling AETitle for MWL Query before starting the actual testing. This is needed to configure the VA MWL SCP to perform the MWL Query against the Validation System.

3. The VA will respond to this email, providing one or more Accession Numbers to include in the MWL Query.

4. Perform a Modality Worklist Query with general query keys. The expected result is a response with multiple Orders.

5. Perform a Modality Worklist Query with specific criteria based on a provided Accession Number. The expected result is a response with a single Order that is specific to the Accession Number.

6. Send a valid representation of images generated by the device under testing. Send more than a single image. The images must contain the image header populated with information received during the MWL Query.

7. If you support multiple SOP Classes, please send images for each SOP Class supported.

8. Send an email to the VA tester notifying them that your test is complete.