

## NHIN Direct Project Status, Consensus, and Direction

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Redwood MedNet Conference



# What is the NHIN Direct Project?



A project to create the set of **standards** and **services** with a **policy** framework to enable simple, directed, routed, scalable transport over the Internet to be used for secure and meaningful exchange between known participants in support of meaningful use



**Services**



**Standards**

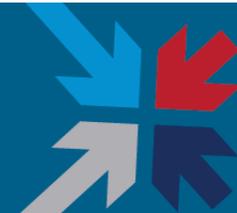


**Policies**



**Trust Fabric**

## A Brief Pre-History



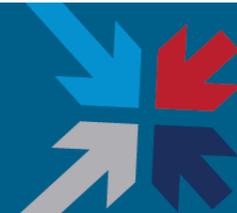
Lots of commentary was received by ONC on the need for **simple interoperability** for secure health IT messaging, particularly Stage 1 MU.

The threshold of trust required for secure messaging would be less than required for comprehensive HIE (CONNECT, NHIN Exchange, etc) – we would gain a lot by simply **replacing the fax machine**.

A further sense that “the truth was out there” - solutions existed to do this within enterprises today, so let's be agile - “Rough Consensus and Running Code” - and **100% public**.

Launched end of March 2010 at HIMSS with a Wiki, a blog, a conference call line, and a mailing list; two facilitators (Brian and Arien); an ad-hoc process; and a dozen or so committed organizations we called the **Implementation Group**

# Implementation Group Requirements



- Implementation Group members must:
  - Regularly attend Implementation Group weekly meetings

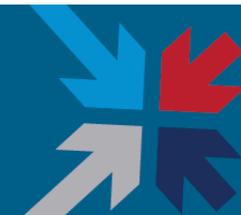
AND

- Contribute source code or documentation to the reference implementation(s), specifications, implementation guides, etc.

OR

- Support real-world early implementations with one of:
  - Groups of providers or patients participating
  - EHRs, EHR modules, PHRs, etc. implementing the specification
  - HISPs or HIE technology implementing the spec
  - Training, certification, or support services to providers

# Close to 200 Implementation Group Participants



- » **PHR**
  - Microsoft (HV/Amalga)
  - Google
  - Relay Health
- » **EHR**
  - Allscripts
  - Cerner
  - eClinicalWorks
  - Epic
  - GE
  - McKesson (through RelayHealth)
  - Siemens
  - Greenway Medical Technologies
- » **HIT Association**
  - Clinical Groupware Collaborative
  - » **Medical Associations**
    - American Academy of Family Physicians
- » **IDN**
  - Kaiser
  - BIDMC/CareGroup
- » **National Network**
  - SureScripts
  - Medplus/Quest
  - MedPATH Secure Networks
- » **State/Regional HIO**
  - CA (CAL eConnect )
  - CA (HHS)
  - CA (Redwood MedNet)
  - CO (CO State HIE)
  - FL (FL State HIE)
  - OR (Oregon HIT Oversight Council)
  - MA (NEHEN-CSC)
  - WA (Community Choice PHCO)
  - MAeHC
  - NY (HIXNY)
  - NY (Hudson Valley) (through MedAllies)
  - RIQI (Rhode Island Quality Institute)
  - TN (TN State HIE)
  - Carespark
  - HealthBridge
  - Community Choice Healthcare Network
- » **Federal**
  - Veteran's Administration
  - Social Security Administration
  - National Institutes of Health
  - VLER
  - Department of Defense
  - Centers for Medicare and Medicaid
  - MITA
- » **Consulting**
  - Gartner
  - Carespark/CGI Federal
  - Carespark/Serendipity Health
  - HLN Consulting, LLC
- » **HIE Technology**
  - RelayHealth (also PHR & EHR)
  - Axolotl
  - Mirth
  - VisionShare
  - GE
  - MedAllies
  - CSC
  - Medicity
  - Kryptiq
  - IBM/Open Health Tools
  - Secure Exchange Solutions
  - Informatics Corporation of America
  - Microsoft (HV/Amalga)
  - Oracle Health Sciences
  - Carespark/Anakam
  - Carespark/Mobile MD
  - MEDNET
  - EHR Doctors
  - FEI.com
  - Misys Open Source Solutions
  - Atlas Development
  - Argonne National Laboratory
  - Emdeon
  - Harris
  - High Pine Associates
  - Inpriva
  - Intel
  - Techsant Technologies



- New Page
- Recent Changes
- Manage Wiki
- Search

## Status of these User Stories

These User Stories are in a Call for Consensus at the Workgroup level state.

- [User Story Workgroup Endorsement](#)
- [User Story Implementation Group Endorsements](#)
- [User Story Other Endorsements](#)
- [May 6th Face to Face meeting consensus vote](#)

## Overview and Context

Patient engagement stories should conform to the overall framework provided by the [NHIN Workgroup](#). In particular, NHIN Direct is intended to solve simple direct secure electronic transport supporting health information exchange currently being handled via paper or portal communication following existing trust models.

These use cases have common patterns, including:

- Pre-existing information transfer patterns via fax, courier, mail or clipboard, or in some cases, via portal
- Push transactions where patient identity is known and consent and legal authorization exists for the information transfer

See [Design Principles](#) and [Story Process](#) for more detail.

User stories are subject to the [Core Terminology](#). Please note that the term "EHR" used in these user stories is used as defined there (and expressly includes the use of lightweight EHR module).

## Stories

	Story	Priority	Status
1	<a href="#">Primary care provider refers patient to specialist including summary care record</a>	1	Draft

- Home
- FAQ
- IPR Policy
- Blog
- Discuss
- Design Principles
- Guidelines for Participation
- Overall Process
- User Stories
- Specifications and Service Descriptions
- Suggestions
- Implementation Group
- Workgroups:
  - Documentation and Testing
  - Reference Implementation
  - Implementation Geographies
  - Security and Trust

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  - Implementation Geographies
  - Security and Trust
  - Previous Workgroups
- Deliverable Tracker
- HHS NHIN Overview



# Primary care provider refers patient to specialist including summary care record

Page

Discussion (30)

History

Notify Me

EDIT

State: Draft

## Story

Perspective: A provider referring a patient to a specialist

Context: The referring provider has made the determination that it is clinically and legally appropriate to send a referral and summary of care to the specialist.

Story: The referring provider searches for a patient in the practice EHR and initiates a referral message. The referral reason is described in the message. In some cases the referral is directed to a specific specialist, and in other cases to a specialist practice. The referring provider attaches clinical documents as needed for reference, and then sends the referral.

The specialist sees the new referral in her local practice EHR. If this is a new patient for the practice, a new patient is created in the EHR. The core referral and the various documents are imported into the new patient's chart.

## Details

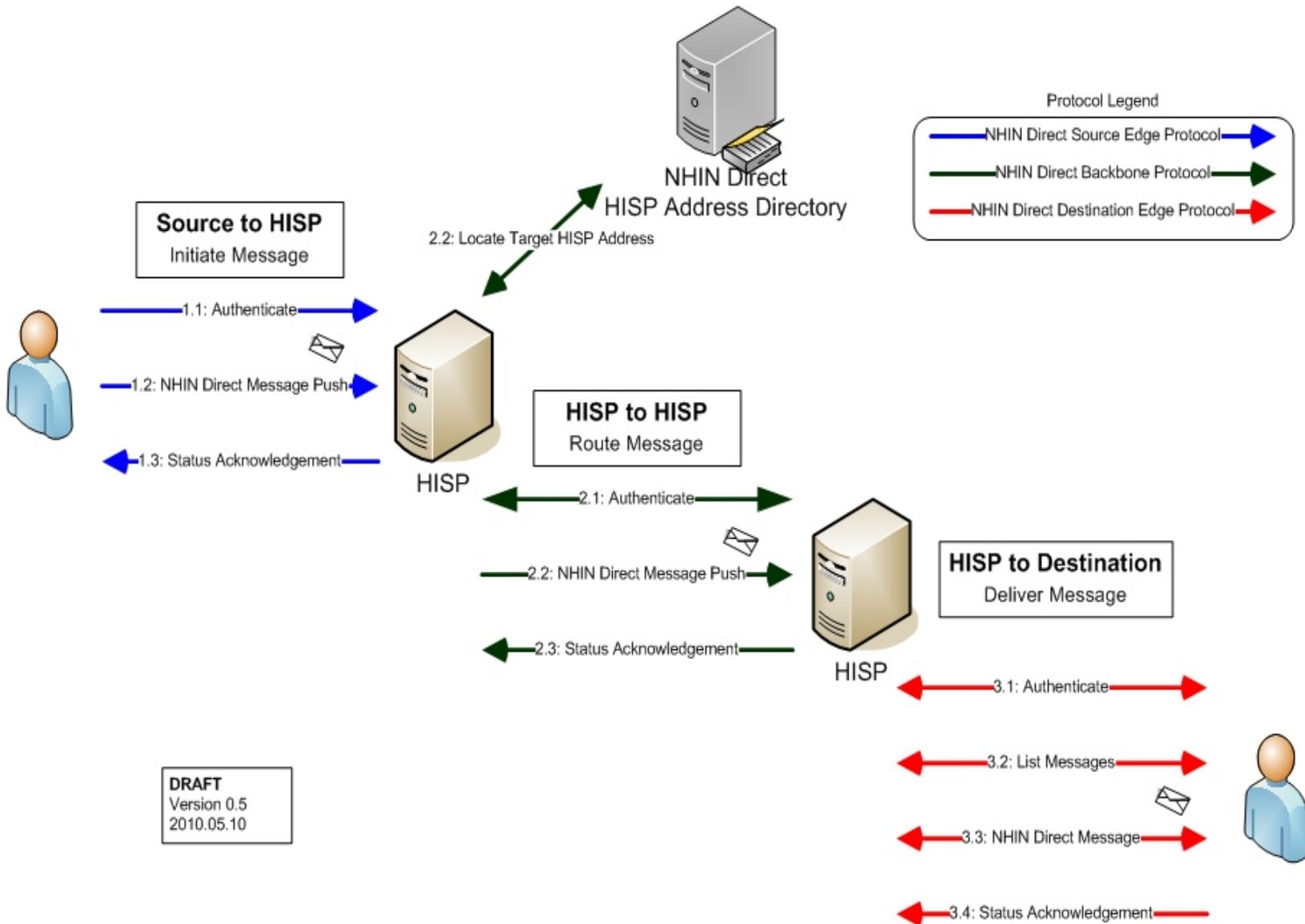
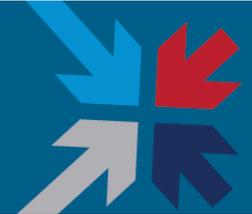
### Actors

Actor	Details
Addressees	The Referring Provider and Specialist (or specialty practice)
Source	The Referring Provider's EHR
Destination	The Specialist's EHR

There may be hidden actors, such as potential intervening HISPs between the Source and Destination.

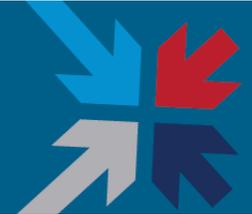
### Data Exchanged (This section is non-normative)

# NHIN Direct Abstract Model

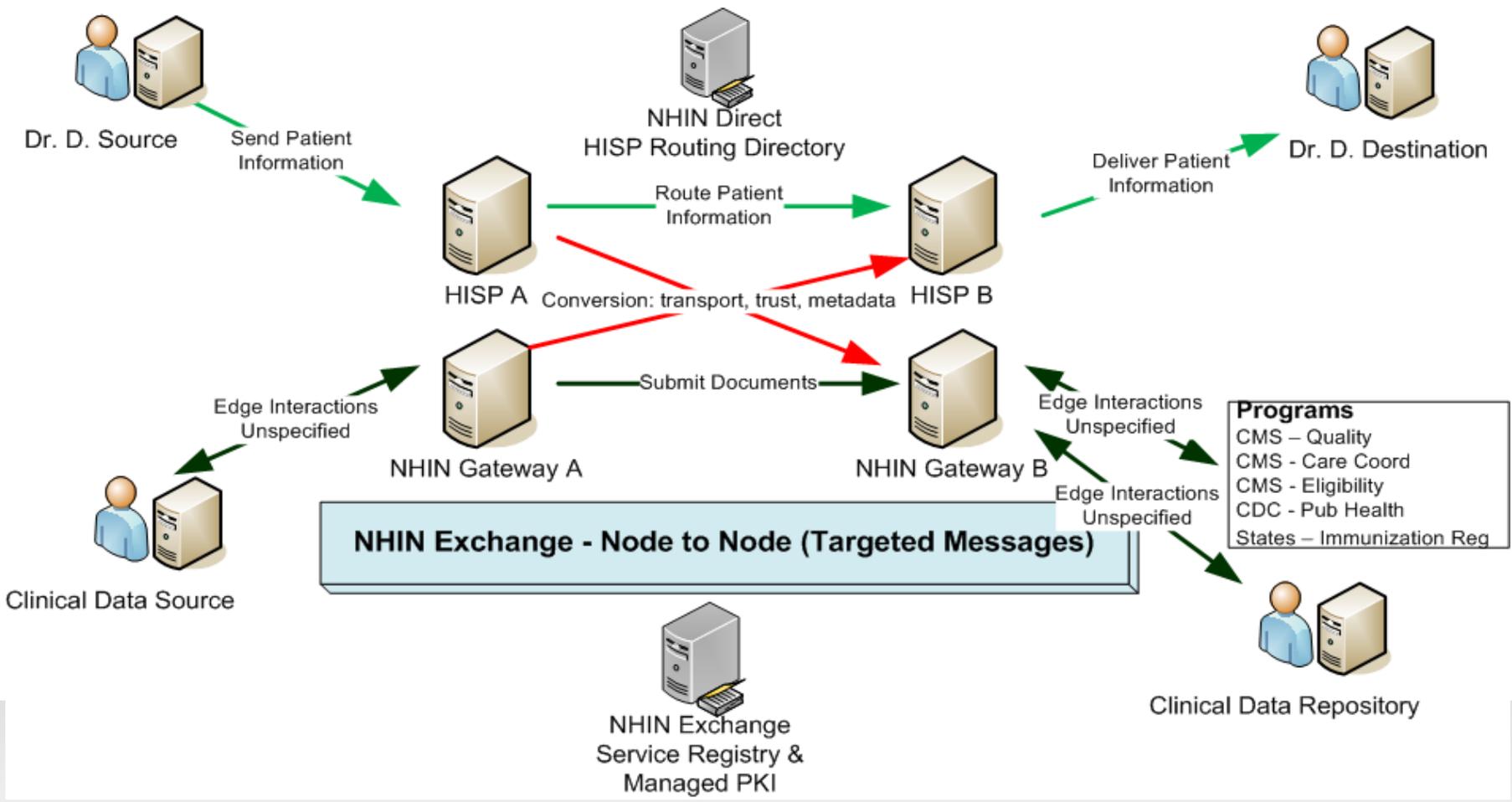


**DRAFT**  
Version 0.5  
2010.05.10

# “Karen's Cross”



## NHIN Direct – Endpoint to Endpoint (Routed Messages)



# Consensus Proposal



- » The Consensus Proposal can be found at:  
<http://nhindirect.org/Consensus+Proposal>
- » To review, the Consensus Proposal is an outline for set of transport specifications. These transport specifications will have two parts:
  - 1) A set of specifications based on SMTP providing a common denominator solution encompassing all providers, and intended as a stepping stone to NHIN Exchange
  - 2) A set of specifications based on XDR allowing participants in NHIN Exchange to fulfill the user stories.
- » Call for Consensus deadline was June 30<sup>th</sup>.
- » Votes and comments:
  - Unanimous “YES”es with some comments.
  - The comments are mostly clarifications and additions and do not go against the main intent of the consensus agreement

# Timeline



NEW DATE



- First Draft Specifications:**
- Key User Stories
  - Content Container Spec
  - Security & Trust Spec
  - Comprehensive HIE Service Descrp.
  - Individual Involvement Service Descrp.
  - Addressing Spec
  - Abstract Model
  - Edge Spec
  - Deliverable: HISP-HISP & Source/Destination-HISP Service Description

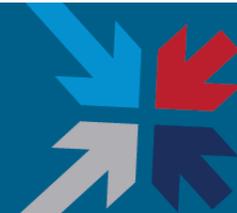
- 2nd Draft Specs**
- June
    - Early Ref Implementation
    - Core Specifications and Service Descriptions
    - Interaction Model/Service Orchestration Model
  - July
    - Ref Implementation
    - Testing Framework
    - Conformance Testing Scripts and Conformance Service
    - Ref Implementation Guides

- Ops/prod Draft Cert.
- Conformance Testing
- Core Messaging
- Policy Recommendation
- Process Recommendations

Weekly teleconferences

- ★ Face to face meetings
- ★ We Are Here

# Deliverables for August



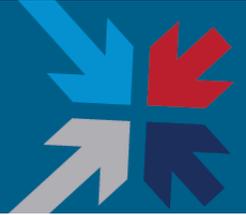
- » **Reference Implementations:** Provide a high quality open source reference implementation of the recommended specification
- » **Reference Implementation Guides:** Provide reference implementation guides for edge systems and routing systems (including sample code, testing and conformance documentation, legal and policy documentation, etc...)
- » **Conformance Testing Scripts and Services:** Provide conformance UATs and an automated conformance service for each concrete implementation
- » **Key Implementation Geographies:** The Implementation Geographies WG will finalize a set of key geographies for early real-world implementation
- » **Interaction Model/Service Orchestration Model:** The Abstract Model WG and the Concrete Implementation WG will provide an Interaction Model and Service Orchestration Model

# Call for participants for new Workgroups



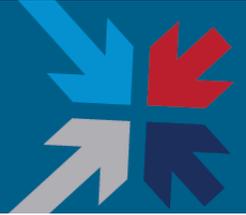
- » NHIN Direct is regrouping around a new set of workgroups:
  - Documentation and Testing Workgroup
  - Reference Implementation Workgroup
  - Implementation Geographies Workgroup
  - Security and Trust Workgroup (refocused)
- » All other workgroups will only meet as needed.
- » Ask that each someone from each Implementation Group member participate in one or more of the workgroups.
- » Please email [nhindirect@nhindirect.org](mailto:nhindirect@nhindirect.org) with contact information and name of workgroup and add yourself to the wiki page of the workgroup you're interested in.

# Reference Implementation Workgroup



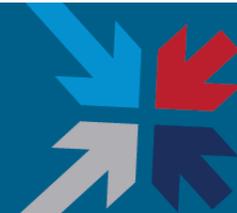
- » Purpose is to create a solid open-source reference implementation and associated libraries implementing the NHIN Direct specifications.
- » Key August 17<sup>th</sup> Deliverable: Draft Reference Implementation
- » The WG made decisions to:
  - Create parallel implementations on a Java platform and .NET platform
  - Prioritize Security Agent specification first.
- » The WG made decisions to:
  - Brian will draft the initial open source policy for the reference implementation work.

# Implementation Geographies Workgroup



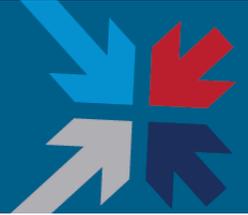
- » Purpose is to plan for early implementations demonstrating real-world information exchange following existing care delivery patterns
- » Key August 17th Deliverable: Key Implementation Geographies
- » To date, the WG has:
  - Early list of potential geographies: <http://nhindirect.org/Potential+Implementation+Geographies>
  - Early list of operational considerations  
<http://nhindirect.org/Implementation+Operational+Plan>
  - Implementation Geographies Participation Guidelines and Checklist  
<http://nhindirect.org/Implementation+Geographies+Participation+Guidelines+-+Check+List>
- The WG is currently working on:
  - Discussing proposed participation timeline and guidelines
  - Drafting and completing project brief on geography, participants and needed resources

# Security and Trust Workgroup



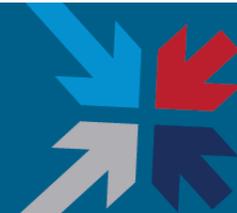
- » Purpose is to provide alternatives and highlight issues relating to security and trust enablement via technology (e.g., certificates and signatures)
- » Key August 17<sup>th</sup> Deliverable: Security & Trust Threat Assessment Model
- » To date WG has:
  - Created a Basic Trust Model, Keys for Consensus:
    - <http://nhindirect.org/Basic+Trust+Model+--+Keys+for+Consensus>
- » The WG set action items to:
  - Finalize Basic Trust Model Keys for Consensus
  - Continue work on Security & Trust Threat Assessment Model

# Documentation and Testing Workgroup



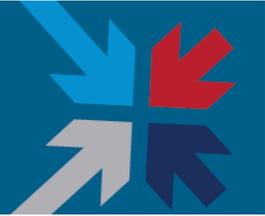
- » Purpose is to create effective documentation and testing guidance for implementers including:
  - Specification documentation
  - Implementation guides
  - Conformance testing guides
- » In addition, the Documentation and Testing Workgroup will create overviews for general consumption and work with the Reference Implementation Workgroup to create a testing service corresponding to the conformance testing guides.

# New WG Schedule



- » WGs adhere to the schedule below, meeting via teleconference on a weekly basis

WG	Meeting Time
Reference Implementation/Open Source WG	Tuesdays 12 pm-1pm EST
Implementation Geographies WG	Wednesdays 12 pm-1pm EST
Documentation and Testing WG	Wednesdays 2 pm- 3pm EST
Security & Trust WG	Thursdays 2pm-3pm EST



## Q&A