

Directory Services Needs Assessment

The purpose of the survey will be to identify informational, business, functionality, management, and administration needs as they relate to the application enterprise directory solutions on a college/departmental level. We are soliciting the support of designated IT professionals within your organization to assess specific and general requirements for directory services.

The survey consists of 2 parts. Part 1 is a questionnaire that encourages narrative answers to the questions. If convenient, it would be helpful if the answers could be written on the word document. The important thing is that we receive input that you feel will be most valuable to a needs assessment process and will result in efforts that best serve your organization. Please use whatever format works best for you.

The second part is a list of specific requirements. We are seeking your response regarding the relative importance of the listed capabilities. If criteria that is important to your organization is not listed, please use the empty spaces that have been provided.

Organization

1. How many users in your organization?
2. Does your organization rely on certain strategic vendors and products, or do you use "best-of-breed."
3. What locations do you serve?
4. Do you have mobile computing users? Who are they, and what computing technology are they accessing?
5. Who are your major internal / external customers?
6. What are your key business strategies / objectives?
7. What IT initiatives are planned? Are you implementing new directory services?
8. How is IT organized within the College?
9. How do you currently provision new accounts?
10. How do you remove accounts?
11. Is your organization an early adopter of technology? Leading edge? Conservative?
12. With which organizations do you share data?
13. Do you have out-sourcing agreements? Do they work?
14. How do you handle IT billing and budgeting issues within your organization?

Applications, Directory, and Network Environment

1. Do you have plans to authenticate and authorize users and customers to access IT services?
2. What central services are accessed by your organization?
3. How is your intra college/department network laid out? What is the bandwidth between sites or operating units? What bandwidth is needed?
4. What is your existing NOS software and what does the namespace look like?

5. What directories do you currently use or access using application software?
6. What unique keys do you use to index the directories?
7. What is your DNS environment? Does it enable DHCP?
8. Does your network require tedious administration tasks that might be made easier by directory services.
9. Are you planning to install or upgrade network, platform software or e-mail systems? When?
10. What e-mail systems do you use? Do you synchronize their directories?
11. Would you use unique identifiers resident in the PeopleSoft LDAP to authenticate access to systems?
12. Do you use a VPN or other remote-access mechanism? Which?
13. How many people administer directories within your organization?
14. What server/hardware platforms do you use?
15. What major computing initiatives are you pursuing?
16. What workstation hardware/software platforms do you use?
17. What are your major applications?
18. Do you plan to use Portal technology? Your own? Enterprise portal?

Directory

1. What kind of data would you like to access from a directory?
2. How could a directory make your job easier?
3. Who owns and administers the data sources that feed the directory system?
4. Do you need to aggregate database information in a directory presentation? Could you do so from a single directory, or would you require a geographically distributed architecture?
5. Are you using or considering voice over IP?
6. What management tools and provisioning applications should be included in the architecture?
7. What percentage of Help Desk calls are requests for password resets?
8. Who should own and manage the directory? Who should own the data?
9. How many people are involved in administering your directory system(s)?
10. What functions should directory services enable?
 - Single sign-on?
 - White pages?
 - IT provisioning?

Employee provisioning/decommissioning?

Simplified administration?

Desktop and device management?

Directory-enabled networking/QOS?

Authentication and access control?

Database information aggregation?

Directory Security

1. What physically secure areas exist in your organization?
2. What authorization systems are currently in use or planned? Custom, application or OS-specific? Centralized or web-based?
3. What technology do you use for authentication and access authorization?
4. Which business functions, applications, and services should use confidentiality and encryption services?
5. Is any of the information that you use confidential, private, or mission-sensitive?
6. Do you share company information, either electronic or hard-copy, with organizations outside the University, i.e., federal, state, local governments, vendors, etc.? Who? What kinds of data do you transfer? How often and how do you transfer it?
7. Do people use locally attached modems on your network to access the Internet?
8. Should you develop security moving towards single (or reduced) sign-on?
9. Do you store personal student, faculty, or staff data that requires special handling?

Specific and Technical Security Questions

1. Do you need strong authentication, access control, and encryption?
2. Should authentication, authorization, and other security management policies be administered centrally, or should it be distributed?
3. Should the Registration Authority (RA) function be centralized or distributed?
4. What revocation and validation processes and protocols should the PKI support?
5. Are you considering a multi-tiered security policy?
6. Have you considered certificate usage, revocation, and recovery policies?"
7. Have you deployed or are you considering deploying Kerberos or public key security mechanisms?
8. Do you have a specific process for secure authentication and access for PDA or mobile users?
9. Should PKI keys be backed up and recovered?

10. What certificate management protocols should you use?
11. What data encryption algorithms should PKI use? What digital signature algorithms? What key exchange algorithms?
12. What kind of trust relationships should be developed for internal and external applications?
13. What level of integration should exist between authentication, authorization, and directory services?
14. How will you manage authentication and authorization across campus boundaries with partners, suppliers, customers, and other B2B constituents?
15. What security application interfaces and development frameworks should you use?
16. Do you perform some kind of attribute certificate process or delegation of authority?
17. Have you considered a policy and procedure to handle certificate revocation?
18. Do you have an intrusion detection systems and a response plan? What is it?
19. What security products have you installed?
20. Have you classified all your data?

Specific Directory Requirements

Should the directory system include or support:

1. Configurable access profiles by group and individual?
2. Configurable access privileges by group and individual?
3. Logon and password information?
4. Information security attributes?
5. Supplier and vendor information?
6. Asset information?
7. People information, such as name, phone number, and e-mail address?
8. Resources information, such as servers, printers, and applications?
9. Digital certificates for reduced/single sign-on or encryption?
10. DNS integration?
11. Differentiation between contractor, employee, student or staff?
12. Support using a campus-wide identifier?
13. Self-service for faculty and staff?
14. International character sets, such as ISO 10646 or UTF-8?
15. Distribution and holding of information based on country of origin?

16. Web enabled access?
17. Identification of the authoritative source of information, a matrix of those who create, read, update, and delete (CRUD) information?
18. Tools to join, select, and clean information?
19. Schedule and/or event-driven replication or synchronization?
20. A campus-wide unique identifier?
21. Ease of restructuring the tree?
22. A graphical user interface?

DIRECTORY REQUIREMENTS ASSESSMENT

College/Department _____

Participants _____

INFORMATIONAL REQUIREMENTS

No.	Requirement	C	M	D	N	Sc
1	Access profiles					
2	Access privileges					
3	Login and password change information					
4	Information security attributes					
5	Supplier and vendor information					
6	Asset information					
7	People information (name, phone, e-mail, role, and so on)					
8	Resources information (servers, printers, applications, and so on)					
9	Digital certificates (Reduced/Single Sign-on, S/MIME, encryption)					
10	Directory-enabled networks (DEN)					
11	DNS integration of directory information					
12	Differentiation between faculty/staff/student/alumni/contractor, etc.					
13	Support for the creation and management of an enterprise-wide unique identifier for identity management and joining related information associated with the identity					
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Key: Critical, Mandatory, Desirable, Not Important						

BUSINESS REQUIREMENTS

No.	Requirement	C	M	D	N	Sc
1	Support the introduction of supplier, partner, and customer information into the selected extranet authentication and authorization solutions					
2	Provide a single repository containing, yet distinguishing between, students, faculty, staff, alumni, contractors, etc.					
3	Provide a self-service interface for students, faculty, staff, etc.					
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Key: Critical, Mandatory, Desirable, Not Important						

GENERAL DIRECTORY FUNCTIONALITY

No.	Requirement	C	M	D	N	Sc
1	Provide global availability and distribution					
2	Support Windows 32-bit clients (IE, Netscape, Outlook, Notes)					
3	Provide flexible, user-friendly query and search functionality					
4	Provide LDAP client access					
5	Contain schema that is extensible to incorporate customer-defined objects and attributes					
6	Provide support for multi-master replication					
7	Provide support for Microsoft ADSI					
8	Provide support for Microsoft MAPI					
9	Provide support for LDAP "C" API (RFC 1823)					
10	Provide support for JNDI (Java Naming & Directory Interface)					
11	Provide support for X.500 and DNS naming models					
12	Provide support for paged search results					
13	Provide support for catalogs and indexes					
14	Provide support for aliases and maintenance of referential integrity.					
15	Support the identification of departments, organizations, roles, and reporting relationships to provide organizational views of the information					

16	Provide support for international character sets (ISO 10646, UTF-8)					
17	Provide configurable access controls to limit accessibility to information based on legal restrictions or user authorization based on group membership or profile					
18	Support web-enabled access to directory information					
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Key: Critical, Mandatory, Desirable, Not Important						

META-DIRECTORY FUNCTIONALITY

No.	Requirement	C	M	D	N	Sc
1	Assure consistency in definition and application of primary enterprise objects (people and assets)					
2	For every object, identify the authoritative source					
3	Provide secure access control to meta-data					
4	Provide tools to join and clean information					
5	Provide processes to maintain the quality of information					
6	Provide a single logical repository					
7	Support the information manipulation required to support organizational changes					
8	Provide an authoritative repository of campus and partner (supplier, granting agency, etc) directory information					
9	Support the analysis of information using attributes to create virtual views of the information					
10	Provide the flexibility to integrate complex directories					
11	Create entries and attributes in oother systems (propagate information mastered elsewhere between multiple systems)					
12	Reflect entries and attributes (synchronize information mastered elsewhere between multiple systems)					
13	Chain queries to entries mastered elsewhere (brokering)					
14	Chain queries to attributes mastered elsewhere (brokering)					
15	Provide schedule-driven replication, synchronization, and propagation					
16	Provide event-driven replication, synchronization, and propagation					
17	Provide the ability to collect, manage, and propagate predefined and ad-hoc distribution lists					

18	Provide the ability to generate and propagate a campus unique identifier for the purpose of joining entries in multiple repositories					
19	Provide meta-directory links or connectors to the repositories shown in the platform support section					
20	Provide LDAP synchronization					
21	Offer flat file import/export capabilities					
22	Allow for name structure mapping					
23	Provide entry inclusion/exclusion rules					
24	Provide attribute inclusion/exclusion rules					
25	Provide bidirectional synchronization					
26	Allow for exception handling (duplicates, unjoined entries)					
27	Provide unjoined entry identification and mapping support					
28	Provide callouts/exits (to allow the use of custom code)					
29	Provide the ability to easily restructure the DIT					
30	Provide the capability to generate additional separate directories (for example, suppliers or granting organizations)					
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Key: Critical, Mandatory, Desirable, Not Important						

MANAGEMENT AND ADMINISTRATION

No.	Requirement	C	M	D	N	Sc
1	Support automated, centralized, and distributed administration					
2	Provide a channel for adding users and managing user access					
3	Reduce administration overhead					
4	Provide single point of administration					
5	Let you maintain information associated with administrative accounts and associated access rights in a container for this purpose (ex. Admin) that is not visible or searchable					
6	Maintain 7x24 availability without bringing the service down for maintenance; includes incremental on-line backup					
7	Allow for customizable bulk directory loading and extracting from existing data sources					
8	Include schema easily extensible by administrator					

9	Perform global schema changes					
10	Include easy-to-perform tree operations, such as tree merge and prune and graft operations					
11	Include a graphical administration interface					
12	Provide performance monitoring and directory optimization tools					
13	Provide schema management tools supporting schema changes with minimal administrator/user impact					
14	Perform replication on a scheduled and event-driven basis					
15	Include templates for controlling user access					
16	Include a Web-based administration interface for standard operations, such as add, delete, and update					
17	Allow application access to directory to be authenticated, controlled and audited					
18	Have minimal impact on other directory repositories					
19	Provide the ability to consolidate or partition the directory based on changes in the campus environment					
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Key: Critical, Mandatory, Desirable, Not Important						

STANDARDS AND PROTOCOL SUPPORT

No.	Requirement	C	M	D	N	Sc
1	Support for NIS consolidation					
2	HTTP					
3	NNTP					
4	LDAPv2					
5	LDAPv3					
6	LDAP Authentication (SASL/SSL/HTTP Digest)					
7	LDAP Referral					
8	LDAP Replication					
9	93 X.500 DAP/DSP					
10	93 X.500 DOP/DISP					
11	XML					

12	Interfaces for C, C++, COBOL, Visual Basic, and ActiveX programming languages					
13	Support for VS Script, Java Script, and PERL scripting languages					
14	Kerberos					
15	SQL					
16	ODBC					
17	IPSec and IKE					
18	S/MIME					
19	PGP					
20						
21						
Key: Critical, Mandatory, Desirable, Not Important						

PLATFORM SUPPORT

No.	Requirement	C	M	D	N	Sc
1	Novell Directory Service, E-Directory					
2	Novell NetWare 4.x					
3	Microsoft Windows NT 3.x, 4.x					
4	Microsoft Windows 2000, XP Server and Active Directory					
5	UNIX / LINUX					
6	Microsoft Exchange 5.5					
7	Microsoft Exchange 2000					
8	Lotus Notes 4.6					
9	PeopleSoft					
10	NIS, NIS+					
11	Integrated badge systems with smartcards					
12	Netegrity SiteMinder					
13	Netscape Directory, Web Server, News, I Planet					
14	IBM AS400					
15	Remedy (or other help desk systems - specify)					
16	SecurID Ace Servers					
17	Telephone					
18						
19						

Key: Critical, Mandatory, Desirable, Not Important

SECURITY

No.	Requirement	C	M	D	N	Sc
1	Support identity management with credentials (200K users)					
2	Provide internal and external access controls					
3	Limit access by domain with ID and password					
4	Enable PKI for clients (signatures and encryption)					
5	Support reduced sign-on initiatives					
6	Support credential management and role-based security administration (access360 enRole and BMC Control-SA)					
7	Support web authentication through managed portals using both simple and strong authentication					
8	Support efforts to preserve data security					
9	Secure information published on the web					
10	Support IKE for VPN certificate distribution					
11	Provide attribute and group-level access controls					
12	Provide the ability to store data in an encrypted form					
13	Support strong authentication of administrators					
14	Support secure messaging					
15						
16						

Key: Critical, Mandatory, Desirable, Not Important

TECHNICAL CAPABILITIES

No.	Requirement	C	M	D	N	Sc
1	Include a server that operates on the Intel - NT-based platform					
2	Include a server that operates on the HP/UX, Sun Solaris, or other UNIX					
3	Support server clustering					
4	Support LDAP					
5	Support X.500					
6	Be capable of supporting n million entries					
7	Have response times that are sub-second in a production environment					

8	Include a directory that is available 99.95%, outside of scheduled maintenance					
9	Have the ability to handle routine maintenance tasks such as database compaction, address changes, backups, and so forth with no scheduled downtime					
10	Include architectural provisions to ensure data integrity					
11	Provide reliability features (for example, fault tolerance, logging, database rebuild, on-line backup, transaction rollback, auditing)					
12	Include reporting tools and statistics (for example, average load peak load, query performance)					
13	Respond to explicit query within two seconds in local environment					
14	Extensible, easy-to-use scripting language (such as PERL)					
15	Provide support for service-level controls, including search size and time limits					
16	Provide a configurable cache					
17	Have the capability to limit denial-of-service threats					
18	Provide responses of less than .5 second for Web security					
19	Include consistent and proven restore capabilities					
20	Provide a network-friendly replication scheme					
Key: Critical, Mandatory, Desirable, Not Important						

NETWORKING INTERFACES AND APPLICATIONS

No.	Requirement	C	M	D	N	Sc
1	DEN (Directory Enabled Networks)					
2	DNS, Dynamic DNS					
3	DHCP address management					
4						
Key: Critical, Mandatory, Desirable, Not Important						