



INFED

INFLIBNET Access Management Federation

<http://parichay.inflibnet.ac.in>

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INFLIBNET Centre

(An Inter University Centre of University Grants Commission)

Infocity , Gandhinagar 382007

Coverage

About INFLIBNET

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Need of Federation (Global Scenario)

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Present Status



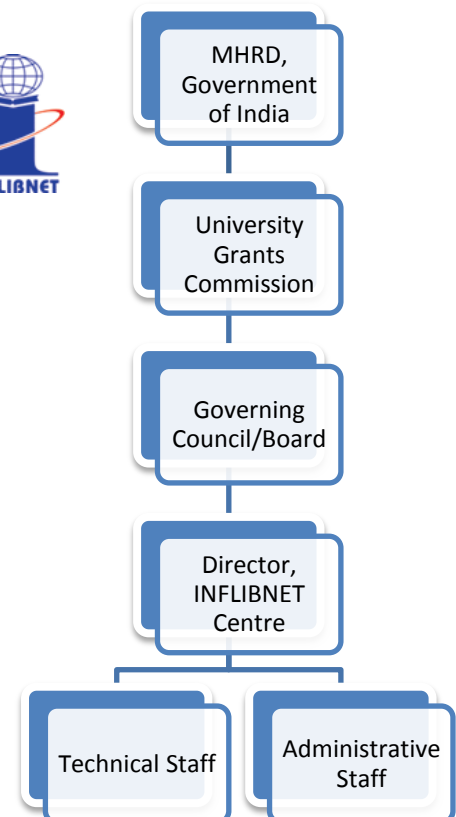
About INFLIBNET Centre

Information and Library Network Centre.



Established in 1991 as a UGC's Project, Recognized as an Inter-University Centre of the UGC in 1996.

Just shifted to its own building at at InfoCity Gandhinagar. Gujarat



Mission and Vision



Create a virtual network of people and resources in academic institutions

Provide seamless, reliable and ubiquitous access to scholarly, peer-reviewed electronic resources in all education institutions

Build and strengthen ICT infrastructure in educational institutions with value-added services.

Develop secure and convenient access management systems enabling users to access information from anywhere, anytime.

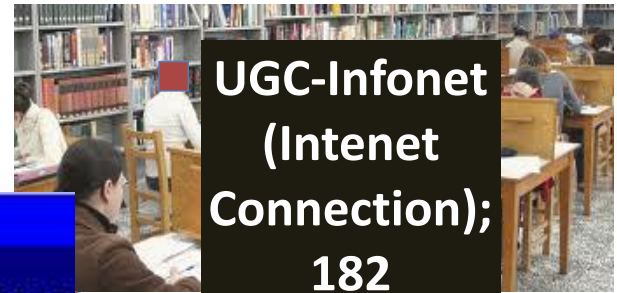
Develop resource selection guides and online tutorials for effective delivery and usage of e-resources.

Facilitate creation of open access digital repositories in every educational institution



At a Glance

Colleges / Institutes



**UGC-Infonet
(Internet
Connection);
182**

**Shodhganga
(Full-text**

Activity	Content
Union Catalogue: Book,Thesis,Serial,Video	1.25+ Crore
e-Book	80,000
e-Journal:UGC -Infonet	7,500
e-Journal:NLIST	3,800
Full-text Theses	3,500
Expert Database	15,500
e-Resource-Subject Gateway	1,800
Open Journal:OJAS	13
Bibliographic Database	13

Content

SOFTWARE



**Book
Database;
145**



Connectivity

Prof. Yash Pal conceived idea of connecting Universities through a common network way back in 1991, well ahead of its time. That paved the way for National Knowledge Network and Others

UGC-INFONET Internet Connectivity

- Provided Internet connectivity (10 Mbps) to 182 universities under purview of the UGC. All universities migrated to NKN. Modified UGC-INFONET Proposed.

National Knowledge Network / NME-ICT

- 1 Gbps MPLS Network Connectivity + 100 Mbps Internet connectivity to all universities and 10 Mbps (broadband) to Colleges

Reformatted UGC- INFONET

- UGC-INFONET Laboratories in Universities
- Video Conferencing Facilities
- Strengthened Network Infrastructure

Internet as
Academic Right



Content

Universities

UGC-INFONET
Digital Library
Consortium

- Provides access to 7,500 journals and 12 bibliographic databases to the 320 universities (Including 200 core members and 118 Associate Members)

Colleges

N-LIST
(NME-ICT)

- Provides access to 3,800+ electronic journals and 80,000 electronic books to Govt.-aided and non-aided colleges. 3100+ colleges have already joined.

UGC-InfoNet Offerings

7,500 electronic journals (Current + back files) from 20 publishers including:

- University Presses
- Scholarly Societies
- Commercial Publishers
- Aggregators

11 bibliographic databases

- SciFinder Scholar (1907+)
- MathSciNet (1940+)
- Web of Science (through N-LIST)



OuP	Oxford University Press
CuP	Cambridge University Press
ACS	American Chemical Society
AIP	American Institute of Physics
APS	American Physical Society
AR	Annual Reviews
IoP	Institute of Physics
SIAM	Society for Industrial and Applied Mathematics
RSC	Royal Society of Chemistry
EPW	Economical and Political Weekly

N-LIST Offerings

3145 Colleges
4,44,000+ Users

3,800 e-Journal and 80,000+ books for Govt. / Govt. aided and non-aided colleges. 3100+ colleges are registered.

3,800 electronic journals

- University Presses
- Scholarly Societies
- Aggregators

One bibliographic database

- MathSciNet (1940+)

80,000+ electronic books

- E-brary (73,000)
- Cambridge Univ. Press (1000+ titles)
- McGraw Hill (1308 titles)
- NetLibrary (986)
- Oxford Scholarship Online (902)
- Hindustan Books (65+ titles)
- Institute of South East Asian Studies Books (382+ titles)
- Springer eBooks (1500+ titles)
- Taylor & Francis eBooks (1500+ titles)
- More ebooks are being added

Current Situation

E-Journal Consortia

160 Universities
69 Associate Members
4 IUCs + Others

Access is limited within Institutional Campus

- Reason : IP based authentication, Impractical to have user id and password for all users and share it across resource providers

N-LIST

6000+6000 Colleges (3100+ registered so far)
4.44+ Lakh Users

Access is through EZProxy Software

- All requests are being served through single server. Accounts are being created and passed on to colleges

In nut shell..

Access is restricted within the confine of a given university campus.

Although, usage of e-resources is satisfactory, access to e-resources are restricted to university campuses due to lack of proper authentication mechanism

In case of NLIST, access is through a single server using proxy.

Ideally....

Ideally user should be to access e-resources from his / her campus, home or even while travelling

Solution requires setting-up of proper user authentication and access control mechanism ensuring trust relationship between publisher, identity providing agency and the user institution

Need of Federation

A formal federation is required as trusted interface between the institutions and publishers / service providers.

INFLIBNET Access Management Federation (INFED) is trusted entity between all the parties, including member colleges, universities and publishers.

How Federation(INFED too) Works..

The user accesses a protected resource.

The resource redirects the user to the WAYF, so that he/she can select his home organization. Depending on the policy of the federation, the user may be able to record this preference, perhaps in a cookie, for future use.

The user is then directed to his home organization, which sends him to the authentication system at his organization.

The user authenticates himself, by whatever means his organization deems appropriate for this federation.

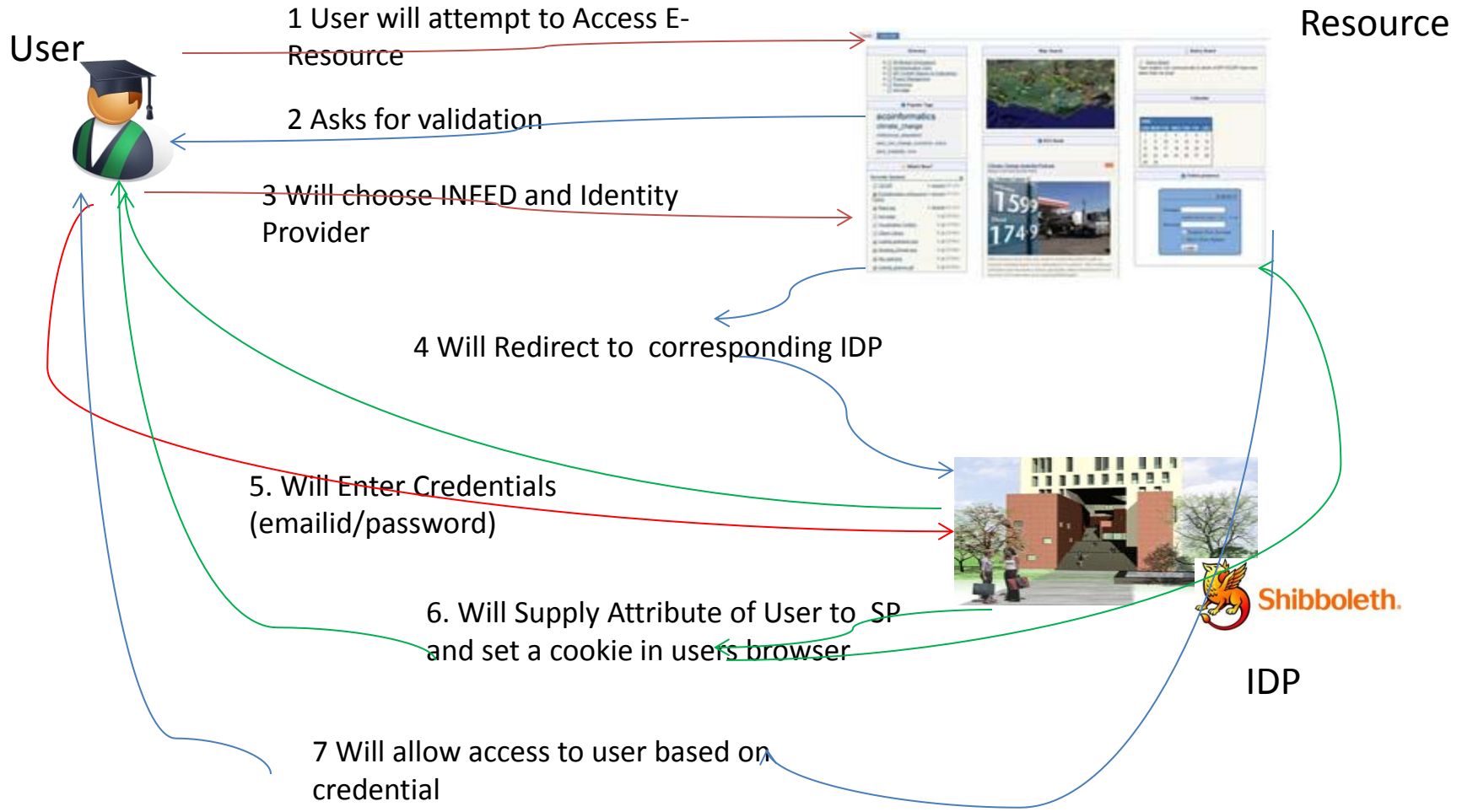
After successful authentication, a one-time handle or session identifier is generated for this user session, and the user is returned to the resource

The resource uses the handle to request attribute information from the Identity Provider for this user.

The organization allows or denies the attribute information to be made available to this resource using the Attribute Release policy.

Based on the attribute information made available, the resource then allows or denies the user access to the resource.

How this stuff works?



Demo : resource page

The screenshot shows a web browser window with the Cambridge Journals website. The address bar displays the URL: journals.cambridge.org/action/loginjsessionid=6A4B34FB66870E7756CD4F2141E4353D:journals. A cookie consent message is visible at the top, stating: "Our website uses cookies to distinguish you from other users of our website and helps us to provide you with a good experience when you browse our website. To accept cookies continue browsing as normal. Please visit our [Privacy and Cookies Policy](#) if you would like more information on the cookies we use or if you would like to alter your browser settings (although please note that if you block some or all cookies you may not be able to access all or parts of our site). [Click here](#) if you wish to hide this message."

The website header includes the Cambridge University Press logo and navigation links: Home | CJO Mobile | Mobile Device Twinning | Contact Us | Site Map | Help | FAQ | Accessibility | Register. The main navigation menu contains: About Us | News | Browse Journals | Authors | Societies | Librarians | Agents | Users | Corporate. A search bar is present with the text "All Journal and Book Content" and a "Search" button. A shopping basket icon and a "Log in" link are also visible.

A login overlay is displayed on the right side of the page, containing three buttons: "User Log-in", "Institutional Log-in" (which is circled in red), and "Register for an Account".

The main content area features a "Welcome to Cambridge Journals Online" message: "To access subscriptions and personalised features please log in or register". Below this is a dark blue banner with the text: "For the latest news, updates and special offers visit the Cambridge Journals Blog".

Demo : Federation Selection



Select an identity provider

If you are an Athens user, please proceed to the [Athens Login page](#).

If the link above does not work, you may log in here [Athens Login page \(beta\)](#)

Otherwise, select an identity provider.

The Service you are trying to reach requires that you authenticate with your home institution, please select it from the list below.

Choose from a list:

Federation

- France/French Federation
- Germany/German Federation
- India/Indian Federation
- Japan/Japanese Federation
- Portugal/RCTSaai Portuguese Federation
- Spain/Spanish Federation
- Switzerland/SWITCHaai Federation
- UK/UK Federation
- US/InCommon Federation
- All Sites

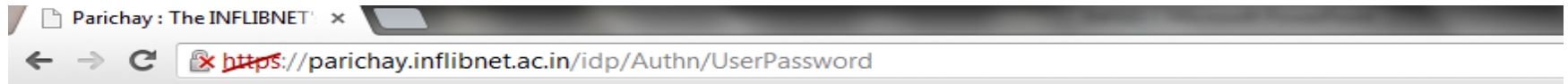
Institution

- Parichay :INFLIBNET Identity Service[NLIST]
- UGCINFONET :INFLIBNET Identity Service[UGCINFONET]

Select Remember for session

or

Demo : IDP Login



INFED

INFLIBNET Access Management Federation

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Parichay Login to Service Provider : <https://shibboleth.cambridge.org/shibboleth-sp>

Parichay Username:

Parichay Password:

Demo : Attribute Release (Back-end Process)

- Cache-Control is: **max-age=0**
- referer is: **https://parichay.inflibnet.ac.in/idp/profile/SAML2/Redirect/SSO?SAMLRequest=fZJfT8IwFMW%02FytJ31m0wwYYtmfAgCQph6IMvptvuWJPSzt5O5dtbGCo%02B;**
- DNT is: **1**
- Shib-Session-ID is: **_25a4acd0299637a6de7fe629ff015e21**
- Shib-Session-Index is: **478f7aefa24234638b18518864d39aae3f408763681103318ba75a50fff14c61**
- Shib-Identity-Provider is: **https://parichay.inflibnet.ac.in/idp/shibboleth**
- Shib-Authentication-Method is:
urn:oasis:names:tc:SAML:2.0:ac:classes>PasswordProtectedTransport
- Shib-Authentication-Instant is: **2013-02-09T08:54:24.794Z**
- Shib-AuthnContext-Class is: **urn:oasis:names:tc:SAML:2.0:ac:classes>PasswordProtectedTransport**
- entitlement is: **http://nlist.inflibnet.ac.in/nlistarts**
- persistent-id is: **https://parichay.inflibnet.ac.in/idp/shibboleth!https://sp.testshib.org/shibboleth-sp!QxGh0Nx2DFGIDeLzWOUqw9qSWpg=**
- orgunit-dn is: **NLIST**
- org-dn is: **56_INFLIBNET Centre**
- Shib-Application-ID is: **default**
- REMOTE_USER is: **https://parichay.inflibnet.ac.in/idp/shibboleth!https://sp.testshib.org/shibboleth-sp!QxGh0Nx2DFGIDeLzWOUqw9qSWpg=**

The Great Indian Implementation Challenge

Last FIVE Years :

- Universities were introduced “bulk” e-resources 8 year back, “e-resources” culture got “populated” 4-5 years back
- Colleges were introduced e-resources under NLIST
- Universities got/getting 100 Mbps through NKN (Earlier 2 to 10Mbps)
- Colleges are having connectivity (under NME-ICT)
- Internet Penetration

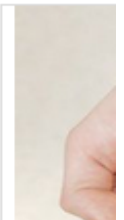
India among fastest growing Internet markets: Study

PTI Oct 28, 2012, 10.22PM IST

Tags: MasterCard | IRCTC | Internet | comScore | ASSOCHAM | Ameri

NEW DELHI: India is among the top three fastest growing Internet markets in the world, a study by industry body ASSOCHAM and ComScore has said.

"Among the Bric nations, India has been the fastest growing market adding over 18 million Internet users and growing at an annual rate of 41 per cent," the study said.



Challenges....

High internet penetration implies user will/should not restrict to access devices at institution

“Shibboleth” or “Federated Access” culture is still in incubation.

Indian Higher Education system is very “huge”

Most of the Universities/Colleges doesn't have email id as “student@university.ac.in”, Even don't have well managed “LDAP” or “Active Directory” kind of structure.

Universities/Colleges don't have skill sets ,resources and infrastructure to establish and manage “Identity Provider”

Approach by INFED (Hands-Off)

IDPs can not be created “overnight” so immediately established common IDP per consortia (“NLIST”, “UGC-Infonet DLC”), where in user from each institution can be identified uniquely (as required by SP), and the ball can be rolled.

Encourage Universities/Institution to have their own IDP and Advocacy

In case they are not capable to do that on their own, Help them in installation, establishment and hosting.

Once they are ready with their IDP , give them their stuff(Migrate data from common IDP to Institutional IDP)

(Presently ‘part-time @Leisure ’ working on creation of virtual image for “Configurable IDP”)

What about 'Non-Shibboleth' Compliant Resources

Presently we are using EZProxy, Which will be configured for Shibboleth based authentication.

Ezproxy has to be aware of resources that are Shib-enabled.

For these Shib-enabled resources, EZproxy can be configured to hand off to Shibboleth for authentication and authorization, rather than proxy the user's entire session.

Non Shib Resources can be accessed through EZProxy

Customizations Done.

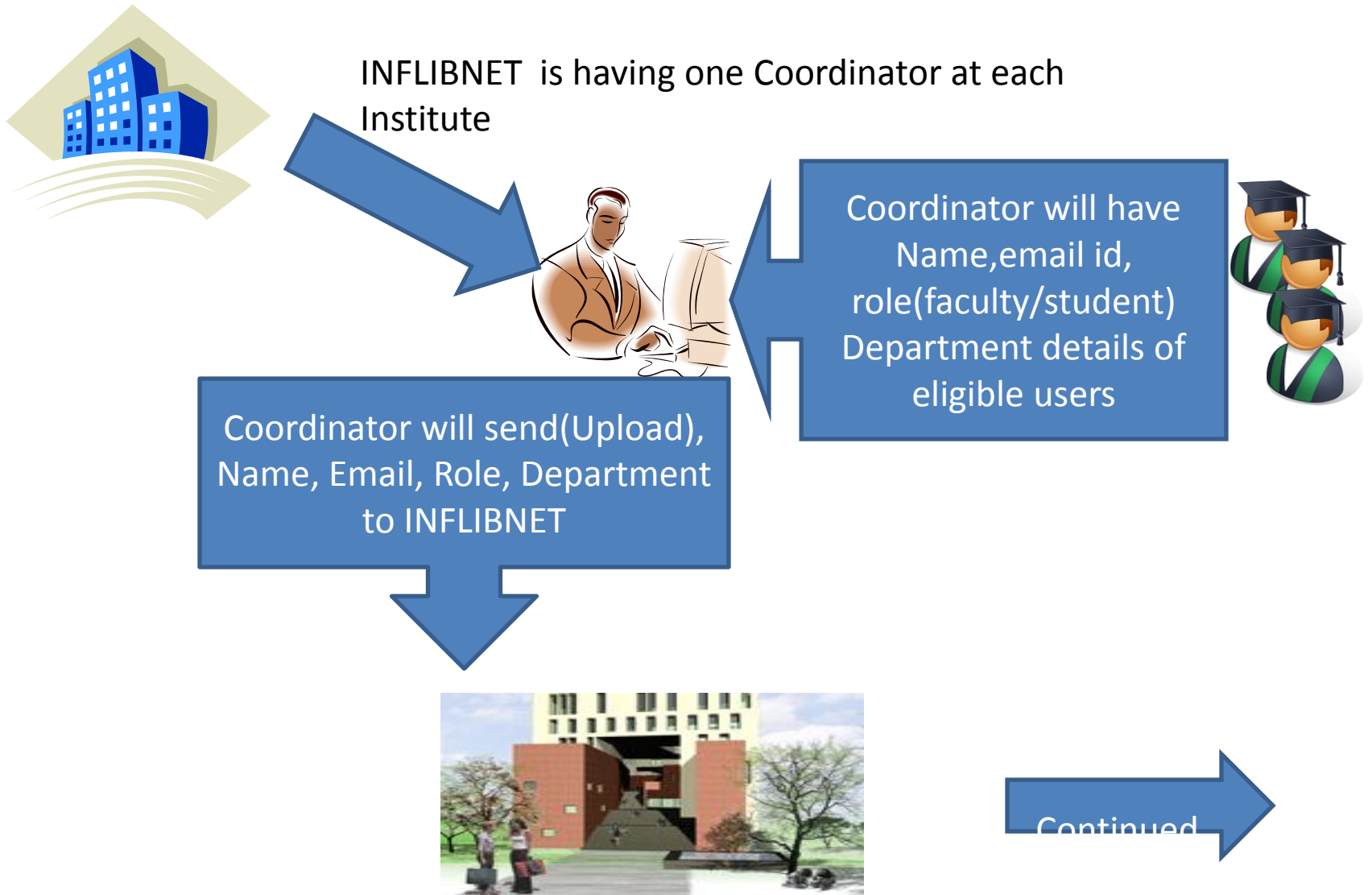
Created separate User Interface for user registration

Customized attribute release in a way that a single IDP can serve for multiple organization

Re-written entire JAAS (Java Authentication and Authorization Service) Module to deal with RDBMS based user authentication

Configured Shibboleth IDP to release attributes from RDBMS rather than LDAP.

How do Users will Get Registered?



User Registration.....



INFLIBNET will send
Email Link to users for
Confirming registration
and Creating Password

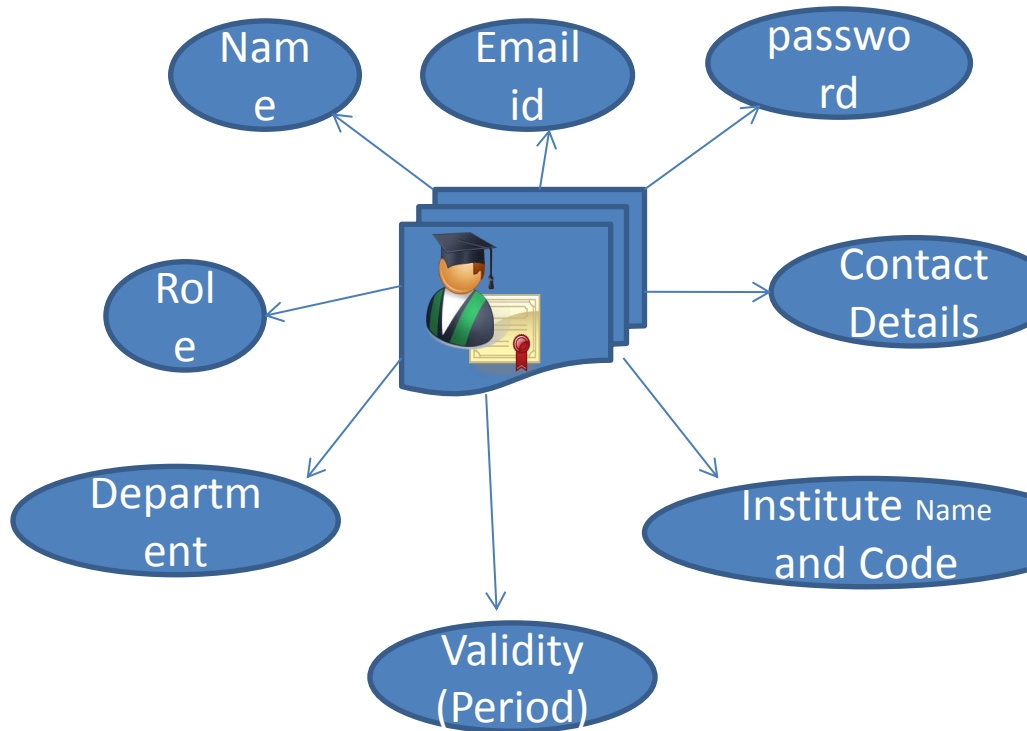


Users will register at INFLIBNET with encrypted
password created by themselves
(Users can do Direct Registration but needs to
be approved by Univ. Officials)



INFLIBNET
will have
Database of
all registered
Users

What INFLIBNET will have ?



Database of Users

LIGO Scientific Collaboration | DIRECTORY

LSC Member Information

Scott Koranda

University of Wisconsin at Milwaukee

Address 1: UWM Physics Department

Address 2: P.O. Box 413

Address 3:

City, State, Postal Code: Milwaukee WI 53201

Country: UNITED STATES

Email: scott.koranda@ligo.org

Office Number: +1 (414) 229 5056

Fax Number: +1 (414) 229 5589

Interface: Admin User Creation

INFED | INFLIBNET Access Management Federation

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welcome root | [Logout](#)

N-LIST INFLIBNET Administrator

[Create College Admin](#) | [Edit College Admin](#) | [View College User](#) | [Department](#) | [Group](#) | [Resource](#) | [Group-Resource Mapping](#)

Search

Search Pending College: Select

Pending College List **Total Users: (1374)**

College Id	College Name	City	State	Address	Date	Add User
41	Lady Barabourne College, Kolkata	Kolkata	West Bengal	P1/2, Suhrawardy Avenue	2009-05-05	
45	P E S College of Science, Arts & Commerce, Madya	Mandya	Karnataka	M C Road,	2009-05-05	
46	Darjeeling Government College	Darjeeling	West Bengal	Lebong Cart road	2009-05-05	
60	J Z Shah Arts & H P Desai Commerce College, Amroli	Surat	Gujarat	At & Po Amroli, St: Utran Ta: Choryasi	2009-05-05	
67	Lal Bahadur Arts, Science & S.B. Solabanna Shetty Commerce (Autonomous) College, Sagar	Shimoga	Karnataka	Jag Road, Sagar	2009-05-05	

Interface: Admin Login

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Login

Username

Password

Verification Code

case sensitive

G44SP4

[Login](#) [Reset](#)

[Forget Password](#) || [Reset Password](#)

Interface : User Creation (By Institute Admin)

College Administration welcome yatrik@inflibnet.ac.in | Department | Logout

Search User Details

Search: Name

Add/Update User Details * Indicates All Fields are Mandatory

Collegid : *

User Name : *

Email Id : *

Phone No : *

Department : *



Designation : *

Username : *

Password : *

Validity : *

View User Details of INFLIBNET Centre Total Users: (2)

Sr. No.	Name	Email	Phone	Department	Designation	User Name	Validity	Edit
1	hh@gmail.com	hh@gmail.com	7789090	NLIST	Administration	hh@gmail.com	2013-12-31	
-	-	-	-	-	-	saroi@inflibnet	-	

Metadata Exchange

Each entity's (IDP or SP) metadata is registered once with the INFED

Aggregated metadata for all registered entities is re-published by the federation operator so that it can be consumed by all participating entities.

This means that each entity only exchanges metadata with the federation operator, but gains the same benefit as from exchanging metadata with each participant.

INFED Metadata is available at <http://parichay.inflibnet.ac.in/metadata/infed.xml>

Attribute Release

Attribute	Description
eduPersonTargetedID	A persistent, non-reassigned, privacy-preserving identifier for a user shared between an identity provider and service provider
eduPersonEntitlement	URI that indicates a set of rights to specific resources
eduPersonScopedAffiliation	Specifies the person's affiliation within a particular security domain in broad categories such as student, faculty, staff etc. (eg. student@nlist.inflibnet.ac.in)
eduPersonOrgDN	Distinguished name (DN) representing the institution with which the person is associated.

Attribute release can be customised as per Service Provider's Requirement

INFED is concern about privacy of user, "Recommendations on use of Personal Data" is available

Federation Documents

Federation Operator Procedures

November 2011
Version 1.0

http://parichay.inflibnet.ac.in/documents/operator_procedures.pdf

Recommendations for use of Personal Data

November 2011
Version 1.0

http://parichay.inflibnet.ac.in/documents/use_of_personal_data.pdf

Rules of Membership

November 2011
Version 1.0

http://parichay.inflibnet.ac.in/documents/rules_of_membership.pdf
<http://parichay.inflibnet.ac.in/INFED%20Membership%20Form.pdf>

Who Can Join INFED

The INFED currently has the following four classes of participants are eligible to join the federation. All institutions have to apply for the membership of INFED on prescribed application form:

- **Universities:** All Govt. / Govt.-aided universities covered under Section 12(B) and 2 (F) Section of the UGC Act, 1956 and all Inter-University Centre (IUCs) of the UGC that are eligible to get access to e-resources through the UGC-INFONET Digital Library Consortium are eligible to participate of the INFED.
- **Colleges:** All Govt. / Govt.-aided colleges (6,000+) covered under 12(B) and 2(F) Section of the UGC Act, 1956 that are eligible to get access to e-resources through the National Library and Information Infrastructure for Scholarly Content (N-LIST) are eligible to participate in INFED.
- **Private Universities / Colleges and Other Institutions:** The Federation may allow private universities, private colleges and other organizations to participate in the Federation with approval of its National Steering Committee.
- **Publishers:** All publishers providing access to e-resources under the UGCINFONET Digital Library Consortium or NLIST Programme are member of the INFED by default.

Membership Fees (?)

Colleges and Associate Members of the UGC-Infonet Digital Library Consortium

- The Fee for INFED is in-built into the Membership Fee being charged from colleges for N-LIST Programme and from Associate Members of the UGC-Infonet Digital Library Consortium. As such, colleges and Associate Members of the UGC-Infonet Digital Library Consortium do not have to pay any additional fee for joining INFED

Core Members of the UGC Infonet Digital Library Consortium

- INFED does not propose to charge any fee from the core member universities of the UGC-Infonet Digital Library Consortium. However, as the workload and membership database increases for core members, INFED may propose a nominal membership fee for core member universities.

Other Institutions

- Membership for other institutions would be opened only after complete implementation of INFED for all publishers. Charges for other institutions would be announced at a later date.

Publishers

- No fee will be charged from publishers providing access to their e-resources to the universities and colleges under UGC-INFONET Digital Library Consortium and N-LIST programme respectively.









How to Join INFED

Universities / colleges falling into categories mentioned may submit their application along with a signed participation agreement. The federation may request additional information with regard to participating institution.

Participating universities and colleges are required to assign its officers and / or faculty as its Administrative and Technical contacts to the INFED. These officers will be responsible for maintaining the database of authorized users for his / her organization. These officer would be responsible for adding new authorized users and deleting users that are no longer authorized, i.e. retired staff and faculty and students who have passed-out or rusticated.

Universities / Colleges covered under the 12(B) and 12(F) Section of the UGC Act would be accepted as members of the INFED on receipt of application along with signed agreement along with a photocopy of notification issued by the UGC about 12(B) and 2 (F) status of the university. Application from other institutions / research organizations would be examined and accepted on case to case basis.

Present Status.

-  Installation and Initial Testing of Concept
-  Testing With External Service Provider
-  User Creation Interface
-  Integration of Common IDP with RDBMS Data
-  Release of Attributes as per Service Provider's Requirement
-  Establishment of Federation successfully tested with Royal Society of Chemistry, Cambridge University Press (Others in Progress)
-  Conversion of present EZProxy user accounts (NLIST) to Shibboleth IDP
-  Enveloping more institutions. Collaboration with Other Federation, Advocacy, Signing of Agreement with present member Institution

