

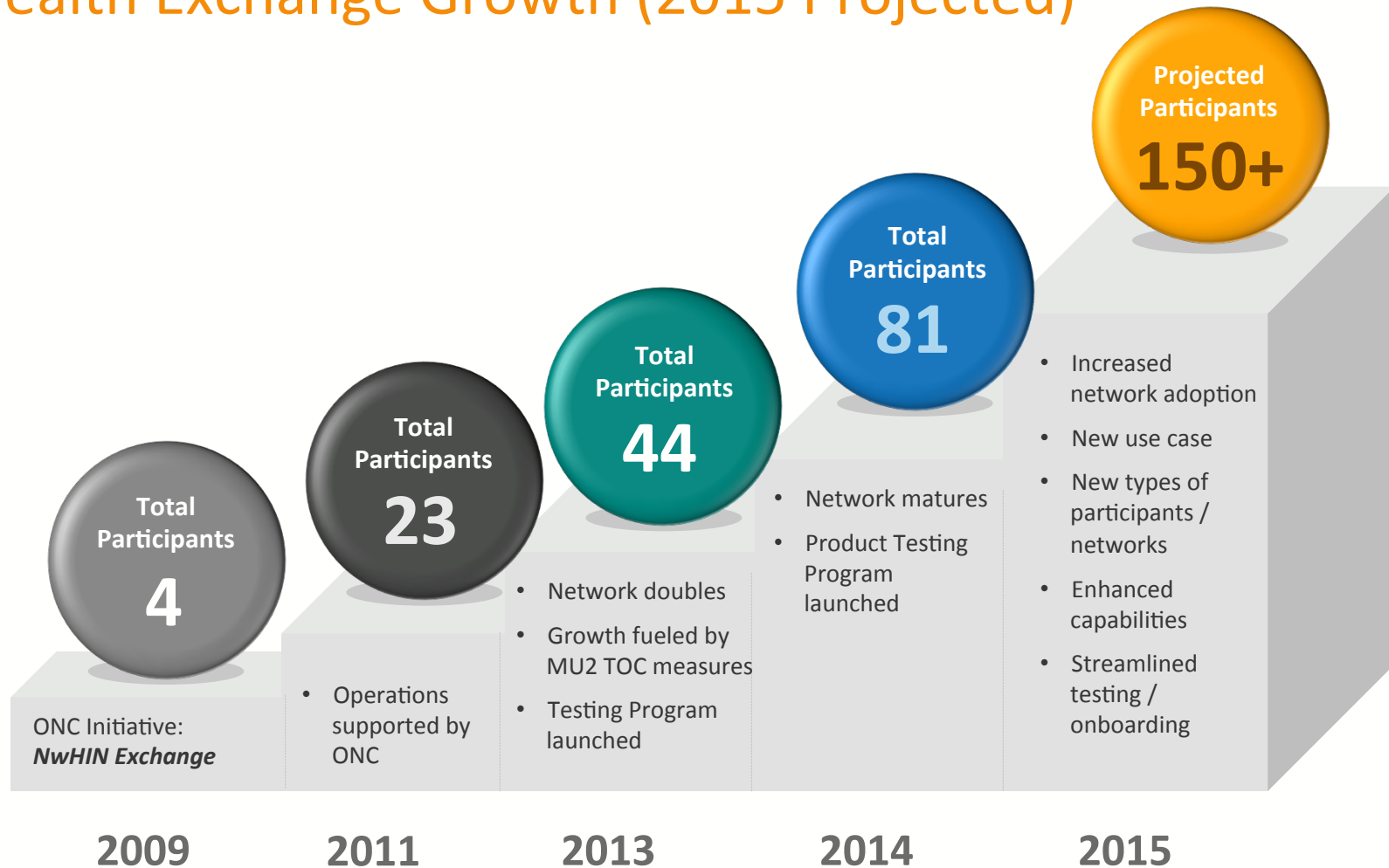


eHealth Exchange™

The Largest Health Information Exchange Network in the U.S.

An initiative of **the sequoia**
project

eHealth Exchange Growth (2015 Projected)



eHealth Exchange Overview



eHealth Exchange Has Trust Foundation

- Legal Agreement
- Governing Committee
- Operating Policies and Procedures



eHealth Exchange Uses Technical Services

- Web services registry (phone book of network Participants)
- Security (x.509 Managed Certificate Authority)
- Automated testing using Aegis platform



eHealth Exchange™

The Validation Testing Programs Documentation Testing for Participants and HIT Product Vendors



eHealth Exchange Validation Programs

Participant Testing Program

- Enables organizations wishing to participate in the eHealth Exchange network to validate the compliance of their implemented HIT with the eHealth Exchange Performance and Service Specifications

Product Testing Program

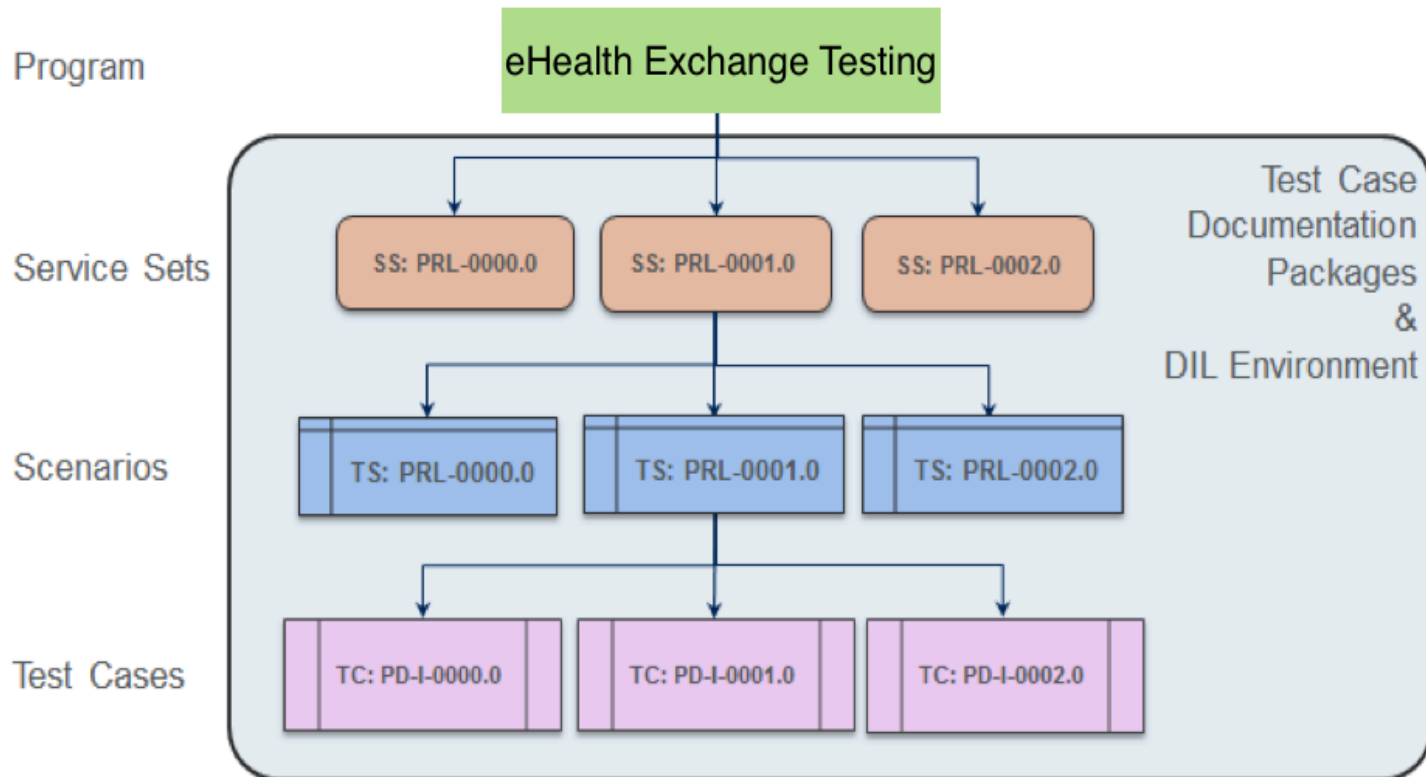
- Focus on compliance and interoperability testing
- Reduces cost and burden for participants to onboard by approximately 50%
- Minimizes the level of vendor / developer support of providers / HIOs onboarding
- Reduces risk of interoperability issues being introduced into production, including the cost and burden of fixing interoperability issues and deploying patches

<http://sequoiaproject.org/ehealth-exchange/testing-overview/>

Content Testing Documentation

- <http://sequoiaproject.org/ehealth-exchange/testing-overview/testing-references-2/>
- [The Basic C32 \(ONC 2011 Edition\)](#)
 - [Basic C32 \(ONC 2011 Edition\) – Test Data Sets](#)
 - The Test Data Sets are found on pages 10-18 of Test Procedure for the ONC 2011 Edition criteria: §170.306 (f) Exchange Clinical Information and Summary Record. For additional information about the Data Notes, please refer to the Basic C32 test case documentation
- [The Bridge C32](#)
 - Bridge C32 – Please use your own test data; no specific test data provided.
- [The Consolidated CDA \(C-CDA\) \(ONC 2014 Edition\)](#)
 - [Consolidated CDA \(C-CDA\) – Test Data Sets](#)
 - The Test Data Sets are found in the ONC 2014 Edition criteria – §170.314(b)(2) – Transitions of care – generate summary care records document. For additional information about the Data Notes, please refer to the C-CDA test case documentation.

Test Case Hierarchy



Smoke Tests Summary

Smoke Tests Summary

The Smoke Tests Service Sets, Test Scenarios and Test Cases can be summarized as below for the Participant and Product Testing Programs:

2010 Service set	2010 Scenario	2010 Test Case	Participant	Product
SS: PRL-0000.0-2010	TS: PRL-I-0000.0-2010	TC: PD-I-0000.0-2010	X	Peer to Peer
SS: PRL-0000.0-2010	TS: PRL-I-0000.0-2010	TC: QD-I-0000.0-2010	X	Peer to Peer
SS: PRL-0000.0-2010	TS: PRL-I-0000.0-2010	TC: RD-I-0000.0-2010	X	Peer to Peer
SS: PRL-0000.0-2010	TS: PRL-R-0000.0-2010	TC: PD-R-0000.0-2010	X	Peer to Peer
SS: PRL-0000.0-2010	TS: PRL-R-0000.0-2010	TC: QD-R-0000.0-2010	X	Peer to Peer
SS: PRL-0000.0-2010	TS: PRL-R-0000.0-2010	TC: RD-R-0000.0-2010	X	Peer to Peer
2011 Service set	2011 Scenario	2011 Test Case	Participant	Product
SS: PRL-0000.0-2011	TS: PRL-I-0000.0-2011	TC: PD-I-0000.0-2011	X	X
SS: PRL-0000.0-2011	TS: PRL-I-0000.0-2011	TC: QD-I-0000.0-2011	X	X
SS: PRL-0000.0-2011	TS: PRL-I-0000.0-2011	TC: RD-I-0000.0-2011	X	X
SS: PRL-0000.0-2011	TS: PRL-R-0000.0-2011	TC: PD-R-0000.0-2011	X	X
SS: PRL-0000.0-2011	TS: PRL-R-0000.0-2011	TC: QD-R-0000.0-2011	X	X
SS: PRL-0000.0-2011	TS: PRL-R-0000.0-2011	TC: RD-R-0000.0-2011	X	X

eHealth Exchange Test Case Documentation

2010 Specifications for Participants & Product Vendors

- 2010 Smoke Test Cases (6 required)

2011 Specifications for Participants

- 2011 Smoke Test Cases (6 required)
- Security Test Cases (19 required for Participants)
- Provisional Security Test Cases *applicable to Product Testing ONLY* (52 provisional)

2011 Specifications for Product Vendors

- 2011 Smoke Test Cases (6 required)
- Security Test Cases (35 required for Product Vendors)
- Provisional Security Test Cases *applicable to Product Testing ONLY* (52 provisional)

eHealth Exchange Service Set Documentation

eHealth Exchange Required Security Testing

Service Set

Development Requirement Specification

Service Set ID:	SS: PRL-0006.0
Version:	17
Release:	Revised 141210 - Version 2

Coverage Specifications

2011 Exchange:	True
2010 Exchange:	False

Purpose/Description

This Service Set contains 2011 Scenarios with MP/AF (MA) Error Test Cases for the System Under Test (SUT) as the Responder Actor.

Test Data

Data Load Set

DS: PRL-2

Test Scenarios

- TS: PRL-R-0006.0
- TS: PRL-R-0035.0
- TS: PRL-R-0036.0
- TS: PRL-R-0037.0
- TS: PRL-R-0038.0

eHealth Exchange Test Scenario Documentation

eHealth Exchange Required Security Testing

Test Scenario

Development Requirement Specification

Test Scenario ID:	TS: PRL-R-0006.0
Version:	27
Release:	Revised 141210 - Version 2

Coverage Specifications

2011 Exchange:	True
2010 Exchange:	False

Purpose/Description

This scenario is a collection of MA Responder error flow test case PD/QD/RD sequences that confirm the SUT correctly responds to a variety of error requests from an Initiator (the Testing Tool).

Preconditions

Data Load Set

DS: PRL-2

Data Notes

See data instructions for each Test Case.

Scenario Steps

1. Execute TC: PD-R-0000.0 variant + TC: MAQD-R-0003.000 using patient P-000000002
2. Execute TC: PD-R-0000.0 variant + TC: MAQD-R-0003.101 using patient P-000000005

eHealth Exchange Test Case Documentation

eHealth Exchange Required Security Testing

Test Case

Development Requirement Specification

Test Case ID:	TC: MAQD-R-0003.000
Title:	Handle missing wsse:Security element
Release Date:	Revised 141210 - Version 2
Version:	13
SUT Role:	Responder

Coverage Specifications

2011 Exchange:	True
2010 Exchange:	False
IHE Profile:	
Flow:	Error
Optionality:	Required

Purpose/Description

Testing Tool sends a simple QD Request to the System with a missing wsse:Security element.

Preconditions

Data Load Set
DS: PRL-2

Data Notes
None

Test Case Patient Association
P-000000002

Test Case Metadata Association
D-000000002.1

Test Steps

1. The Testing Tool sends a synchronous Find Documents Request to the System, using the following required parameters:

SOAP Header = MP: MA Default Request (TestTool) Message Parameters, **except the SOAP header element wsse:Security is missing.
 \$XDSDocumentEntryPatientID = [patient P-000000002]
 \$XDSDocumentEntryStatus = Approved
 returnType = LeafClass
 SOAP request = synchronous

2. **Expected Result:** The System returns a SOAP fault to the Testing Tool with text describing the internal error using MP: MA Fault (Both) Message Parameters.

OR

Based on its security policy, instead of returning a fault the System may return a normal response, but without performing the requested action. Example: if the request were a Patient Discovery, a normal response is returned, but with no matching patients found. This approach of concealing the fault is permitted by the underlying requirements to mitigate certain kinds of attacks.

3. Verify conformance of the fault Response message to the:
 - MP: MA Fault (Both) Message Parameters

OR

Verify conformance of the PD Response to the:

- CL: MA SOAP Response Checklist

Referenced Specifications

2011 Exchange Specification	Messaging Platform 3.0 Sec 3.6.2
2011 Underlying Specification	SOAP 1.2: Table 4 WS-Addressing 1.0, SOAP Binding: Section 6 WSS SOAP Message Security 1.1: Lines 2038-2044



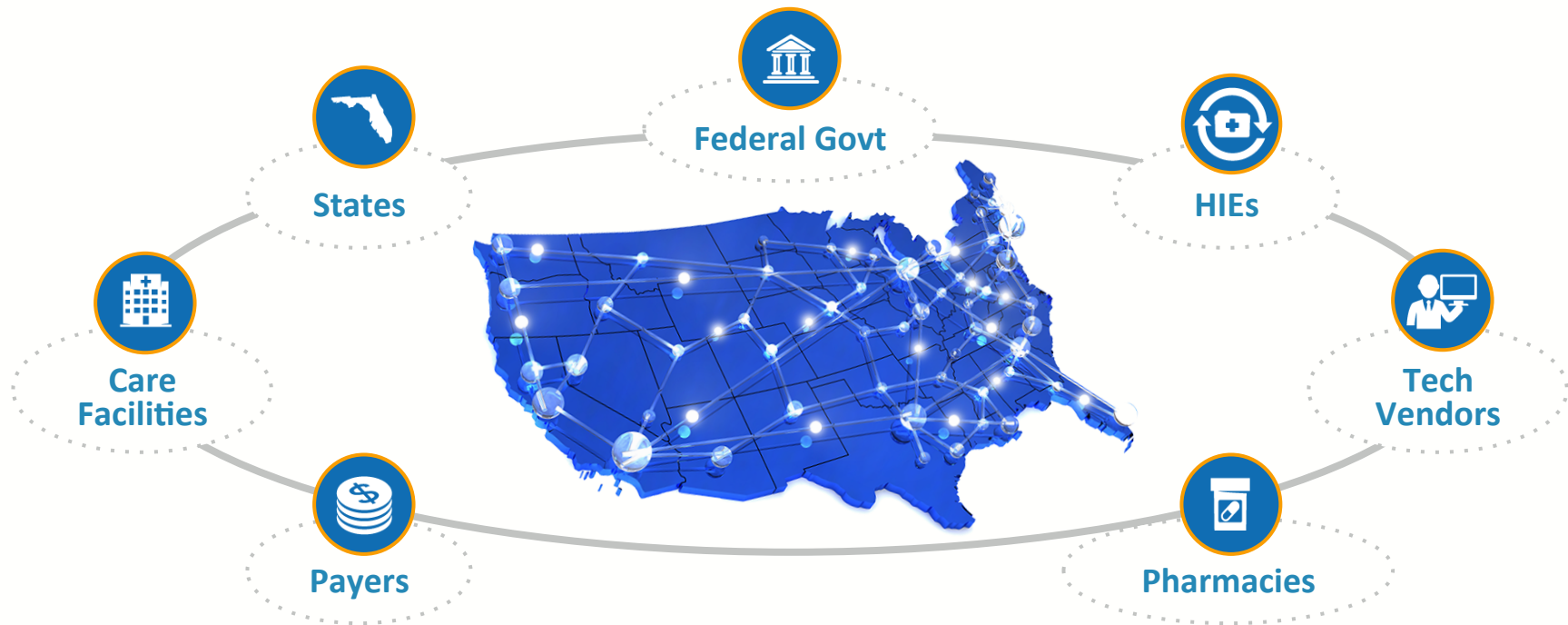
eHealth Exchange™

Conformance Testing Checklists

An initiative of **the sequoia**
project

Introduction to the eHealth Exchange

Rapidly growing network for securely sharing health information over the Internet



Shared Governance and Trust Agreement

Common Standards, Specifications & Policies

Thank You!