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# Cloud-Based Services: Prospects for the University Libraries

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(Extending benefits of Modern Technology to Public, Academic and Special Libraries)

*Edited by*

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# Remote Access to Electronic Resources Using Virtual Private Network (VPN) at TISS Library

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## ABSTRACT:

*Libraries always strived hard to be committed to ensure full access to their range of services and information sources and facilities to their clientele. Libraries have to invest heavily on the electronic resources such as e-journals, e-books, and other databases. The best value from these electronic resources and their services is highly expected. The optimum usage of these resources would be possible only when proper and adequate access facilities are provided. Generally, all such online resources are made available 'anytime' through the library's website and over the IP range of the institute or university and on the campus. But, the faculty members, research scholars, students on overseas assignment and others also need online access to all such e-resources from wherever they are. This is possible with the help of ICTs using remote access tools. This paper deliberates TISS Library's approach to 'remote access' facility using the technology called 'Virtual Private Network' (VPN). It also covers the practicalities of administering the VPN system used, along with issues like training and technical support, future plans in this regard.*

*Keywords: 1. Remote Access, 2. Off-campus Access, 3. Virtual Private Network (VPN), 4. Electronic Resources, 5. Global Access*

## 1. INTRODUCTION

The Sir Dorabji Tata Memorial Library at TISS is a unique Knowledge Center, which offers essential and specialized information resources and personalized information services to its faculty and students. This library's main objective is developing user - based resources, providing human and technologically moderated access to knowledge and facilitating users to identify, evaluate and access information.

## 2. LEARNING RESOURCES

Library has in stock over 1,20,000 books covering the principal fields of interest in Social Sciences. More than 150 international and 125 Indian journals are currently subscribed. About 3500 thesis and dissertations submitted to various schools of TISS and various project reports, Committee reports are also housed in library. It also houses a small collection of non-book materials. The items in the library are arranged in three classes: General Collection, Reserved Collection and Reference Collection.

### 3. ELECTRONIC RESOURCES AT TISS LIBRARY

A wide range of electronic resources are available to the TISS Library users as mentioned in the following table:

SN	e-Resource Name	e-Resource Type	Source	No. of Titles
1	Gale Virtual Reference Library	E-Books (Full-text)	Subscription	21
2	NetLibrary	E-Books (Full-text)	Subscription	108
3	Cambridge University Press	E-Journals (Full-text)	UGC-Infonet Consortium	224
4	EBSCO Business Source Premier	E-Journals (Full-text)	Subscription	-
5	Economic & Political Weekly	E-Journals (Full-text)	UGC-Infonet Consortium	1
6	Emerald Management Xtra	E-Journals (Full-text)	Subscription	175
7	Indian Journal of Social Work	E-Journals (Full-text)	Library Digitisation Project	1
8	JSTOR	E-Journals (Full-text)	UGC-Infonet Consortium	1401
9	Oxford University Press	E-Journals (Full-text)	UGC-Infonet Consortium	206
10	Project Muse	E-Journals (Full-text)	UGC-Infonet Consortium	411
11	Sage Journals Online	E-Journals (Full-text)	Subscription	388
12	Sociological Bulletin	E-Journals (Full-text)	Library Digitisation Project	1
13	Springer Link	E-Journals (Full-text)	UGC-Infonet Consortium	206
14	Taylor and Francis	E-Journals (Full-text)	UGC-Infonet Consortium	1173
15	Wiley Blackwell Publishing	E-Journals (Full-text)	UGC-Infonet Consortium	908
16	Dissertations and Theses	ETDs (E-Theses & Dissertations)	Library Digitisation Project	433
17	Web of Science	Online Database (Bibliographic)	UGC-Infonet Consortium	10000+
18	ISID Database (Institute for Studies in Industrial Development)	Online Database (Bibliographic/ Online Indexes of Indian Social Science Journals and Press Clippings)	UGC-Infonet Consortium	125+

SN	e-Resource Name	e-Resource Type	Source	No. of Titles
19	<a href="http://Manupatra.com">Manupatra.com</a>	Online Database	Subscription (Indian Legal Database)	
20	<a href="http://Indiastat.com">Indiastat.com</a>	Online Database	Subscription (Indian Statistical database)	
21	IBID (India Business Insight Database)	Other (A compilation of vital information on Indian business and industry from various business magazines and newspapers)	Subscription	
22	TISS Institutional Repository	Other (Course Compendiums, Question Banks, articles, book chapters, conference papers, etc.)	Library Digitisation Project	73
23	JCCC	Other (Customized e-journals access gateway and database solution)	UGC-Infonet Consortium	7900+

#### 4. ACCESS FACILITES

At library, various access facilities have been developed in anticipation keeping in mind the prospects of the users' needs and demands. They include:

**a) Cyber Library:** State of the art Cyber Library, a 24 X 7 facility is located on the library first floor. This has provision of over 90 workstations with 10Mbps broadband internet access.

**b) Faculty Room:** This is located on the second floor. About ten computers are available for faculty to access e-Resources. This room is also used as Committee Room for conducting discussions/meetings with a small group of 10-15 members.

**c) Blind Persons/Persons with Disabilities:** M.K.Tata Memorial Learning Centre for the Visually Challenged. This Centre is equipped with 20 multimedia computers, scanners for reading print materials, Prisma Magnification device for students with low vision, Kurzweil K1000 OCR Reading software, Zoom-Ex Instant Reader for conversion of print material into digital format for creating an e-Library. A 200 page print book can be converted into e-Book in less than 10 minutes. It also has Basic D Braille Embosser for production of Books in Braille. Library also offers additional facilities like open access fetching and Copying, proxy borrowing service, computer aided reading facility, etc.



## 5. REMOTE ACCESS THROUGH VIRTUAL PRIVATE NETWORK (VPN)

A virtual private network (VPN) is a secure network connection that is layered on top of a public network, such as the Internet. It allows secure communication through public computer networks. VPNs use encryption and other security mechanisms to ensure that only authorized users can access the network and that the data cannot be intercepted. VPNs provide more functionality than proxy servers. Remote access VPNs extend almost any data, voice, or video application to the remote desktop, emulating the main office desktop. With this VPN, you can provide highly secure, customizable remote access to anyone, anytime, anywhere, with almost any device.

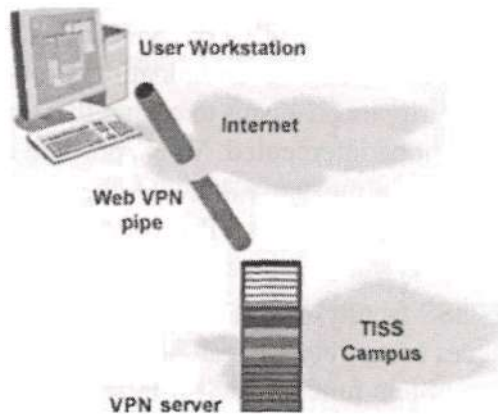
VPN is especially useful for TISS faculty, staff, and students who are off-campus and would like to access restricted campus resources using a commercial Internet Service Provider. After authenticating with the VPN server, remote computers function as if they were on campus, and as long as user's VPN connection is active all Internet activity from their computer is routed through the institute's servers.

At TISS, almost all the e-resources have IP based access facility and the faculty members, research scholars, students and staff, cannot get off-campus access to them. In order to solve this problem, the library has implemented Virtual Private Network (VPN). The use of this VPN server requires authentication in the form of a **username & password**.

Cisco VPN solutions used at TISS Library, which are said to provide exceptional security through encryption and authentication technologies that protect data in transit from unauthorized access and attacks. A Cisco VPN helps to:

- Use highly secure communications, with access rights tailored to individual users
- Quickly add new sites or users, without significantly expanding your existing infrastructure
- Improve productivity by extending corporate networks, applications, and collaboration tools
- Reduce communications costs while increasing flexibility
- Create a remote user experience that emulates working on the main office desktop
- Deliver VPN access safely and easily to a wide range of users and devices
- Support a wide range of connectivity options, endpoints, and platforms to meet your dynamic remote access needs

The VPN service is intended for the University's students, teachers and other staff to establish a secure connection from the Internet to the University network. The connection is established by encrypting all traffic from the client computer to a VPN server inside the University's firewall in a way makes it impossible for a third party to eavesdrop on the connection. All data related to user authentication (e.g. username, password) are relayed in encrypted form.



The Web VPN implementation in use here is a software installable on a desktop or laptop. The software manages establishment of the connection, user authentication, and encryption of network traffic. The user is solely responsible should any misuse incur, i.e. passing on authentication to another person is forbidden. By logging in via VPN server connects you to that under no circumstances serve other person your login information and not to download articles or documents other than their own study purposes.

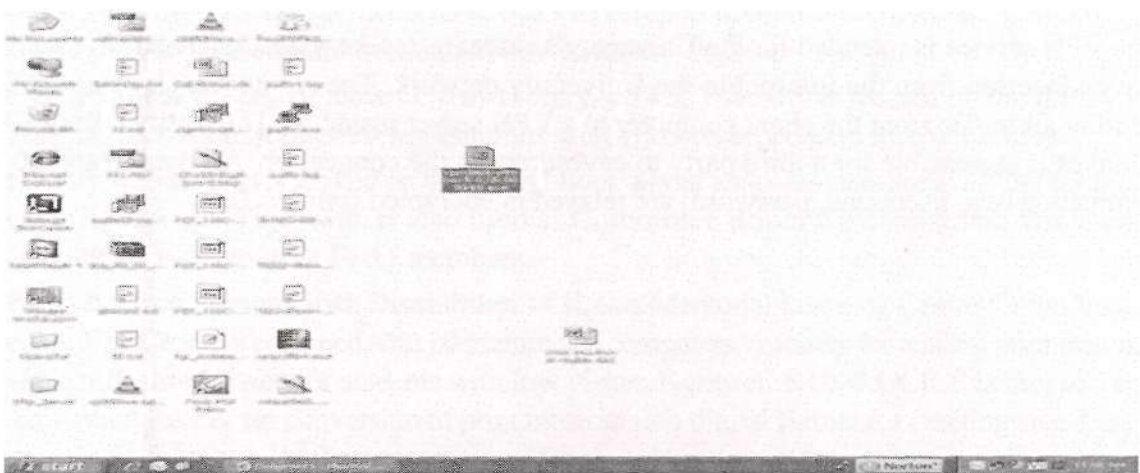
### Important Stages:

- a) Download VPN Client Software (Windows/Linux/Macintosh/Solaris)
- b) Install VPN Client Software (refer installation manual)
- c) Configure VPN Client (refer configuration manual)
- d) Get Username & Password from library

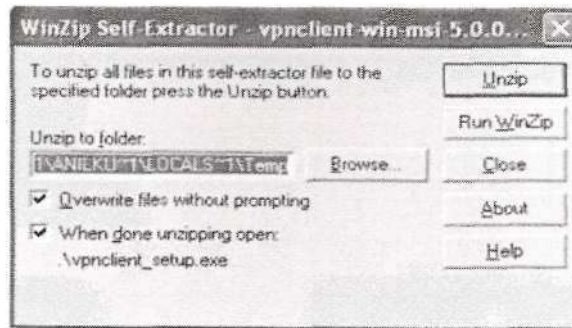
#### 5.1 VPN Client Installation (Windows XP/Vista)

After downloading the VPN Client software, the following steps are followed for its installation:

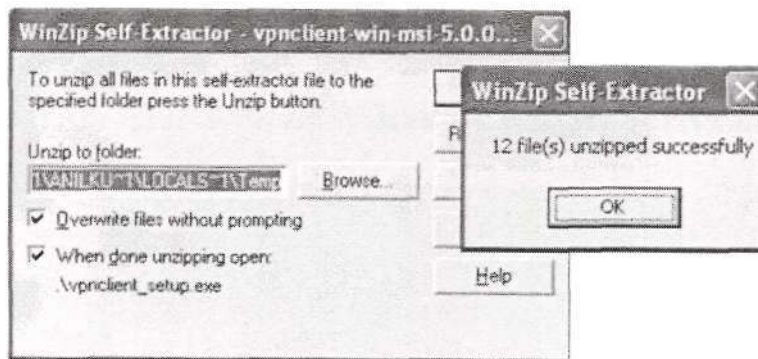
Step 1: Double click on Icon of VPN client software (provided by TISS)



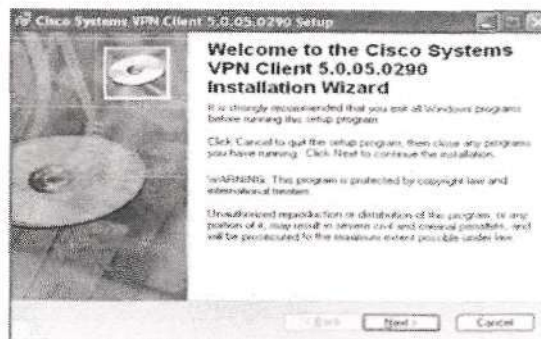
Step 2: Click on **Unzip** tab to run setup



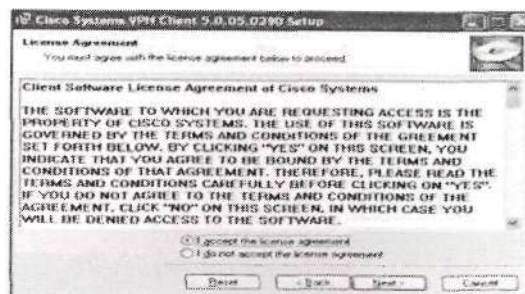
Step 3: Click on Ok



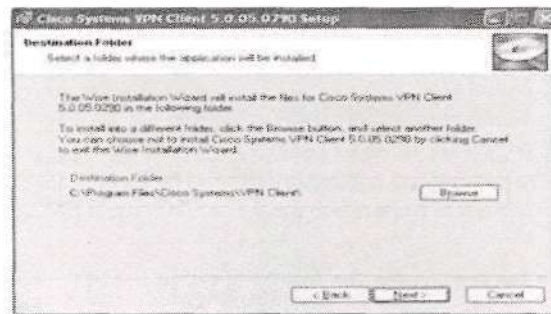
Step 4: Click on Next



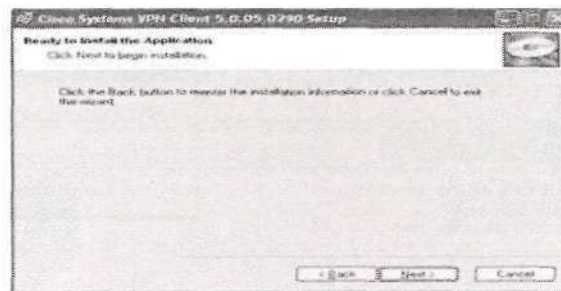
Step 5: Select "I accept the license agreement" option and then Click on Next



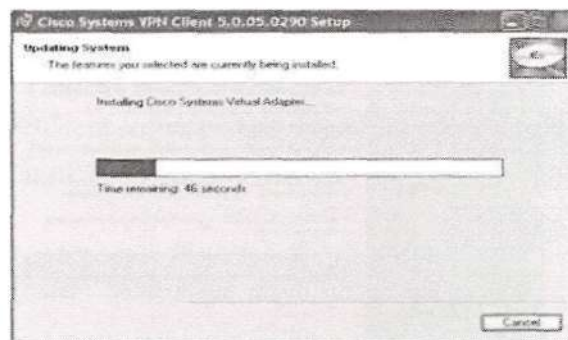
Step 6: Click on **Next**



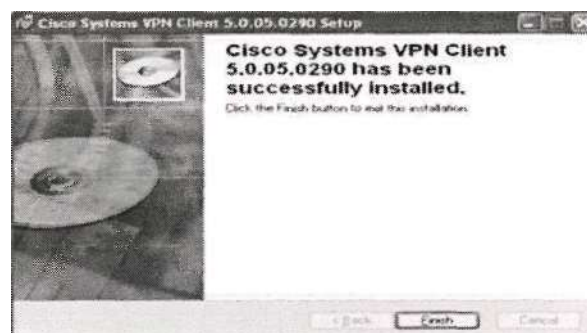
Step 7: Click on **Next**



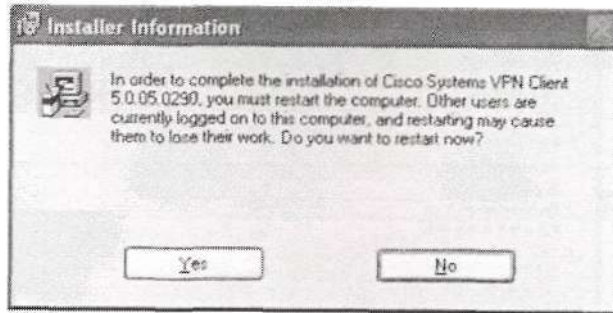
Step 8: Wait for minute installation in progress.



Step 9: Click on **Finish**



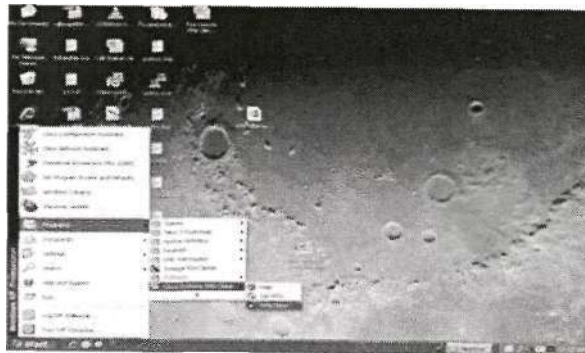
Step 10: Click on **No** to complete the installation



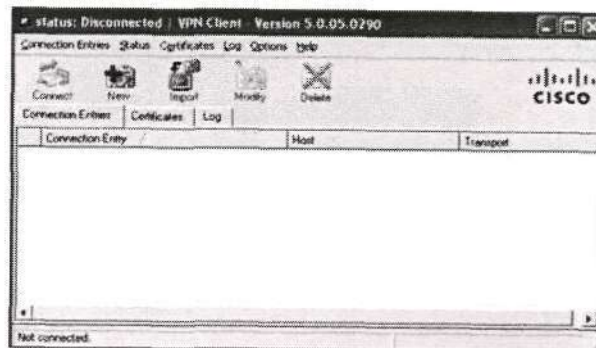
### 5.2 WebVPN Client Configuration

After installing the VPN client, next stage is to configure it for the particular system for which the following steps are followed:

Step 1: Go to "**Start >Programs >Cisco Systems VPN Client >VPN Client**"



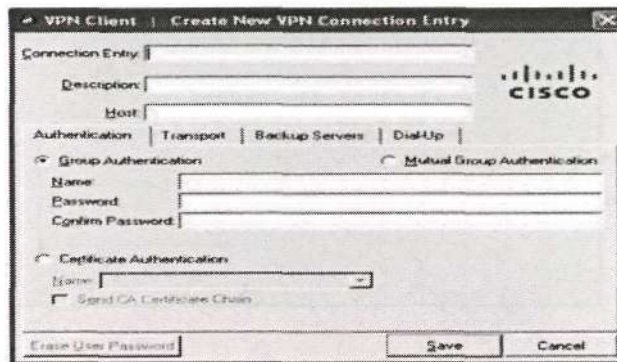
VPN client window will be open as in Picture



Step 2: Click on **New** tab



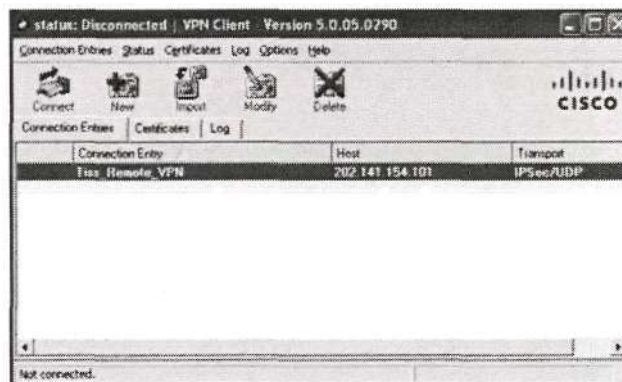
After click the new window will be open as shown in picture:



Step 3: Fill the Connection Details as following:

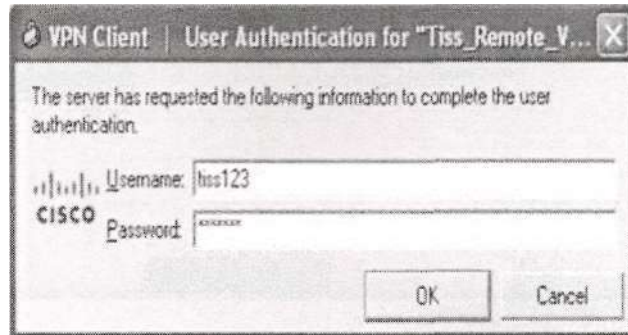
1. Connection Entry **TISS\_Remote\_VPN**
2. Description **To Access Library e-Resources remotely**
3. Host **210.212.26.162**
4. Group Authentication
  - Name\_\_\_\_\_tissvpn
  - Password\_\_\_\_\_tissciscovpn
  - Confirm Password\_\_\_\_\_tissciscovpn

After completion of entries click on **Save** tab



Step 4: Click on "**Connect**"

Step 5: After Click it asks for Username and Password



Type Username and Password provided by Library

For example, Username: **tiss123**  
Password: **tiss123**

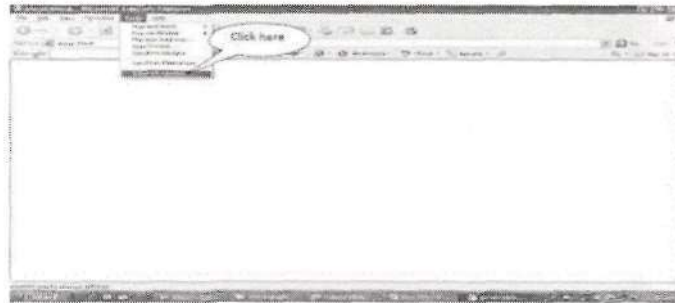
Step 6: Connection status showing on Taskbar



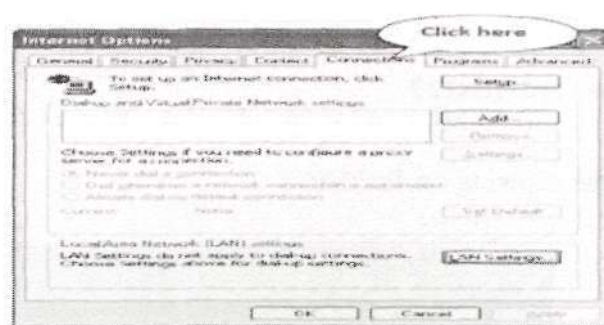
Step 7: Open the Browser in your PC and click 'tools'



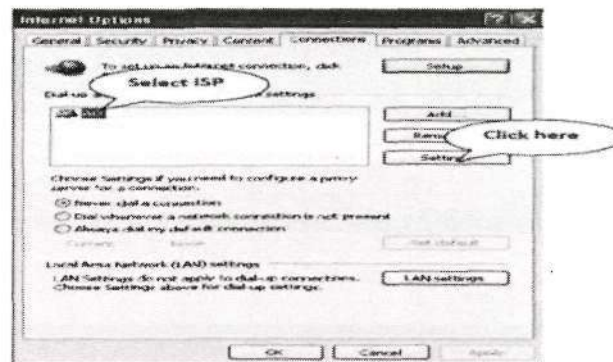
Step 8: Select 'Internet Options'



Step 9: Select 'Connections'



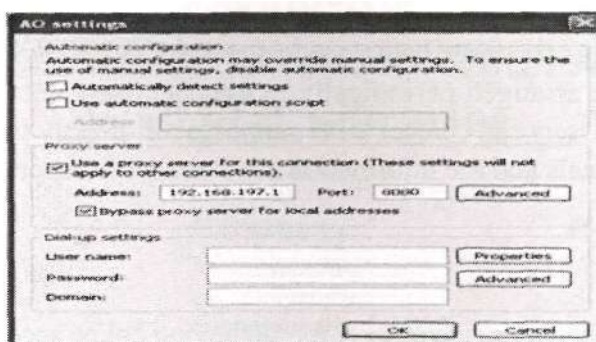
Step 10: Select your ISP and then 'Settings'



Step-11 Check 'Use a proxy server....' and Fill the Details as following:

1. Address a **192.168.197.1**
2. Portal **8080**
3. '**Check**' Bypass proxy server for.....





## 6. USERS OF VPN SERVICE

At TISS Library, soon after its introduction, this remote access facility through VPN has gained popularity among the users. Initially it was provided to the institute faculty only. Later, this service has been extended to the day-scholars, students staying off-campus and on the field work. It was really a wonder for the most of them! The registered VPN users at TISS Library are as follow:

SN	Category of Users	Number of Users
1.	Faculty	74
2.	Research Scholars	143
3.	Students	452
4.	Project/Temporary Staff	9
5.	Administrative & Library Staff	9
<b>TOTAL</b>		<b>687</b>

Remote access using VPN is becoming more popular. There are increasing number of requests and queries from the external individual members from other institutes, colleges and corporate houses are coming in via email and telephone! But, currently as a policy matter the use of VPN has been restricted to the bona-fide member of TISS only.

## 7. DIGITAL LIBRARY SERVICES FOR REMOTE LIBRARY PATRONS

Serving as a central point of contact for students and faculty, the Digital Library Services (DLS) staff coordinates support and services for all remote users. Working with other Library departments, DLS can assist students and faculty with:

- Access to the Library's Online Catalog (Web OPAC)
- Access to all the online databases (UGC-Infonet and Library Subscriptions)
- Access to D Space Digital Library (Institutional Repository)
- Electronic Course Compendiums
- Telephone and email reference services
- Web-based Tutorials and Lists of the journals etc. for Library Users
- Technical support and contact details

## 8. TRAINING AND TECHNICAL SUPPORT

Library conducts training sessions to help you locate access and evaluate information. Information Literacy Programmes are arranged periodically to educate users about e-resources like online databases and e-journals. Users can contact VPN support staff directly to report any problems. The relevant instructional manuals and the information about where to report problems has been put on the library's web site.

## 9. FUTURE PLANS

Our experiments and experiences using VPN for facilitating online access to the remote users have yielded successful results and satisfaction among the users. With the support from the INFLIBNET Centre, Ahmedabad Sir Dorabji Tata Memorial Library will be going for the new remote access tool namely EZproxy very soon. Hopes are there for providing seamless access to all the electronic/digital resources available online at our disposal.

## 10. CONCLUSION

It has always been considered that 'Content without Access' is almost useless! Thus, at TISS library, our continued efforts have always yielded the expected results like enhanced usage of the electronic resources and ultimately the patron satisfaction. As the huge amount of money is being spent on these database and resources, it is the earnest duty of any such library to make optimum use of such materials. Moreover, library users being the human beings are not supposed to be on the institute's campus always! They need to be on roaming on academic assignments and need to access these electronic resources wherever they are! Thus, to the remote patrons of TISS Library, remote access facility using VPN has been successfully provided by breaking the physical barrier!

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