



REMOTE ACCESS TO E-RESOURCES ANYWHERE, ANYTIME



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DEFINING THE REMOTE ACCESS

- ◉ Remote Access in simple language is the ability to access a computer / server remotely through a network connection.
- ◉ The users have leverage to work remotely away from the institution/ office while retaining access to a distant computer or network.
- ◉ Remote Access can be applicable for Local Area Networks (LANs), Wide Area Network (WANs) and Virtual Private Networks (VPN)

REMOTE ACCESS

Remote access refers to:

- Connection to a data-processing system from a remote location, for example through a virtual private network or remote desktop application
- Remote desktop software, refers to a software or an operating system feature enabling applications to be run remotely on a server while being graphically accessible locally.

REMOTE ACCESS CONTROL METHODS

- ◉ Direct (Physical) Line: Through the direct line control can be implemented between a computer and institution LAN. Similar line can be used to connect a home LAN and a institution LAN. This network is faster but is more expensive and have high maintenance. The network has routing limitations due to structure of rooting from point to point.
- ◉ Virtual Private Networks: VPN connects to remote site through the internet with encryption and tunneling techniques to access the institution network. VPN is generally used in small organizations.
- ◉ Microsoft Remote Desktop Services (RDS): Remote controlled Access using RDS can be used to access the remote computer/ server on the local machine. Some other solutions like Citrix Virtual Apps, VMware, Parallels Remote Application Server (RAS) can be used through the web browser for clientless access.
- ◉ Other methods include Integrated Service Digital Network, Wireless Network, DSL- Digital Subscriber Line, Cable Modem etc.

Reference: [Vissarion Yfantis](#), What Is Remote Access Control? | Parallels Has the Answer, September 25, 2018. Available at <https://www.parallels.com/blogs/ras/remote-access-control/>

REMOTE ACCESS PROTOCOLS

- ◉ POINT-TO-POINT PROTOCOL (PPP)
- ◉ RADIUS (Remote Authentication Dial-In User Service)
- ◉ TACACS+ (Terminal Access Controller Access Control System+)
- ◉ VPN (Virtual Private Network) & Tunneling
- ◉ PPTP (Point to Point Tunneling Protocol)
- ◉ L2TP (Layer Two Tunneling Protocol)
- ◉ IPSec (Internet Protocol Security)
- ◉ SSH (Secure SHell)
- ◉ IEEE 802.1x -collection of wireless protocols

Source: Stewart, James M. *Security+ fast pass*. John Wiley & Sons, 2006.

RULES FOR REMOTE ACCESS

- NEVER share logon credentials with anyone.



www.simplenomics.com

- Use strong and memorable passwords.

- www.passwordmeter.com

Test Your Password		Minimum Requirements			
Password:	<input type="text" value="abcd123"/>	<ul style="list-style-type: none">• Minimum 8 characters in length• Contains 3/4 of the following items:<ul style="list-style-type: none">- Uppercase Letters- Lowercase Letters- Numbers- Symbols			
Hide:	<input type="checkbox"/>				
Score:	<div><div></div> 31%</div>				
Complexity:	Weak				
Additions		Type	Rate	Count	Bonus
✗ Number of Characters		Flat	$+(n*4)$	7	+ 28
✗ Uppercase Letters		Cond/Incr	$++((len-n)*2)$	0	0
✗ Lowercase Letters		Cond/Incr	$++((len-n)*2)$	4	+ 6
✗ Numbers		Cond	$+(n*4)$	3	+ 12
✗ Symbols		Flat	$+(n*6)$	0	0
✗ Middle Numbers or Symbols		Flat	$+(n*2)$	2	+ 4
✗ Requirements		Flat	$+(n*2)$	2	0
Deductions		Type	Rate	Count	Bonus
✓ Letters Only		Flat	$-n$	0	0
✓ Numbers Only		Flat	$-n$	0	0
✓ Repeat Characters (Case Insensitive)		Comp	-	0	0
✓ Consecutive Uppercase Letters		Flat	$-(n*2)$	0	0

RULES FOR REMOTE ACCESS

- Do not use public devices like Kiosks, Web cafes, Coffee shops (Not possible at this time of Pandemic)



<https://www.theinfatuation.com/new-york/guides/coffee-shops-that-serve-great-food>

- Preferably use only institution email for remote access.



www.thinkprogress.org

RULES FOR REMOTE ACCESS

- Implement anti-virus and anti-spyware and Run them continuously, update it regularly.



Image source: <https://ergonotes.com/wp-content/uploads/2017/12/antivirus-software-728x278-728x278.jpg>

- Ensure user is connected to one network at a time. No split-tunneling or dual homing

**Combine Multiple Internet Connections
(WIFI/LAN/3G/4G)
On Single Computer**



Image source: <http://i.ytimg.com/vi/Eu3GHylu31U/hqdefault.jpg>



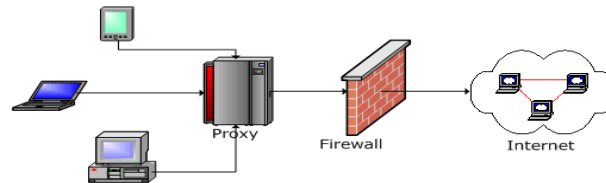
RULES FOR REMOTE ACCESS

- Only use “administrator” profile to update profile or make system changes.



A PROXY SERVER

- A proxy server is a computer or an application level gateway between client workstation and the server or other system.
- When user request a web page, the proxy server receives and processes the request as an intermediate.
- After the web page or the file access is received from the Internet, the proxy server sends the file over to client computer.
- For the user or client, the proxy server is invisible.
- Proxy server associates with the firewall, blocking incoming network requests from the Internet making difficult for the hackers to get internal addresses and details of private network.



Source: <http://www.postcastserver.com/help/Images/proxyfirewall.gif>

The proxy might be part of the firewall or can be separate, based on the network

EZPROXY

- ◉ EZproxy is a adaptable middleware program that provides access to library's licensed or subscribed content for accessing remotely.
- ◉ It operates as an intermediary server between library users and library subscribed licensed databases.
- ◉ Library Remote Users connect to EZproxy, then Ezproxy connects on their behalf to subscribed licensed databases to obtain web pages and send them back to end users.
- ◉ EZproxy runs on a machine or server on network, so database vendor sees the requests as originating from an authentic IP address of library/institution network, thus database/ publisher website permits access.
- ◉ Example- ezproxy.yourlib.org is EZproxy server and that subscribes to somedb.com. For making this database available, it requires to edit **config.txt** and adding these lines: (config.txt/ezproxy.cfg)
 - Title Some Database
 - URL <http://somedb.com/search/>
 - Domain somedb.com

URL REWRITING PROXY

- URL rewriting proxy servers don't require any specific browser configuration. These proxy servers or Ezproxy change's the URLs of the web pages so that requests for web pages from subscribed licensed e-resources are routed back to the proxy server, providing authentic users with remote access to e-resources of the library.
- It operates as an liaison or intermediary server connecting users and subscribed licensed e-resources. Users connect to the proxy, then the proxy connects on their behalf to subscribed publisher e-resources to obtain specific web pages and sends the web pages back to the end-users.
- While the proxy server runs on a machine on the institution library's network, the publisher or vendor perceives the requests as coming from an IP address at the institution library.
- EZproxy from OCLC Incorporation and Ill-WAM proxy from Innovative Interfaces Incorporation are two of the most popular rewriting proxy products available in the market.

EZ-PROXY @JNU

जवाहरलाल नेहरू विश्वविद्यालय

JAWAHARLAL NEHRU UNIVERSITY



Central Library
Gateway of JNU E-Resources

Cyber ID:

Password:

Login

Powered by Central Library & Communication and Information Services, JNU



JNU

Central Library
Jawaharlal Nehru University

Remote access
e-Resources
Gateway

E-Journals
Database
E-Books

Gateway to JNU E-Resources

Logout

Online Databases/E-Journal Gateway/E-Books/Portals

Single Window Search



Single Window Search
Resources available at Central Library

Search

☒ Keyword ☐ Title ☐ Author

Limit Your Results

☐ Full Text
☐ Catalog Only

☐ Peer Reviewed
☐ Available in Library Collection



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User Management

Resource Management

Usage Statistics

Change Password

Select user type: --SELECT-- ▼

[UnsentMails](#)

New User Registration

Unique Id*



☐ Admin?

Gender*



First Name*



Login(Email)*



Last Name*



Password*



Department*



Confirm
Password*



Designation*



Phone No



Mobile No.



User Type*



DOB *
(dd/mm/yyyy)



Security Question



Your Answer*



Subscription
Period*

From

To:

Save

Clear

RESOURCE MANAGEMENT

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User Management

Resource Management

Usage Statistics

Change Password

Resource Assignments

Resource Type

Database

Title*

URL*

Domain

Resource details

Help description

Save

Clear

Or

Choose File

No file chosen

Upload

Help

Search By

Id

➔

Show All

Total Pages = 6

Total Records= 54(1 Page = 10 records)

	<u>Id</u>	<u>Title</u>	<u>URL</u>	<u>Domain</u>	<u>Type</u>
	✗ 136	ACM Digital Library	http://portal.acm.org/dl.cfm	acm.org	Database
	✗ 137	American Institute of Physics	http://journals.aip.org/	aip.org	Database
	✗ 138	American Physical Society	http://publish.aps.org/browse.html	aps.org	Database
	✗ 139	Institute of Physics	http://iopscience.iop.org/journals	iop.org	Database
	✗ 140	CREDO-reference	http://www.credoreference.com/home.do	credoreference.com	E-Books
	✗ 141	EBSCO -Academic Search Complete	http://search.ebscohost.com/	ebscohost.com	Database
	✗ 142	EBSCO-Business Source Complete	http://search.ebscohost.com/	ebscohost.com	Database
	✗ 143	Education Resource Inf. Center (ERIC) (complimentary access from EBSCO)	http://search.ebscohost.com/	ebscohost.com	Database
	✗ 144	IEL Online	http://ieeexplore.ieee.org/Xplore/dynhome.jsp	ieee.org	Database
	✗ 145	Emerald-150 Database	http://www.emeraldinsight.com/	emeraldinsight.com	Database

1 2 3 4 5 6

USAGE STATISTICS

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User Management

Resource Management

Usage Statistics

Change Password

Usage report: User Count ▼

From 01/01/2014

To 01/01/2015

Get

SINo	Name	Registration No	No of Logins
1	PragyaShankar	084917979	23
2	ManishaKulshrestha	093575893	5
3	KarunakarSingh	093576064	25
4	MridusmitaBaruah	093754203	5
5	RekhaMaitra	093754568	18
6	RashmiGautam	0973273362	13
7	NidhiTewathia	097327703	5
8	DemoDemo	100002	2

OPEN ATHENS

- Open Athens stems from 1995 at the University of Bath, UK. The first manifestation of product was developed for the requirement of controlled access to online resources, funded for UK Higher Education by Jisc.
- In 1999 Eduserv turned into an autonomous non profit driven association.
- In 2000 the UK NHS invested in the product. In 2006 Open Athens reached two million end-users.
- In 2019, our parent company Eduserv merged with Jisc and has more than 4 million end users.
- Over 2,600 organizations are using Open Athens software, equating to a worldwide network of millions of end-users.

Source: <https://openathens.org/about-us/>

OPEN ATHENS PRODUCTS

OpenAthens MD (Managed Directory)	Hosted service for the creation and management of user identities and privileges for single-sign-on access to e-resources.
OpenAthens LA (Local Authentication)	A standards-compliant software platform that empowers secure access to either internal and/or external electronic resources and provides to host own SAML Identity Provider (IdP)
OpenAthens SP (Service Provider)	Present world standards-compliant benchmark software platform that facilitates to provide and manage secure access to your online e-resources.
OpenAthens Federation	A framework or system that supports the swapping of information between identity providers and service providers using SAML (can also be used by Shibboleth identity providers and other service providers).
OpenAthens Wayfinder	A free to use service for organisation discovery over multiple federations. It is a universal discovery service, it is not limited to single federation.
OpenAthens Keystone	Middleware to effortlessly associate or connect OpenID Connect to SAML federations.
Third party applications	Connecting to additional applications like Moodle or ADFS

Source: <https://docs.openathens.net/display/public/home/OpenAthens+Documentation>

OPEN ATHENS



https://auth.athensams.net/?ath_returl=%2Fmy%2F&ath_dspid=ATHENS.MY



Home

Help

Login to MyAthens



Username:

Password:

Login »

[Alternative login](#) | [Login help](#) | [Forgotten password?](#)

Search for organisation

To find your OpenAthens administrator contact details enter your organisation name below.

Go »

Enter one or more keywords, e.g. Camford University or Camford Primary Care Trust.

About MyAthens



MyAthens enables you to see the set of resources you are entitled to access.

OpenAthens is an Access Management System developed by [Eduserv](#) that simplifies access to the electronic resources your organisation has subscribed to. Eduserv is a not-for-profit, professional IT services group.

EBSCO DISCOVERY SERVICE



Search:

All Resources



- ▶ [AIP](#)
- ▶ [American Physical Society](#)
- ▶ [American Society for Microbiology \(ASM\)](#)
- ▶ [Annual Reviews](#)
- ▶ [Cambridge Journals Online](#)
- ▶ [HeinOnline](#)
- ▶ [IEEE_XPLORE](#)
- ▶ [Indiastat.com](#)
- ▶ [MathSciNet](#)
- ▶ [Nature](#)
- ▶ [Project Euclid](#)
- ▶ [ProQuest](#)
- ▶ [SAGE Journals](#)
- ▶ [SIAM Journals Online](#)
- ▶ [SpringerLink](#)
- ▶ [Taylor & Francis Online](#)
- ▶ [Wiley Online Library](#)

Google Scholar



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3 ▼ searches



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New microsite connects science with policy for the public good

Discoverability success stories in next NISO webinar

INSTITUTIONS IN INDIA HAVING ATHENS

INDIA

Academic organisations

- Baba Farid University of Health Sciences
- Daffodil International University
- East West University
- EBSCO INDIA TEST ADMINISTRATOR
- GUJARAT TECHNOLOGICAL UNIVERSITY
- Indian Institute of Management - Indore
- Indian Institute of Management - Lucknow
- Indian Institute of Management Raipur
- Indian Institute of Management Udaipur
- INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, THIRUVAN
- Jamia Millia Islamia University
- Jawaharlal Nehru University

K J Somaiya Colleges

- K J Somaiya College Of Engineering
- K J Somaiya College Of Science And Commerce
- K J Somaiya Comprehensive College of Education, Training and Research
- K J Somaiya Institute of Management Studies and Research
- National Institute of Design
- Panjab University
- Punjab Technical University
- University of Kota
- University of Mumbai
- Vidya Prasarak Mandal
- Visva Bharati University

Commercial organisations

- National Institute of Advanced Studies

Health organisations

- National Institute of Mental Health and Neuro Sciences (NIMHANS)
- Sir Ganga Ram Hospital

Non-commercial organisations

- TERI

Partners

- CNA Central News Agency
- EBSCO India

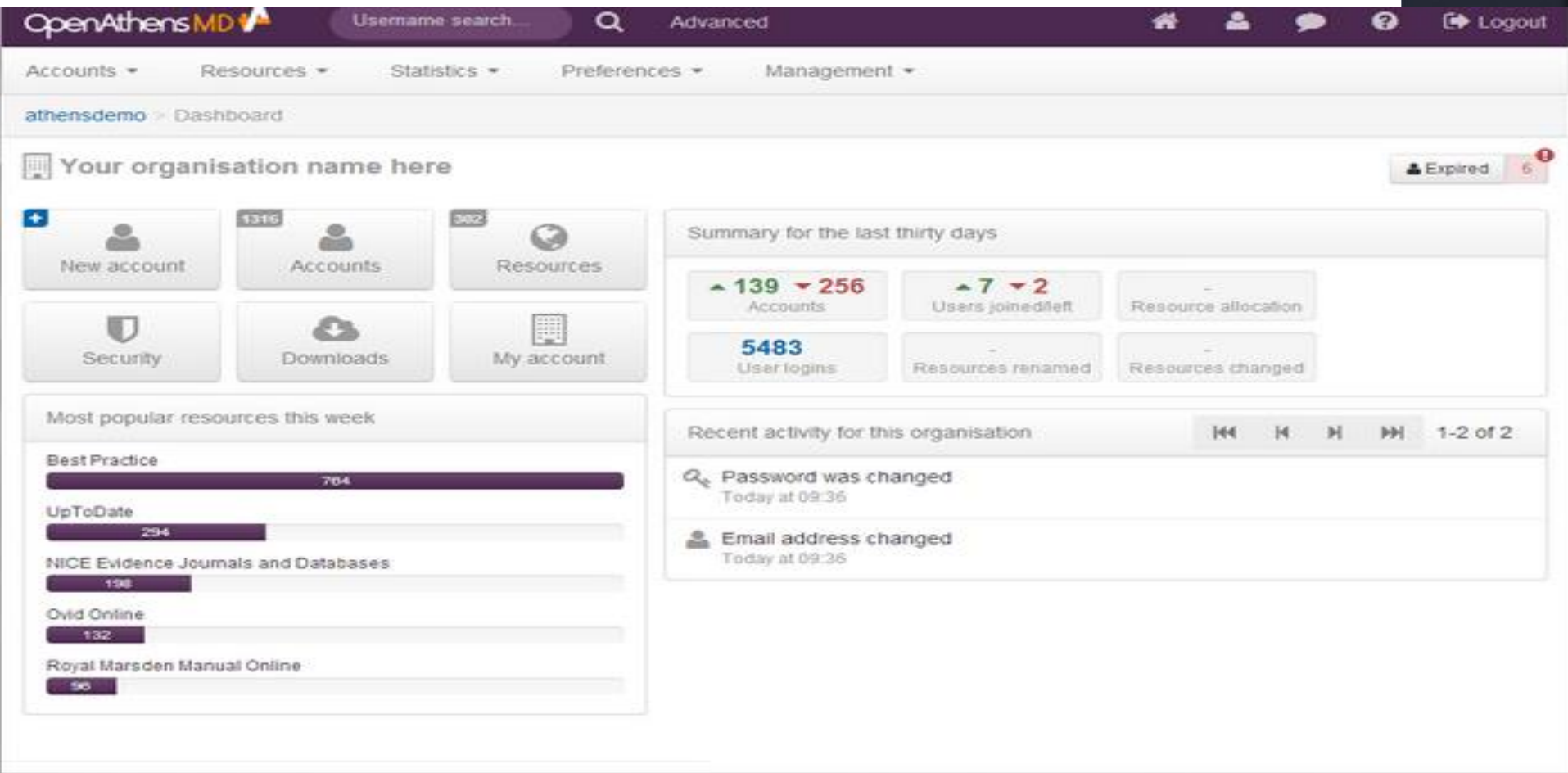
Public sector organisations

- Defence Scientific Information & Documentation Centre (DESIDOC)

Research councils

- Indian Institute of Science Education and Research
- Indian Institute of Spices Research
- National Institute of Food Technology and Entrepreneurship Management

ADMIN DASH BOARD @ ATHENS



NEW ACCOUNT WIZARD @ ATHENS

Create a new personal account under 'Your organisation name here'.

x

1 Login

2 Details

3 Optional details

4 Permission sets

Title

Mr

Department

Position

Researcher

Phone number

207 946 0347

Fax number

Staff/student number

42

Postal address

ZZ9 Plural Z Alpha

Free text attribute

* required fields



Cancel

← Previous

→ Next

USER MANAGEMENT @ ATHENS

Accounts ▾ Resources ▾ Statistics ▾ Preferences ▾ Management ▾

[athensdemo](#) > [Advanced search](#) > Search results

← Refine search

You searched for **all accounts** that are **activated** or **not activated** and belong to **me** where **Forenames** contains *John* and **Surname** contains *Smith*

Personal **25**

Access **0**

Self-registration **0**

Administrator **0**



Show 15 ▾ items



1-15 of 25

	Username	Forenames	▲ Surname	Email address	Status	Owner
<input type="checkbox"/>	athjohnsmith0014	John	Smith	athens.workshops...	active	athensdemo
<input type="checkbox"/>	athjohnsmith0015	John	Smith	athens.workshops...	active	athensdemo
<input type="checkbox"/>	athjohnsmith0019	John	Smith	athens.workshops...	not activated	athensdemo
<input type="checkbox"/>	athjohnsmith0020	John	Smith	athens.workshops...	active	athensdemo
<input type="checkbox"/>	athjohnsmith0021	John	Smith	athens.workshops...	expired	athensdemo
<input type="checkbox"/>	athjohnsmith0022	John	Smith	athens.workshops...	active	athensdemo
<input type="checkbox"/>	athjohnsmith0023	John	Smith	athens.workshops...	active	athensdemo
<input type="checkbox"/>	athjsmithjones0001	John	Smith-Jones	athens.workshops...	expired	athensdemo
<input type="checkbox"/>	athjsmithjones0007	John	Smith-Jones	athens.workshops...	not activated	athensdemo
<input type="checkbox"/>	athjsmithjones0008	John	Smith-Jones	athens.workshops...	active	athensdemo
<input type="checkbox"/>	athjsmithjones0009	John	Smith-Jones	athens.workshops...	active	athensdemo
<input type="checkbox"/>	athjsmithjones0010	John	Smith-Jones	athens.workshops...	not activated	athensdemo
<input type="checkbox"/>	athjsmithjones0011	John	Smith-Jones	athens.workshops...	active	athensdemo

RESOURCE STATISTICS @ ATHENS

OpenAthens MD

Username search...



Advanced



Logout

Accounts ▾

Resources ▾

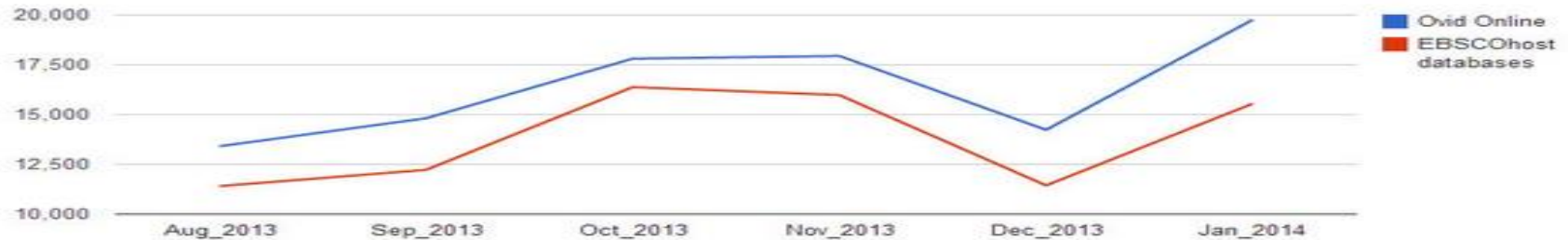
Statistics ▾

Preferences ▾

Management ▾

[athensdemo](#) > Summary of Athens statistics for athensdemo








The table below displays the monthly summary of all the resources that have been accessed by users at your organisation (including all the users under sub-administrators). A dynamic usage graph for the past six months will appear when you click on resource names.



View monthly report: Aug 13 ▾

Resource title	Total accesses ▾	Aug_2013	Sep_2013	Oct_2013	Nov_2013	Dec_2013
Total	1197850	164360	177388	219500	219002	177388
Best Practice	298411	48835	50095	57272	51289	39000
BMJ Learning	110998	13367	15985	20882	21182	19580
EBSCO A to Z service	102612	14091	16167	20235	20559	19580
Informa Healthcare	97979	13410	14815	17810	17947	18900
New England Journal of Medicine	82992	11409	12225	16381	15982	15982








RESOURCE MANAGEMENT CENTRE
















OpenAthens MD  Username search...  Advanced      Logout

Accounts ▾ Resources ▾ Statistics ▾ Preferences ▾ Management ▾

athensdemo > Resource catalogue

All Allocated **122** Custom **3**

 Actions ▾ Search...       351-400 of 2,882

 BNF for Children BNF for Children (BNFC) presents essential practical information to help... Allocated...	 ChildData ChildData is a resource for researches, childcare professionals and... Allocated...	 Children's Literature Comprehensive Data Allocate...
 Childlink Information Service Childlink Information Service Allocate...	 Childlink Information Service Allocate...	 Canadian Medical Directory MDSelect's latest product, the online version of the Canadian Medical Directory. Allocate...
 Canadian Pharmacists Association The Canadian Pharmacists Association... Allocate...	 Datamonitor - Shibboleth Allocate...	 Digimap Collections Online maps and spatial data of Great Britain Allocate...
 EBSCOhost databases EBSCO offers the largest scholarly full text collections in the world covering virtually... Allocated...	 EBSCOhost EJS A single gateway to over 10,700 journals. With over 335,000 issues, 5.3m articles... Allocated...	 EBSCO A to Z service EBSCO's A-to-Z is a comprehensive listing and linking tool for all the titles in an... Allocated...
 FACTfinder.ie Indexed archive of Irish business news articles, company information, trade...	 Facts.com Provides access to electronic versions of World News, Digest, Issues and...	 FAME A financial database of major public and private British companies.

WHAT IS VIRTUAL PRIVATE NETWORK?

- ◉ A private network that uses a public network or internet using tunneling protocol to connect remote sites or users together.
- ◉ Rather than utilizing a devoted, dedicated, real-world connection such as leased line, a VPN uses "virtual" connections directed through the Internet from the private network to the remote site or users or clients.

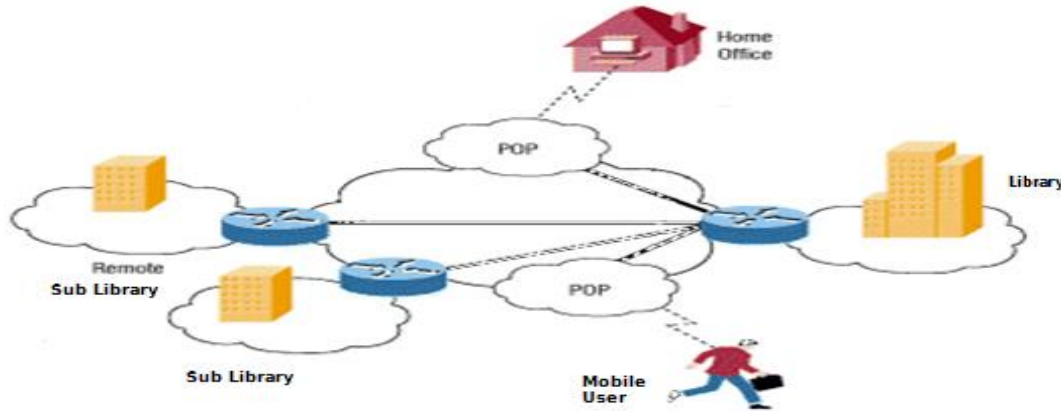


Image source: <https://www.cisco.com/c/dam/en/us/support/docs/security-vpn/ipsec-negotiation-ike-protocols/14106-how-vpn-works-01.gif>

Source: <https://computer.howstuffworks.com/vpn.htm>

WHAT MAKES A VPN?

- A well-designed VPN can greatly benefit a organization and library.
 - Broaden geographic connectivity
 - Improve security
 - Shrink operational costs versus conventional WAN
 - Reduce transit time and transportation costs for remote clients
 - Telecommuter assistance
- Accommodate more users and different locations much easier than a leased line.

TUNNELLING

- ⦿ Tunneling is a protocol that allows to place an entire packet within another packet securely from one network to another network.
- ⦿ The protocol of the outer packet is understood by the network and allows the private network communication sent across the public network such as internet through encapsulation process.
- ⦿ VPN software uses an IP-in-IP tunnel.
- ⦿ Encrypting the entire datagram and place the result inside another datagram.

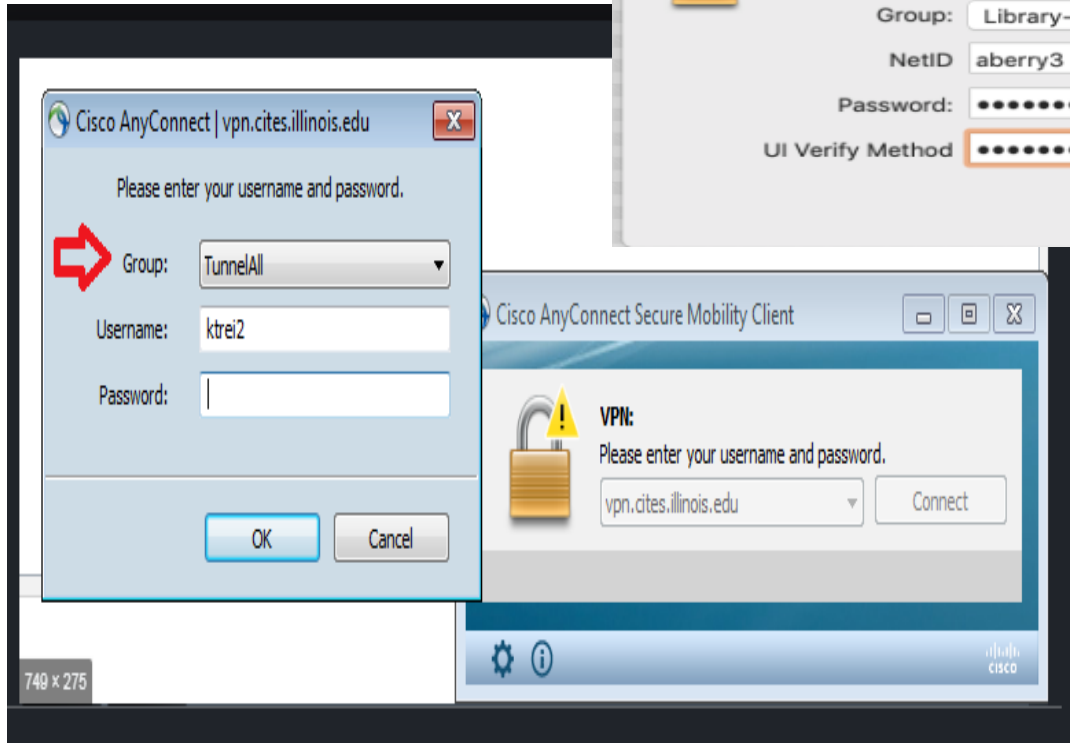
THE KEY FUNCTIONS WHICH MAKE VPN TECHNOLOGIES SECURE :

- **Authentication** - Use of trusted source for the communication
- **Access Control** - Controlling the network access to unauthorized users and clients
- **Confidentiality** - Data protection through controlling the access or copying of data as it travels across the public network
- **Data integrity** - Ensuring the protection over data tampering as it travels across the public network

COMPLICATIONS IN VPN

- ◉ **Additional software for secure connections.** Need to install new software to establish the connection.
- ◉ **Operating system restrictions.** The need for a specific OS depends on the client software.
- ◉ **Complex configuration.** The VPN needs to be configured and appoint an account for each user.

SCREENSHOT OF VPN



SHIBBOLETH

ORIGIN AND CONSORTIUM

- The Origin
 - Internet2 in the US launched the open source project
- The name
 - Word **Shibboleth** was used to identify members of a group
- The standard
 - Based on Security Assertion Markup Language (SAML)
- The Consortium
 - The new home for Shibboleth development collect financial contributions from deployers worldwide



Source: <http://shibboleth.net>

WHAT IS SHIBBOLETH?

- ◉ Technically it's a project group, like Apache or Eclipse, whose core team maintains a set of software components
- ◉ Most people think of it as the set of software components
 - OpenSAML C++ and Java libraries
 - Shibboleth Identity Provider (IdP)
 - Shibboleth Service Provider (SP)
 - Shibboleth Discovery Service (DS)
 - Shibboleth Metadata Aggregator (MA)
- ◉ Taken together these components make up a federated identity management (FIM) platform.
- ◉ Shibboleth is a multi-protocol platform that enforces a consistent set of policies.



THE COMPONENTS

anywhere



Discovery
Service

*@ home
organization*



Authentication
System



Identity
Provider



User
Information

*@service
organization*



Service
Provider

Source: <http://shibboleth.net>

SHIBBOLETH CONSORTIUM

- ◉ The Shibboleth Consortium is the “body which ensures the ongoing development, support and maintenance of the Shibboleth software. It is comprised of Members who contribute financially at varying levels depending on size and type of organisation. Jisc, as well as being a Member, are the Operator of the Consortium, responsible for its day-to-day management” (<https://www.shibboleth.net/consortium/>).
- ◉ Shibboleth Internet2 “middleware initiative created an architecture and open-source implementation for identity management and federated identity-based authentication and authorization (or access control) infrastructure based on Security Assertion Markup Language (SAML)”.

Source: [https://en.wikipedia.org/wiki/Shibboleth_\(Shibboleth_Consortium\)](https://en.wikipedia.org/wiki/Shibboleth_(Shibboleth_Consortium))

SAML

- ◉ SAML, or Security Assertion Markup Language, is an XML-based framework for communicating user authentication, entitlement, and attribute information.
- ◉ SAML defines three roles:
 - ◉ the principal (typically a user),
 - ◉ the identity provider (IDP),
 - ◉ and the service provider (SP).
- ◉ SAML does not specify the method of authentication at the IDP; it may require username and password, or another form of authentication, including multi-factor authentication (MFA)

Source: <http://shibboleth.net>

SAML COMPONENTS

- ◉ Assertions - An assertion is a package of information that supplies one or more statements made by a SAML authority. It has three kinds of assertion statements that can be build by a SAML authority:
 - ◉ **Authentication assertions** are used to make people prove their identities. This kind of statement is typically generated by the SAML identity provider (IDP).
 - ◉ **Attribute assertions** are used to supply specific information about the individual, for example email or mobile, phone number etc.
 - ◉ **Authorization decisions** determine whether the specified subject has been granted or denied permission to access the specified resource.

Contd..

SAML COMPONENTS

- ⦿ For single sign-on (SSO), a typical SAML assertion will contain a single authentication statement and possibly a single attribute statement. A SAML response could contain multiple assertions, although its more typical to have a single assertion within a response.
 - ⦿ Protocol - This defines the way that SAML asks for and gets assertions, for example, using SOAP over HTTP.
 - ⦿ Binding - This details exactly how SAML message exchanges are mapped into SOAP exchanges.
 - ⦿ Profile - A SAML profile describes in detail how SAML assertions, protocols, and bindings combine to support a defined use case. The most important SAML profile is the Web Browser SSO Profile.

USES OF SAML

- ⦿ User passwords never cross the firewall.
- ⦿ Web applications with no passwords are virtually impossible to hack
- ⦿ SAML SSO provides access to Web apps for users outside of the firewall as “SP-initiated”
- ⦿ Centralized federation provides a single point of Web application access, control and auditing, which has security, risk and compliance benefits.
- ⦿ Provide an enterprise-wide, architecturally sound Internet SSO solution.

SHIBBOLETH HISTORY

- ◉ The Shibboleth project grew out of Internet2. Today, the project is managed by the Shibboleth Consortium. Two of the most popular software components managed by the Shibboleth Consortium are the Shibboleth Identity Provider and the Shibboleth Service Provider, both of which are implementations of SAML.
- ◉ The Shibboleth project was started in 2000 to facilitate the sharing of resources between organizations with incompatible authentication and authorization infrastructures. After development and testing, Shibboleth IdP 1.0 was released in July 2003. This was followed by the release of Shibboleth IdP 1.3 in August 2005
- ◉ Version 2.0 of the Shibboleth software was a major upgrade released in March 2008. It included both IdP and SP components, but, more importantly, Shibboleth 2.0 supported SAML 2.0. The Shibboleth 2.x software has reached its End of Life and is no longer supported.
- ◉ Version 3.0 of the Shibboleth software is a upgrade released in 2015. This version has easier UI and login customization, error handling, simpler clustering, attribute release consent, easier handling of vendor quirks, much improved update process, CAS protocol support.

SHIBBOLETH IDENTITY PROVIDER

- ◉ The **Identity Provider** provides Web Single Sign-On capabilities, authenticating users and supplying data to services, extending their reach beyond a single organization. It also :
 - ◉ Accept a SAML authentication request from the Service Provider a user wants to access;
 - ◉ Authenticate the user against your organization's existing authentication store(s);
 - ◉ Collect user data from your organization's existing data store(s);
 - ◉ Apply policy to control what data is released to which Service Provider;
 - ◉ Securely transmit the collected information to the Service Provider.

Source: <https://www.shibboleth.net/products/identity-provider/>

SHIBBOLETH IDENTITY PROVIDER KEY FEATURES

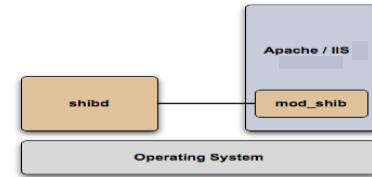
- ◉ Out-of-the-box support for LDAP, Kerberos, JAAS, X.509, SPNEGO, Duo Security, and container-based authentication systems.
- ◉ Out-of-the-box support for reading user data from arbitrarily-structured LDAP directories and relational databases and performing simple or complex transformations on the acquired data.
- ◉ Fine-grained control over the data to release to a relying party system.
- ◉ Excellent scaling, both in performance and manageability - a single instance can handle millions of authentication requests per day and can communicate with thousands of service providers.
- ◉ Out-of-the-box high availability via client-side state management, plus additional options for database or memcache state.
- ◉ Works with any compliant SAML 1.1 and 2.0 Service Provider implementation.
- ◉ Supports the CAS 2 SSO protocol and some additional extensions.
- ◉ Extensive and carefully-managed APIs to allow the software to be extended to support custom scenarios.

Source: <https://www.shibboleth.net/products/identity-provider/>

SHIBBOLETH COMPONENTS:

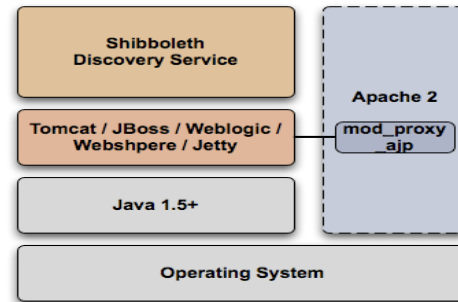
SERVICE PROVIDER

- What is it?
 - mod_shib: A C++ web server (Apache/IIS) module
 - shibd: A C++ daemon - keeps state when web server processes die
- What does it do?
 - Optionally initiates the request for authentication and attributes
 - Processes incoming authentication and attribute information
 - Optionally evaluates content access control rules



SHIBBOLETH COMPONENTS: DISCOVERY SERVICE

- What is it?
 - A Java Servlet (2.4) web application
- What does it do?
 - Asks the user to select their home organization from a list



SCREENSHOT OF SHIBBOLETH

Log in

Log in via your institution

> Shibboleth

> OpenAthens

Log in to Taylor & Francis Online

 Your email address

 Password

[Forgot password?](#)

☐ Remember Me

Log in

> [List of OpenAthens registered sites](#), including contact details.

> **Login via Your Institution**

> [Login via your institution](#) : You may be able to gain access using your login credentials for your institution. Contact your library if you do not have a username and password.

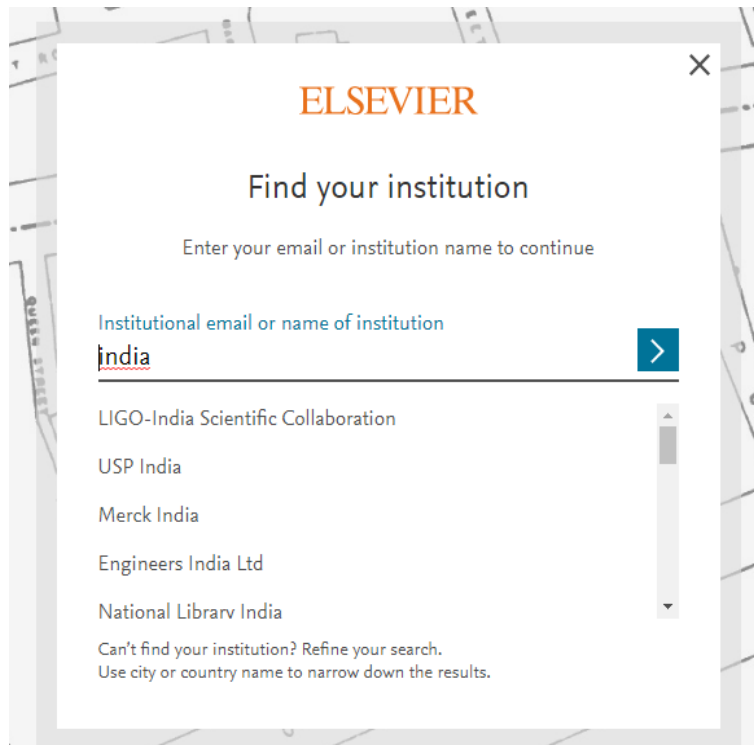
2. You may then need to select "UK Access Management Federation" or "UK Federation" from the drop down menu. Depending on the eResource you are trying to access, this step may not be necessary.

which institution or federations currently supports the resource you are trying to access. If your institution is not currently participating in this Shibboleth initiative, please contact your library for more information.

Location  Select your institution location...

Australia (AAF)
Canada (CANARIE)
Chile (COFRE)
France (RENATER)
Germany (DFN-AAI)
Ireland (EduGate)
Italy (IDEM)
Japan (GakuNin)
Spain RedIRIS - SIR
Switzerland (SWITCH AAI)
UK Access Management Federation
United States (InCommon)

SCREENSHOT OF LOGIN PAGE



ELSEVIER

Find your institution

Enter your email or institution name to continue

Institutional email or name of institution

India

LIGO-India Scientific Collaboration

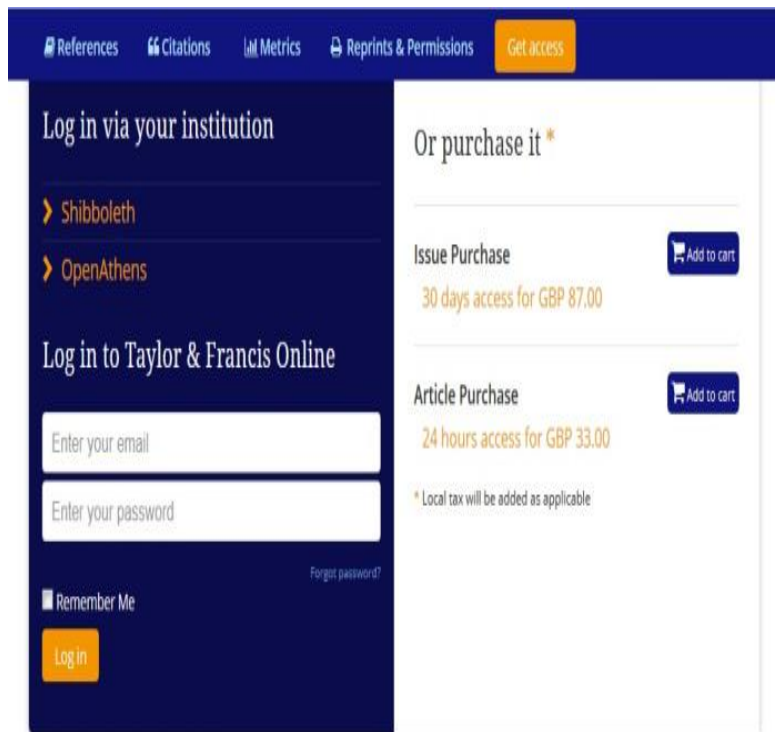
USP India

Merck India

Engineers India Ltd

National Library India

Can't find your institution? Refine your search.
Use city or country name to narrow down the results.



References Citations Metrics Reprints & Permissions Get access

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Shibboleth

OpenAthens

Log in to Taylor & Francis Online

Enter your email

Enter your password

Remember Me

Log in

Or purchase it *

Issue Purchase

30 days access for GBP 87.00

Add to cart

Article Purchase

24 hours access for GBP 33.00

Add to cart

* Local tax will be added as applicable

INFED THROUGH INFLIBNET

- INFLIBNET Access Management Federation (INFED) has adopted Shibboleth, a standard-based open source software, for authenticating authorized users from institutions and provide them seamless access to e-resources from anywhere, anytime.
- The goal of the INFED is to allow users to access internal and external resources seamlessly using a single, institutionally controlled identity. This would not only allow authorized users to access e-resources from anywhere, anytime but would also circumvent the requirement of maintaining multiple passwords for multiple resources in multiple domains.
- INFLIBNET is supporting to install:
 - IdP Installation -
 - SP Installation- Service Providers (publishers)
 - Hosting Services - server space and installation and configuration to the institution and libraries (Available at <http://parichay.inflibnet.ac.in/>)

DIFFERENCE BETWEEN SHIBBOLETH AND OPEN ATHENS

- Shibboleth is an extension of SAML which provides a single sign-on infrastructure and reference implementation. It is not a product and therefore no support service is available with the code.
- OpenAthens provides a suite of supported software and services which allow publishers and institutions to connect to each other via SAML/Shibboleth.

RemoteXs

- ◉ RemoteXs has an ability to provide secured access to scattered eResources of the institution, bringing them under one umbrella, along with subscribed eJournals, eBooks and all other eContent, that too anytime ...from anywhere.
- ◉ It is a cloud-based service model which enables progressive libraries in creating their own Digital Library Portal with facilities to reach their target audiences in efficient manner
- ◉ RemoteXs harnesses simplicity, strength and security of Drupal CMS with enhanced automated monitoring of the users.
- ◉ The software is Trusted by 600+ Institutions across 3 continents to provide single window access to their digital resources.
- ◉ Remote Xs allows Hosting services, Data Backup services , Mail server hosting services and Resource portal theme design

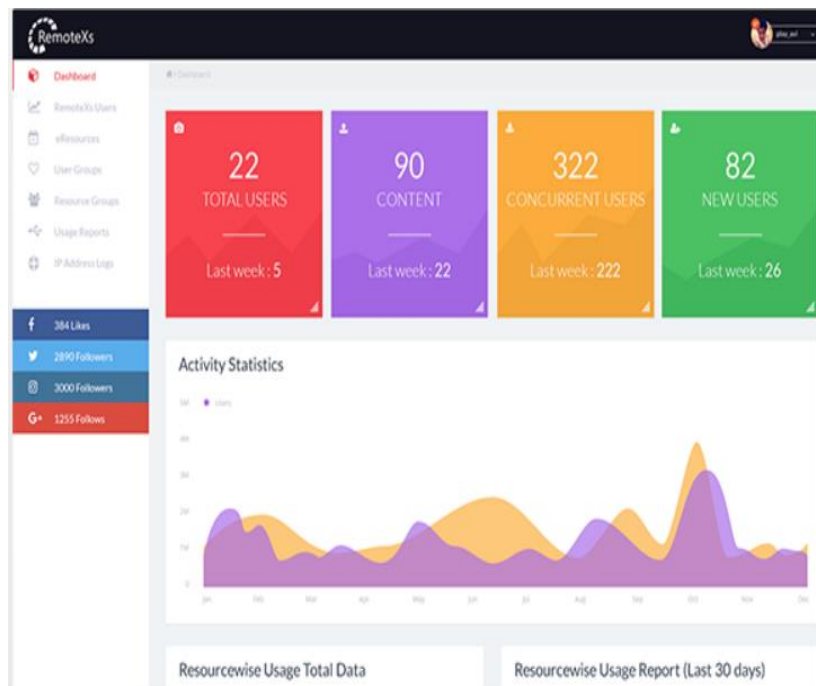
Source:<https://www.remotexs.co/>

FEATURES OF RemoteXs

- ◉ Management dashboard- Provides a scapshot of activities on a single screen
- ◉ Secure and Dependable - embrace and drive change in industry and allows to keep our clients relevant.
- ◉ Reporting module for decision making -MIS Reports generated by RemoteXs can very well help in optimizing budget allocations towards eResources and eSubscriptions
- ◉ Integrated eMail services -Allows administrator to easily send system generated email messages
- ◉ Flexible -User category-based resource grouping and access to resources
- ◉ Responsive multimedia capability to provide SDI services - Libraries and Publishers can classify content to increase resource usage by displaying videos, presentations, images, articles, documents relevant for special user categories

Source:<https://www.remotexs.co/>

SCREENSHOT OF RemoteXs



RULES FOR REMOTE ACCESS

- ⦿ Remote access is strictly personal and should only be used for personal study or research purposes.
- ⦿ The commercial use of data, the systematic download of large amounts of data (including entire books or journals) as well as the systematic storage of data are strictly forbidden.
- ⦿ Pass of user ID and password (pin code) to others is strictly forbidden and to use remote access in connection with another workplace.
- ⦿ If the library or the data supplier discovers any misuse, remote access account of user will be closed.
- ⦿ All traffic relating to remote access is logged by both the data supplier and by the library.

MANDATORY ACCEPTANCE OF TERMS FOR USE OF REMOTE ACCESS

- ◉ In compliance with the permissible limits of the Copyright Ordinance, users may display, download or print limited copies of citations, abstracts, full-text or portions from e-Books and e-Databases solely for the purposes of research or private study.
- ◉ Under no circumstances should the e-Books and e-Databases or any of the content therein be redistributed to another person or be used, duplicated or altered for commercial purpose.
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- ◉ According to the license agreement, users may not download, copy, burn, capture, transmit, rent, sell, re-stream or modify any materials from the e-Books and e-Databases, or create derivative works based on materials from the e-Books and e-Databases.
- ◉ Users are reminded that they will be held fully responsible for any legal consequences arising from copyright infringement.

SUGGESTIONS

- ◉ Provide 24X7 or atleast 12X7 support service to your users by way of implementing Open a Ticket or Live Chat
- ◉ If your organisation or library does not have remote technology implemented at present then publishers are support in with Organization Access Numbers and Referring URL
- ◉ You can create a subject- or research-group-specific page, providing direct access to enriched links and other helpful content.
- ◉ Help/ Assist the users with tracking the illegal use of robots or intelligent agents to do systematic, bulk or automatic downloading.

CONCLUSION

- ◉ Technology to access materials remotely has gone from document delivery via snail mail to documents received electronically.
- ◉ No longer do users have to come into the library to find articles in scholarly journals, magazines, and newspapers.
- ◉ Books are not always available electronically, but users can search the library's online catalog to find print and e-books without going to the library.
- ◉ The technologies authenticate users through a password. Once they are authenticated they can access the library collections for their research