Node and Flow Configuration (NFC)

Node Mentoring Workshop

2/9/2004

Node And Flow Configuration (NFC)

- Product review
  - Technical guidance oversight
  - Security
  - Flow management
  - Network operation issues

Technical Guidance Oversight and Outreach Products

Product	Status
Network Exchange Protocol v1.1	Completed 9/17/03
Network Node Functional Specification v1.1	Completed 9/17/03
Network Knowledge Call #1 and Supporting Materials	Completed 10/31/03
Network Knowledge Call #2 and Supporting Materials	Completed 12/2/03
Network Knowledge Call #3 and Supporting Materials	Completed 1/13/04
Network Knowledge Call #4 and Supporting Materials	Scheduled 2/17/04

Network Exchange Protocol (Protocol)

The ***Protocol*** is the set of rules that govern the generation and use of valid service requests and responses on the Exchange Network.

Network Node Functional Specification (Specification)

The ***Specification*** is a detailed description of a Node's expected behavior that includes:

- a description of the functions the Node will perform
- how those functions are to be invoked
- the output expected from the Node

Network Security Infrastructure: NAAS

The Network Authentication and Authorization Services (NAAS) is a set of centrally managed XML Web Services that provide for:

- **Network Authentication**
- **Network Authorization**
- **Network Identity Management**

Security Products

Product	Status
Network Security Guidelines and Recommendations	Complete 4/2003
Network Security Specification Version 1.0 (Combined authentication and authorization documents)	Final Draft 2/2004
Administrator's Guide to Network Security Version 1.0	Draft 2/2004
Network Security Policy Document Version 1.0	Draft 2/2004

Network Security Guidelines and Recommendations

- Describes security risks associated with the Exchange Network.
- Reviews security models and encryption technologies.
- General guidelines and minimum recommendations for securing Network Nodes.

Network Security Specification Version 1.0

- Discusses how the NAAS can be used to for security management tasks on the Exchange Network.
- Defines the NAAS Web Services and interfaces for Network authentication, authorization, and identity management.
- Document describes how a *Node* must interact with NAAS.

Network Security Policy Document v1.0

- Describes the Network Authorization, Network Authentication, and Identity Management Policies.
- Describes the Network Hardware and Data Security Policies.
- In conjunction with the Administrator's Guide to Network Security describes how a Human should interact with the NAAS.

Flow Management Products

Product	Status
Flow Configuration Document (FCD) Template	Completed 12/2003
FCD NEI	Draft – reviewing – early 2004
FCD Beach	Draft – reviewing – early 2004
FCD Facility	IPT reviewing – early 2004
FCD North West Water Quality (NWWQ)	Draft completed by NWWQ
FCD eDMR	Draft completed 1/2004
Meta data header – aka Payload header	Facility IPT working on – 2/2004

FCD

The Flow Configuration Document (FCD) Template identifies the universe of information Network Partners should consider when documenting and implementing a Flow or a Common Data Service. A Flow Configuration Document may include, by reference, information from many other documents (schema, system code lists, or procedures). The major parts of this document are:

- Network Exchanges
  - Common Data Services
  - Flows

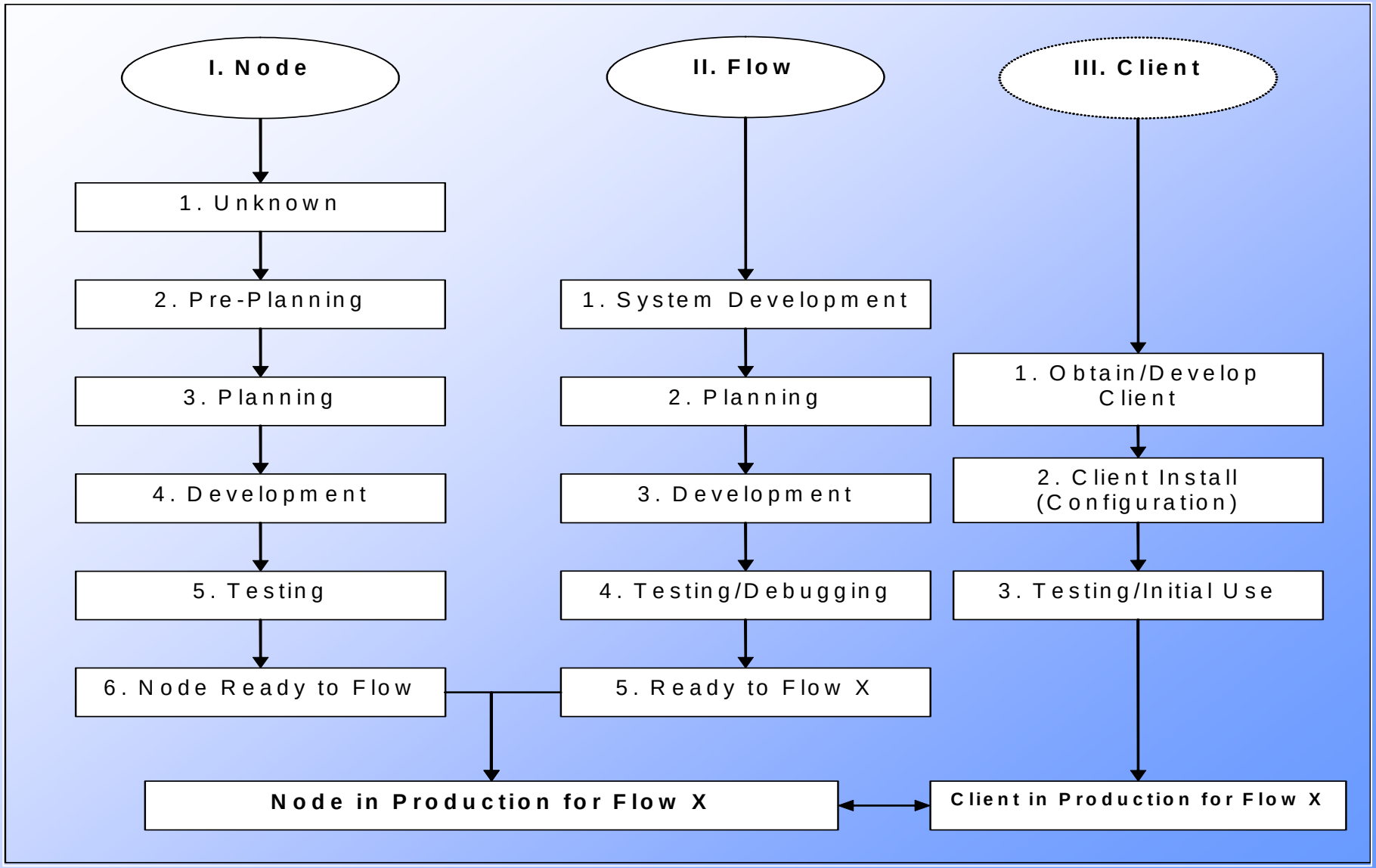
Meta Data Header

Coming soon

Flow Management Products

Product	**Status**
Node, Flow, and Client Definition and Implementation Statuses	Final
Data Request Naming Convention	Draft completed
Network Flow Principles (Benefits of using the Network)	Draft completed

Flow Deployment



Node Definition

A Node is a Web Service provider which can correctly respond to all Web methods[1] as described in the Network Node Functional Specification and Network Exchange Protocol.

[1] Web method descriptions are on pages 31–37 of the Network Exchange Protocol v1.1 and pages 12–30 of the Network Node Functional Specification v1.1.

Flow Definition

A Network Flow is a documented grouping of related data, their defined format, and the requests and responses, as defined by the Protocol and Specification. Partners communicate their Flow designs through "Flow Configuration Documents" (FCD).

Client Definition

A Network Client is a component or an application that can initiate data requests or data submissions to Nodes. Network Client applications cannot directly interact with other clients; a Node "listening" for Network Client requests is required for an information exchange.

Clients on the Network

- Can be used by Partners to implement a Flow.
- Likely to proliferate the Network use for ‘non-regulatory’ Flows.
- Marketplace displaying innovative Network use through Clients.
- Used by Partner’s to ‘add-value’ to Nodes

Data Service Naming

Purpose: The naming convention is to guide implementers by providing basic information about the Data Service and ensure consistency and uniqueness across Data Service names.

Data Service Naming Convention

[Prefix].[Action][Object](By [Parameter(s)]) _ [Version]

e.g. AirCompliance.GetPlantByPlantID_V1.0

	Prefix	Action	Object	*Parameters(s)* *(Optional)*	Version (V)
Allowable Values	Environmental Interest (EI)	Get	Primary Data Returned	Optimizing constraint(s)	Data Service Version Number (V.#.#)
	System Name	Other			
	Exchange Name				
	Responsible Party				

Network Flow Principles (Benefits of using the Network)

- High-Level questions Flow designers should consider when designing a Network Flow.
  - Describe the target program/data area of the Flow independent of the precise historical domain of the existing Flow?
  - For the current data in an existing data exchange, what improvements does the Network provide over current practice (e.g., More Frequent, More Efficient, Better Data Quality, Data standards and Schema XML for additional definition, structure and integration, Leveraging common infrastructure)?
  - How does the Flow Project expand upon the existing traditional exchange to include additional data (e.g., More Data Partners, More Entities, More information about current entities.)?
  - How does the Flow provide new kinds of access to data via the interactive Web services (Query, Solicit) provided by the Network?
  - How are the Flow partners planning/aspiring to use these new capabilities/data?

Network Operations Products and Activities

Product/Activity	**Status**
Coordination with Network Help Desk	Ongoing
Coordination with Network Mentoring Group	Ongoing
Coordination with Technical Resource Group (TRG)	Ongoing
Clearinghouse for Operations issues, e.g., Schema Header, Data Request Naming	Ongoing
Node Test Tools	Completed

Network Help Desk

The CDX/Network Help Desk is available for any Network or Node building question.

By Telephone:
Call toll-free line between the hours of 8:00 am and 6:00 pm (Eastern) at 888-890-1995 (Select Option 2).

By E-Mail:
Send support requests to nodehelpdesk@csc.com

Node Mentoring Group Contacts

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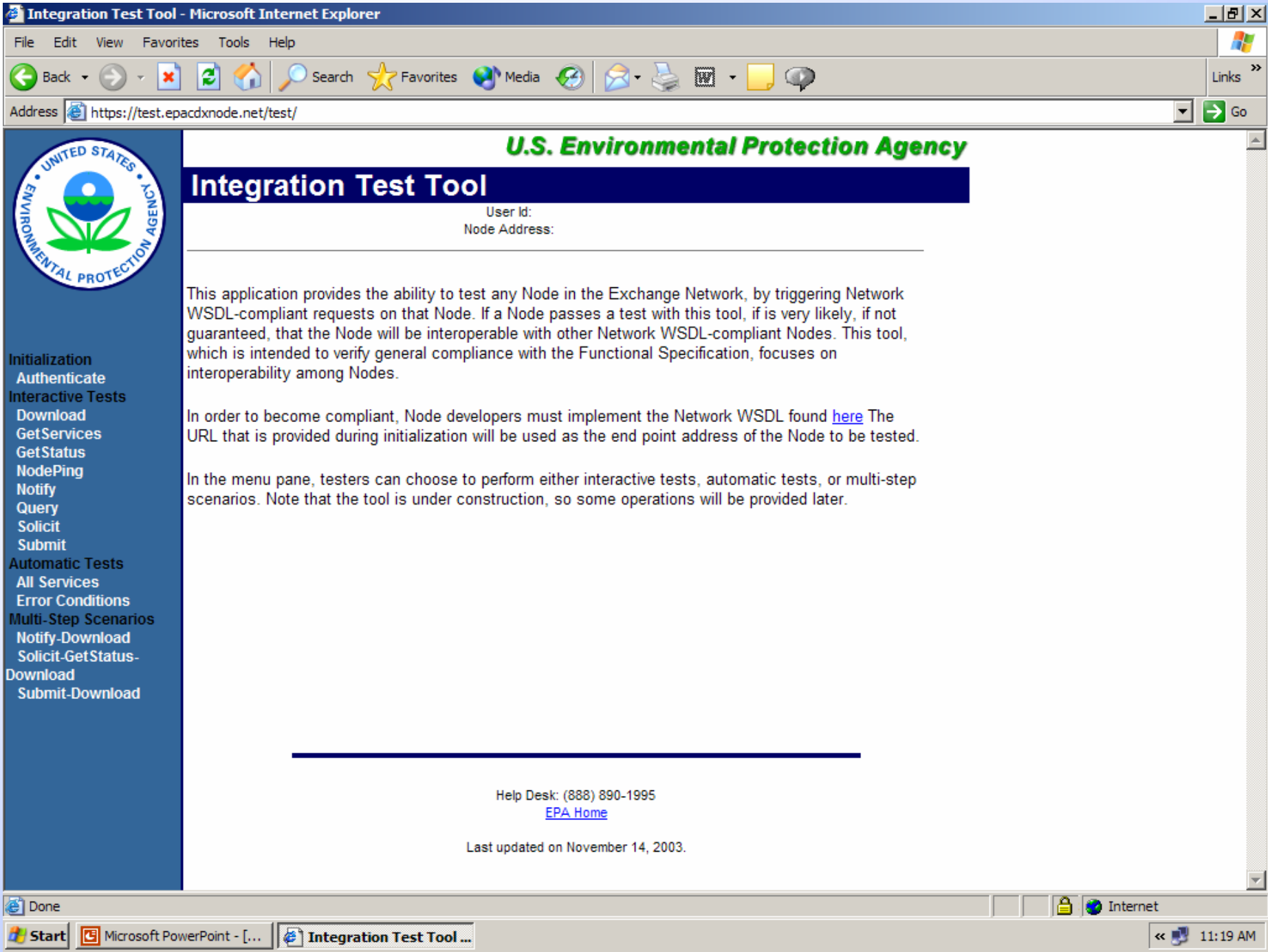
Test Tools

https://test.epacdxnode.net/test/

- The ability to test any Node in the Exchange Network, by triggering Network WSDL-compliant requests on that Node.
- If a test is passed, it is very likely, the Node will be interoperable with other Network WSDL-compliant Nodes.
- Intended to verify general compliance with the Functional Specification, focuses on interoperability among Nodes. :
  - interactive tests
  - automatic tests.


Integration Test Tool - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media Links
Address https://test.epacdxnode.net/test/
Go
U.S. Environmental Protection Agency
Integration Test Tool
User Id:
Node Address:
This application provides the ability to test any Node in the Exchange Network, by triggering Network WSDL-compliant requests on that Node. If a Node passes a test with this tool, if is very likely, if not guaranteed, that the Node will be interoperable with other Network WSDL-compliant Nodes. This tool, which is intended to verify general compliance with the Functional Specification, focuses on interoperability among Nodes.
In order to become compliant, Node developers must implement the Network WSDL found here The URL that is provided during initialization will be used as the end point address of the Node to be tested.
In the menu pane, testers can choose to perform either interactive tests, automatic tests, or multi-step scenarios. Note that the tool is under construction, so some operations will be provided later.
Initialization
Authenticate
Interactive Tests
Download
GetServices
GetStatus
NodePing
Notify
Query
Solicit
Submit
Automatic Tests
All Services
Error Conditions
Multi-Step Scenarios
Notify-Download
Solicit-GetStatus-Download
Submit-Download
Help Desk: (888) 890-1995
EPA Home
Last updated on November 14, 2003.
Done
Internet
Start
Microsoft PowerPoint - [...
Integration Test Tool ...
11:19 AM

NFC Members

- Connie Dwyer, EPA co-chair
- Chris Clark, EPA assistant co-chair
- Maryane Tremaine, EPA Region VII
- Mike Macdougall or Ken Blumberg, EPA Region I
- Dennis Burling, NE state co-chair
- Dennis Murphy, DE
- Bill Geake, MI

Participating Members

- Ross & Associates
  - Rob Willis
  - Louis Sweeney
  - Kochukoshy Cheruvettolil (CK)
- CSC
  - Yunhao Zhang
  - David Dundua
  - Glenn Tamkin
  - Joe Greer

Questions

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