

## Remote access (Off-Campus access) to e-resources via EZproxy and RemoteXs facilities: A case study of Allama Iqbal Library system, University of Kashmir

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### Abstract

This paper is an attempt to study the comparison between of Remote access facilities provided by Allama Iqbal Library using different softwares viz., EZproxy and RemoteXs and its impact on the user community at the University. The findings is based on the usage statistics of different category of users like faculty members, research scholars, students and staff members which had been registered at Allama Iqbal Library System for online and remote access to e-resources via EZproxy and RemoteXs softwares.

The Library has been providing single window access to its digital content/e-resources through EZproxy software to its huge collection of online resources from 2010 and upto January, 2019. Since February, 2019, Library has shifted to the new and latest state-of-the-art RemoteXs software which acts as a gateway to accessing digital resources of Library from anywhere and anytime. The cost-effective cloud-based service model of RemoteXs has enabled our Allama Iqbal Library system in creating our own digital library portal with facilities to reach the target users in efficient manner. RemoteXs has also eased us from investing and marinating huge hardware infrastructure of e-mail servers, central servers, bandwidth costs, IP address registration etc. This indeed has helped the University to focus on core-academic research activities and use saved funds aptly.

The findings show that users from all these categories were using e-resources; the awareness about e-resources encourages users to use such resources to the maximum; and the users are using personal computers, laptops, tablet computers, mobile devices more for accessing the information. The impact of e-resources was visible from the decrease in number of printed journals in comparison to the increase in number of electronic journals and online databases. The use of e-journals/e-databases has increased manifold. The printed material is being quickly replaced by the electronic resources due to its ease of access and availability.

**Keywords:** Electronic resources, Digital resources, RemoteXs, EZproxy, Off-campus access.

### Introduction

The University of Jammu and Kashmir was founded in the year 1948. In 1969, it was divided into two full- fledged Universities namely University of Kashmir at Srinagar and University of Jammu at Jammu.

In 1969, when the two universities formed namely University of Kashmir and University of Jammu, the collection of library was also shared between them. In 1975, the Central Library of the University of Kashmir was shifted to its present multistoried building and in 1984, it was renamed as IQBAL LIBRARY and as ALLAMA IQBAL LIBRARY in July 2002. The library is presently the centre of University library system having more than 60 seminar libraries attached with different departments, centres, institutes and various campuses of the University of Kashmir.

Allama Iqbal Library system, the central and main Library system of University of Kashmir acts as a hub to disseminate information across all its users which are enrolled in different departments, centres, institutes and various campuses of the University of Kashmir. The advent of Internet facility and emergence of e-resources /digital formats has made it possible to connect the library to its users from all over the world in a fast and easiest manner with seamless and un-interrupted access from anywhere, anytime and 24x7.

An electronic resource or e-resource “is any cohesive publication in digital form that is being marketed” or “any electronic product that delivers a collections of data, be it

text, numerical, graphical or time based, as a commercially available resource” and includes “full text databases, electronic journals, image collections, multimedia products, collections of numerical data” (Lee & Boyle, 2004, p. 5.).

The International Coalition of Library Consortia (ICOLC, 1998) (<http://www.icolc.net>) defines e-information (or electronic information) as “a broad term that encompasses abstracting and indexing services, electronic journals and other full text materials, the offerings of information aggregators, article delivery services, etc.” which can be accessed via remote networks from information providers, or locally mounted by a consortium or one of its member libraries. The electronic information resources, commonly known as e-resources are becoming an important component of modern libraries.

### Shift towards E-resources

The present day users are keenly interested to use the electronic resources as compared to its counterpart print resources which save time of the user, easy to use and availability/accessibility of large range of information from 24x7, anywhere and anytime. The overall subscription status of different e-resources subscribed through Centrally-Financed & Centrally-Controlled e-ShodhSindhu Consortium & by Allama Iqbal Library (Self-Subscriptions) available to University of Kashmir for the Year 2019 is shown as below:-

**Table 1:** Subscription status of e-resources available to University of Kashmir

S. No.	Resource Name/Publisher	No. of Tiles	Resource Type
1.	American Chemical Society - eSS Collection	(49 titles)	Full-text
2.	Economic & Political Weekly - eSS Collection	(01 title)	Full-text
3.	Elsevier ScienceDirect-2 Subject Collection *	(372 titles)	Full-text
4.	Emerald Publishing *	(138 titles)	Full-text
5.	IndiaStat *		database
6.	Institute for Studies in Industrial Development (ISID) - eSS Collection		database
7.	JGate Plus (JCCC)- eSS Collection		database
8.	JSTOR - eSS Collection	(3165 titles)	Full-text database
9.	Manupatra *		database
10.	MathSciNet *		database
11.	Oxford University Press *	(262 titles)	Full-text
12.	SAGE Publishing *	(17 titles)	Full-text
13.	Springer Link + Nature Journal -- eSS Collection	(1729 titles)	Full-text
14.	Taylor and Francis - eSS Collection	(1076 titles)	Full-text
15.	Web of Science - eSS Collection		database
<b>NDL e-Resources:</b>			
1.	World e-Book Library		e-books
2.	South Asia Archive (SAA)		digitized collection
3.	National Digital Library of India (NDL-India)		Repository

Legend: \* Library Self-Subscriptions: (784 titles)

eSS Consortium e-resources: (6020 titles)

Usage of e-resources by faculty members, researchers and students is shown below<sup>1</sup>:

**Table 2:** Use of E-resources by Faculty members, Researchers/ Students

S. No.	Name of E-resources available	Used by Faculty (in% age)	Used by students/researchers (in%age)
1	E- journals	70	80
2	E-data archives	60	55
3	E-manuscripts	70	85
4	E-maps	50	70
5	E-books	50	70
6	E-magazines	50	70
7	E-theses and dissertations	80	90
8	E- Newspapers	60	65
9	E-mail	75	80
10	E-research reports	70	60
11	E-bibliographic database	70	80
12	Internet Browsing	70	90
13	OPAC	75	95
14	Online reference services	60	70
15	Video library services	65	85
16	Institutional repository	80	90
17	Literature search services	70	70
18	Resource sharing through networks	65	75
19	Braille Softwares	90 (Specifically used)	90 (Specifically used)
20	Use of Computer LAN softwares	60	80
21	Wi-Fi services	60	80

#### USER REGISTRATION in EZproxy and RemoteXs Softwares at Allama Iqbal Library:

The number of users registered for remote access facility using EZproxy software as on January, 2018 were 495 while as from February, 2019 the numbers of Users registered for RemoteXs software has grown upto 861 including the 495 users migrated from erstwhile EZproxy software. This indicates that 366 new user registrations have been made only during the last four (04) months shown below:

**Table 3:** User registrations in EZproxy software and RemoteXs software

Name of Software	Number of Registered Users	Year
EZproxy Software	495	2018
RemoteXs Software	861 (including 495 migrated from EZproxy)	2019 (till May, 2019)

Usage of E-Resources (in terms of number of hits/downloads) from 2014-2018 as per the report generated from EcAccess Software that serves as an administrator dashboard for the EZproxy Software.

**Table 4:** Use of E-resources via EZproxy software by faculty members, researchers/ students

Remote Access Software Used	2014	2015	2016	2017	As on July 2018
Usage of E-Resources through EZproxy Software (Remote Access)	28961	29883	16968	22923	4569

User category wise off-Campus usage – (100 days report till 2019-05-19) using newly inducted RemoteXs software as shown below:

**Table 5:** User Category-wise off-campus Usage (RemoteXs Software)

Category	Location	Users	Logins	Total Downloads	Download Data (MBs)	Browsing Data (MBs)	Total Data (MBs)
Faculty	Off Campus	5	66	471	620.25	586.50	1206.75
Research Scholar	Off Campus	110	530	467	1797.89	2369.69	4167.58
Student	Off Campus	67	190	76	84.38	681.29	765.67
Officer/ Official	Off Campus	6	40	47	22.17	173.50	195.67
Staff	Off Campus	2	161	30	25.51	515.43	540.94
Assistant Librarian	Off Campus	2	15	11	20.73	117.86	138.59
Others	Off Campus	1	3	3	1.47	6.51	7.98
Affiliated Colleges	Off Campus	6	10	1	0.22	20.09	20.31
Faculty/Academics	Off Campus	1	1	0	0.00	4.77	4.77

Overview Report - 100 day report till 2019-05-19

Go Back

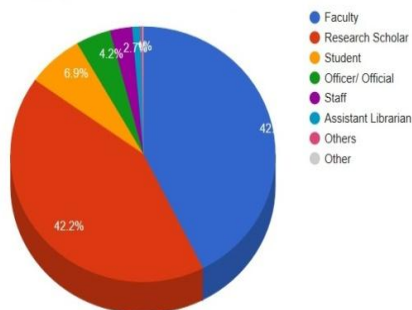
Parameters

CSV HTML XLS

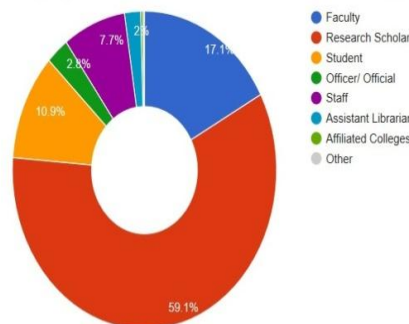
Print Report

Daywise Usage User Categorywise Usage Resourcewise Usage Userwise Usage

Categorywise Total PDF Downloads



Categorywise Total Data: Downloads+Browsing (in MB)



**Fig. 1:** User Category-wise off-campus Usage (RemoteXs Software)

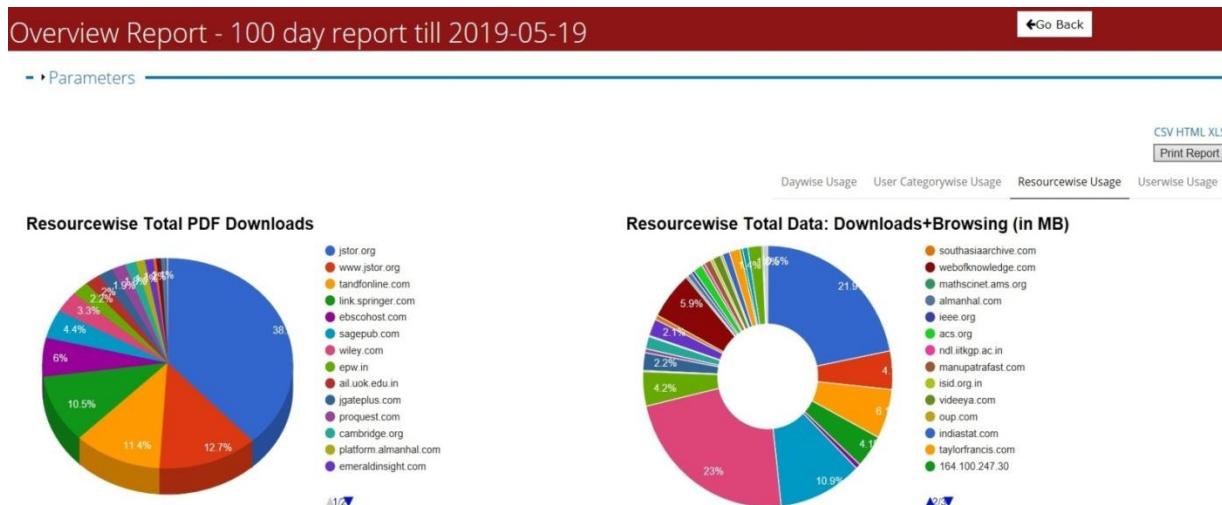


Fig. 2: Resource- wise off-campus Usage (RemoteXs Software)

**Comparison of different features of RemoteXs and EZproxy softwares:**

(Following comparison is based on product information available online or provided by librarians who have used the services of respective solution provider.):

**Table 6:** Comparison of different features of RemoteXs and EZproxy softwares (The comparison is bases on customer queries)

S. No.	Features	RemoteXs Hosted Service (RXs)	EZproxy Onsite version (EZ) Availability YES -Y / No - N
<b>I</b>	<b>Admin Portal</b>	<b>Brief Description</b>	<b>RXs</b>
1	Admin Dashboard	Simple view of System & User statistics	Y
2	Console based User Management	User friendly admin portal for easy user management	Y
3	Resource Management*	User friendly interface to manage white list of resources.	Y
4	Email* notifications	Standard Email templates for users & publishers	Y
5	Reports*	Comprehensive reports module.	Y
6	Bandwidth Monitoring	User category wise per day download limit & alerts	Y
7	SDI	Email based currently	Y
8	Alerts	Alerts via Email & Portal	Y
<b>II</b>	<b>Captive Web portal*</b>	<b>CMS based device responsive portal to maintain resources</b>	<b>Y</b>
<b>III</b>	<b>Resource Accessibility &amp; Search</b>		
1	Single sign-on	Seamless access to subscribed resources once user logs in with registered email.	Y
2	Support for Libraries digital content*	Support for linking videos, image galleries, e-resources, e-books on a single platform	Y

3	Support for resource based training	Resource wise help can be provided on the portal for each resource	Y	Not available	N
4	User category based resource access & validity*	Validity and Access to individual resources can be configured as per user requirement	Y	Not available	N
<b>IV</b>	<b>User Management &amp; Authentication</b>				
1	Auto password generation & expiry*	To avoid misuse, system can auto generate & expire user password	Y	Not available	N
2	User Self registration	Users can self register with auto approval support	Y	Not available	N
3	Concurrent login	Options to allow/disallow concurrent session from same ID	Y	Not available	N
4	Bulk import	Staff can import users from csv in a single click	Y	Staff needs to submit a text file.	Y
5	User Category	Staff can create user categories easily	Y	Staff needs to submit a text file.	Y
6	Auto Email * Alerts	Email alerts as per user categorization for better reporting	Y	Not available	N
7	LDAP; OAUTH; SAML;SSO authentication	Support for multiple authentication services	Y	Available	Y
8	2 Factor * Authentication	Mobile, Sms, Email based OTP authentication; Google Authenticator	Y	Not available	N
<b>V</b>	<b>Data Analytics*</b>				
1	User category wise usage statistics	Admin can generate detailed reports based on user category/ group	Y	Not available	N
2	Resource wise usage statistics	Resource wise detailed usagereports available	Y	Yes	Y
3	Date/ Day wise usage statistics	Resource & user category wise reports available	Y	Not available	N
<b>VI</b>	<b>Database Backup facility</b>	<b>Provided by data centre. Auto back up on external site can be setup for clients requesting the same.</b>	<b>Y</b>	<b>Will depend upon institute data backup policies</b>	<b>Y</b>
<b>VII</b>	<b>System Availability &amp; user experience</b>				
1	Uptime*	99.9%	Y	Will vary with Institute	N
2	User Experience	Will not depend upon Institute internet	Y	Will depend upon institute internet bandwidth	Y
3	IT knowledge required to run the system	Library staff needs minimal IT skills to maintain the system	Y	Skilled IT system admin is required to monitor & run the system	Y
4	IT infrastructure requirement	Minimal. Actually since the service is offered on cloud hosting model, Library doesn't need any dedicated IT infrastructure	Y	Dedicated IT infrastructure needed	Y

## Conclusion

The Allama Iqbal Library System has made a big leap in terms of enriching its collection not only in print format but with latest digital formats like e-journals, e-books, e-theses and dissertations, e-databases e-papers, digitized manuscripts, digitized books etc.

Library has been conducting user awareness/user education programmes from time to time in which newly inducted users are made aware about the availability of different e-resources and the use of e-resources both within campus and off-campus and it has been found that most of the faculty members, research scholars and students are showing good interest in using the state-of-the art RemoteXs facility (RemoteXs portal) to an encouraging extent due to its ease of access and availability of e-resources 24x7, anywhere and anytime. RemoteXs has empowered our institution in systematically imbibing research values among faculty and researchers and take right steps in creating knowledge-based institution. As is evident from above that RemoteXs has edge over other available solutions like EZproxy, since it is offered as a fully cloud hosted solution i.e. 99.95% up-time with very good speed and zero infra cost for our University. The complete access to usage report dashboard with detailed user category-wise, resource-wise and day-wise usage statistics has helped the Library in tracking the usage of all the subscribed e-resources and also find the usage behaviour of different categories of users for providing better services and products to them.

Although, the frequency of remote access to e-resource usage is quite encouraging and is increasing day by day but at the same time, it is alarming to observe that users prefer to use portable devices like Laptops, Netbooks, tablet computers and mobile phones to browse and use the information from places other than libraries which has decreased the number of footfalls to a considerable extent. In order to cope up with this trend, Allama Iqbal Library needs to increase the number of computer labs with increased number of computer systems and associated

infrastructural facilities including other Wi-Fi facilities/hot-spots so that users prefer the library as their preferred destination for their research and study.

**Conflict of Interest:** None.

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**How to cite this article:** Bhat IH, Remote access (Off-Campus access) to e-resources via EZproxy and RemoteXs facilities: A case study of Allama Iqbal Library system, University of Kashmir. *Indian j Libr Sci inf techno* 2019;4(1):25-30.