NMI Component Testing Guidelines

Pertaining to: NMI Release 2 (released October 25, 2002)

November 21, 2002

This packet contains NMI Component Testing Guidelines for individual components released as part of NMI Release 2.0. The information was prepared by the NMI Integration Testbed Manager working in cooperation with the NMI Testbed-Council to represent the interests of the NMI Management team and also relevant component developers. This information is intended to provide NMI Integration Testbed sites with sufficient guidance per component to enable evaluation of any given component at their site as used with actual projects and applications. It also specifies detailed reporting mechanisms designed to enable the capture, aggregation, and analysis of participating sites' evaluations to determine the overall level of evaluation activity within the Testbed and status checks on how evaluation is proceeding per component.

NMI Testbed site representatives may undertake evaluation of components themselves or may delegate to or collaborate with others at their sites having useful expertise and experience to evaluate specific components. Additional instructions are provided for noting the name and position of the additional evaluator(s) for cases where feedback is originating from someone other than the NMI Testbed site representative.

Though specific actions are listed for the evaluation of all individual components, those participating in evaluation should also consider and operate within the context of the general categories of evaluation for NMI components, as applicable. These general categories of evaluation are:

1. Integration at and distribution to workstations and other endpoint resources
2. Interaction with commonly deployed campus infrastructure
3. Vertical discipline integration within communities of users
4. Component scalability and consistency
5. To the greatest extent possible, all evaluations should involve real users in realistic application scenarios and the integrated use of several middleware components

A new and updated version of these NMI Component Testing Guidelines will made available through the NMI Testbed Manager to the NMI Integration Testbed sites prior each NMI Release to enable the start of the formal integration testing cycle.

NMI Release 2 Components:

Software: **Globus Toolkit™ v2.2.2**
Software: **Condor-G v6.4.4**
Software: **Network Weather Service v2.2.1**
Software: **GSI-enabled OpenSSH v1.7**
Software: **Grid Packaging Tools v2.2.5**
Software: **GridConfig v0.1**
Software: **KX.509 and KCA v1.0** (as deployed with Globus)
Software: **KX.509 and KCA v1.0** (standalone)
Software: **Certificate Profile Maker v1.1**
Software: **Pubcookie v3.0**
Software: **Shibboleth**
Software: **OpenSAML**

Directory Object Classes: **eduPerson (200210)**
Directory Object Classes: **eduOrg (200210)**
Directory Object Classes: **commObject, October 2002**

Services: **LDAP Analyzer, October 2002**
Services: **Certificate Profile Registry**

Conventions and Practices: **Practices in Directory Groups, October 2002**
Conventions and Practices: **LDAP Recipe, October 2002**
Conventions and Practices: **Metadirectory Practices for Enterprise Directories in Higher Education, October 2002**

Architectures: **Inter-Domain Data Exchange (Draft)**
Architectures: **Shibboleth Architecture v.5, May 2002**

Policies: **Higher Education PKI (HEPKI) Model Campus Certificate Policy**
Policies: **Lightweight Campus Certificate Policy and Practice, April 2002**
Policies: **Sample Campus Account Management Policy, April 2002**

NMI Release 2 Component Testing: Globus Toolkit v2.2.2

Component:	Globus Toolkit 2.2, as deployed in tandem with other NMI-R2 components such as Condor-G, Network Weather Service, GSI-OpenSSH, Grid Packaging Tools and KX.509
Description:	An open source software toolkit enabling Grid computing: coordinated resource sharing and problem solving in dynamic, multi-institutional virtual organizations.
Documentation/ download materials: (docs, URLS, binaries, etc.)	Packaged as part of the GRIDS Center Software Suite in NMI Release 2 at http://www.nsf-middleware.org/NMIR2. See also http://www.globus.org and http://www.grids-center.org.
Prerequisites for site: (specific expertise, experience, config.)	Operating System: Red Hat 7.2 or 7.3 on IA32, or Solaris 8 on Sparc. (Maintenance release NMI-R2.1 will support Red Hat on IA64.) . More information is available at: http://www.nsf-middleware.org/documentation/GlobusToolkit/
Actions or focus areas for testing:	Level 1: 1. Verify installation procedures and documentation for Globus Toolkit as part of the general NMI-R2 packaging installation and separately. 2. Identify scientific projects that could benefit from the Globus Toolkit's features. Ideal demonstrations would involve participants at other testbed sites and other NMI-R2 components. 3. Identify specific campus enterprise components (e.g., directory services, user accounts, supercomputer schedulers, etc.) and describe how these can be integrated with specific Globus Toolkit components (e.g., MDS, GSI, GRAM) for resource management, security, information services and data management. Level 2: 1. Demonstrate successful sign-on and execution across multiple sites. 2. Demonstrate integration with Globus Toolkit components with specific campus enterprise components.
Support mechanism:	Use the NMI developers' discussion list (nmi-developer@nsf-middleware.org). Subscribe by sending email to majordomo@nsf-middleware.org with a message body of "subscribe nmi-developer" (without quotes).
Bug and Enhancement Suggestion reporting mechanisms:	Send bug reports and enhancement suggestions to nmi-support@nsf-middleware.org with the subject line: TESTBED-FEEDBACK-R2-GLOBUS

	If the person who is sending the feedback is not the same as the sender of the email message, indicate name/position of the person providing the feedback.
Deliverable date:	January 28, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org in an MS-Word document with a filename in the following format: Institution_initials-R2-GLOBUS.doc 1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels. Report as requested in the test actions for the level(s) that were tested. 2. Listing of date/time/brief summary line of bugs and enhancement suggestions submitted throughout the test cycle. 3. Log (date/time/user/use/result) of all sign-on and execution attempts, up to and concluding with documentation of successful usage at end of test period. 4. Listing and brief description of any previously undocumented parameters required within Globus Toolkit configuration. 5. Listing and brief description of any "best practice" issues associated with this mode of working, as input into NMI dissemination activities.

NMI Release 2 Component Testing: Condor-G v6.4.5

Component:	Condor-G v6.4.5, as deployed in tandem with other NMI-R2 components such as Globus Toolkit*, Network Weather Service and KX.509.
Description:	Condor-G works in conjunction with the Globus Toolkit to provide High Throughput Computing (HTC) on very large collections of distributively owned workstations. For many research and engineering projects, the quality of the research or the product is heavily dependent upon having this quantity of computing cycles available over a long period of time.
Documentation/ download materials: (docs, URLS, binaries, etc.)	Packaged as part of the GRIDS Center Software Suite in NMI Release 2 at http://www.nsf-middleware.org/NMIR2. See also http://www.cs.wisc.edu/condor/ and http://www.grids-center.org.
Prerequisites for site: (specific expertise, experience, config.)	Operating System: Red Hat 7.2 or 7.3 on IA32, or Solaris 8 on Sparc. (Maintenance release NMI-R2.1 will support Red Hat on IA64.) Grid credentials and authorization, either on a locally constructed Grid or an already-established Grid such as the PACI resources, NASA IPG, or DOE Science Grid. Willingness to occasionally replace software with patches from the NMI developers. More information at: http://www.nsf-middleware.org/documentation/NMI-R2/0/CondorG/
Actions or focus areas for testing:	Level 1: 1. Verify installation procedures and documentation for Condor-G Level 2: 1. Exercise Condor-G with other NMI-R1 components such as the Globus Toolkit and Kx509. Note re: fault tolerance - routine network and remote resource failures should be considered normal and automatically recoverable. 2. Exercise the use of higher level tools such as the Condor DAGMan for managing Grid jobs. 3. Desirable but not required: Exercise Condor-G resources not using the NMI stack (such as NASA IPG or EU Datagrid) is appreciated but not required
Support mechanism:	Use the NMI developers' discussion list (nmi-developer@nsf-middleware.org). Subscribe by sending email to majordomo@nsf-middleware.org with a message body of “subscribe nmi-developer” (without quotes).

Bug and Enhancement Suggestion reporting mechanisms:	Send bug reports and enhancement suggestions to nmi-support@nsf-middleware.org with the subject line: TESTBED-FEEDBACK-R2-CONDOR-G If the person who is sending the feedback is not the same as the sender of the email message, indicate name/position of the person who did the evaluation.
Deliverable date:	January 28, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org in an MS-Word document with a filename in the following format: Institution_initials-R2-CONDOR-G.doc 1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels. Report as requested in the test actions for the level(s) that were tested. 2. Listing of date/time/brief summary line of bugs and enhancement suggestions submitted throughout the test cycle. 3. Listing of all instances of using Condor-G to use Grid resources for local user's applications, with indication of success or failure. 4. Listing and brief description of any previously undocumented parameters required for successful use of Condor-G.

NMI Release 2 Component Testing: Network Weather Service v2.2.1

Component:	Network Weather Service (NWS) version 2.2, as deployed in tandem with other NMI-R2 components such as Globus, Condor-G and KX.509.
Description:	The Network Weather Service is a distributed system that periodically monitors and dynamically forecasts the performance that various network and computational resources can deliver over a given time interval.
Documentation/ download materials: (docs, URLS, binaries, etc.)	Packaged as part of the GRIDS Center Software Suite in NMI Release 2 at http://www.nsf-middleware.org/NMIR2.
Prerequisites for site: (specific expertise, experience, config.)	Operating System: Red Hat 7.2 or 7.3 on IA32, or Solaris 8 on Sparc. (Maintenance release NMI-R2.1 will support Red Hat on IA64.) To take advantage of the services that NWS provides, knowledge of the local network is useful but not necessary. Firewalls and Network Access Translation (NAT) services can adversely affect the reachability of parts of NWS.
Actions or focus areas for testing:	Level 1: 1. Verify installation procedures and documentation for NWS, as part of the general NMI-R2 packaging installation and separately. 2. Provide feedback on configuration and management of NWS. Level 2: 1. Demonstrate interoperability of NWS with other NMI-R2 components. Whenever feasible, this should be achieved with specific applications such as those developed for large-scale Grid deployments such as iVDGL, PPDG, GriPhyN, NEES, etc. 2. Define how the NWS components in the following areas interact with the campus enterprise (e.g., directory services): - Resource Management - Security - Information Services - Data Management - Devote particular attention to security aspects, including use of NWS in firewall and NAT conditions.
Support mechanism:	Use the NMI developers' discussion list (nmi-developer@nsf-middleware.org). Subscribe by sending email to majordomo@nsf-middleware.org with a message body of “subscribe nmi-developer” (without quotes).

Bug and Enhancement Suggestion reporting mechanisms:	Send bug reports and enhancement suggestions to nmi-support@nsf-middleware.org with the subject line: TESTBED-FEEDBACK-R2-NWS If the person who is sending the feedback is not the same as the sender of the email message, indicate name/position of the person who did the evaluation.
Deliverable date:	January 28, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org in an MS-Word document with a filename in the following format: Institution_initials-R2-NWS.doc 1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels. Report as requested in the test actions for the level(s) that were tested. 2. Listing of date/time/brief summary line of bugs and enhancement suggestions submitted throughout the test cycle. 3. Listing of all instances of using NWS, including the impact of successful use on actual applications or projects where applicable. 4. Listing and brief description of any previously undocumented parameters required within NWS configuration. 5. Listing and brief description of any "best practice" issues associated with this mode of working, as input into NMI dissemination activities.

NMI Release 2 Component Testing: GSI-enabled OpenSSH v1.7

Component:	GSI-enabled OpenSSH
Description:	GSI-enabled OpenSSH is a patched OpenSSH client and server that adds GSI to the list of available authentication mechanisms for SSH protocols 1 and 2. This enables SSH logins to resources using Grid security credentials. More information is available at: http://www.ncsa.uiuc.edu/Divisions/NSM/GST/GSI/openssh/
Documentation/ download materials: (docs, URLS, binaries, etc.)	Packaged as part of the GRIDS Center Software Suite in NMI Release 2 at http://www.nsf-middleware.org/NMIR2. See also http://www.ncsa.uiuc.edu/Divisions/NSM/GST/GSI/openssh/ and http://www.grids-center.org/.
Prerequisites for site: (specific expertise, experience, config.)	Operating System: Red Hat 7.2 or 7.3 on IA32, or Solaris 8 on Sparc. (Maintenance release NMI-R2.1 will support Red Hat on IA64.) Grid credentials and authorization, either on a locally constructed grid or an already-established Grid. Willingness to occasionally replace software with updates from the NMI developers.
Actions or focus areas for testing:	Level 1: 1. Verify installation procedures and documentation for GSI-OpenSSH. Level 2: 1. Exercise the tests provided in the verification section of the GSI-OpenSSH NMI documentation.
Support mechanism:	Use the NMI developers' discussion list (nmi-developer@nsf-middleware.org). Subscribe by sending email to majordomo@nsf-middleware.org with a message body of “subscribe nmi-developer” (without quotes).
Bug and Enhancement Suggestion reporting mechanisms:	Send bug reports and enhancement suggestions to nmi-support@nsf-middleware.org with the subject line: TESTBED-FEEDBACK-R2-GSI-OpenSSH If the person who is sending the feedback is not the same as the sender of the email message, indicate name/position of the person who did the evaluation.

Deliverable date:	January 28, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org in an MS-Word document with a filename in the following format: Institution_initials-R2-GSI-OpenSSH.doc 1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels. Report as requested in the test actions for the level(s) that were tested. 2. Listing of date/time/brief summary line of bugs and enhancement suggestions submitted throughout the test cycle. 3. Log (date/time/user/use/result) of all sign-on and execution attempts, up to and concluding with documentation of successful usage at end of test period. 4. Listing and brief description of any previously undocumented parameters required within GSI-enabled OpenSSH configuration. 5. Listing and brief description of any "best practice" issues associated with this mode of working, as input into NMI dissemination activities.

NMI Release 2 Component Testing: Grid Packaging Tools v.2.2.5

Component:	Grid Packaging Tools (GPT)
Description:	This collection of packaging tools is built around an XML-based packaging data format that provides a straight forward way to define complex dependency and compatibility relationships between software packages. GPT was used to create all of the Grids Center Software Suite bundles and is a pre-requisite for installing them.
Documentation/ download materials: (docs, URLS, binaries, etc.)	Packaged as a "technology preview" for the GRIDS Center Software Suite in NMI Release 2 at http://www.nsf-middleware.org/NMIR2.
Prerequisites for site: (specific expertise, experience, config.)	Operating System: Red Hat 7.2 or 7.3 on IA32, or Solaris 8 on Sparc. (Maintenance release NMI-R2.1 will support Red Hat on IA64.)
Actions or focus areas for testing:	
Support mechanism:	Use the NMI developers' discussion list (nmi-developer@nsf-middleware.org). Subscribe by sending email to majordomo@nsf-middleware.org with a message body of "subscribe nmi-developer" (without quotes).
Bug and Enhancement Suggestion reporting mechanisms:	Send bug reports and enhancement suggestions to nmi-support@nsf-middleware.org with the subject line: TESTBED-FEEDBACK-R2-GPT If the person who is sending the feedback is not the same as the sender of the email message, indicate name/position of the person who did the evaluation.
Deliverable date:	January 28, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org in an MS-Word document with a filename in the following format: Institution_initials-R2-GPT.doc 1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels. Report as requested in the test actions for the level(s) that

were tested.
2. Listing of date/time/brief summary line of bugs and enhancement suggestions submitted throughout the test cycle.
3. Log (date/time/user/use/result) of all sign-on and execution attempts, up to and concluding with documentation of successful usage at end of test period.
4. Listing and brief description of any previously undocumented parameters required within GPT configuration.
5. Listing and brief description of any "best practice" issues associated with this mode of working, as input into NMI dissemination activities.

NMI Release 2 Component Testing: GridConfig v0.1

Component:	GridConfig v0.1
Description:	GridConfig is a collection of configuration tools that manages the configuration for GRIDSC software components. It provides an easy way to generate and regenerate configuration files in native formats, and to ensure configuration consistency. For NMI-R2, the use of GridConfig to configure the components is optional. In future releases it will be a standard feature. More information is available at: http://rocks.npaci.edu/nmi/gridconfig.overview.html.
Documentation/ download materials: (docs, URLS, binaries, etc.)	Packaged as a "technology preview" for the GRIDS Center Software Suite in NMI Release 2 at http://www.nsf-middleware.org/NMIR2.
Prerequisites for site: (specific expertise, experience, config.)	Operating System: Red Hat 7.2 or 7.3 on IA32, or Solaris 8 on Sparc. (Maintenance release NMI-R2.1 will support Red Hat on IA64.)
Actions or focus areas for testing:	Level 1: 1. Verify installation procedures and documentation for Gridconfig. 2. Report on problems, missing items, bugs. Level 2: 1. Demonstrate capability of users to generate valid configuration files that are needed by all NMI components. 2. Demonstrate capability of users to re-generate valid configuration files after changing parameters for any subset of components. 3. Verify that created configuration files are equivalent to those produced by GPT for an equivalent setup. 4. Report on problems, bugs, needed additional attributes, configurations, etc. 5. Enumerate areas of improvement 6. Define how Gridconfig helps configuration by judging the following areas: a) provides a unified approach to configuration b) makes configuration/reconfiguration easier c) makes configuration/reconfiguration faster d) provides a familiar interface (constructive interaction) e) enumerate configurations/issues which Gridconfig currently does not anticipate
Support mechanism:	Use the NMI developers' discussion list (nmi-developer@nsf-middleware.org). Subscribe by sending email to majordomo@nsf-

	middleware.org with a message body of “subscribe nmi-developer” (without quotes).
Bug and Enhancement Suggestion reporting mechanisms:	Send bug reports and enhancement suggestions to nmi-support@nsf-middleware.org with the subject line: TESTBED-FEEDBACK-R2-GridConfig If the person who is sending the feedback is not the same as the sender of the email message, indicate name/position of the person who did the evaluation.
Deliverable date:	January 28, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org in an MS-Word document with a filename in the following format: Institution_initials-R2-GridConfig.doc 1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels. Report as requested in the test actions for the level(s) that were tested. 2. Listing of date/time/brief summary line of bugs and enhancement suggestions submitted throughout the test cycle. 3. Log (date/time/user/use/result) of all sign-on and execution attempts, up to and concluding with documentation of successful usage at end of test period. 4. Listing and brief description of any previously undocumented parameters required within GridConfig configuration. 5. Listing and brief description of any "best practice" issues associated with this mode of working, as input into NMI dissemination activities.

NMI Release 2 Component Testing: KX.509(G) v1.0

Component:	KX.509 as deployed with Grid Security Infrastructure (GSI) for use with the Globus Toolkit˙ as a bridge between Kerberos and PKI infrastructure.
Description:	KX.509 and KCA provide a bridge between a Kerberos and PKI infrastructure. KCA 1.0 (Kerberized Certificate Authority) receives a Kerberos ticket and issues a short-term PKI certificate. KX.509 1.0 is the desktop client that issues a request to the KCA and manages the returned certificate.This technology is included in NMI-R2 to enable the PKI-based security infrastructure of the Globus Toolkit to integrate with Kerberos-based authentication implemented at university campuses.
Documentation/ download materials: (docs, URLS, binaries, etc.)	Packaged as part of the GRIDS Center Software Suite in NMI Release 2 at http://www.nsf-middleware.org/NMIR2.
Prerequisites for site: (specific expertise, experience, config.)	Globus Toolkit 2.2, as part of NMI-R2. Kerberos infrastructure in place on campus, without PKI Certificate Authority (CA). Operating System: Red Hat 7.2 or 7.3 on IA32, or Solaris 8 on Sparc. (Maintenance release NMI-R2.1 will support Red Hat on IA64.) More information at: http://www.nsf-middleware.org/documentation/KX509KCA/index.html
Actions or focus areas for testing:	Due to the growing need for Grids to work with Kerberos-based sites, NMI-R2 includes KX.509, a utility for converting Kerberos certificates to the PEM format. A significant goal of the NMI testbed is to work through issues of campuses authenticating with Kerberos credentials that can then be used in GSI space. Testbed sites should: Level 1: 1. Verify installation procedures and documentation for KX.509/KCA as packaged with the GRIDS deliverables in NMI-R2. Level 2: 1. Demonstrate capability of researchers within projects such as iVDGL, PPDG, and GriPhyN to 1.) authenticate locally using Kerberos, 2.) map through KX.509 to a GSI credential, and 3.) undertake all normal Grid project activities (e.g., resource management, security, information services and data management) by presenting the credential to a DOE Science Grid CA. 2. Explore and negotiate security policy with the campus Kerberos authority and the CA's of science projects involving researchers at your campus to determine if campus Kerberos credentials can be mapped into GSI credentials that will be accepted by CA's of existing and upcoming Grid projects.

	3. Demonstrate above capability with credential as presented to relevant EU Datagrid CAs.
Support mechanism:	Use the NMI developers' discussion list (nmi-developer@nsf-middleware.org). Subscribe by sending email to majordomo@nsf-middleware.org with a message body of “subscribe nmi-developer” (without quotes).
Bug and Enhancement Suggestion reporting mechanisms:	Send bug reports and enhancement suggestions to nmi-support@nsf-middleware.org with the subject line: TESTBED-FEEDBACK-R2-KX509(G) If the person who is sending the feedback is not the same as the sender of the email message, indicate name/position of the person who did the evaluation.
Deliverable date:	January 28, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org in an MS-Word document with a filename in the following format: Institution_initials-R2-KX509(g).doc 1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels. Report as requested in the test actions for the level(s) that were tested. 2. Listing of date/time/brief summary line of bugs and enhancement suggestions submitted throughout the test cycle. 3. Log (date/time/user/use/result) of all sign-on and execution attempts, up to and concluding with documentation of successful usage at end of test period. 4. Listing and brief description of any previously undocumented parameters required within KX.509 configuration. 5. Listing and brief description of any "best practice" issues associated with this mode of working, as input into NMI dissemination activities.

NMI Release 2 Component Testing: KX.509 and KCA v1.0 (standalone)

Component:	**KX.509 and KCA** as stand-alone applications, deployed outside the context of the Globus Grid Security Infrastructure (GSI)
Description:	This software suite provides a bridge between the different security infrastructures of PKI and Kerberos within a campus authentication infrastructure. This software is unchanged from the version released as part of NMI R.1.
Documentation/ download materials: (docs, URLS, binaries, etc.)	Available as part of NMI Release 2 at http://www.nsf-middleware.org/nmir2/components/edit-software.asp
Prerequisites for site: (specific expertise, experience, config.)	1. KCA server runs on Solaris/AIX/Linux machines. 2. KX509 client runs under Windows (9x/2000/ME/XP) /Solaris/Linux. 3. Users already get Kerberos IV or V Tickets at login.
Actions or focus areas for testing:	Level 1: 1. Verify installation procedures and documentation for KX.509/KCA. Level 2: 1. Demonstrate capability of users to authenticate locally using Kerberos, run KX.509 to make use of their Kerberos tickets to authenticate to KCA and thereby obtain a short-term X.509 certificate which will work with services (ex. Web-server based) that already use X.509 certificates for authentication.
Support mechanism:	Send support requests to <nmi-support@nsf-middleware.org> with subject line: TESTBED-SUPPORT-KX509(SA)
Bug and Enhancement Suggestion reporting mechanisms:	Send bug reports and enhancement suggestions to nmi-support@nsf-middleware.org with the subject line: TESTBED-FEEDBACK-R2-KX509(SA) If the person who is sending the feedback is not the same as the sender of the email message, indicate name/position of the person who did the evaluation.
Deliverable date:	February 25, 2003

Deliverable format:	Submit the following to testbed-reports@sura.org in an MS-Word document with a filename in the following format: Institution_initials-R2-KX509(sa).doc 1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels. Report as requested in the test actions for the level(s) that were tested. 2. Listing of date/time/brief summary line of bugs and enhancement suggestions submitted throughout the test cycle. Listing and brief description of any previously undocumented parameters required within KX.509 configuration. 3. Log (date/time/user/use/result) of all sign-on and execution attempts, up to and concluding with documentation of successful usage at end of test period. 4. Listing and brief description of any "best practice" issues associated with this mode of working, as input into NMI dissemination activities.

NMI Release 2 Component Testing: Certificate Profile Maker v1.1

Component:	Certificate Profile Maker (CPM), v1.1
Description:	This package creates an XML certificate profile and produces a sample x.509 certificate in XML, according to the profile. v1.1 has been updated slightly, with some bug fixes.
Documentation/ download materials: (docs, URLS, binaries, etc.)	Available as part of NMI Release 2 at http://www.nsf-middleware.org/nmir2/components/edit-software.asp
Prerequisites for site: (specific expertise, experience, config.)	Technical: • A UNIX system with Apache to host the software (or) • Use Certificate Profile Maker from the Internet2 PKI development machine http://pkidev.internet2.edu/cpm/ Operational: • General knowledge of PKI • A more in-depth understanding of X.509 certificates, certificate profiles, and RFC-2459.
Actions or focus areas for testing:	Level 1: 1. Verify installation procedures for OS platform(s) being tested (if installing locally, and not using the service at http://pkidev.internet2.edu/cpm/). 2. Demonstrate capability of users to generate a valid certificate profile 3. Report on problems, needed additional attributes, etc.
Support mechanism:	Send support requests to <nmi-support@nsf-middleware.org> with subject line starting with: TESTBED-CPM-SUPPORT:
Bug and Enhancement Suggestion reporting mechanisms:	Send bug reports and enhancement suggestions to nmi-support@nsf-middleware.org with the subject line: TESTBED-FEEDBACK-R2-CPM If the person who is sending the feedback is not the same as the sender of the email message, indicate name/position of the person who did the evaluation.
Deliverable date:	February 25, 2003

Deliverable format:	Submit the following to testbed-reports@sura.org in an MS-Word document with a filename in the following format: Institution_initials-R2-CPM.doc 1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels. Report as requested in the test actions for the level(s) that were tested. 2. Listing of date/time/brief summary line of bugs and enhancement suggestions submitted throughout the test cycle. Listing and brief description of any previously undocumented parameters required within CPM configuration. 3. Log (date/time/user/use/result) of all usage attempts, up to and concluding with documentation of successful usage at end of test period. 4. Listing and brief description of any "best practice" issues associated with this mode of working, as input into NMI dissemination activities.

NMI Release 2 Component Testing: Pubcookie v3.0

Component:	Pubcookie v3.0
Description:	Pubcookie is an example of a "WebISO" package, a system designed to allow users, with standard web browsers, to authenticate to web based services across many web servers, using a standard, typically username/password central authentication service. Pubcookie consists of a standalone login server and modules for common web server platforms like Apache and Microsoft IIS. Together, these components can turn existing authentication services (like Kerberos, LDAP, or NIS) into a solution for single sign-on authentication to websites throughout an institution. Release 3.0 includes many improvements over previous major releases, differences between these versions can be found here: http://www.washington.edu/pubcookie/news/announce-3.0.0.html
Documentation/ download materials: (docs, URLS, binaries, etc.)	Available as part of NMI Release 2 at http://www.nsf-middleware.org/nmir2/components/edit-software.asp
Prerequisites for site: (specific expertise, experience, config.)	Pre-existing authentication service (e.g. Kerberos, LDAP, PKI, shadow passwd file) and some expertise with its interfaces. Experience configuring SSL on Apache & Microsoft IIS web servers.
Actions or focus areas for testing:	Level 1: 1. Verify that Pubcookie overview information is sufficient prior to installation. 2. Verify Pubcookie installation procedures. 3. Demonstrate capability of users to deploy and test Pubcookie login server. 4. Demonstrate capability of users to deploy and test Pubcookie application server in communication with test login server Level 2: 1. Demonstrate capability of users to use login server's verifier interface with pre-existing campus authentication infrastructure.
Support mechanism:	Send support requests to <nmi-support@nsf-middleware.org> with subject line starting with: TESTBED-PUBCOOKIE-SUPPORT:

Bug and Enhancement Suggestion reporting mechanisms:	Send bug reports and enhancement suggestions to nmi-support@nsf-middleware.org with the subject line: TESTBED-FEEDBACK-R2-PUBCOOKIE If the person who is sending the feedback is not the same as the sender of the email message, indicate name/position of the person who did the evaluation.
Deliverable date:	February 25, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org in an MS-Word document with a filename in the following format: Institution_initials-R2-Pubcookie.doc 1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels. Report as requested in the test actions for the level(s) that were tested. 2. Listing of date/time/brief summary line of bugs and enhancement suggestions submitted throughout the test cycle. 3. Log (date/time/user/use/result) of all sign-on and execution attempts, up to and concluding with documentation of successful usage at end of test period. 4. Listing and brief description of any previously undocumented parameters required within Pubcookie configuration. 5. Listing and brief description of any "best practice" issues associated with this mode of working, as input into NMI dissemination activities.

NMI Release 2 Component Testing: Shibboleth

Component:	Shibboleth
Description:	Shibboleth provides a way for a user with a web browser to access a remote, restricted resource utilizing information about that user stored within the user's home security domain. This information can be any attribute true about the user, such as member of community, student in Physics 101, eligible under a particular contract, or, if necessary, a user's identity. This permits browser users to access controlled information securely from anywhere, without the need for additional passwords or unnecessary loss of privacy. It also allows resource owners to easily control access to content based on user characteristics. Virtually any web browser will work with Shibboleth, and no further client installation or configuration is necessary.
Documentation/ download materials: (docs, URLS, binaries, etc.)	Available as part of NMI Release 2 at http://www.nsf-middleware.org/nmir2/components/edit-software.asp
Prerequisites for site: (specific expertise, experience, config.)	Origin (campus) sites will require common institutional components in place such as an enterprise LDAP or MySQL directory and a WebISO system. Target (resource/content provider) sites will require an Apache web server, and both target and origin can maintain use of other access systems while testing Shibboleth. Installation and configuration require relatively little labor.
Actions or focus areas for testing:	Level 1: 1. Verify installation procedures and documentation. 2. Examine usability issues and suggest improvements; e.g., design of a tool to manage Attribute Release Policies (ARPs) and Attribute Acceptance Policies (AAPs), better error handling, other interface concerns. 3. Report on potential incompatibilities encountered. Level 2: 1. Examine the compatibility with other types of systems and contribute new code and plug-ins. Level 3: For sites interested in further exploring Shibboleth, please contact Steve Olshansky <steveo@luminagroup.com>, Internet2 Middleware Flywheel, for further details and a site-specific action plan.

Support mechanism:	Send support requests to <nmi-support@nsf-middleware.org> with subject line starting with: TESTBED-SHIBBOLETH-SUPPORT: For technical questions regarding Shibboleth, use the list (mace-shib-users@internet2.edu), subscribe at http://archives.internet2.edu/.
Bug and Enhancement Suggestion reporting mechanisms:	Send bug reports and enhancement suggestions to nmi-support@nsf-middleware.org with the subject line: TESTBED-FEEDBACK-R2-Shibboleth If the person who is sending the feedback is not the same as the sender of the email message, indicate name/position of the person who did the evaluation.
Deliverable date:	February 25, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org in an MS-Word document with a filename in the following format: Institution_initials-R2-Shibboleth.doc 1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels. Report as requested in the test actions for the level(s) that were tested. 2. Listing of date/time/brief summary line of bugs and enhancement suggestions submitted throughout the test cycle. 3. Log (date/time/user/use/result) of all usage attempts, up to and concluding with documentation of successful usage at end of test period. 4. Listing and brief description of any previously undocumented parameters required within Shibboleth configuration. 5. Listing and brief description of any "best practice" issues associated with this mode of working, as input into NMI dissemination activities.

NMI Release 2 Component Testing: OpenSAML

Component:	OpenSAML
Description:	OpenSAML is a set of open-source libraries in Java and C++ which can be used to build, transport, and parse SAML messages. OpenSAML is able to transform the individual information fields that make up a SAML message, build the correct XML representation, and unpack and process the XML before handing it off to a recipient. OpenSAML fully supports the SAML browser/POST profile for web sign-on, and supports the SOAP binding for exchange of attribute queries and attribute assertions. It does not currently support the browser/artifact profile or other SAML messages.
Documentation/ download materials: (docs, URLS, binaries, etc.)	Available as part of NMI Release 2 at http://www.nsf-middleware.org/nmir2/components/edit-software.asp
Prerequisites for site: (specific expertise, experience, config.)	OpenSAML will prove most useful to communities that want to exchange attribute information about recognized principles in a standards-based way (e.g. Shibboleth).
Actions or focus areas for testing:	Level 1: 1. Verify installation procedures and documentation. Level 2: 1. Ensure proper functionality and design of API's. 2. Contribute code modifications to support the artifact profile or other assertion formats.
Support mechanism:	Send support requests to <nmi-support@nsf-middleware.org> with subject line starting with: TESTBED-OPENSAML-SUPPORT: For technical questions regarding OpenSAML, use the list (mace-opensaml-users@internet2.edu), subscribe at http://archives.internet2.edu/.
Bug and Enhancement Suggestion reporting mechanisms:	Send bug reports and enhancement suggestions to nmi-support@nsf-middleware.org with the subject line: TESTBED-FEEDBACK-R2-Shibboleth If the person who is sending the feedback is not the same as the sender of the email message, indicate name/position of the person

	who did the evaluation.
Deliverable date:	February 25, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org in an MS-Word document with a filename in the following format: Institution_initials-R2-OpenSAML.doc 1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels. Report as requested in the test actions for the level(s) that were tested. 2. Listing of date/time/brief summary line of bugs and enhancement suggestions submitted throughout the test cycle.

NMI Release 2 Component Testing: eduPerson (200210)

Component:	EduPerson 200210 Object Class for LDAP Directories
Description:	eduPerson contains the inetorgPerson attributes localized to higher ed and research and eight additional attributes for individuals to foster inter-institutional collaborations. This component was released at an earlier status level in NMI R1. A change summary is included at the end of the document.
Documentation/ download materials:	Available as part of NMI Release 2 at http://www.nsf-middleware.org/nmir2/components/dirschema.asp
Prerequisites for site:	Enterprise LDAP directory and accompanying directory expertise
Actions or focus areas for testing:	Note: For testbed sites that did NOT submit reports for NMI R.1, please test and submit as detailed below. For those testbed sites that DID submit reports for this object classes in R1, we would like to consult with you via conference call about what would be most useful to all parties for the second round of reviews in R2. We would also like to use that opportunity to discuss the many substantive points that were raised in the your earlier reviews. Please contact Steve Olshansky <steveo@luminagroup.com>, Internet2 Middleware Flywheel, to arrange this. Level 1: Read through the object class specification document, and provide feedback in relation to: a) Document the fit of the object class with your environment. Would you use it? Explain why or why not. b) Document additional attributes that would be useful. Include explanation of use and requirements for the proposed attribute. c) Is this object class ready for wide distribution and deployment? Explain why or why not. d) On the documentation, note suggested changes/additions/omissions to attribute descriptions. e) Is the document written at an appropriate level for the target audience? If not, explain why. f) Indicate your recommended publication and dissemination venues for this object class. g) On the documentation, note suggested changes/additions/omissions to attribute descriptions. Level 2: Install and test in a pilot or production environment with applications. Do level 1 and also:

	a) Comment on the ease or problems encountered in installation b) Comment on the ease or problems encountered in populating it with data c) Note suggestions for improvement or changes d) Perform test queries against this object class, and note any issues or problems that arise e) Please include a detailed configuration of your test environment, including HW configuration, LDAP server/version used, any additional information that would be helpful f) Include a description of the application and the purpose for which it was used. g) Document additional attributes that would be useful. Include explanation of use and requirements for the proposed attribute. h) Is this object class ready for wide distribution and deployment? Explain why or why not. Level 3: Test inter-institutional applications using this object class Do levels 1-2 and also: a) Note suggestions for improvement or changes b) Please include a detailed configuration of your test environment, including HW configuration, LDAP server/version used, any additional information that would be helpful c) Document additional attributes that would be useful (within the context of inter-institutional applications). Include explanation of use and requirements for the proposed attribute. d) Is this object class ready for wide distribution and deployment useful (within the context of inter-institutional applications)? Explain why or why not. e) On the documentation, note suggested changes/additions/omissions to attribute descriptions useful (within the context of inter-institutional applications). f) Include a description of the application and the purpose for which it was used.
Support mechanism:	Send support requests to <nmi-support@nsf-middleware.org> with subject line starting with: TESTBED-EDUPERSON-SUPPORT:
Bug and Enhancement Suggestion reporting mechanisms:	Send bug reports and enhancement suggestions to nmi-support@nsf-middleware.org with the subject line: TESTBED-FEEDBACK-R2-EDUPERSON If the person who is sending the feedback is not the same as the sender of the email message, indicate name/position of the person who did the evaluation.
Deliverable date:	March 25, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org, with a cc to mace-dir-comments@internet2.edu, in an MS-Word document with a filename in the following format:

Institution_initials-R2-eduPerson.doc

1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels.
2. Listing of date/time/brief summary line of bugs and enhancement suggestions submitted throughout the test cycle.
3. Responses to the evaluation questions above.
4. If comments were made on the document itself, include that as an attachment with suggested changes highlighted in some fashion (color, italics, change bars, etc.) for ease of reading.

NMI Release 2 Component Testing: eduOrg (200210)

Component:	eduOrg (200210) Object Class for LDAP Directories
Description:	eduOrg contains institutional attributes, including account management policies, security policies, contacts for key services, etc. This component was released at an earlier status level in NMI R1. A change summary is included at the end of the document.
Documentation/ download materials:	Available as part of NMI Release 2 at http://www.nsf-middleware.org/nmir2/components/dirschema.asp
Prerequisites for site:	Enterprise LDAP directory and accompanying directory expertise
Actions or focus areas for testing:	Note: For testbed sites that did NOT submit reports for NMI R.1, please test and submit as detailed below. For those testbed sites that DID submit reports for this object classes in R1, we would like to consult with you via conference call about what would be most useful to all parties for the second round of reviews in R2. We would also like to use that opportunity to discuss the many substantive points that were raised in the your earlier reviews. Please contact Steve Olshansky <steveo@luminagroup.com>, Internet2 Middleware Flywheel, to arrange this. Level 1: Read through the object class specification document, and provide feedback in relation to: a) Document the fit of the object class with your environment. Would you use it? Explain why or why not. b) Document additional attributes that would be useful. Include explanation of use and requirements for the proposed attribute. c) Is this object class ready for wide distribution and deployment? Explain why or why not. d) On the documentation, note suggested changes/additions/omissions to attribute descriptions. e) Is the document written at an appropriate level for the target audience? If not, explain why. f) Indicate your recommended publication and dissemination venues for this object class. g) On the documentation, note suggested changes/additions/omissions to attribute descriptions. Level 2: Install and test in a pilot or production environment with applications. Do level 1 and also: a) Comment on the ease or problems encountered in installation b) Comment on the ease or problems encountered in populating it

	with data c) Note suggestions for improvement or changes d) Perform test queries against this object class, and note any issues or problems that arise e) Please include a detailed configuration of your test environment, including HW configuration, LDAP server/version used, any additional information that would be helpful f) Include a description of the application and the purpose for which it was used. g) Document additional attributes that would be useful. Include explanation of use and requirements for the proposed attribute. h) Is this object class ready for wide distribution and deployment? Explain why or why not. Level 3: Test inter-institutional applications using this object class Do levels 1-2 and also: a) Note suggestions for improvement or changes b) Please include a detailed configuration of your test environment, including HW configuration, LDAP server/version used, any additional information that would be helpful c) Document additional attributes that would be useful (within the context of inter-institutional applications). Include explanation of use and requirements for the proposed attribute. d) Is this object class ready for wide distribution and deployment useful (within the context of inter-institutional applications)? Explain why or why not. e) On the documentation, note suggested changes/additions/omissions to attribute descriptions useful (within the context of inter-institutional applications). f) Include a description of the application and the purpose for which it was used.
Support mechanism:	Send support questions to nmi-support@nsf-middleware.org with subject line starting with: TESTBED-EDUORG-SUPPORT: .
Bug and Enhancement Suggestion reporting mechanisms:	Send bug reports and enhancement suggestions to nmi-support@nsf-middleware.org with the subject line: TESTBED-FEEDBACK-R2-EDUORG If the person who is sending the feedback is not the same as the sender of the email message, indicate name/position of the person who did the evaluation.
Deliverable date:	March 25, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org, with a cc to mace-dir-comments@internet2.edu, in an MS-Word document with a filename in the following format: Institution_initials-R2-eduOrg.doc

1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels.
2. Listing of date/time/brief summary line of bugs and enhancement suggestions submitted throughout the test cycle.
3. Responses to the evaluation questions above.
4. If comments were made on the document itself, include that as an attachment with suggested changes highlighted in some fashion (color, italics, change bars, etc.) for ease of reading.

NMI Release 2 Component Testing: commObject 1.0, October 2002

Component:	commObject 1.0 Communications Object Class for LDAP Directories
Description:	commObject is a schema for representing video and voice over IP conferencing endpoints in LDAP directories, enabling portal searching, white pages, and centralized user management. This schema was originally produced by the NMI community and included in NMI release 1. Since that time, the architecture has been improved and submitted to the International Telecommunications Union Standardization Sector (ITU-T) Study Group 16 as a proposed international standard. The NMI community is invited to submit their comments and suggestions on the draft to Study Group 16 for inclusion in the ratification process. Additional advanced implementation scenarios have been added which will be useful to institutions deploying commObject. Please note that the updated draft which is before the ITU is not implementable, because it contains temporary OIDs. Therefore you must implement the NMI Release 1 version of the object classes. However, you are encouraged to review the latest version which is before the ITU in order to see improved application examples and offer comment on the official version.
Documentation/ download materials:	Available as part of NMI Release 2 at http://www.nsf-middleware.org/nmir2/components/dirschema.asp NMI Release 1 implementable version: http://middleware.internet2.edu/video/ ITU Draft Version for Review: ftp://standards.pictel.com/avc-site/0210_Gen/DirectoryServices.zip
Prerequisites for site:	Enterprise LDAP Directory and accompanying directory expertise. Since these object classes represent h.323 video/voice conferencing endpoints, it is useful to test the classes using real h.323 account and user data.

Actions or focus areas for testing:

Level 1:
Read through the object class specification document, and provide feedback in relation to:

a) Document the fit of the object class with your environment. Would you use it? Explain why or why not.
b) Document additional attributes that would be useful. Include explanation of use and requirements for the proposed attribute.
c) Is this object class ready for wide distribution and deployment? Explain why or why not.
d) On the documentation, note suggested changes/additions/omissions to attribute descriptions.
e) Is the document written at an appropriate level for the target audience? If not, explain why.
f) Indicate your recommended publication and dissemination venues for this object class.
g) On the documentation, note suggested changes/additions/omissions to attribute descriptions.

Level 2:
Install and test in a pilot or production environment with applications.
Do level 1 and also:

a) Comment on the ease or problems encountered in installation
b) Comment on the ease or problems encountered in populating it with data
c) Note suggestions for improvement or changes
d) Perform test queries against this object class, and note any issues or problems that arise
e) Please include a detailed configuration of your test environment, including HW configuration, LDAP server/version used, any additional information that would be helpful
f) Include a description of the application and the purpose for which it was used.
g) Document additional attributes that would be useful. Include explanation of use and requirements for the proposed attribute.
h) Is this object class ready for wide distribution and deployment? Explain why or why not.

Level 3:
Test inter-institutional applications using this object class
Do levels 1-2 and also:

a) Note suggestions for improvement or changes
b) Please include a detailed configuration of your test environment, including HW configuration, LDAP server/version used, any additional information that would be helpful
c) Document additional attributes that would be useful (within the context of inter-institutional applications). Include explanation of use and requirements for the proposed attribute.
d) Is this object class ready for wide distribution and deployment useful (within the context of inter-institutional applications)? Explain why or why not.
e) On the documentation, note suggested changes/additions/omissions to attribute descriptions useful (within the context of inter-institutional applications).
f) Include a description of the application and the purpose for

which it was used.

Support mechanism:	Send support questions to nmi-support@nsf-middleware.org with subject line starting with: TESTBED-COMMOBJECT-SUPPORT:
Bug and Enhancement Suggestion reporting mechanisms:	Send bug reports and enhancement suggestions to nmi-support@nsf-middleware.org with a cc to Tyler_Johnson@unc.edu and with the subject line: TESTBED-FEEDBACK-R2-COMMOBJ If the person who is sending the feedback is not the same as the sender of the email message, indicate name/position of the person who did the evaluation.
Deliverable date:	March 25, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org, with a cc to mw-vidmid@internert2.edu, in an MS-Word document with a filename in the following format: Institution_initials-R2-commObject.doc 1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels. 2. Listing of date/time/brief summary line of bugs and enhancement suggestions submitted throughout the test cycle. 3. Responses to the evaluation questions above. 4. If comments were made on the document itself, include that as an attachment with suggested changes highlighted in some fashion (color, italics, change bars, etc.) for ease of reading.

NMI Release 2 Component Testing: Certificate Profile Registry

Service:	Certificate Profile Registry Consists of a profile registry, to hold profiles for standard certificate formats for the community and an institutional root certificate service, to provide a functional way for certificate path construction to be done within the community. This component was released at an earlier status level in NMI R1. Available as part of NMI R2 at http://www.nsf-middleware.org/nmir2/components/services.asp
Target Audience:	Campus security managers & campus PKI implementers
Focus areas for review:	Level 1: 1. Comment on the sufficiency of the certificate profile formats available in registry. 2. Comment on the ease of use of submission of profiles and retrieval of profiles from other schools. 3. Should the registry also include guidance or suggestions for implementers?
Deliverable date:	March 25, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org, with a cc to mace-dir-comments@internet2.edu, in an MS-Word document with a filename in the following format: Institution_initials-R2-Cert-Registry.doc 1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels. 2. Listing of date/time/brief summary line of bugs and enhancement suggestions submitted throughout the test cycle. 3. Responses to the evaluation questions above. 4. If comments were made on the document itself, include that as an attachment with suggested changes highlighted in some fashion (color, italics, change bars, etc.) for ease of reading.

NMI Release 2 Component Testing: LDAP Analyzer, October 2002

Service:	LDAP Analyzer The LDAP Analyzer Service determines the compliance of an LDAP directory server implementation with various object class definitions such as inetOrgPerson, eduPerson, and the Grid Laboratory Universal Environment (GLUE) schema, as well as the recommendations outlined in the LDAP-recipe and other best practice documents. Available as part of NMI R2 at http://www.nsf-middleware.org/nmir2/components/services.asp
Target Audience:	Technical - Directory Server Administrators
Focus areas for review:	Level 1: General Website Appearance 1. Are all the click-able links valid? 2. Is the information presented in an intuitive manner? 3. Does the analyzer look different with different browser versions and vendors? Level 2: Analyzer Function 1. Given a directory server with a known configuration, are the analyses correct? 2. Does the analyzer behave erractically with different browser versions or vendors (e.g., receive a timeoout, "hang", etc.)?
Deliverable date:	March 25, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org, with a cc to mace-dir-comments@internet2.edu, in an MS-Word document with a filename in the following format: Institution_initials-R2-LDAP-analyzer.doc 1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels. 2. Listing of date/time/brief summary line of bugs and enhancement suggestions submitted throughout the test cycle. 3. Responses to the evaluation questions above. 4. If comments were made on the document itself, include that as an attachment with suggested changes highlighted in some fashion (color, italics, change bars, etc.) for ease of reading.

NMI Release 2 Documentation Testing: Practices in Directory Groups, October 2002

Document:	Practices in Directory Groups, October 2002 Available as part of NMI R2 at http://www.nsf-middleware.org/nmir2/components/bestpractices.asp Experiments and early experiences with facilitation of authorization in applications and facilitation of group messaging with use of directory services in institutions of higher education were surveyed. Several concepts, good practices, open issues, and a few principles extracted from this are presented. This document was released at an earlier status level in NMI R1.
Target Audience	IT Architects or equivalents; enterprise directory managers and implementers.
Focus areas for review:	Level 1: Review the document and comment on the following: a) Is this document written at an appropriate level for the target audience? If not, explain why. b) Is this document useful to you? Explain why or why not. c) Do you have any suggested changes and/or additions? d) Does the content of this document vary widely from your or your institution's experience with enterprise directory groups? If yes, please include a write-up on your experience. e) Is this document ready for wide publication? Explain why or why not. f) Indicate your recommended publication and dissemination venues for this document. g) Are you using groups in your enterprise directory? If yes, for what purposes? Highlight uses that are not mentioned in the document. Level 2: Implement prototype services following the specifications in the document, then comment on the areas noted above. Level 3: Implement actual user services following the specifications in the document, then comment on the areas noted above.
Deliverable date:	March 25, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org, with a cc to mace-dir-comments@internet2.edu, in an MS-Word document with a filename in the following format:

Institution_initials-R2-Practices-Groups.doc

1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels.
2. Responses to the evaluation questions above, including a description of services as implemented for Levels 2 & 3.
3. If comments were made on the document itself, include that as an attachment with suggested changes highlighted in some fashion (color, italics, change bars, etc.) for ease of reading.

NMI Release 2 Documentation Testing: LDAP Recipe, October 2002

Document:	LDAP Recipe, October 2002 Available as part of NMI R2 at http://www.nsf-middleware.org/nmir2/components/bestpractices.asp
Description:	This document is intended to be a discussion point toward the development of common directory deployments within the Higher Education community. In particular, a hope is to have institutions configure and populate their directories in similar ways to enable federated administration and distribution of directory data that allows applications, both client and server, to utilize directory infrastructures. Practical techniques are described and associated with other developments of the NMI such as metadirectories and group management. This document was released at an earlier status level in NMI R1. Change summary is included in the document.
Target Audience	IT Architects or equivalents; enterprise directory managers and implementers.
Focus areas for review:	Level 1: Review the document and comment on the following: a) Is this document written at an appropriate level for the target audience? If not, explain why. b) Is this document useful to you? Explain why or why not. c) Do you have any suggested changes and/or additions? d) Does the content of this document vary widely from your or your institution's experience with enterprise directory groups? If yes, please include a write-up on your experience. e) Is this document ready for wide publication? Explain why or why not. f) Indicate your recommended publication and dissemination venues for this document. Level 2: Implement prototype services following the specifications in the document, then comment on the areas noted above. Level 3: Implement actual user services following the specifications in the document, then comment on the areas noted above.
Deliverable date:	March 25, 2003

Deliverable format:	Submit the following to testbed-reports@sura.org, with a cc to mace-dir-comments@internet2.edu, in an MS-Word document with a filename in the following format: Institution_initials-R2-LDAP-Recipe.doc 1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels. 2. Responses to the evaluation questions above, including a description of services as implemented for Levels 2 & 3. 3. If comments were made on the document itself, include that as an attachment with suggested changes highlighted in some fashion (color, italics, change bars, etc.) for ease of reading.

NMI Release 2 Documentation Testing: Metadirectory Practices for Enterprise Directory in Higher Ed, October 2002

Document:	Metadirectory Practices for the Enterprise Directory in Higher Education, October 2002 Available as part of NMI R2 at http://www.nsf-middleware.org/nmir2/components/bestpractices.asp
Description:	This paper offers alternative approaches to the metadirectory functions of information flow, transformation, and redistribution. Topics range from the identity management function to the many forms of information used by connected systems. The focus throughout is on clarifying the essential functions being performed and providing relevant recommendations and techniques. This document was released at an earlier status level in NMI R1. Change summary is included in the document.
Target Audience:	IT Architects or equivalents; enterprise directory managers and implementers.
Focus areas for review:	Level 1: Review the document and comment on the following: a) Is this document written at an appropriate level for the target audience? If not, explain why. b) Is this document useful to you? Explain why or why not. c) Do you have any suggested changes and/or additions? d) Does the content of this document vary widely from your or your institution's metadirectory architecture and practices? If yes, please include a write-up on your experience. e) Is this document ready for wide publication? Explain why or why not. f) Indicate your recommended publication and dissemination venues for this document. g) What functions does your metadirectory perform? Highlight uses that are not mentioned in the document. Level 2: Implement prototype services following the specifications in the document, then comment on the areas noted above. Level 3: Implement actual user services following the specifications in the document, then comment on the areas noted above.
Deliverable date:	March 25, 2003

Deliverable format:	Submit the following to testbed-reports@sura.org, with a cc to mace-dir-comments@internet2.edu, in an MS-Word document with a filename in the following format: Institution_initials-R2-Metadir-Practice.doc 1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels. 2. Responses to the evaluation questions above, including a description of services as implemented for Levels 2 & 3. 3. If comments were made on the document itself, include that as an attachment with suggested changes highlighted in some fashion (color, italics, change bars, etc.) for ease of reading.

NMI Release 2 Documentation Testing: Inter-Domain Data Exchange (Draft)

Document:	Inter-Domain Data Exchange (Draft) Available as part of NMI R2 at http://www.nsf-middleware.org/NMIR2/components/archdocs.asp
Description:	This document outlines a set of scenarios where data elements from external administrative domains must be transported, stored, or used. It attempts to present differing requirements of one or more of these scenarios, and describes various techniques that may be used to meet one or more of these requirements. This information has been gathered from the authors' experiences, discussions with potential participants in the scenarios, and discussions amongst MACE-Dir participants.
Target Audience:	IT Architects or equivalents; enterprise directory managers and implementers.
Focus areas for review:	1. How do the scenarios, requirements, and techniques described in the document compare to the "real world" experiences of your institution? 2. Are there any examples of requirements or techniques that fall outside those described in the document that should be added? 3. With regards to future work, what future development for this document would be helpful? Examples: "Cookbook"-style solutions, Toolkits, etc.
Deliverable date:	March 25, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org, with a cc to mace-dir-comments@internet2.edu, in an MS-Word document with a filename in the following format: Institution_initials-R2-Inter-realm-Dir.doc 1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels. 2. Responses to the evaluation questions above. 3. If comments were made on the document itself, include that as an attachment with suggested changes highlighted in some fashion (color, italics, change bars, etc.) for ease of reading.

NMI Release 2 Documentation Testing: Shibboleth Architecture v.5, May 2002

Document:	Shibboleth Architecture v.5, May 2002 Available as part of NMI R2 at http://www.nsf-middleware.org/NMIR2/components/archdocs.asp
Description:	This paper presents an architecture for the secure exchange of authorization information that can be used to decide who can access a protected web resource. Called the Shibboleth project, Internet2/MACE (Middleware Architecture Committee for Education) has sponsored this effort to support inter-institutional sharing of access-controlled resources. Note: We received valuable feedback from the testbed sites on this document as part of NMI R.1. This current plan is to update this document when resources become available, at which time these suggestions will be addressed. If you have not yet reviewed this document, your comments and feedback are welcome and encouraged.
Target Audience	CIOs and technical management (sections 1 through 4 only), IT Architects or equivalents, and implementers.
Focus areas for review:	For each audience above (management, architects, and implementers), please address the following: 1. Is this document written at an appropriate level for the target audience? If not, explain why. 2. Is this document useful to you? Explain why or why not. 3. Do you have any suggested changes and/or additions? 4. Is this document ready for wide publication? Explain why or why not. 5. Indicate your recommended publication and dissemination venues for this document.
Deliverable date:	March 25, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org, with a cc to mace-dir-comments@internet2.edu, in an MS-Word document with a filename in the following format: Institution_initials-R2-SHIB-ARCH.doc 1. Indication as to the level of review performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels.

2. Responses to the evaluation questions above.
3. If comments were made on the document itself, include that as an attachment with suggested changes highlighted in some fashion (color, italics, change bars, etc.) for ease of reading.

NMI Release 2 Documentation Testing: Higher Education PKI (HEPKI) Model Campus Certificate Policy

Document:	Campus Certificate Policy for the Higher Ed Bridge Certificate Authority (HEBCA) Available as part of NMI R2 at http://www.nsf-middleware.org/NMIR2/components/policies.asp
Description:	A Certificate Policy (CP) statement defines the terms and conditions under which a campus Certificate Authority (CA) must operate. This document proposes a model CP for use at an institution of Higher Education in the United States. Additionally, as a national infrastructure for PKI matures, it is the intent that this model CP be interoperable with other PKI implementations. This model CP is suitable for use with the Higher Education Bridge Certification Authority (HEBCA).
Target Audience	IT Architects or equivalents, campus security managers, campus legal, campus PKI implementers
Focus areas for review:	Level 1: Review the document and comment on the following: a) Is this document written at an appropriate level for the target audience? If not, explain why. b) Is this document useful to you? Explain why or why not. c) Do you have any suggested changes and/or additions? d) Does the content of this document vary widely from your or your institution's experience with enterprise directory groups? If yes, please include a write-up on your experience. e) Is this document ready for wide publication? Explain why or why not. f) Indicate your recommended publication and dissemination venues for this document. Level 2: Implement prototype services following the specifications in the document, then comment on the areas noted above. Level 3: Implement actual user services following the specifications in the document, then comment on the areas noted above
Deliverable date:	March 25, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org in an MS-Word document with a filename in the following format: Institution_initials-R2-HEPKI-policy.doc 1. Indication as to the level of testing performed and a list of

name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels.

2. Responses to the evaluation questions above, including a description of services as implemented for Levels 2 & 3.
3. If comments were made on the document itself, include that as an attachment with suggested changes highlighted in some fashion (color, italics, change bars, etc.) for ease of reading.

NMI Release 1 Documentation Testing: Lightweight Campus Certificate Policy & Practice, April 2002

Document:	Lightweight Campus Certificate Policy and Practice Statement Available as part of NMI R2 at http://www.nsf-middleware.org/NMIR2/components/policies.asp
Description:	PKI-Lite focuses on employing PKI technology for standard assurance applications that already have established and implemented requirements for initial user authentication and overall system security. This was previously released as part of NMI R.1. If testbed sites did not review/test it at that time, they are encouraged to do so now.
Target Audience	IT Architects or equivalents, campus security managers, campus legal, campus PKI implementers
Focus areas for review:	Level 1: Review the document and comment on the following: a) Is this document a useful example of a certificate policy that would guide discussion on your campus? b) Is this document problematic, conflicting with efforts or policies already underway or in place on your campus? c) Do you have any suggested changes and/or additions? d) Does the content of this policy vary widely from your or your institution's experience with certificate policies? If yes, please include a write-up on your experience. e) Is this document ready for wide publication? Explain why or why not. f) Indicate your recommended publication and dissemination venues for this document. Level 2: Implement prototype services following the specifications in the document, then comment on the areas noted above. Level 3: Implement actual user services following the specifications in the document, then comment on the areas noted above
Deliverable date:	March 25, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org in an MS-Word document with a filename in the following format: Institution_initials-R2-PKI-Lite.doc 1. Indication as to the level of testing performed and a list of

name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels.

2. Responses to the evaluation questions above, including a description of services as implemented for Levels 2 & 3.
3. If comments were made on the document itself, include that as an attachment with suggested changes highlighted in some fashion (color, italics, change bars, etc.) for ease of reading.

NMI Release 1 Documentation Testing: Sample Campus Account Management Policy, April 2002

Document:	Sample Campus Account Management Policy, April 2002 Available as part of NMI R2 at http://www.nsf-middleware.org/NMIR2/components/policies.asp
Description:	Sample account management policy, particularly intended for institutions preparing to deploy Shibboleth. This is part of a larger effort related to inter-domain trust models, especially as they relate to the formation and maintenance of federations of institutions. An institution's account management policy would be made publicly available to fellow members of the federation. In order for an institution (target) to make a decision on allowing access to particular resources by a user coming from another domain in the federation (origin), the account management policy of the requesting user's home security domain (origin) could be evaluated. One of the primary criteria by which the access decision could then be made by the target site would be the origin's account management policy. This sample policy is intended for discussion with stakeholders on your respective campus and potential localization to meet the unique needs of your environment, if found to be meaningful in that context. It outlines the issues to be addressed in your particular account management policy, in order to participate in the federation of Shibboleth-enabled institutions. This document was released as part of NMI R.1, but if your campus is interested in evaluating Shibboleth it is important that you review this policy if you have not already done so.
Target Audience:	IT Architects or equivalent, campus IT security managers, campus legal counsel
Focus areas for review:	Level 1: a) If you are intending to deploy Shibboleth, an institutional account management policy will be required to participate. How long do you believe it will take to create one for your campus?
Deliverable date:	March 25, 2003
Deliverable format:	Submit the following to testbed-reports@sura.org in an MS-Word document with a filename in the following format: Institution_initials-R2-Sample-Policy.doc

1. Indication as to the level of testing performed and a list of name/position of those who participated in the evaluation. If the site was only able to complete partial levels of testing, please provide additional detail as to what prohibited testing at higher levels.
2. Responses to the evaluation questions above.
3. If comments were made on the document itself, include that as an attachment with suggested changes highlighted in some fashion (color, italics, change bars, etc.) for ease of reading.