

UNIVERSITY DATA CENTRE



Establishment of BSAU Data Centre

- Rapid expansion of the institute and exponential growth in the application of information technology in teaching learning process
- Enormous need for computational power, data storage and green computation has driven us for
- optimizing the expenditure on hardware, software, energy consumption and space
- Data centre was established at B.S. Abdur Rahman University in the year 2010



Establishment of BSAU Data Centre

- This centre coupled with a total Wi-Fi Campus and an uninterrupted power supply has helped the institution for centralized Data storage and management and 24X7 access. At present it has storage capacity of 10TB
- It is envisaged to soon triple the capacity and enhancing the security in order to lend the centre as a public cloud to help the industry also with the state of art facilities.

Highlights

- **24 x 7** availability and accessibility of state of the art data centre with high end rack servers, blade servers, **10 Tera Byte SAN storage** and virtualization.
- Content access such as National Programme on Technology Enhanced Learning (**NPTEL**) Lectures is available through Streaming Server, accessible 24X7 staffs & students.
- Centralized Content repository made available to academicians to share the contents and made it available in our campus 24X7 accessibility through mobile and fixed devices.
- BSAU is one among the first set of institutions providing the unique facility to students attending lectures of IIT professors from remote part of our nation through ICT.

Highlights

- For effective utilization of Network infrastructure and reduction of hardware and storage cost, the **state of art Data Centre with high end Blade Servers(4Nos), Rack Servers(4Nos) and SAN storage(10TB) worth of Rs. 1 Crore** is established at the annexure building of Computer Science block of B.S.A Rahman University.
- The highlights of this Data Centre would be to provide staffs and students of each dept to have 24 hours availability and accessibility to their computing resources through wired /wireless sitting in the lab or anywhere in the campus. They can continue their lab works, CAMPIT access, Internet/Intranet access and content access such as NPTEL through Streaming Server.



- Centralized Servers



- Four Blade Servers
- HP EVA SAN Storage



- Four Rack Servers
- Data Protector
(Backup and Restore Tape Library)

Data Centre Infrastructure:



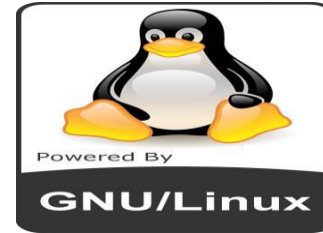
- SAN Storage
- HP Tape Library
- 4 Rack Servers
- 4 Blade Servers
- Router
- Core Switch
- FC-Switch
- Firewall



Computing Power



*HP Rack &
Blade Servers/
Storage/Tape
Library*



Connectivity



National Knowledge Network
Connecting Knowledge Institutions



Security





SAN Storage

- SAN-HP 4400 EVA Box implemented in our Data Centre environment with a capacity of 10TB.
- 4 Rack & 4 Blade servers connected to SAN Box through FC-Switch.

HP Tape Library

- HP Data Protector Manager Server is used to manage the HP Tape Library.
- HP Data Protector has been connected with Rack and Blade servers.



Rack Servers

- eSRM/CampIT Academic Automation Server. (Windows 2008)
- Streaming Application Server. (Windows 2008)
- Management Application Server (Windows 2003)
- VMware Servers.(Oracle Database, Linux, Windows 2008)

Blade Servers

- Domain Server(Windows 2003)
- Mail Server (Exchange) (VMWARE - LINUX)
- Antivirus server & ADC (Additional Domain Controller) (VMWARE- Windows)
- VMware (Windows and Linux). Servers Allotted for future requirement.





Server Configuration:

Blade Servers HP BL460C

2x Quad Core Intel® Xeon processor E5506 (2.13 GHz., 4MB L3 Cache, 80 watts, DDR3 800) , 16 GB DDR3-800 RAM, 2 x 146GB 15,000 rpm, SAS HDD / FC-card, 800 MHz. FSB, - with two Power supplies

2U Rack Servers HP DL360G6

2x Quad-core Intel Xeon Processor E5506 (2.13 GHz., 4MB L3 Cache), 16 GB DDR3 RAM, HBA, 2 x 146 GB 15000 rpm HDD SAS, Redundant power supplies. 800 MHz. FSB

SAN Storage HP EVA 4400

SAN storage with 10TB usable capacity (support up to 18 TB) comprising of

- **End-to-end FC storage 10K HDDs – with necessary**
- **30 no. of 450GB HDD, End to End 4GBPS;**
- **Storage management software –**
- **Unlimited Command View license to scale up storage space,**
- **Multiple OS support bundled**





Physical Arrangements

- Physically 4 Rack and 4 Blade servers are made available for our application services, academic & research operations. These physical servers are virtually partitioned into multiple virtual servers with combinations of windows and Linux environment.
- SAN storage has been attached to 4 rack and 4 blade servers to provide required storage facility.
- Data protector has been interconnected with rack and blade servers to backup & restore the server data when any data loss occurs.
- Streaming Application & Oracle server has been implemented in our data centre for academic knowledge development. This is available 24x7 for students and faculties usage.





Physical Arrangements

- ARUBA networks. Wireless LAN controller Series 3000 box has been implemented in our data centre. We can avail the data centre facility through wireless connection within our campus.
- Wireless AP65 access points are used to provide wireless facility in our campus. So far 100 access points have been installed and they have the scalability up to 250 access points. Each access point can provide WIFI connection to 50-60 users.
- HP Tape library are used to take the backup of the servers. This will be scheduled as daily, Weekly, Monthly and Yearly. In future these backups can be used to restore the data on servers in case of data loss or server crashes.

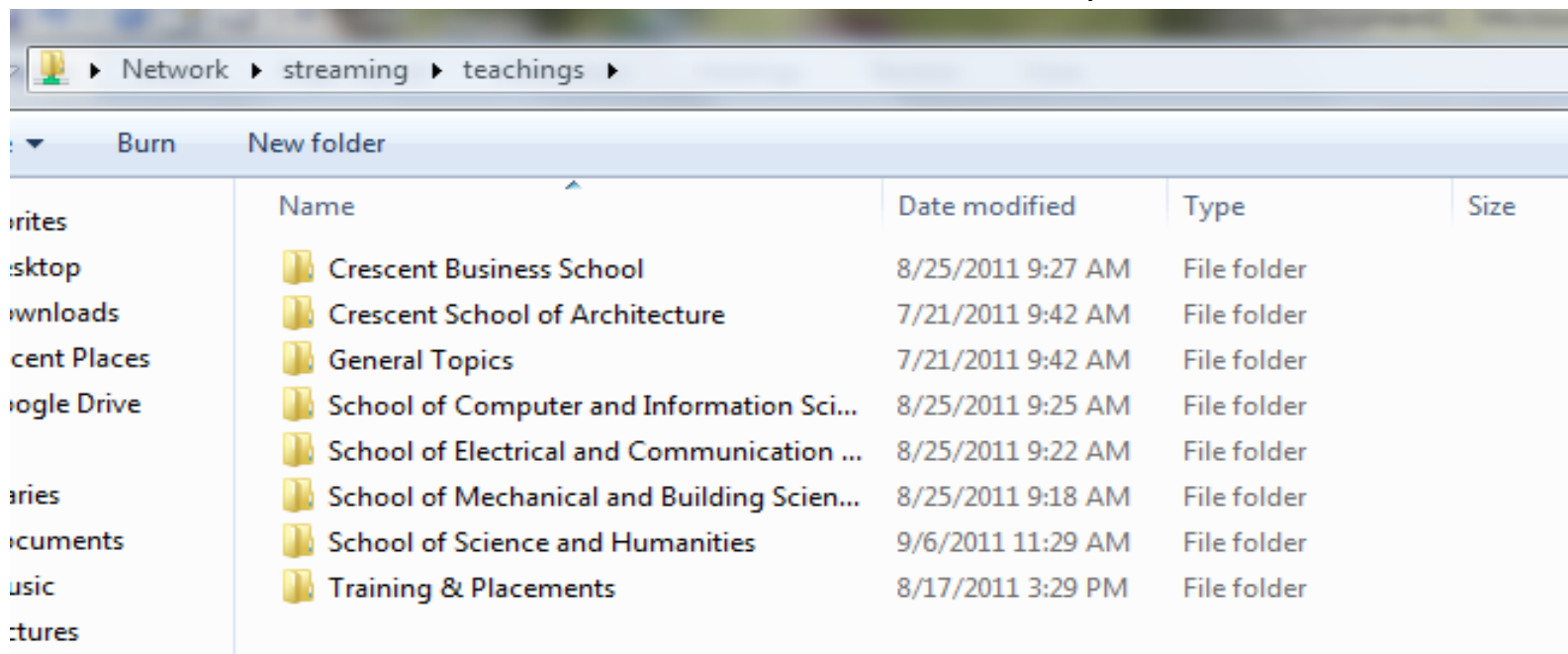




Activities:

1. Centralized Content Repository made available 24X7 to faculty and students to store teaching & learning contents.

- To access, type this address on run command in your system : `\\streaming\teachings`
- A window will appear for user credential. Please enter User Name : `user` and password: `user123`



Activities:



2. NPTEL Videos are downloaded and stored in our data centre and made available for our university students 24X7 throughout the campus.

Address: <http://streaming/local/>

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Keyword Search

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NPTEL

[Electronics & Communication Engineering](#)
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[Basic Courses \(Sem I & II\)](#)
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Events
ICCA '10
International Conference on Computer Applications, 2010
Event Date: 24-12-2010
PRAGYAN 2010
A technical festival attracting innovation from across the state.
Event Date: 25-02-2010
ICONN 2010
International Conference on Nanoscience and Nanotechnology - SRM University
Event Date: 24-02-2010
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Btechguru News
40 scholarships for postgraduation in India and abroad
Added On Nov 08, 2009
[IHS Journalism Internship Program](#)

Jobs & Internships



Activities:



- | | | | |
|----|--|---|-------------|
| 3. | Ansys Server & MATLAB Software- Mechanical Department | | |
| | Ansys Server Installed | : | Nov 2011 |
| | MATHLAB Software Installed | : | May 2012 |
| 4. | Domain Server – Civil Department. | | |
| | Domain Name | : | CIVILDOMAIN |
| | Installed on | : | June 2012 |
| 5. | CATIA Software & ANSYS Server- Aero Space Department. | | |
| | CATIA Software Installed on | : | Feb 2013 |
| | Ansys Server Installed on | : | May 2013 |
| 6. | EDI 9.1 Software- ECE Department. | | |
| | Installed on | : | Apr 2012 |



Activities:



- | | | | |
|-----|---|---|----------|
| 7. | CAMPIT Software- University.
Installed | : | May 2010 |
| 8. | Streaming Server-University.
Installed | : | May 2010 |
| 9. | IBM EUCALYPTUS OPEN SOURCE CLOUD SOFTWARE - IT Department
Installed | : | May 2013 |
| 10. | QEEE Institute Server installed and maintained in the Data Centre. | | |
| 11. | Virtual class room is established in the Seminar hall-II | | |
| 12. | Digital Signal Processing Virtual Lab is established for ECE Students in the Department | | |



Activities:



13. New Fibre cable laid between University Data Centre and entire Men's Hostel blocks.
14. New Fibre cable laid between Convention Centre and University Data Centre for QEEE live classes.
15. **E-Book Contents** are stored in the streaming server for student & faculty access
 - To access, type this address on run command in your system : **\\streaming\teachings\e-books**
 - A window will appear for user credential. Please enter : User Name : **user**
and password : **user123**
16. Server space allocated to install eZProxy application and Public IP address provided to access **Off Campus Remote-Access of e-Resources.**

Click here to access



E-Journals



Activities:



MoU Signed

: BSAU has signed an MoU with MHRD and get connected with the National Knowledge Network (NKN) under National Mission on Education through Information, Communication and Technology (NMEICT) scheme through BSNL

Workshop Conducted

: SAN Storage Training- Conducted on June 2nd and 3rd 2012.

13 Google Apps workshops conducted in the year 2013-14

Social Networks connectivity created

: FACEBOOK , Twitter, Wikipedia, Youtube.

Google Apps

: LOI Signed on 27-5-2013

4000 Email Ids are Created for Students, faculty and Non-teaching staffs





BSAU-QEEE Pilot Programme

- BSAU is one among the first set of institutions providing the unique facility to students attending lectures of IIT professors from remote part of our nation through ICT.
- QEEE (Quality Enhancement in Engineering Education) Team of B.S. Adbur Rahman University(BSAU) implemented the live classes of the MHRD's QEEE Pilot programme.
- The program consists of certain modules planned to be delivered through an educational platform (software/hardware) developed for this purpose. These, put together, cover all aspects of technical higher education.
 - **Live Lectures**
 - **Tutorials**
 - **Virtual Labs**
 - **MOOC (Open Courseware)**





BSAU-QEEE Pilot Programme

- B.S. Abdur Rahman University has successfully launched Live class of the MHRD's QEEE pilot programme on Monday 27th Jan 2014
- Three departments have readily come forward to attend the live classes of IIT Professors on the following subjects.
 - Heat Transfer
 - Fluid Dynamics
 - Operating System





BSAU-QEEE Pilot Programme

- B.S. Abdur Rahman University has successfully launched following Live lab of the MHRD's QEEE pilot programme on Monday 14th Feb 2014
 - **DSP(Digital Signal Processing) Lab**
- Also MOOC (Open Courseware) course on **Design and Analysis of Algorithms** has successfully launched on Thursday 20th Feb 2014



Visitors



Taiwan Professor visited data centre and interacted with our Director Data Centre and his team regarding collaborative research work.





Visitors



Dr. Junzo watada, Professor, Waseda University interacting with our Director Data Centre

**B. S. ABDUR RAHMAN
UNIVERSITY**

(Estd. u/s 3 of the UGC Act. 1956)



Administration Team



- Director : **Dr. P.Sheik Abdul Khader**, Professor & Head/CA
- Advisor : **Dr. V.Sankaranarayanan**, Director-University Project
- Systems Manager : **Mr. R.Venkateswaran**, Asst. Professor/CA
- System Administrator : **Mr. R.Sivakumar**, System Engineer/CA
- Database Administrator : **Mr. A.Abdul Azeez Khan**, Asst. Professor/CA
- System Operators : **Mr. E.Nishanth**, System Analyst cum Operator
Mr. A.Mohamed Ismail, System Analyst cum Operator
Mr. S.Suresh, System Analyst cum Operator
Mr. N.Kamal Basha, System Analyst cum Operator
Ms. P.Thiripura Sundari, System programmer/CampIT





THANK YOU

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