# **UAEU**





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Annual Report

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# Message from CIO

2015-2016 were another successful year for UAEU: We reached new levels of customer satisfaction and advanced key strategic initiatives aligned with the vision and objectives of the University.

Each year we seek to strengthen our offering to the university community through careful alignment of our services to support the teaching, learning and research mission of the university, as well as its strategic plan.

The dedicated professionals at UITS, along with our many partners across the campus, are responsible for the achievements highlighted here.

Our objectives in the years ahead are to integrate and consolidate all systems so our customers won't know the difference from a technology perspective where they are working.

We encourage you to review this report to help gain a better understanding of the multitude of projects and initiatives various teams within the One IT family are involved in.

Thank you for taking the time to review our progress in this annual report. Creating connections matters to UITS, and our most important connection always will be the one we have with those whom we serve.

Sincerely,

Afraa Al Shamsi Chief Information Officer University IT Sector - UITS

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### Mission

Our guiding principles include a focus on communication, collaboration, efficiency, effectiveness, research, outreach, service, and global impact in the field of Information Technology. We are committed to serve the needs of the next generation and our customer's expectations in regards to the use of innovative technologies. As we look ahead, UITS's focus is to create a future oriented, effective, and an efficient organization providing 21st Century customer education, mobile learning, and development as well as work in the field to meet the connectivity needs of our students, faculty, and staff.

### Vision

To be recognized as a center of excellence in leveraging information technology to advance learning, teaching, research, and student development in alignment with UAEU's mission and goals.







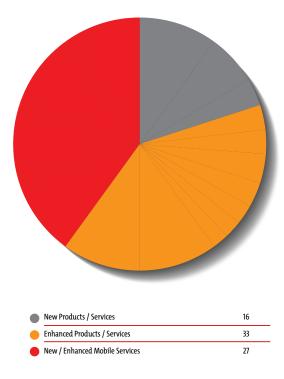
# **Project Management Offie**

The University Information Technology Sector (UITS) supports the mission of the University by providing information technology products and services that support the University's teaching, learning, research and administrative activities.

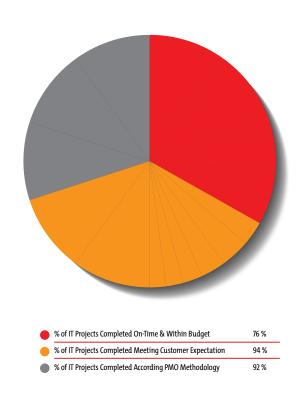
For the past academic year 2015/2016, the UITS has undertaken many initiatives that produced new products and services including, developed new software solutions, enhancing existing systems, applications, network, and core infrastructures. We are constantly looking for ways to transform technology and effectively support and manage standard and professional excellence by providing cost-effective and scalable technology products and services.

During the 2015/2016 academic year, the UITS has implemented information systems that delivered financial and functional benefits by simplifying the business process and delivering a considerable cost savings by increasing efficiency and staff productivities, reduce administrative costs, processing time, paperwork, and increase student, faculty, staff and partners satisfaction.

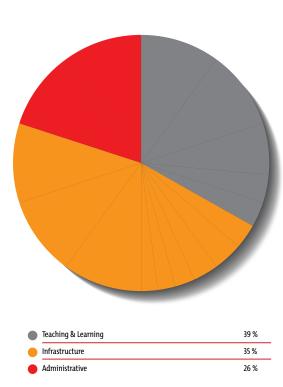
PMO Scorecard During Academic Year 2015 / 2016



Total IT Products & Services Implemented During
Academic Year 2015 / 2016



Total IT Projects Completed During Academic Year 2015 / 2016







# **UITS Committees**

### **CIO Office**

Office of the Chief Information Officer oversees the entire IT management framework, provides leadership for the continued development of a modern information technology environment, long range planning and policy making throughout for the University. The primary goal of this office is to deliver high quality and timely services that support UAE University mission in teaching, learning, research and community service.

### **IT Governance Team**

IT Governance team makes sure that IT strategy is aligned with business strategy, policy, procedures and process are in place and resources are secured. This team makes sure that IT risks are known, well managed and develop business and customer oriented policies and framework.

# IT procurement & Financial

Manages the budget and finance functions/ commitments for all IT activities. The team assists on how funding should be allocated to each IT project's various aspects/activities. Takes care of all coordination between IT, finance, purchasing and vendors.

# **Quality Assurance Team**

Team creates the Quality Assurance Plan and helps oversee the revision of the Definition Phase Go/No Go decision documentation that helps to determine and revalidate the UAEU IT project's size, scope, and required artifacts. Develops measures to ensure that a quality product is produced.

### Administrative assistant team

The team is performing a variety of secretarial and administrative work for the department. Research, summarize and analysis information, compile data to prepare special and recurring reports and many other supporting roles.

# **Project Management Team**

The Project Management Team supports the UITS division's commitment to more effective and efficient, consistent and repeatable project management practices, enabling project managers to successfully deliver their promised value to their customers. The team provides a project management culture that ensures common methodology and standards are shared across all IT projects and projects are delivered on time, within budget, and with the anticipated results.

### **Technical Training Team**

The UITS Training Team is responsible for coordination and preparation of the training packages for UAEU community. The Team is responsible for educating the community on the new and existing technology and overseeing the implementation, facilitation, tracking and day-to-day operations.

### **Technical evaluation committee**

The committee is responsible of technically evaluating any bids received after the tendering of any IT related projects. The committee goes through the process of evaluating the bids, recommending the vendors based in predefined criteria to ensure the best interest of the university and the quality of the technical work that will be provided. At last the committee submits the technical evaluation reports to the concern purchase committee in the university.



# UITS Projects Timeline 2016 - 2015



2015

# **SEPTEMBER**

- To Whom it May Concern Letter for Students
- Tawasul System
- Online College Transfer (Phase II)
- Electronic Approval of HR Minutes

# JULY

- Online Admission Acceptance
- Employee Health Insurance
- **▶** UAEU Mobile App Phase 5 to Comply smart
- Government KPI



# **OCTOBER**

- ▶ To Whom it May Concern Letter for Health Insurance & Housing Certificate
- Sports & Recreational Activities Registration

# **NOVEMBER**

- ▶ TRA KPI 6 & 4,3,2 For UAEU's Priority Services
- Student Special Needs Intake
- Online Alumni Document Request
- Student Registration Postponement
- Student Withdrawal & Clearance





- Student Internship Program
- Online Graduation Request
- UAEU Smart Wearable Technology

# **MARCH**

- **Upgrade AV Systems of COL Court Rooms**
- Video Wall Solution for UITS Network Operation Center Room
- Upgrade the Data Domain Infrastructure
- **Upgrade InfoBlox Solution**
- Implement Office 365 for all UAEU Employees
- Upgrade EMC Storage with Solid-State Drive (SSD)
- **Privileged Access Management Solution**
- **Upgrade SAP Business Objects**
- Alumni Online Document Request & ePayment
- Upgrade Worklight Studio



- **CurricUNET & Banner Integration**
- Online Master & PhD Admission System
- **Enhancement Printing Press Portal**
- Upgrade MS Lync to Skype for business
- Solarwinds Applications, Storage, Websites & Virtualization Monitoring
- Electronic Achiving & Document Management Solution for Internal Audit Office
- General Stores / General Services Network Upgrade
- Seh Bin Ammar Hostel Network Upgrade
- Alfoah Network Upgrade

- Online Attendance Management System (Phase II)
- Online CMHS Student Transcript
- Upgrade Chancellor Board Room

- Online Job Navigator
- **Integrate Pricing Agreements Products with** Banner system
- WAN and Internet Links Upgrade

# **FEBRUARY**

- ▶ Upgrade RightFax servers from 10.5 to 10.6 SR2
- ▶ Enterprise Vulnerability Management Solution Upgrade
- Faculty Performance Evaluation (Phase II)

- Arab ACRAO website
- Magam 5 Network Infrastructure
- Juniper Internet Routers upgrade

# Centralize IT Resources Around the Campus **Upgrade Male Campus Classrooms**

Magam2 hostel Network Upgrade



- New Campus Wired Infrastructure Upgrade Phase 2
- Dupgrade ADFS Server from 2.0 to 3.0
- Security Information and Event Management SIEM Solution







Islamic Institute Network Upgrade





# Application Achievements



# Completed 2015 Projects

# **UAEU Smart Wearable Technology**

Description: As part of continuous technology enhancement UITS took the initiative to develop an in-house a mobile app for smart wearable device such as Apple Watch. As a first step forward UAEU Apple Watch services include latest UAEU News, Academic Calendar, and Academic Programs and also to receive important notifications on smart wearable devices.





# **TRA Compliance**

Description: Telecommunication and regulatory authority has launched guidelines and regulations that need to be complied. UITS took the initiative to work towards the TRA compliance. TRA along with PM office identified priority services for UAEU and released 6 KPI's covering different domains. Out of 6 KPI's one KPI is related to website quality which UITS is working closely with the media and communication department. Some KPI's are related to information and systems security for which UITS initiated a project to further enhance and improved the applications related to priority services in order to comply with the TRA regulations. Mainly KPI 2 and 6 are related to UITS. Last 2 years assessment of TRA shows continuous improvement towards the TRA compliance.

# Target Audience University Community & General Public

# To Whom It May Concern Letter for Students

Description: This service automates the process of requesting "To Whom it May Concern Letter" by the students by enhancing the Student Document system to send a soft copy of TWIMC letter to students via email after receiving request & fee payment. The requesting students can now pay the fees for TWIMC either through eServices or mobile.



## **Database Security Vulnerability Assessment**

Description: As a part of ISO initiative, UITS has Implemented a security system to periodically scan the databases to identify database related vulnerabilities. These vulnerability definitions are continuously updated as per international standards. This system helps us to ensure our databases are secure from malicious activities. This system directly impacts the university community including students, staff and faculties.



# Implement Responsive Design & Accessibility for Portal

Description: UITS decided to take the initiative to change the existing portal to complete responsive design. This was also a step forward and towards fulfilling TRA requirements of having the services available not only through computers but also through smart phones. Since all the services are available through the UAEU portal therefore changing the interface to responsive makes all the services to be available through the smart phones as well. It has also further enhanced the accessibility by having Text to Speech & different Font Sizes options





# **Student Special Needs Intake**

Description: On request from student services UITS has developed an in-house complete web-based system that allow student services department to use the online forms to to register/request for special needs for the students in case they have some.





# **Sports & Recreational Activities Registration**

Description: UITS developed an in-house an online application to track & manage the usage of the sports & recreational facilities in hostels & in the main campus (male/female). Earlier the management staff used a complete manual process to manage the activities. The process is completely automated and electronic.







## **Tawasul System**

Description: UITS recently launched Tawasul website is one of the most important initiatives of the Admissions Department. Its target population is primarily grade 10 to 12 high school students. Tawasul is a point of contact between students and UAE University Admission department where student's queries are answered. It is also a one stop shop where they can browse information about the university. The site provides links and important information about colleges, departments, majors and student services.

In addition, Tawasul has many useful links to other organizations, institutions, and self-assessment exams that help students decide whether to join the university and, if so, what to study. The site is also fed regularly with important information and announcements that will benefit future students and keep them up to date with University Admissions policy, regulations, and important dates and deadlines.

Students can access the site by clicking the Tawasul link under the Admissions page of the UAEU website. The site has comprehensive information available. However, if a student needs further information or if they wish to participate in the recruitment activities of the Recruitment Section (Admissions Department), they need to register using the application designed for this purpose.





### **Online Admissions Acceptance**

Description: UITS has developed a system to get more accurate information about the students who will join the United Arab University during the next semesters, the online admission acceptance system is developed to serve the undergraduate students that are approved to enroll the University to Accept or Reject the admission offer online. The information of students who accepts the admission offer will be automatically created in Banner. This service targets the new students.





# Application Security Vulnerability Assessment

Description: UITS has Implemented an application to perform source code scan (Static Scanning) and web application scanning (Dynamic Scanning) and identify all different standard vulnerabilities and to provide solutions to fix them. This is related to application security as per ISO standards. This system is implemented to further enhance application security against known threats like SQL injection and cross site scripting etc...



## **Student Registration Postponement**

Description: Registration department used to have a laborious manual process whenever student(s) need to postpone their registration. UITS developed an application that allow students to request registration postpone through e-Services and the application goes through different levels of review and approvals as per the approved policy including clearance. This has greatly reduced the manual interaction between the students and the registration department.



# **Online Alumni Document Request**

Description: UITS developed an online document request system that makes it easy for any alumni to request, pay and receive any certificate. The system allows requesting Graduation Certificate, Attestation Certificate, Data Modification, University Degree, Replacement of Degree, & Rejoin the University. The service targets the UAEU Alumni.





# **Research Ethics Review Request System**

Description: This system was requested by the research department and it is to automate the process of submitting, reviewing and approving requests for Research Ethics Reviews. It has a complete workflow as per the requirements with related approvals.



# Finance Accounts Receivable Invoice & Receipts

Description: With the continuous cooperation between UITS, Risk Management Department and Finance Operations Department, UITS has implemented the Finance Accounts Receivable Invoice & Receipts templates. This implementation is allowing all UAEU Finance Officers to process the invoices and receipts via system, and generate them at the end with formatted template. This system has replaced the current manual process for non-student's accounts receivables payment.



# **Online Attendance Management System**

Description: Student attendance is one of the most critical process that is required as per the university academic policies. The existing ERP system Banner does not have a built in student attendance system and therefore there was a need to have a comprehensive student attendance system that fulfills the university requirements. Therefore, UITS took this initiative and developed a complete online comprehensive student attendance system that adhere to all the related policies and procedures.







# Completed Projects

# **Online Master & PhD Admission System**

**Description:** This online system which is already in use has been further enhanced to have an uplift of the overall look of the online application. Changes are made to streamline the use of the application as well to make it more easy for the end users. An approval workflow and notification module is also added to further enhance the overall automation of the process.



### **Upgrade SAP Business Objects**

**Description:** SAP Business Objects is the business intelligence and reporting system used by the administrative units of the university. UITS initiated this project to upgrade the SAP Business Objects to the latest release. This upgrade helps to overcome the limitations and performance problems that earlier reporting system users faced before. Also helped us to prepare the system for mobile reporting as well. This system is being used by all university community through the business units.

# **Online Job Navigator**

**Description:** The Job Navigator system is a job-posting system, which allows job seekers to find their preferred jobs and allows employers to find their wanted candidates. The system serves current & alumni students for building their employment profiles, search job database, & apply jobs online. Additionally, the online system will allow partner employers to post jobs for UAEU students and browser their profiles and job applications. This system serves current students and Alumni.





# Upgrade Blackboard eLearning from 9.1 to Q2 2016

**Description:** As part of the continuous improvement of the university management systems the enterprise elearning system Blackboard from 9.1 to Q2 2016 which is the latest release. The upgrade is meant to improve quality, performance, accessibility & bug fixes. It Includes enhanced assessments, grading, enterprise surveys, and security related fixes.







### **CurricUNET & Banner Integration**

**Description:** CurricUNET is an off the shelf curriculum management system which is hosted outside UAEU network. This is an interface for the academia to perform all curriculum related activities and thus there was a need to integrate this system with the enterprise ERP Banner. UITS has done the integration of the two systems by reading a feed from the CurricUNET and transform it accordingly to flow into Banner.





### **UAEU Mobile App - Phase 6**

**Description:** The journey of UAEU mobile app development continues with more updates. UAEU Mobile App Platform has been upgraded with the latest version. This upgrade allows us to be in line with all new technology and features which facilitates a robust growth for UAEU mobile app.

UAEU Mobile App 2016 release contains new services targeting UAEU Alumni and Faculty;

- » Alumni main services includes requesting documents, requesting card ID and updating Alumni profile.
- » Faculty main services includes Faculty schedule with feature to add to device calendar, and taking attendance via iPad.



Moreover, more enhancements have been introduced to student services such as;

- » Open GPA calculator to allow students calculate their GPA for future courses.
- » Feature to add student calendar to the device calendar.
- » Option to submit absence excuses via mobile app.



# Electronic Archiving & Document Management Solution for Internal Audit Office

**Description:** With this initiative, UITS created an electronic archiving solution to help the Internal Audit Office of the university to improve the documentation archiving process of the department. It replaced the paper based and excel based document archiving process with complete online electronic document management system, that is also used by other administrative departments of the university.



# Integrate Pricing Agreements Products with Banner system

**Description:** As part of UITS main objectives of administration enhancement, UITS has developed an online application for Pricing Agreement Products. This application automates the selection of the pricing agreement items in a more innovative and efficient way. Further, it automates the creation of the Purchasing Orders upon the selected items into Banner Finance System.



### **Oracle Audit Vault and Database Firewall**

**Description:** This is an initiative to implement an auditing and controlling system to continuously audit the sensitive transactions performed in the ERP databases. Also this system helps to control the administrative access to the database. This is also a mandatory requirement of the ISO standardization process.

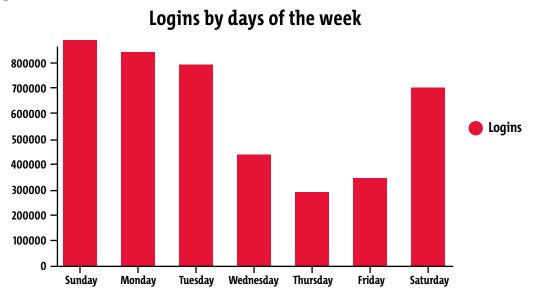
This system is enhancing the overall security of the underlying database for the systems using the enterprise RDBMS.



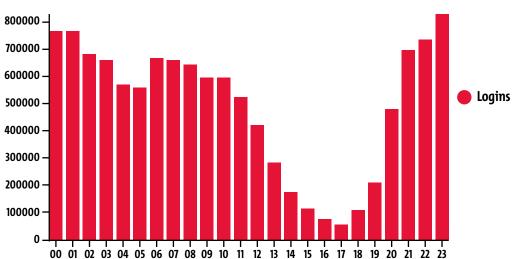


# **Blackboard Mobile stats**

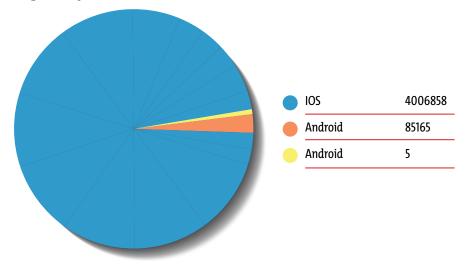
# From Sept 2015 – Aug 2016



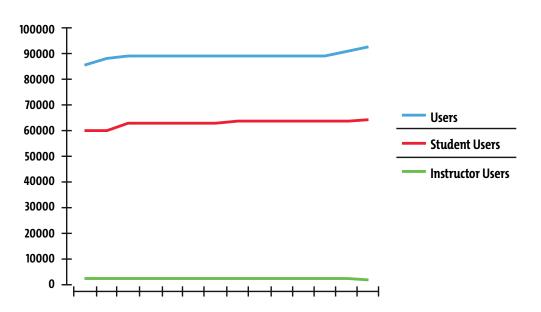




# **Logins by Platform**

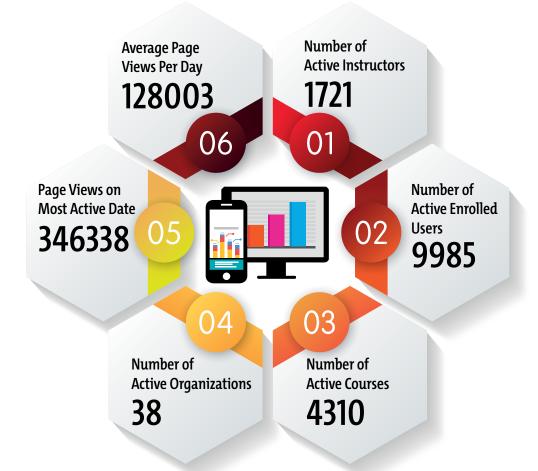


# **Average Users Per Month**



# 198498 Unique Visitors





# **Average Users Per Month**

| Month     | Users | Student Users | Instructor Users |
|-----------|-------|---------------|------------------|
| 2015 - 07 | 85318 | 59408         | 1824             |
| 2015 - 08 | 87994 | 60275         | 1338             |
| 2015 - 09 | 88686 | 62511         | 1878             |
| 2015 - 10 | 88711 | 62539         | 1883             |
| 2015 - 11 | 88745 | 62622         | 1886             |
| 2015 - 12 | 88779 | 62638         | 1880             |
| 2016 - 01 | 89061 | 62827         | 1887             |
| 2016 - 02 | 89174 | 63019         | 1910             |
| 2016 - 03 | 89190 | 63018         | 1914             |
| 2016 - 04 | 89208 | 63020         | 1914             |
| 2016 - 05 | 89223 | 63025         | 1918             |
| 2016 - 06 | 89264 | 63029         | 1918             |
| 2016 - 07 | 90643 | 62996         | 1892             |
| 2016 - 08 | 92575 | 63432         | 1721             |

# Page Views per Month

| Month     | Average page Views | Average Course Views |
|-----------|--------------------|----------------------|
| 2015 - 07 | 43225              | 5911                 |
| 2015 - 08 | 58008              | 12281                |
| 2015 - 09 | 184575             | 59304                |
| 2015 - 10 | 179361             | 58896                |
| 2015 - 11 | 173199             | 58682                |
| 2015 - 12 | 135871             | 41823                |
| 2016 - 01 | 97991              | 27106                |
| 2016 - 02 | 190108             | 72666                |
| 2016 - 03 | 169775             | 63104                |
| 2016 - 04 | 153320             | 53636                |
| 2016 - 05 | 188705             | 72820                |
| 2016 - 06 | 59466              | 13223                |
| 2016 - 07 | 36408              | 427                  |
| 2016 - 08 | 33583              | 11336                |

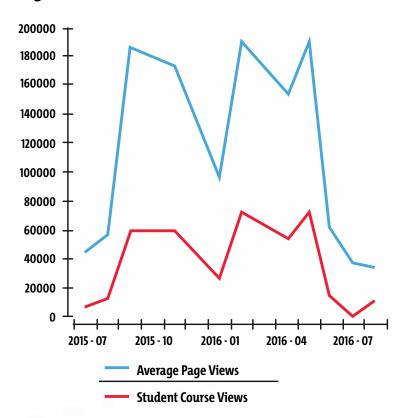
# **Average Active Courses / Organizations Per Month**

| Month     | Courses | Active Courses | Organizations | Active Organizations |
|-----------|---------|----------------|---------------|----------------------|
| 2015 - 07 | 16433   | 1801           | 163           | 18                   |
| 2015 - 08 | 17689   | 1958           | 163           | 23                   |
| 2015 - 09 | 16937   | 5372           | 164           | 40                   |
| 2015 - 10 | 16955   | 5081           | 165           | 38                   |
| 2015 - 11 | 16969   | 5083           | 166           | 46                   |
| 2015 - 12 | 16971   | 4878           | 168           | 44                   |
| 2016 - 01 | 19786   | 4811           | 168           | 35                   |
| 2016 - 02 | 20934   | 6374           | 168           | 42                   |
| 2016 - 03 | 20949   | 5680           | 168           | 32                   |
| 2016 - 04 | 20955   | 5194           | 169           | 36                   |
| 2016 - 05 | 20984   | 5697           | 171           | 44                   |
| 2016 - 06 | 21127   | 4033           | 171           | 31                   |
| 2016 - 07 | 19766   | 1594           | 171           | 29                   |
| 2016 - 08 | 13050   | 1236           | 171           | 22                   |

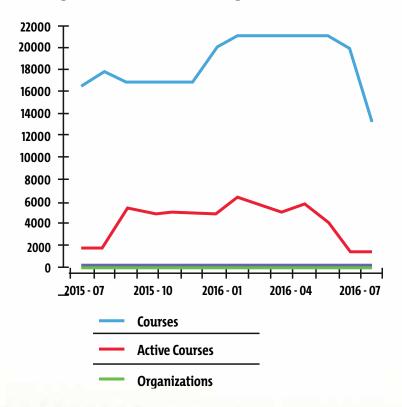


# **Page Views Per Month**

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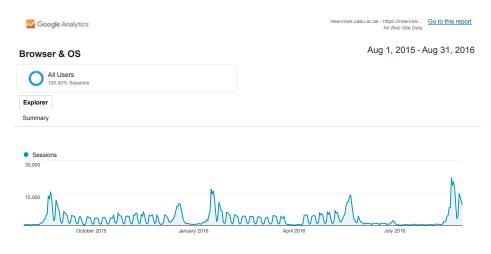
# **Average Active Courses / Organizations Per Month**



# **Analytics All Web Site Data Audience Overview**



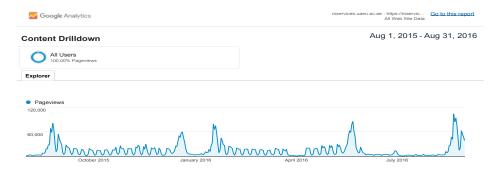
# **Analytics All Web Site Data Browser & OS**



|     |                   | Acquisition  |  |   | Behavior                                      |  |  | Conversions                                |                                  |  |
|-----|-------------------|--|--|---|---|--|--|--|----------------------------------|--|
| Bro | Browser           | Sessions   | % New<br>Sessions                          | New<br>Users                                    | Bounce<br>Rate                                | Pages /<br>Session                       | Avg. Session<br>Duration                         | Goal Conversion<br>Rate                    | Goal<br>Completions              | Goal<br>Value                              |
|     |                   | 1,293,419<br>% of Total:<br>100.00%<br>(1,293,419) | 2.96%<br>Avg for View:<br>2.94%<br>(0.52%) | 38,258<br>% of<br>Total:<br>100.52%<br>(38,060) | 7.01%<br>Avg for<br>View:<br>7.01%<br>(0.00%) | 4.71<br>Avg for View:<br>4.71<br>(0.00%) | 00:02:29<br>Avg for View:<br>00:02:29<br>(0.00%) | 0.00%<br>Avg for View:<br>0.00%<br>(0.00%) | 0<br>% of Total:<br>0.00%<br>(0) | \$0.00<br>% of Total:<br>0.00%<br>(\$0.00) |
| 1.  | Safari (in-app)   | 1,095,559<br>(84.70%)                              | 2.80%                                      | 30,681<br>(80.19%)                              | 6.70%   | 4.62                                     | 00:02:23   | 0.00%                                      | (0.00%)                          | \$0.00                                     |
| 2.  | Chrome            | 185,502<br>(14.34%)                                | 3.45%                                      | 6,402<br>(16.73%)                               | 8.36%   | 5.18                                     | 00:02:57   | 0.00%                                      | (0.00%)                          | \$0.00                                     |
| 3.  | Android Browser   | 8,609<br>(0.67%)                                   | 5.66%                                      | 487<br>(1.27%)                                  | 10.54%  | 4.95                                     | 00:03:03   | 0.00%                                      | (0.00%)                          | \$0.00                                     |
| 4.  | BlackBerry        | 2,202<br>(0.17%)                                   | 13.76%                                     | 303<br>(0.79%)                                  | 19.57%  | 4.37                                     | 00:02:48   | 0.00%                                      | (0.00%)                          | \$0.00                                     |
| 5.  | Internet Explorer | 616<br>(0.05%)                                     | 30.52%                                     | 188<br>(0.49%)                                  | 22.56%  | 4.83                                     | 00:04:16   | 0.00%                                      | (0.00%)                          | \$0.00<br>(0.00%)                          |
| 6.  | YE                | 531<br>(0.04%)                                     | 0.94%                                      | 5<br>(0.01%)                                    | 8.85%   | 4.40                                     | 00:02:19   | 0.00%                                      | (0.00%)                          | \$0.00                                     |
| 7.  | Firefox           | 298<br>(0.02%)                                     | 48.32%                                     | 144<br>(0.38%)                                  | 52.35%  | 9.69                                     | 00:11:40   | 0.00%                                      | (0.00%)                          | \$0.00                                     |
| 8.  | (not set)         | (0.00%)  | 100.00%                                    | (0.10%)   | 37.84%  | 0.38                                     | 00:00:00   | 0.00%                                      | (0.00%)                          | \$0.00                                     |
| 9.  | Safari            | 34<br>(0.00%)                                      | 17.65%                                     | 6<br>(0.02%)                                    | 76.47%  | 1.44                                     | 00:01:59   | 0.00%                                      | (0.00%)                          | \$0.00                                     |
| 10. | Edge              | 24<br>(0.00%)                                      | 16.67%                                     | 4<br>(0.01%)                                    | 0.00%   | 15.96                                    | 00:22:17   | 0.00%                                      | (0.00%)                          | \$0.00<br>(0.00%                           |

Rows 1 - 10 of 12

# **Analytics All Web Site Data Content Drilldow**



| Page p | ath level 1                | Pageviews  | Unique Pageviews                                   | Avg. Time on Page                                | Bounce Rate                                | % Exit                                       |
|--------|----------------------------|--|--|--|--|--|
|        |                            | 6,086,204<br>% of Total:<br>100.00%<br>(6,086,204) | 3,562,328<br>% of Total:<br>100.00%<br>(3,562,328) | 00:00:40<br>Avg for View:<br>00:00:40<br>(0.00%) | 7.01%<br>Avg for View:<br>7.01%<br>(0.00%) | 21.25%<br>Avg for View:<br>21.25%<br>(0.00%) |
| 1.     | /news.html                 | 2,725,989<br>(44.79%)                              | 1,193,854<br>(33.51%)                              | 00:00:16   | 4.35%                                      | 7.20%  |
| 2.     | /ViewAttendence.html       | 646,311<br>(10.62%)                                | 494,318<br>(13.88%)                                | 00:01:12   | 45.09%                                     | 47.33%                                       |
| 3.     | /ScheduleByWeek.html       | 620,677<br>(10.20%)                                | 461,977<br>(12.97%)                                | 00:02:22   | 48.02%                                     | 50.46%                                       |
| 4.     | /ViewStudentGrade.html     | 571,765<br>(9.39%)                                 | 360,732<br>(10.13%)                                | 00:00:25   | 14.29%                                     | 11.34%                                       |
| 5.     | /GpaCalc.html              | 350,224<br>(5.75%)                                 | 240,243<br>(6.74%)                                 | 00:01:32   | 32.86%                                     | 41.00%                                       |
| 6.     | /Gpa.html                  | 287,479<br>(4.72%)                                 | 176,872<br>(4.97%)                                 | 00:00:19   | 9.57%                                      | 10.24%                                       |
| 7.     | /Registration.html         | 267,936<br>(4.40%)                                 | 179,032<br>(5.03%)                                 | 00:03:00   | 40.60%                                     | 41.76%                                       |
| 8.     | /ViewAttendanceExcuse.html | 101,749<br>(1.67%)                                 | 82,928<br>(2.33%)                                  | 00:00:32   | 18.19%                                     | 24.21%                                       |
| 9.     | /ScheduleByTerm.html       | 86,747<br>(1.43%)                                  | 66,916<br>(1.88%)                                  | 00:00:52   | 20.67%                                     | 20.95%                                       |
| 10.    | /academic_calendar.html    | 68,176<br>(1.12%)                                  | 47,552<br>(1.33%)                                  | 00:01:02   | 28.05%                                     | 39.34%                                       |

Rows 1 - 10 of 74

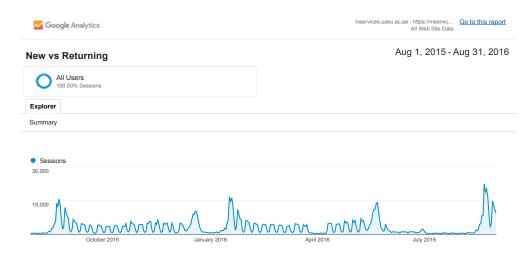
# **Analytics All Web Site Data Location**



|         |                      | Acquisition  |  |   | Behavior                                      |  |  | Conversions                                |                                  |   |  |
|---------|----------------------|--|--|---|---|--|--|--|----------------------------------|---|--|
| Country |                      | Sessions   | % New<br>Sessions                          | New<br>Users                                    | Bounce<br>Rate                                | Pages /<br>Session                       | Avg. Session<br>Duration                         | Goal Conversion<br>Rate                    | Goal<br>Completions              | Goal<br>Value                             |  |
|         |                      | 1,293,419<br>% of Total:<br>100.00%<br>(1,293,419) | 2.96%<br>Avg for View:<br>2.94%<br>(0.52%) | 38,258<br>% of<br>Total:<br>100.52%<br>(38,060) | 7.01%<br>Avg for<br>View:<br>7.01%<br>(0.00%) | 4.71<br>Avg for View:<br>4.71<br>(0.00%) | 00:02:29<br>Avg for View:<br>00:02:29<br>(0.00%) | 0.00%<br>Avg for View:<br>0.00%<br>(0.00%) | 0<br>% of Total:<br>0.00%<br>(0) | \$0.00<br>% c<br>Tota<br>0.009<br>(\$0.00 |  |
| 1.      | United Arab Emirates | 1,269,958<br>(98.19%)                              | 2.81%                                      | 35,709<br>(93.34%)                              | 6.85%   | 4.70                                     | 00:02:29   | 0.00%                                      | 0<br>(0.00%)                     | \$0.0<br>(0.009                           |  |
| 2.      | Oman                 | 5,675<br>(0.44%)                                   | 3.21%                                      | 182<br>(0.48%)                                  | 7.42%   | 5.38                                     | 00:02:19   | 0.00%                                      | 0<br>(0.00%)                     | \$0.0<br>(0.009                           |  |
| 3.      | United States        | 2,861<br>(0.22%)                                   | 20.24%                                     | 579<br>(1.51%)                                  | 24.08%  | 4.17                                     | 00:02:00   | 0.00%                                      | (0.00%)                          | \$0.0<br>(0.009                           |  |
| 4.      | Romania              | 2,164<br>(0.17%)                                   | 3.60%                                      | 78<br>(0.20%)                                   | 7.02%   | 4.81                                     | 00:01:59   | 0.00%                                      | 0<br>(0.00%)                     | \$0.0<br>(0.009                           |  |
| 5.      | Germany              | 1,419<br>(0.11%)                                   | 6.62%                                      | 94<br>(0.25%)                                   | 11.70%  | 5.03                                     | 00:02:40   | 0.00%                                      | 0<br>(0.00%)                     | \$0.0<br>(0.009                           |  |
| 6.      | Saudi Arabia         | 1,386<br>(0.11%)                                   | 5.19%                                      | <b>72</b> (0.19%)                               | 10.32%  | 5.40                                     | 00:02:23   | 0.00%                                      | 0<br>(0.00%)                     | \$0.0<br>(0.009                           |  |
| 7.      | United Kingdom       | 1,089<br>(0.08%)                                   | 21.40%                                     | 233 (0.61%)                                     | 25.71%  | 4.02                                     | 00:01:32   | 0.00%                                      | (0.00%)                          | \$0.0<br>(0.009                           |  |
| 8.      | (not set)            | 700<br>(0.05%)                                     | 53.57%                                     | 375<br>(0.98%)                                  | 53.71%  | 3.04                                     | 00:01:25   | 0.00%                                      | (0.00%)                          | \$0.0<br>(0.009                           |  |
| 9.      | Thailand             | 627<br>(0.05%)                                     | 4.31%                                      | 27<br>(0.07%)                                   | 9.09%   | 5.28                                     | 00:02:19   | 0.00%                                      | (0.00%)                          | \$0.0<br>(0.009                           |  |
| 10.     | Egypt                | 578<br>(0.04%)                                     | 6.40%                                      | (0.10%)   | 16.09%  | 5.53                                     | 00:02:34   | 0.00%                                      | (0.00%)                          | \$0.0                                     |  |

Rows 1 - 10 of 114

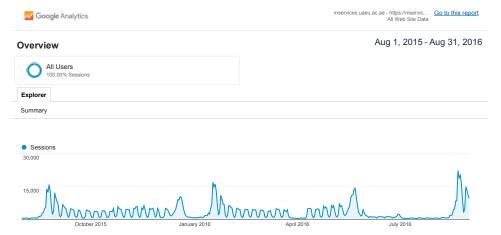
# **Analytics All Web Site Data New vs Returning**



| User Type         | Acquisition  |  |   | Behavior                                      |  |  | Conversions                                |                                  |   |  |
|-------------------|--|--|---|---|--|--|--|----------------------------------|---|--|
|                   | Sessions   | % New<br>Sessions                          | New<br>Users                                    | Bounce<br>Rate                                | Pages /<br>Session                       | Avg. Session<br>Duration                         | Goal Conversion<br>Rate                    | Goal<br>Completions              | Goal<br>Value                                 |  |
|                   | 1,293,419<br>% of Total:<br>100.00%<br>(1,293,419) | 2.96%<br>Avg for View:<br>2.94%<br>(0.52%) | 38,258<br>% of<br>Total:<br>100.52%<br>(38,060) | 7.01%<br>Avg for<br>View:<br>7.01%<br>(0.00%) | 4.71<br>Avg for View:<br>4.71<br>(0.00%) | 00:02:29<br>Avg for View:<br>00:02:29<br>(0.00%) | 0.00%<br>Avg for View:<br>0.00%<br>(0.00%) | 0<br>% of Total:<br>0.00%<br>(0) | \$0.00<br>% of<br>Total:<br>0.00%<br>(\$0.00) |  |
| Returning Visitor | 1,255,161<br>(97.04%)                              | 0.00%                                      | (0.00%)   | 6.65%   | 4.66                                     | 00:02:26   | 0.00%                                      | (0.00%)                          | \$0.00<br>(0.00%)                             |  |
| 2. New Visitor    | 38,258<br>(2.96%)                                  | 100.00%                                    | 38,258<br>(100.00%)                             | 18.77%  | 6.20                                     | 00:04:00   | 0.00%                                      | (0.00%)                          | \$0.00<br>(0.00%)                             |  |

Rows 1 - 2 of 2

# **Analytics All Web Site Data Overview**



| Device Category | Acquisition  |  |   | Behavior                                      |  |  | Conversions                                |                                  |   |
|-----------------|--|--|---|---|--|--|--|----------------------------------|---|
|                 | Sessions   | % New<br>Sessions                          | New<br>Users                                    | Bounce<br>Rate                                | Pages /<br>Session                       | Avg. Session<br>Duration                         | Goal Conversion<br>Rate                    | Goal<br>Completions              | Goal<br>Value                                 |
|                 | 1,293,419<br>% of Total:<br>100.00%<br>(1,293,419) | 2.96%<br>Avg for View:<br>2.94%<br>(0.52%) | 38,258<br>% of<br>Total:<br>100.52%<br>(38,060) | 7.01%<br>Avg for<br>View:<br>7.01%<br>(0.00%) | 4.71<br>Avg for View:<br>4.71<br>(0.00%) | 00:02:29<br>Avg for View:<br>00:02:29<br>(0.00%) | 0.00%<br>Avg for View:<br>0.00%<br>(0.00%) | 0<br>% of Total:<br>0.00%<br>(0) | \$0.00<br>% of<br>Total:<br>0.00%<br>(\$0.00) |
| 1. mobile       | 1,053,057<br>(81.42%)                              | 2.61%                                      | 27,447<br>(71.74%)                              |   | 4.70                                     | 00:02:29   | 0.00%                                      | 0<br>(0.00%)                     | \$0.00<br>(0.00%)                             |
| 2. tablet       | 237,966<br>(18.40%)                                | 3.89%                                      | 9,268<br>(24.22%)                               | 8.15%   | 4.69                                     | 00:02:23   | 0.00%                                      | 0<br>(0.00%)                     | \$0.00<br>(0.00%)                             |
| 3. desktop      | 2,396<br>(0.19%)                                   | 64.40%                                     | 1,543<br>(4.03%)                                |   | 6.56                                     | 00:08:06   | 0.00%                                      | 0<br>(0.00%)                     | \$0.00<br>(0.00%)                             |

Rows 1 - 3 of 3

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# **Analytics All Web Site Data Pages**

| ✓ Google Analytics             | mservices.uaeu.ac.ae - https://mservice Go to this report All Web Site Data |
|--------------------------------|---|
| Pages                          | Aug 1, 2015 - Aug 31, 2016  |
| All Users<br>100.00% Pageviews |   |
| Explorer                       |   |
| Pageviews                      |   |
| 120,000                        | , h   |
|                                | Mann man  |
| October 2015 January 2016      | April 2016 July 2016  |

| Page                          | Pageviews  | Unique Pageviews                                   | Avg. Time on Page                                | Entrances  | Bounce Rate                                | % Exit                                       | Page Value                                 |
|-------------------------------|--|--|--|--|--|--|--|
|                               | 6,086,204<br>% of Total:<br>100.00%<br>(6,086,204) | 3,562,328<br>% of Total:<br>100.00%<br>(3,562,328) | 00:00:40<br>Avg for View:<br>00:00:40<br>(0.00%) | 1,293,396<br>% of Total:<br>100.00%<br>(1,293,396) | 7.01%<br>Avg for View:<br>7.01%<br>(0.00%) | 21.25%<br>Avg for View:<br>21.25%<br>(0.00%) | \$0.00<br>% of Total:<br>0.00%<br>(\$0.00) |
| 1. /news.html                 | 2,725,989<br>(44.79%)                              | 1,193,854<br>(33.51%)                              | 00:00:16   | 1,180,028<br>(91.23%)                              | 4.35%                                      | 7.20%  | \$0.00<br>(0.00%                           |
| 2. /ViewAttendence.html       | 646,311<br>(10.62%)                                | 494,318<br>(13.88%)                                | 00:01:12   | 27,871<br>(2.15%)                                  | 45.09%                                     | 47.33%                                       | \$0.00<br>(0.00%                           |
| 3. /ScheduleByWeek.html       | 620,677<br>(10.20%)                                | 461,977<br>(12.97%)                                | 00:02:22   | 24,172<br>(1.87%)                                  | 48.02%                                     | 50.46%                                       | \$0.00<br>(0.00%                           |
| 4. /ViewStudentGrade.html     | 571,765<br>(9.39%)                                 | 360,732<br>(10.13%)                                | 00:00:25   | 18,848<br>(1.46%)                                  | 14.29%                                     | 11.34%                                       | \$0.00<br>(0.00%                           |
| 5. /GpaCalc.html              | 350,224<br>(5.75%)                                 | 240,243<br>(6.74%)                                 | 00:01:32   | 2,398<br>(0.19%)                                   | 32.86%                                     | 41.00%                                       | \$0.00<br>(0.00%                           |
| 6. /Gpa.html                  | 287,479<br>(4.72%)                                 | 176,872<br>(4.97%)                                 | 00:00:19   | 5,175<br>(0.40%)                                   | 9.57%                                      | 10.24%                                       | \$0.00<br>(0.00%                           |
| 7. /Registration.html         | 267,936<br>(4.40%)                                 | 179,032<br>(5.03%)                                 | 00:03:00   | 12,552<br>(0.97%)                                  | 40.60%                                     | 41.76%                                       | \$0.00<br>(0.00%                           |
| 8. /ViewAttendanceExcuse.html | 101,749<br>(1.67%)                                 | 82,928<br>(2.33%)                                  | 00:00:32   | 3,678<br>(0.28%)                                   | 18.19%                                     | 24.21%                                       | \$0.00<br>(0.00%                           |
| 9. /ScheduleByTerm.html       | 86,747<br>(1.43%)                                  | 66,916<br>(1.88%)                                  | 00:00:52   | 4,291<br>(0.33%)                                   | 20.67%                                     | 20.95%                                       | \$0.00<br>(0.00%                           |
| 10. /academic_calendar.html   | 68,176<br>(1.12%)                                  | 47,552<br>(1.33%)                                  | 00:01:02   | 3,822<br>(0.30%)                                   | 28.05%                                     | 39.34%                                       | \$0.00<br>(0.00%                           |

Rows 1 - 10 of 74

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#### **Disaster recovery**

A catastrophic failure of a main datacenter or the simple loss of the servers in a Datacenter is an IT Departments nightmare scenario.

Some examples of disaster include a natural calamity like earthquake, cyclone or a man-made disaster such as a fire, or a technical disaster such as failed hard drives which even deforms the redundancy. Planning how to restore services as quickly as possible with the minimal data loss is a key IT task. Over the years, the mission critical dependence upon the use of computers in the day-to-day business activities of many organizations has become standard. The UAE University is no exception to this trend.

Consider for a moment the impact of a disaster that prevents the use of the system to process Student Registration, Payroll, Accounting and e-learning or any other vital application for weeks. Students and Faculties and various departments rely upon IT systems for instruction, research & administrative purposes all of which are important to the well-being of the University. It is hard to estimate the damage to the University that such an event might cause.

## DELL PowerEdge FX2 chassis with 4x PowerEdge FC630 blade servers installed



#### **Disaster Recovery Solutions for UAEU**

As important as having a disaster recovery plan is, taking measures to prevent a disaster or to mitigate its effects beforehand is even more important. The University Information Technology Services (UITS) has built a Disaster Recovery site outside Al Ain to host the University most critical Enterprise IT services for business continuity.

In order to facilitate the DR site requirements, UITS has upgraded the existing Physical Servers to the new generation Blade Servers offered by DELL. UITS adopted the Virtualization technology in 2010 and the same technology is used to provision the Virtual Servers in the remote site hosting the critical application and services. The high availability features of VMware Virtualization spectrum helps in having a replicated copy of Virtual Server as well as the Database Servers running in the main Data center so that the moment a disaster strikes, the replicated copy will be activated and all the services will continue working with minimal downtime and the users will least experience this impact.





DELL PowerEdge FX2 chassis rear view





# Upgrade EMC Storage with Solid State Drive (SSD)

Information has become a major commodity in our daily lives. We are producing massive amounts of data daily. At UAEU Students, Staff and faculty members take advantage of readily available IT resources and services to send and receive e-mails, share documents and videos, and use many other applications. With so much data out there, the need for an efficient solution to Data Storage becomes extremely important.

A traditional hard drive leveraged rotating platters and heads to read data from a magnetic device, comparable to a traditional record player; while flash storage leveraged electronic media, or flash memory, to vastly improve performance. Flash eliminates rotational delay and seek time, functions that add latency to traditional storage media.

Fully automated storage tiering (FAST) automatically moves active data to higher performance storage tiers and inactive data to low-cost, high-capacity storage tiers. The result is higher performance, lower costs, and a denser footprint than conventional systems.

As the university grows and its services increase so does the burden on the storage system. Hence, a multi-tiered storage system with automated data movement provides the best solution for managing the data explosion University is experiencing.

The aim of the project is to efficiently utilize the exiting middle tier (Serial Attached SCSI – SAS) as performance storage tier and use the Solid State Drives (SSD) as extreme-performance storage tier to increase application

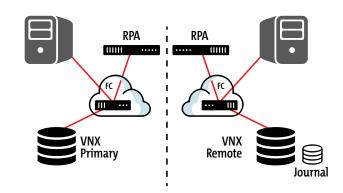
performance by up to 800 percent and the Near Line Serial attached SCSI (NL-SAS) as high-capacity storage tier to lower costs by up to 80 percent overall the VNX7600 Storage System.

Licensing the VNX7600 with EMC RecoverPoint to provide continuous data protection with multiple recovery points to restore applications instantly to a specific point in time as part of the Business Continuity and Disaster Recovery Plans in UAEU.

#### SSD and NL-SAS DAEs Physical View



#### RecoverPoint Replication - Theory of Operation



#### Fully Automated Storage Tiering -Theory of Operation





# Upgrade EMC Storage with Solid-State Drive (SSD)

Upgrade the UAE Data Storage performance and capacity to support the increase demands from business applications to ensure that all administrative services are provided with high level of quality, efficiency and transparency. UITS - An Adaptable Organization.

- 30 x 2 TB NL-SAS disk x 2 DAES. 60 TB
- 25 x 1.8 TB SSD disk x 1 DAES, 45 TB
- Recover point license for VNX7600

#### Disaster Recovery Site Hardware Upgrade

Replace the old intel hardware used in the Disaster recovery site with new hardware. VMware Cluster will be enabled to attain the high availability to Ensure that all administrative services are provided with high level of quality, efficiency and transparency. UITS - An Adaptable Organization.

#### Disaster Recovery Solutions for UAEU

Build a Disaster Recovery site outside Al Ain to host the University most critical Enterprise IT services for business continuity (File shared, Blackboard SQL Server, Banner Database Server, SharePoint SQL Server and Backup Server) to ensure that all administrative services are provided with high level of quality, efficiency and transparency. UITS - An Adaptable Organization.

- » Hardware & Software procurement progress completed.
- » Network Connectivity to the DR site has been completed.
- » Data Domain & SAN replication completed.
- » Domain Controller, UAEU Website, & File Sharing services have been completed.
- » Banner database and application installation completed.
- » New router with 1GB connection between DR & DC installation completed.
- » Project is on-hold due to pending for the completion of WAN and Internet Links Upgrade project (CIO338).

# Upgrade Oracle Logical Domains (LDOM) Virtual Machines

Upgrade LDOM T2 to T5 to support the application needs for the next 3 years, and upgrade the Banner production servers from 32GB to 64 GB to Develop scientific research capacity and innovation in areas of national and regional importance.

UITS - Collaboration & Efficiency through Information Sharing.

- » Hardware Installation completed.
- » OS installation & logical domains configuration completed.
- » Waiting Application migration by EAI.
- » Banner Test Servers has been delivered to application team for Banner installation.
- » Library server has been poisoned on our VMware farm to replace the M5000 Server used by Library.

#### **Extend & Migrate Virtualization Farm**

Enhance and extend the Capacity of the VMware Farm to be capable of hosting more servers and migrate the current virtual servers from standalone hardware to VMware cluster with High availability feature to Ensure that all administrative services are provided with high level of quality, efficiency and transparency. UITS - An Adaptable Organization.

- » Installation completed, first phase to migrate the CITRIX hosts is completed & handed over to Citrix admin to start the migration.
- » DR VMware cluster is completed.
- Citrix hosts are ready, CITRIX admin in migration process.
- » Main site migration from the old hosts to the new clusters in progress.



# Upgrade Oracle Logical Domains (LDOM) Virtual Machines

The purpose of the LDOM upgrade project is to consolidate, virtualize and enhance the University's Oracle SPARC environment, which hosts our Backup and Banner Software.

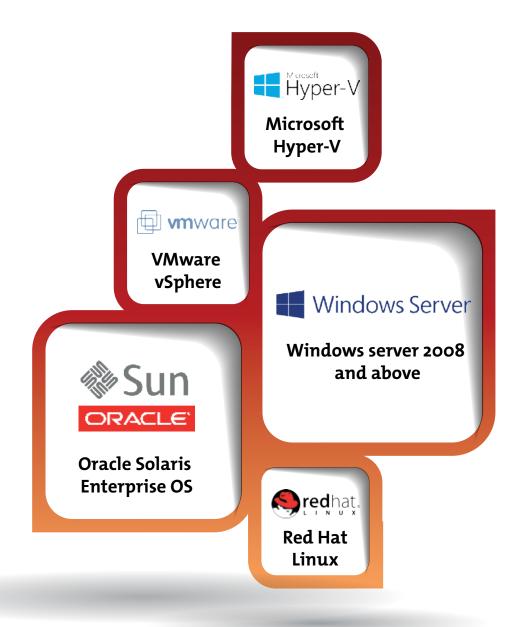
Currently, the University's SPARC environment consists of about 19 physical servers, which, during the course of this project will be virtualized and consolidated across only 2 physical servers, SPARC T5-4.

#### Below are some of the Benefits of this project:

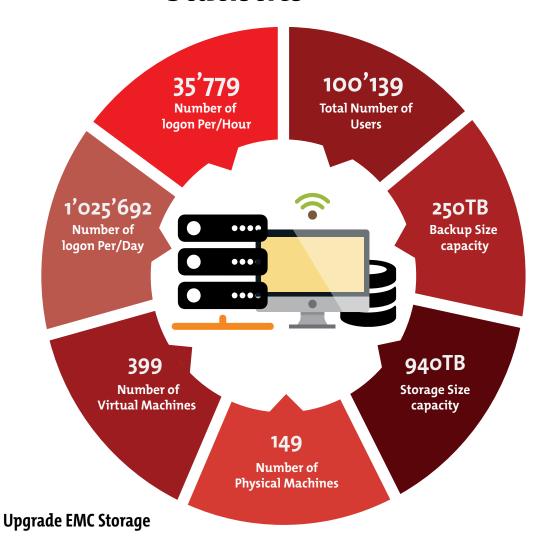
- » Enhance the performance with new hardware
- » Reduce Support and maintenance cost
- » Reduce both physical and power footprint of the SPARC Environment
- » Virtualization will provide greater flexibility in administering the SPARC environment
- » Resources like disk, memory, network and CPU can be changed according to performance needs while the system is running

#### **Project Status:**

- » Hardware Installation is complete
- » OS installation and Logical Domain configuration is complete
- » Banner Test Server has been delivered to Application team for installing and test Banner
- » Library Server has been provisioned on VMware far to replace the M5000 server used by Library
- » EMC Networker Server (legato02), successfully migrated to the T5 server



### **Statistics**



Information has become a major commodity in our daily lives. We are producing massive amounts of data daily. At UAEU Students, Staff and faculty members take advantage of readily available IT resources and services to send and receive e-mails, share documents and videos,

and use many other applications. With so much data out there, the need for an efficient solution to Data Storage becomes extremely important. A traditional hard drive leveraged rotating platters and heads to read data from a magnetic device, comparable to a traditional record player; while flash storage leveraged electronic media, or flash memory, to vastly improve performance. Flash eliminates rotational delay and seek time, functions that add latency to traditional storage media.

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The aim of the project is to efficiently utilize the exiting middle tier (Serial Attached SCSI – SAS) as performance storage tier and use the Solid State Drives (SSD) as extreme-performance storage tier to increase application performance by up to 800 percent and the Near Line Serial attached SCSI (NL-SAS) as high-capacity storage tier to lower costs by up to 80 percent overall the VNX7600 Storage System.

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#### **Extend & Migrate Virtualization Farm**

Enhance and extend the Capacity of the VMware Farm to be capable of hosting more servers and migrate the current virtual servers from standalone hardware to VMware cluster with High availability feature to Ensure that all administrative services are provided with high level of quality, efficiency and transparency. UITS - An Adaptable Organization

#### **Virtualization at UAEU**

UITS adopted the Virtualization technology in 2010 and started virtualization with a minimal number of virtual machines.

Currently, almost 85% of servers hosting the UAEU critical business services are already virtualized. UITS has a 2 year strategic plan for Virtualization to reach 95%.



#### Virtualization defined

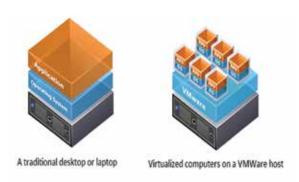
» Virtualization is nothing but creating a version of something like virtual computer hardware platforms, operating systems, storage devices, and computer network resources from a physical hardware.

» The term Virtualization came in to picture in the late 1960s, as a method of logically dividing the system resources provided by mainframe computers between different applications. Since then the term has really broadened.



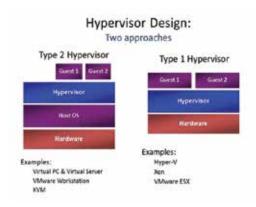
#### **Traditional Vs Virtual Architecture**

- » Traditional Architecture involves having dedicated Physical Server that is a piece of hardware configured to perform the tasks of your business.
- » Virtual Architecture gives flexibility to its hardware by providing performance, efficiency and management being more easier.



#### What is Hypervisor?

The hypervisor is the layer of software that allows a virtualization system to abstract all the resources available in the underlying hardware and present them to the virtual machines that are running on top of this.



#### **Backup & Recovery**

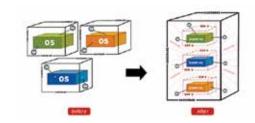
Flexibility to take Full backups as well as snapshots of virtual machines.

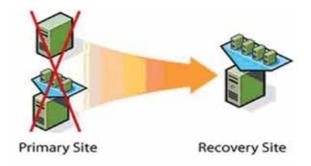
Virtual machines can be relocated from one infrastructure to another and redeployed easier and faster.

Snapshot dramatically cuts the downtime since firing a VM is much easier than booting a new OS instance.

#### **Benefits of Virtualization**

- » Saving energy and cooling, i.e. going green
- » Reducing the data center footprint
- » Faster server provisioning
- » Reducing physical hardware
- » Increasing uptime
- » Improving disaster recovery

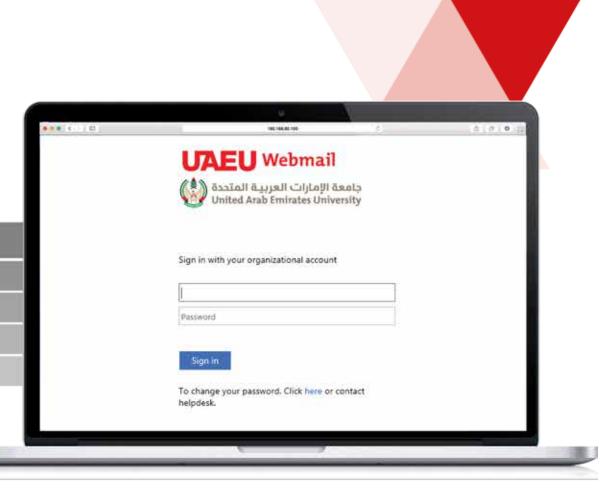






#### Upgraded O365 server authentication servers (ADFS) to new version

With the introduction of new services on Microsoft O365 we needed to ensure user login & account activities are handled faster & better in a user friendly way. With the new authentication servers, we introduced the below features



Simple & user-friendly interface on all devices

User password change

feature





# Upgraded Right fax servers from 10.5 to 10.6 SR2

Right Fax from Open text is our E-Fax solution provided by UITS. With this upgrade we achieved users to be able to send Doc & PDF attachments. We enabled user to be able to receive fax as PDF in emails. This new upgrade has also increased Fax service performance.

# Introduced Microsoft O365 to all staff & faculty

In our efforts to provide the best services to our UAEU community, UITS is pleased to announce the implementation of the new Services using Microsoft Office 365. The new email system is user friendly and allows better and faster communication as it offers many features which are not available to us in the current email system, such as:

- » Access to your e-mail, calendars and contacts using a variety of clients (Outlook, Entourage, Web) and devices (Workstations, Laptops, Mobile Devices) anywhere and anytime. Email from here http:// cloudmail.uaeu.ac.ae/
- » Familiar Microsoft Office Outlook experience using different devices and clients with no requirement for extra software or services.
- » Ability to share your Calendar with anyone.
- » The e-mail environment is fully redundant (highly available 24/7).
- » The size of the mail boxes for Students, Faculty, Staff will be 50 GB. Yes it's true!!
- » Integrated Anti-virus solution that will detect viruses & clean/protect even before it reached your mailbox

# Enabled user with new Services (OneDrive, new office downloads, office online)

#### Office Online & Office Download

You are already using Office desktop applications? Or you might wonder what Office means to you. We think you should go ahead and give Office a try, especially if you are a person that works with other people on Office documents, presentations and spreadsheets. With Office, you can dynamically collaborate in real-time.

Office online gives us the ability view/edit & create office deferments from any device without the need of installing the office application. All you need is to login with your UAEU ID to cloudmail.uaeu.ac.ae

With your UAEU ID you can now download up to 15 copies of office on different devices for FREE, limiting to 5 copies per device type. E.g. Phone/Tablet/PC. You will see the number incrementing at each downloads & similarly can deactivate a copy from a device so you can install & activate it on another.





#### **Data Center Network Upgrade**

Data center networks have evolved in recent years to address the changing nature in the volume and nature of data center traffic. The modern data center workload is now dominated by server-to-server traffic with intensive communication across hundreds of servers. Additionally, application architecture has also changed and there is a huge growth in the use virtualization, microservices, and IP storage.

The increasing demands have led to the development of next-generation of DC switches to be based on application-specific circuits (ASIC), because the ASIC is the single largest factor influencing switch performance, capabilities, power profiles, and cost. The Cisco 9000 Nexus switches is the latest generation of DC switches with high performance ASICs.

UAEU recently upgraded the entire data center from Brocade MLX switches to Cisco 9000 Nexus switches in order to provide the high performance, high port density, reliability and scalability. Considering the future requirement, where data centers are going to shrink in size and moving to the virtualized environment to reduce the power consumption and to provide a central administration for all the network and server environment.

As shown on the figure, the new DC design is a spine and leaf design where the Cisco Nexus 9508 switches are used as Spine or Aggregation switches and Cisco nexus 9396 as Leaf or Access switches.

#### Spine - Cisco Nexus 9508 Switch

- » Aggregation Switch
- » 8 payload slots
- » Up to 1152 full line-rate 1- and 10-Gbps ports
- » Up to 288 full line-rate 40-Gbps ports

#### Leaf - Cisco Nexus 9396PX Switch

- » 48 ports of 1- and 10-Gbps fiber Enhanced Small Form-Factor Pluggable (SFP+)
- » 12 ports of 40-Gbps fiber Quad SFP (QSFP)
- » Used as access switch to connect servers
- » Used as services switch to connect firewalls, load balancers, etc
- » Used as border switch to connect to connect to the campus core

# The major benefits of the data center upgrade are as follows

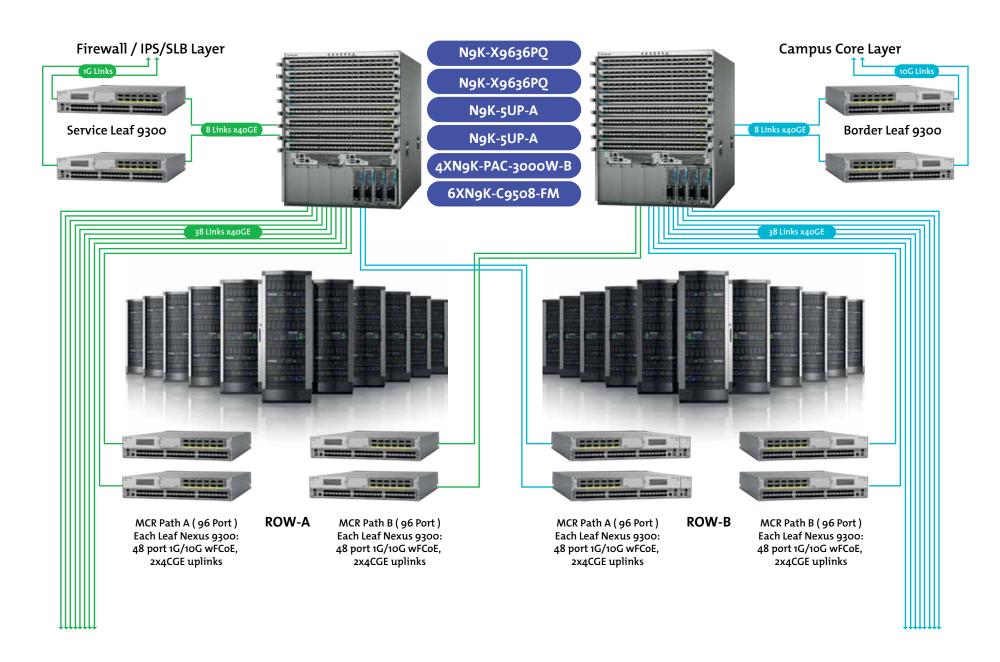
- » It provides high density 40 Gigabit and 10 Gigabit uplinks today and can go up to 100 Gig in future
- » Providing a very high performance of 30 Tbps of throughput
- » Most power efficient, programmable and fastest packet forwarding
- » ACI enabled platform
- » Provides a high level of security based on the Nexus-OS kernel, that provides the modularity and programmability
- » Error free and port based security in a meshed environment

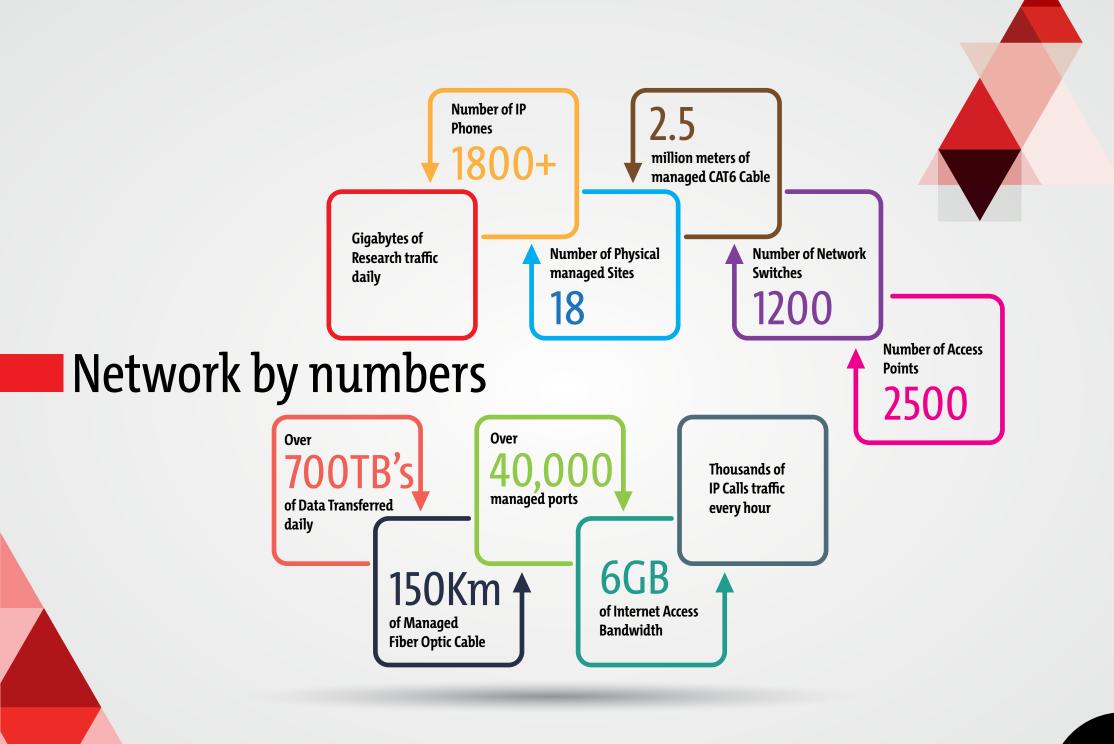




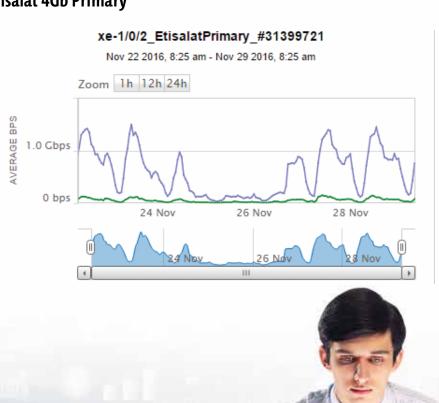


#### **UAEU** DC SPINE / AGGREGATION

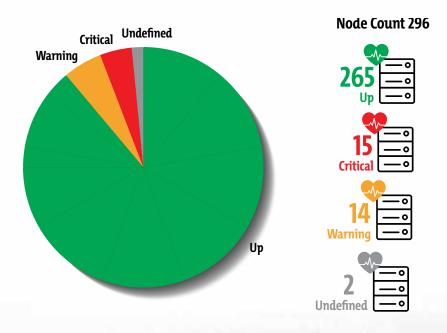




#### **Etisalat 4Gb Primary**

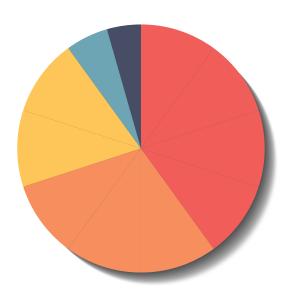


#### **Hardware Health Overview**



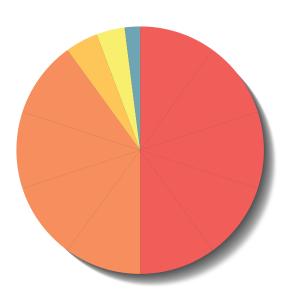
"COMMON"CHREALS AS A PERCENTAGE
Share of the income of participants by quarter

**Top 5 Countries** 



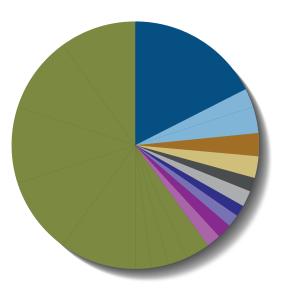
| Country              | INGRESS<br>BYTES | EGRESS<br>BYTES | INGRESS<br>PACKETS | EGRESS<br>PACKETS | PERCENT |
|----------------------|------------------|-----------------|--------------------|-------------------|---------|
| Private Address      | 357.7 Gbytes     | 355.76 Gbytes   | 355.76 M           | 355.67 M          | 39.82 % |
| United States        | 248.5 Gbytes     | 248.4 Gbytes    | 225.37 M           | 225.33 M          | 27.65 % |
| United Arab Emirates | 149.9 Gbytes     | 149.8 Gbytes    | 116.97 M           | 116.86 M          | 16.68 % |
| Europe               | 47.3 Gbytes      | 47.2 Gbytes     | 37.97 M            | 37.96 M           | 5.26 %  |
| France               | 36.5 Gbytes      | 36.5 Gbytes     | 31.95 M            | 31.95 M           | 4.07 %  |
| Remaining traffic    | 58.7 Gbytes      | 58.6 Gbytes     | 56.16 M            | 56.12 M           | 6.53 %  |

**Top 5 Applications** 



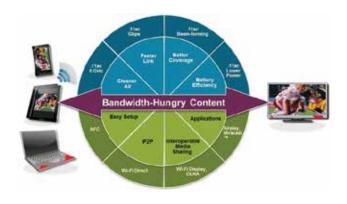
| Applications                     | INGRESS<br>BYTES | EGRESS<br>BYTES | INGRESS<br>PACKETS | EGRESS<br>PACKETS | PERCENT |
|----------------------------------|------------------|-----------------|--------------------|-------------------|---------|
| http protocol over TLS/SSL (443) | 153.2 Gbytes     | 153.1 Gbytes    | 136.13 M           | 136.11 M          | 47.06 % |
| World Wide Web HTTP (80)         | 138.7 Gbytes     | 138.7 Gbytes    | 118.98 M           | 118.95 M          | 42.62 % |
| CAPWAP Data Protocol (5247)      | 8.6 Gbytes       | 8.6 Gbytes      | 9.54 M             | 9.53 M            | 2.63 %  |

#### **Endpoint Vendors**



| Vendor                             | Endpoints |
|------------------------------------|-----------|
| Apple Computer Inc                 | 12.7 k    |
| Cisco                              | 4.5 k     |
| Dell Computer Corporation          | 4.3k      |
| Intel Corporation                  | 2.2 k     |
| Samsung Electro-Mechanics Co., Ltd | 1.5 k     |
| InPro Comm                         | 1.4 k     |
| Hon Hai Precision Ind Co Ltd       | 1.3 k     |
| Samsung Group                      | 1.2 k     |
| LITE-ON Technology Corp            | 968       |
| Murata Manufactuaring Co., Ltd     | 797       |
| Other                              | 48.9 k    |

Wired and Wireless Network Upgrade at Student Hostels and Branch Offices – Maqam 4, Maqam 1, Maqam 5, Science Park, General Stores, General Services and Date Palm Research Center



UAE University has a number of student hostels and branch offices with wired and wireless network infrastructure. On some locations, these networks have served the users for many years but had become outdated since they did not fully support the new generation of clients. With the advancement and wide usage of smart phones and mobile devices, the user is demanding more bandwidth, support for data, audio and video as well as a stable wireless coverage and mobility requirements.

The old equipment at those sites could not support those requirements and it was deemed necessary to renovate and replace them with up to date network infrastructure. The objective of the renovation projects was to:

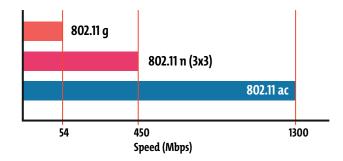
» Replace the structured cabling with the best cabling standard to support the latest wired and wireless

- technology. The installed copper cabling will support 1/10 Gbps while backbone supported 10/40Gbps
- » Provide reliable wireless coverage for all buildings especially in the student rooms, staff office areas and some outdoor locations
- » Install the newer 802.11 AC Wireless Access points which provide high throughput and lesser interference on the 5GHz frequency.
- » Replace the core switches, edge switches and wireless controllers at those sites to provide higher bandwidth, robust design and stability.

# The network upgrade have achieved the following

- » increased application performance
- » provided full support for the new generation of Wi-Fi clients with integrated 802.11ac capabilities (such as smartphones, tablets, etc)
- » provided support for the older generation of wifi clients with 802.11a/g/n Wi-Fi clients (such as older laptops and phones).
- » Enhanced security
- » Optimal wireless coverage with technologies such as beam forming, multiple spatial streams, aggregate radio, reduced battery consumption and other features.
- » Ease of management

#### Wifi Standard

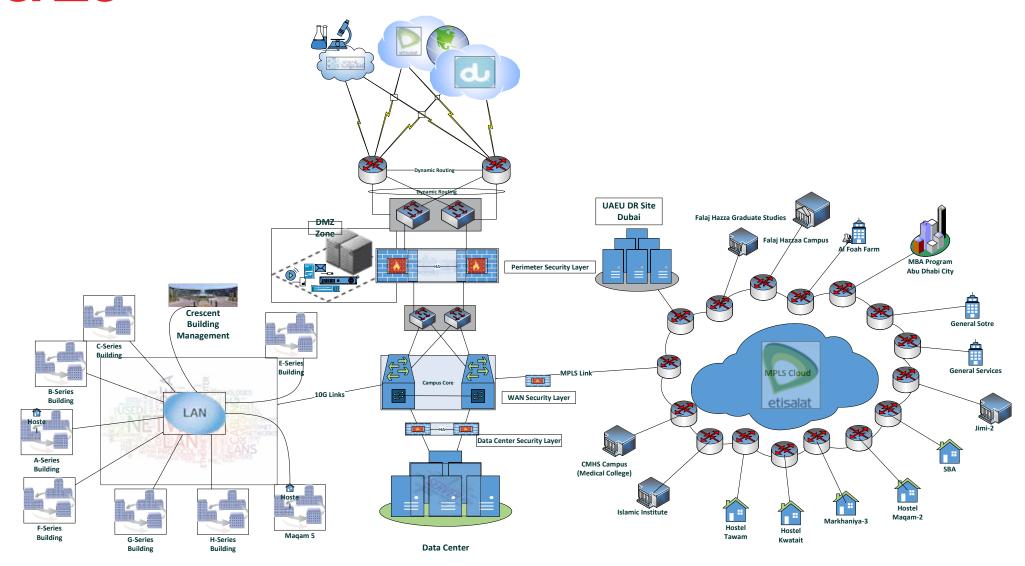








# **UAEU**

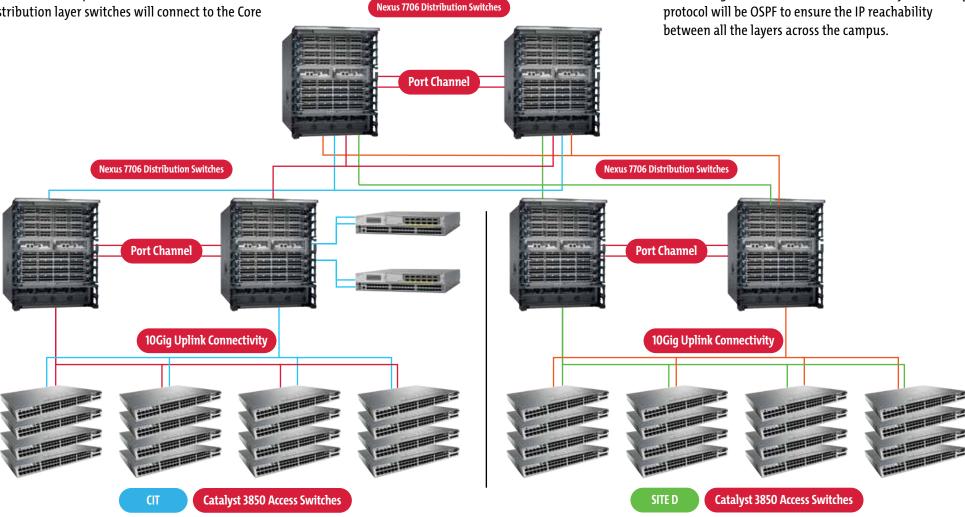


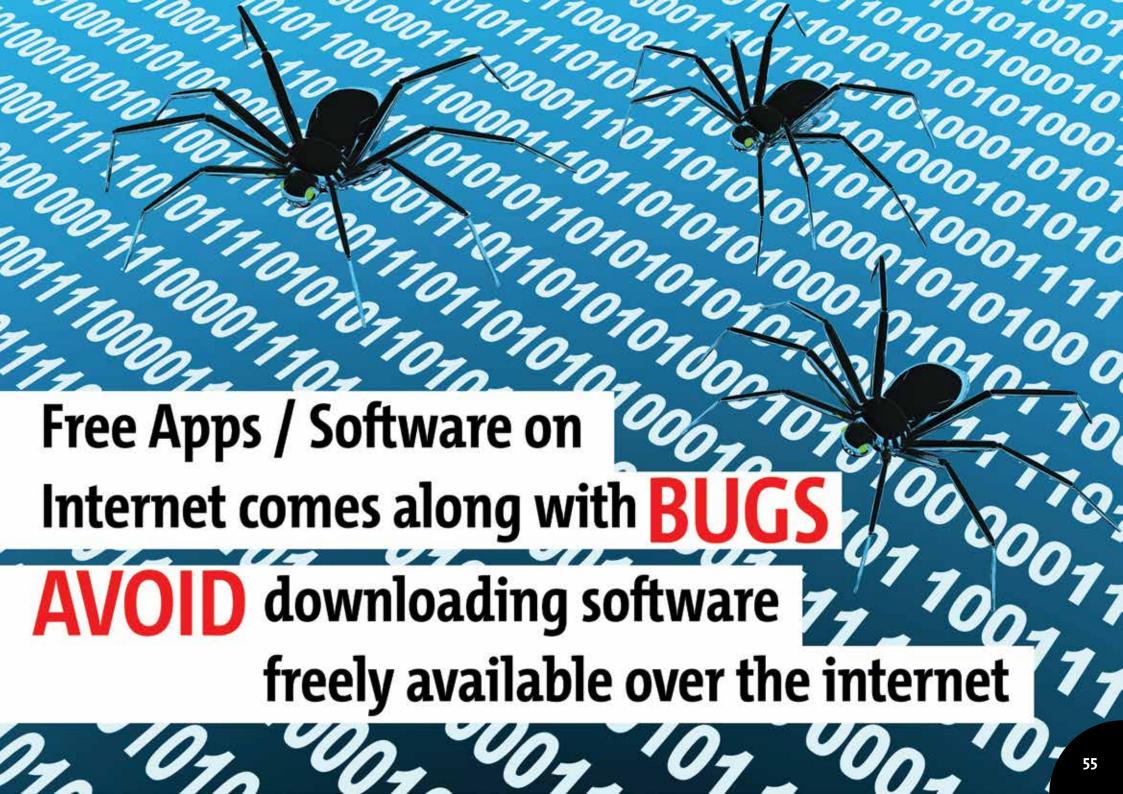
#### New Campus Upgrade Phase II

#### **Solution Overview**

The newly proposed architecture will be based on the Cisco's three-layer architecture: Core, Distribution and Access. Access switches will provide entry point for the users across the campus and these switches will connect to the respective Distribution switches. All the Distribution layer switches will connect to the Core

switches with multiple 40Gbps links. The new Cisco Nexus 7710 switches with redundant supervisors will be configured as Campus core switches and will have modules with 48-port 1/10Gig ports. These Core switches will be aggregation point of multiple Distribution switches to ensure the interconnectivity between multiple distribution layers. Distribution switches will connect to the core layer by multiple 40Gig links and will run routing between Core & distribution layers. Routing protocol will be OSPF to ensure the IP reachability between all the layers across the campus.





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#### **Networking Blocks**

Datacenter Block is used to host the Shared applications access by the entire UAEU. Existing cisco Nexus 9508 switches are deployed in the Datacenter Core layer and new Cisco nexus 9396 are being used to aggregate the Servers acting as top of the rack switches. Datacenter to campus core connectivity is fully redundant 40Gbps. Inside the datacenter, the servers connect to the switches using both 1gbps links on the physical servers as well as multiple non-blocking 10Gbps links using fully virtualized Dell blade chassis. Moving ahead, the server team plans to virtualize the complete DC environment with at least 10G uplinks.

#### **DC Tor Switch**



#### **DC Aggregate Switch**



Campus Core block will be used to route traffic between multiple blocks i.e. traffic across multiple block has to transit through the Core network. Two Cisco Nexus 7710 switches will be used as Core switches, which will have dual 40Gig connectivity to DC Core Switches and multiple distribution blocks.

#### **Campus Core**



**Services block** comprises of internet gateway routers and perimeter firewall, which terminates the internet service provider connections. The perimeter firewall now connects to the campus core using multiple 10Gbps, non-blocking, fully redundant connections. UAEU connectivity to the internet is also completely redundant as the gateway router are both dual-homed and multi-homed.

# **Distribution block** will be used to aggregate Access switches for the respective locations. Two Cisco Nexus 7706 switches will be used at each Distribution layer. There are multiple distribution blocks, which in turn connect to the access switches.

Access block terminates the actual end users. Devices like computer desktops and IP Phones connect to the access layer. UAEU has cutting-edge 3850 switches forming this layer. These switches also have 12 multi-gig ports (M-gig) which connect to M-gig capable hosts such as access points and can provide upto 10Gbps speed.



#### Major benefits of Campus Upgrade

- » The campus cores are 40Gbps capable with feature such as virtual port-channel & virtual device context (VDC). Utilizing the VDC feature of Nexus, UAEU has terminated the wireless controllers to a separate VDC to limit the layer-2 fault domain.
- » Both the cores and distribution provide high-density 10/40 Gbps uplinks today and can go up to 100 Gbps in future.
- » Power efficient, programmable and fastest packet forwarding.
- » Provides a high level of security based on the Nexus-OS kernel, which provides the modularity and programmability based on control plane policing.



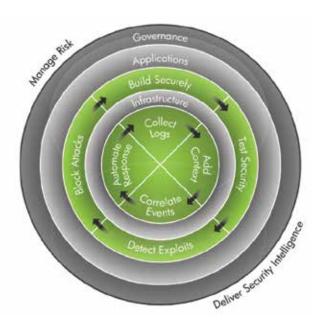




#### **Security Information and Event Management SIEM Solution**

A Security Information and Event Management or SIEM solution is a system that combines Security Incident Management with Security Event Management. It is used to provide real time analysis of the security alerts that are generated by various IT infrastructure components such as wired/wireless network devices, servers, firewall, etc.

For ISO27000 compliance and federal UAE regulations, UAE University has implemented a SIEM solution to log security events and generate reports. The SIEM is based on the well known SIEM product called HP Arcsight. This product has more advanced features than the typical SIEM solution and it is referred to as a Security Intelligence and Risk Management SIRM Solution. It is capable of helps safeguard the organization by providing complete visibility into activity across the IT infrastructure including external threats such as malware and hackers, internal threats such as data breaches and fraud.



## The system capabilities can are summarized below

**Data aggregation:** Log management aggregates data from many sources, including network, security, servers, databases, applications, providing the ability to consolidate monitored data to help avoid missing crucial events.

**Correlation:** looks for common attributes, and links events together into meaningful bundles. This technology provides the ability to perform a variety of correlation techniques to integrate different sources, in order to turn data into useful information. For example, to track an AD user use of wireless network

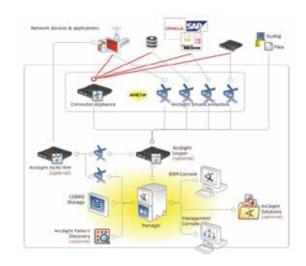
**Alerting:** the automated analysis of correlated events and production of alerts, to notify recipients of immediate issues. Alerting can be to a dashboard, or sent via third party channels such as email.

**Dashboards:** Tools can take event data and turn it into informational charts to assist in seeing patterns, or identifying activity that is not forming a standard pattern.

**Compliance:** Applications can be employed to automate the gathering of compliance data, producing reports that adapt to existing security, governance and auditing processes.

**Retention:** employing long-term storage of historical data to facilitate correlation of data over time, and to provide the retention necessary for compliance requirements. Long term log data retention is critical in forensic investigations as it is unlikely that discovery of a network breach will be at the time of the breach occurring.

**Forensic analysis:** The ability to search across logs on different nodes and time periods based on specific criteria. This mitigates having to aggregate log information in your head or having to search through thousands and thousands of logs.

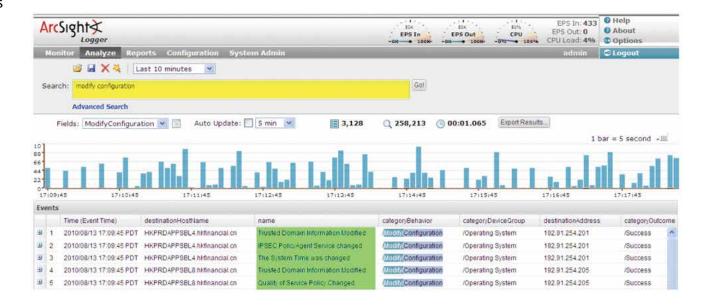


#### The components of the HP Arcsight SIEM solution are as follows

**HP ArcSight Logger** – a log management solution collects data from any log generating source and unifies the data for searching, indexing, reporting, analysis, and retention.

HP ArcSight Connectors - provide universal data collection from over +350 unique devices and event sources without the need to deploy agents across the enterprise. It automates the process of collecting and managing logs from any device and in any format through normalization and categorization of logs into a unified format known as Common Event Format (CEF).

**HP ArcSight ESM** – is the security event manager that analyzes and correlates every event in order to help the IT Security team with security event monitoring, from compliance and risk management to security intelligence and operations. It has many add on modules such as HP ArcSight Threat Detector, HP Reputation Security Monitor (RepSM), Identity View and others.



#### **Solarwinds Monitoring Solution**

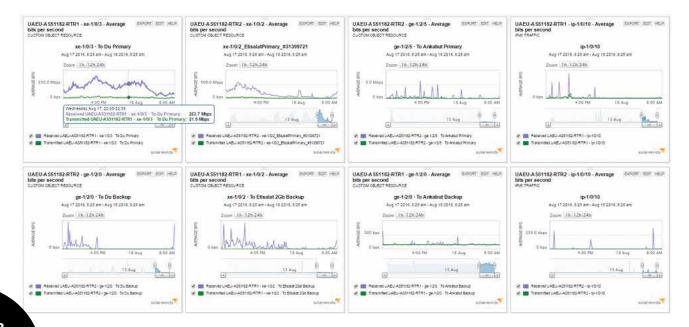
UITS has deployed the Solarwinds product, which is an advanced infrastructure monitoring solution. Its deployment has provided greater visibility into the University's UITS infrastructure devices. All wired & wireless network nodes, security nodes, storage nodes, servers & the applications running in them are being monitored on most parameters.

Monitoring is done at both hardware and application levels. Servers monitored are both physical & virtual. University's major website transactions are also monitored in this product.





University's Internet & MPLS links to each hostel site are also monitored in a graphical form which help identify issues with either the University's or the connected Internet Service Provider's links & take necessary corrective measures.



Solarwinds' monitoring, alerting and capacity forecasting systems helps the UITS staff identify potential errors in the infrastructure devices and to take preventive measures to avoid the devices from crashing. Configuration backup of network nodes is also done by Solarwinds. It also provides flexible & detailed report generation options for the infrastructure availability, etc.

# UAEU WAN Links and Internet Bandwidth Upgrade

With More and more services migrating towards cloud such as Office 365, Citrix etc., and student's requirement to access rich and high definition media at quicker speeds, and to provide academics with High quality Videoconferencing and other bandwidth hungry applications, demanded more bandwidth.

In order to cater with such pressing requirements and keeping in view any future expansion ICT Team decided to lay the infrastructure which will not only fulfill the current needs but is also ready to handle any other future demands.

Two major upgrades were done in this regard 1) ISP Services and 2) The underlying Hardware. The current ISP services couldn't be upgraded due to the underlying hardware which puts a hard limit on the bandwidth due to no support of high speed modules. So the Internet and MPLS routers were upgraded that supported 10G Links as a first step. Later the ISP services (MPLS and Internet) were upgraded as well to cater the huge bandwidth demands.

Earlier UAEU had only 2GB of Internet Access which was mostly used during peak hours and MPLS links were between 10-50MB. After the Upgrade we now stand at 6GB of Internet access capable to be upgraded to more than 200GB and the MPLS links are at 100-300MB. This will allow users to access High Content media at much higher speeds and also with full redundancy (availability 99.9999%).



#### **Email Security Best Practices**

E-mail - so simple, so important Security

Email messages containing Spam, Phishing or those containing viruses as hoaxes are becoming more and more challenging to identify. Spammers and phishers are getting better everyday at making these messages look legitimate. However, these messages often fail on a number of counts. They usually contain bad spelling and/or grammatical mistakes. Also, some such emails ask for your personal information, namely username/password. You are of course strongly advised against replying to such emails. You should also inform IT Help Desk (helpdesk@uaeu.ac.ae).

#### **Recognize Scam**

Scam tactics are constantly changing and becoming increasingly sophisticated. If an email looks genuine, be careful and look for these warning flags

- » The message is unsolicited and asks the user to update, confirm personal information.
- » The message is labelled as urgent.
- » The message has an unusual source address or and unusual reply-to address instead of
- » "@uaeu.ac.ae" address.
- » The web address does not have 's' after http://, indicating it is not a secure site.
- » Opened-link does not match the given link in the email.

## **Phishing by Numbers**

- » 91% of cyber-attacks begin with spear phishing email.
- » 94% of spear phishing emails use malicious file attachments.

#### **Handling email Attachments**

#### Be careful of all attachments and links:

- » The most dangerous ways malware can be spread is via attachments and harmful links (Any attachment, especially .exe). Avoid clicking on links / attachments in unsolicited emails.
- » Never open email attachments or links you don't recognize.
- » Never respond to spam/phishing emails.
- » Don't provide sensitive or personal information over email. Use email Encryption New Service (ask Help Desk for email Encryption), when sharing personal or confidential information.



# PHISHING

Phising is a technique where a user is tricked into submitting personal / confidential information thinking that the request is coming from trustworthy source.

Avoid becoming a victim of phising by following these simple rules.

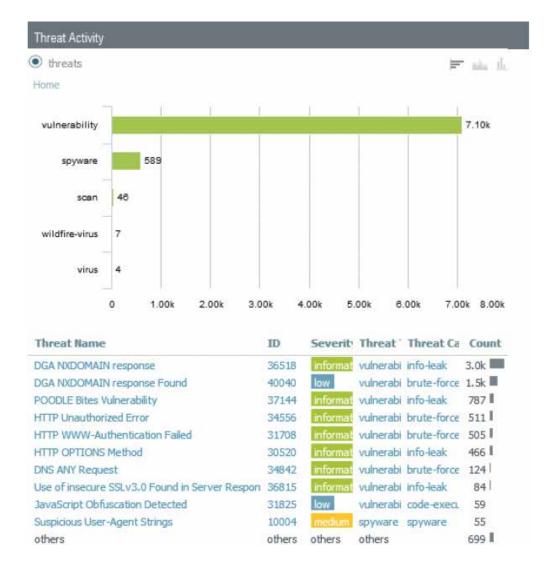
- Do not reply to e-mails requesting you to forward details such as passwords, account information etc., even if the e-mail seems to be from a legitimate source.
- Do not use a link in an e-mail to get to a web page. Instead, type in the URL directly into your browsers address bar.
- **Be Vigilant when downloading e-mail attachments on your computer. if in doubt, do not download.**

I Just received an e-mail from the service call centre asking me to send them my login and password





| Overview > Incoming Mail Summary          |        |          |  |  |  |
|---|--------|----------|--|--|--|
| Message Category                          | %      | Messages |  |  |  |
| Stopped by Reputation Filtering           | 85.8%  | 12.4M    |  |  |  |
| Stopped as Invalid Recipients             | 4.2%   | 606.3k   |  |  |  |
| Spam Detected                             | 4.6%   | 663.6k   |  |  |  |
| Virus Detected                            | 0.0%   | 992      |  |  |  |
| Detected by Advanced Malware Protection   | 0.0%   | 0        |  |  |  |
| Messages with Malicious URLs              | 0.2%   | 27.4k    |  |  |  |
| Stopped by Content Filter                 | 0.3%   | 36.5k    |  |  |  |
| Stopped by DMARC                          | 0.0%   | 0        |  |  |  |
| S/MIME Verification/Decryption Failed     | 0.0%   | 0        |  |  |  |
| Total Threat Messages:                    | 94.9%  | 13.7M    |  |  |  |
| Marketing Messages                        | 2.2%   | 316.7k   |  |  |  |
| Social Networking Messages                | 0.2%   | 29.4k    |  |  |  |
| Bulk Messages                             | 1.0%   | 143.1k   |  |  |  |
| Total Graymails:                          | 3.4%   | 489.2k   |  |  |  |
| S/MIME Verification/Decryption Successful | 0.0%   | 0        |  |  |  |
| Clean Messages                            | 1.7%   | 251.5k   |  |  |  |
| Total Attempted Messages:                 | 117 76 | 14.5M    |  |  |  |





- Ensure your computer is locked or logged out when you leave your desk, as someone else could send message in your name.
- Never reply to unsolicited "spam/phishing" email, even when given an option to remove your name from the mailing list as this just trick to confirm to that your email address is valid or steal your personal information.
- If you subscribed (journal/newsletter etc.), then its' safe to use the instructions given by the host. Keep your passwords secure and ensure they are not visible to the casual observer.
- If you need to send confidential information (e.g. exam questions/result or sensitive communication) contact UITS Help Desk and ask about encryption.

#### **Reporting Suspicious Email**

If you receive a phishing email, kindly forward to IT Help Desk at helpdesk@uaeu.ac.ae as attachment.

#### New Email Spam Filtering System Cisco IronPort

University Information Technology Services (UITS) has implemented a new spam-filtering gateway as of April 2014 that is expected to reduce the amount of spam/Marketing email received by the University.

In the new system, Suspected spam and Marketing mails will be quarantined.

To access your quarantined email, login to https://myspam.uaeu.ac.ae using your UAEU email address as username and

password.

# STRONG PASSWORD

Follow these easy steps tips to make sure that your password is easy to remeber but hard to guess!!

- Is at least eight characters long.
- Includes at least one character from three of the following four categories:
  - > Uppercase characters ( A to Z )
  - > Lowerxase characters ( a to z )
  - > Numbers (0 to 9)
  - > Symbols (for example: !,\$,#,%,etc)
- Do not include three or more consecutive characters from your login or full name.









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That why we are aiming to join the success story, UAEU has start a journey to upgrade all it client devices to windows 10, this Aim is not

To reach our goal we have to sharp our tools first, in order to do so UITS implemented Microsoft System Center latest version (1511) to replace the previous version (2012) which was non-compatible with windows 10, after the server in place we have to go through a process of client upgrade to more than 5000 register clients in our server.

Our work started with close corporation with Microsoft, on the end of May 2016, taking into consideration the obstacles such as that not all software used in colleges will be compatible with windows 10 yet, today we reach about 1000 pc all of it running windows 10.

> As a step in the plane we did prepare all our new images for the new academic year to be based on windows 10, this will lead to that all new devices coming to the picture will be windows 10.

> > Not only Equipment's needs to be sharpen our people too, in order to increase our IT support staff level of understand to windows 10, we did arrange a windows 10 training for about 30 of our staff, those people coming from all the colleges and units for the university. the session was having a lot of hands on labs and scenarios and the feedback from it was very encouraging.

> > > Our plans for the coming years is to finish what we start, ending by replacing all our clients to windows 10 clients by the end of 2017



AV Technology Services @ UAEU provides Design, Implementation, Support and Services around the Campus. The specified areas are built with AV Technology in Classrooms, Lecture Halls, Meeting rooms, Auditoriums and Sports Venues where user experience and System performance build Customer image and provides Educational Productivity.

**UAEU Classrooms** are supported with more advanced and state of the art technology like smart board which helps faculties to teach students in effective manner. Smart board with support of computer and opens a new world in understanding the same subject in a better and more powerful way. Faculties can add more color and sound while teaching on a Smart board. The use of audio-visual aids can make both teaching and learning easier with latest technology.

UAEU Lecture halls have dual projection facilities and gives a wonderful experience for the students. Interactive writing technology used in this lecture hall helps faculties to interact with students. This will develop students to concentrate more on the subject. Especially all our lecture halls, AV installations are carried out by qualified and experienced engineers. Installation of audio visual control systems are stable to deliver perfect acoustics and crystal-clear visual imaging that reach every corner of the lecture hall.

**UAEU sports venue** has integrated with AV technology to use high quality sound system, LED display systems and LED score boards for student activities and entertainments

**UAEU Meeting rooms** provides user friendly and easy-to-maintain solutions, such as High performance control processors and touch interactive systems that meets UAEU community needs. Wireless presentation system allows participants to share content from any device during meeting. These rooms are equipped with programmed devices to control the accessibility of the AV systems.

of seating capacity. Such facilities are integrated with powerful audio-visual system that provides simple control for user friendly environment at UAEU. Auditoriums and great hall enhanced with LED panels & Heavy Duty high lumens Projector with Surround sound systems including lighting and blinds etc. These AV systems supports all kind of programs like cultural Events, Exhibitions, national & international Conferences, Graduation Ceremony, Convocations and student activities etc.

UAEU AV System Maintenance team is maintaining entire AV technology at the campus on daily, weekly and monthly basis. This will maintain the system performance last long. We do testing measures consist of developing a set of test criteria either for the entire system or for specific hardware, software and communications components. We do provides first level support to maintain Info point, Way finder, Digital signage and IP TV's around the campus.



## Educational court rooms Upgrade – overview

The college of law has educational court rooms in both Male and female campuses where we use Audio visual technology for teaching and learning purposes. It was hard to continue operating and maintaining the legacy technology, so we have decided to upgrade the rooms with the latest technology to enhance the functional and operational features.

The new system has the capability of fast switching of multiple inputs selected instead of the old analog switching. The use of high definition cables enhances the image quality. The new digital audio conference system has more floor control options and uses microphone and speaker units in each user desk for audio discussion. The new programing of control system for the room operation added the flexibility for the user to choose separate inputs either video or presentation on each display area and the new user interface is very user friendly. The room operation application is not only limited to the touch screen but also extended to iPad and pc which enhances the operational reliability. The video conference system in the room has now more control and flexibility, the facility utilizes for delivering lectures and seminars within the university or between any outside organizations thus can reduces the travel time, expenses and can have concurrent teaching and learning sessions for male and female students.

As a result of the upgrade, the students and teachers can utilize the state of the art new technology which infuses a practical court room experience in to the curriculum.

## **Centralize IT Resources Around the Campus**

Research and studies proved that Unified IT systems are able to deliver more consistent services and enable information sharing. IT service's consolidation has become a priority for many organizations as well as for UAEU. Information and communication technologies have become commonplace entities in all aspects of UAEU academic and administrative operations and playing an important role to achieve their targets according to UAEU's vision & mission. IT services consolidation is a logical and important step for UAEU in designing a more rational, efficient and resilient IT infrastructure that can support the on demand operational model. UAEU have enough resources and skills that can sustainably optimize UAEU IT Services by centralization concept: for higher productivity, better mapping of operational processes, greater security and stability, optimum availability and minimal administrative costs. By centralizing IT resources UITS work as a single team. The IT development, support, delivery, policies and procedures are treated as a whole "The IT".

#### Realized benefits of centralization:

- » Improved Service Level
- » Improved decision-making
- » Improved communication level
- » Reinvestment of funds
- » Infrastructure and maintenance upgrades
- » Eliminating redundant capabilities
- » Standardization
- » Centrally located resources
- » Opportunities for resource realignment
- » Reduce complexity and Risk

## Video Wall Solution for UITS Network Operation Center Room

One of the important goals for UITS is continual service improvement, The ICT Office (NOC room) was one of Locations ITSS Team works to enhance the Video system with latest solutions which Meet current and future needs. Video wall is special multiple LED-Display tiled together contiguously to make one large screen. With a lot of benefits like High performance, 24/7 reliability, Purpose-built solutions for different needs, Versatility, Maintenance Ease, Superior long-life performance and Lowest cost of operation.

The NOC room Video wall consist of 12 Samsung 46 inch professional displays, on each display we installed Samsung SBB media player. We are using Software-based PC solution to Control the video wall and for Content Management. We depended on stand to install the video wall to ease the possibility of reuse it another place in the future



In the middle of the last year all UAEU community (students, faculty and staff) start up to use Microsoft office 365 cloud. The part of this service is MS OneDrive for Business that enable you to access your files from anywhere, on any devices such as (windows based, Mac, Android, iPhone, iPad and others), also you can easily share them with your co-workers and others; simply it is your professional library.

#### What You Will Get?

- With UAEU University account, you get 1TB of OneDrive space that works seamlessly with the tools you use every day to create, edit, communicate, and collaborate from your devices.
  - » Trust OneDrive to storage your data. Built in security features like file encryption help you protect your data and allow you to send encrypted email to anyone, whatever email service recipients may use.
    - » Don't worry if you lost your files, OneDrive create a backup and you can restore your files anytime.



Share. Store. Sync

Will help you!!



## **How To Access OneDrive?**

#### From UAEU Webmail

Login to UAEU Webmail. (http://cloudmail.uaeu.ac.ae/)

- 1. Click the" Apps Launcher" in the upper left
- 2. Select "OneDrive" icon

- 1. Use the Query Box to search the Documents in your OneDrive for Business.
- 2. By default, you will see your own files and folders in OneDrive for Business, managing them by using the links on left side (Files, Recent, Shared with me, Discover and Recycle bin)
- 3. The Quick Command Bar allows you to
  - » Create new documents.
- » Upload documents from your computer.
- » Sync OneDrive for Business to your devices for local access to your files.
- 4. This is your OneDrive library of files and folders, the place to keep your work documents, assignments, coursework and other files.



## From your Desktop



From your Tablet and Phone

## **ITSS** Statistics

**Number of Total survey records Number of** Service desk calls / 6 lines emails answers **Total Number of** (2015:8850) (2015: 73247) by helpdesk change requests (2016: 4860) (2016: 82501) Total: (2015: 175) Number of 15000 Total: 13710 (2016:101) **Total Request** 155748 Total: (2015: 30950) The total number of 276 calls (2016: 20371) Video conference sessions Total: for the period Jan 2015 51321 **Number of** to June 2016 is around services desk **Around 1500 Desktops** 480 Number of requests were replaced with **Total No of** helpdesk calls legacy machines Desktops 5657 (2015: 11787 calls) 8000 1500 (2016: 13462) **Total Calls:** The total number of Number of live chat 25249 smart boards around 117 the campus are calls 1025



#### Governance, Risk and Compliance Solution

Automate the IT Governance, compliance and risk procedures.

#### **Graduate & Undergraduate Transcript Enhancement**

Enhance the current Online Transcript system by solving the issue related to BS students, BS-MS students and PHD students by updating & changing Transcript information.

## **Extend & Migrate Virtualization Farm**

Enhance and extend the Capacity of the VMware Farm to be capable of hosting more servers and migrate the current virtual servers from standalone hardware to VMware cluster with High availability feature.

#### **UAEU Science and Innovation Park Website**

Create and host the UAEU Science and Innovation Park website by creating the site templates and making it available so that the content can be entered.

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#### Online Financial Aid Management System (Phase II)

Enhance the current Student Financial Aid System to include a link to Zakat form, enhance the payment process, add additional notifications, allow applicants to update their financial situation.

## Student Field Trip Management System

Develop in-house an online application that will allow colleges to request student field trips for training, conferences, workshop and other activities with other institutions and organizations in the UAE.

## Upgrade Oracle Logical Domains (LDOM) Virtual Machines

Upgrade LDOM T2 to T5 to support the application needs for the next 3 years, and upgrade the Banner production servers from 32GB to 64 GB.

## New Campus Wired Infrastructure upgrade Phase 3

Upgrade existing Brocade network infrastructure to replace it with Cisco network infrastructure to have a robust infrastructure to support UAEU's growing needs and to ensure connectivity & interoperability with the rest of existing campus buildings network infrastructure & data center.

## **Student Volunteer System**

Develop in-house an online application that will allow student to register in event as volunteers. Students can track their volunteering hours. Dashboards are available to be viewed by external viewers and reports can be generated.

#### Maqam 3 Hostels Renovation Network Infrastructure

Magam 3 hotel site is going under renovation, part of that IT network wired and wireless infrastructure will be upgraded with a high performance wired & wireless network to enhance students learning experience.

## New Campus Wired Infrastructure upgrade Phase 3

Existing Brocade wired infrastructure is not stable, we will replace all switch infrastructure with Cisco to have a robust infrastructure to support UAEU's growing needs. Phase 2 included an upgrade of all switches at Crescent and CIT building as well as the installation of new Cisco Core Switches. Phase 3 includes the upgrade of C1 to C6 building switch infrastructure and migration of all campus buildings to the new Cisco Core Switches.

# Pipeline IT Projects

## Interactive Website for International Journal for Educational Research

Develop an online system to enable external authors to submit and track their manuscripts for CEDU journal online and enable internal/external reviewers to review & approve online.

#### **Attestation Management**

Enhance the Banner Attestation solution to make work more easy and faster to give high quality services by adding additional fields for new Academic Degrees like effective term.

#### **Graduation Projects Assessment**

Develop an online solution to replace the current manual system with an automated system for the assessment and evaluation of student final graduation project.

#### Hostel To Whom It May Concern Letter for Students

Develop in-house and online system that allows hostel students to request Hostel To Whom It May Concern Letter online, pay fee online, and receive a soft copy of the letter via email.

## Performance Management Solution

Develop in-house a web-based Performance Management System and integrate it with Banner.

## Internship & Work-Integrated Learning (iWIL)

Enhance the current iWIL online system to automate all procedures and support the colleges and students for all the operations related task to the internship.

#### Upgrade Projection in Food Court

Need to upgrade the legacy projection technology in Food court.

## FMHS Wired and Wireless Upgrade

Upgrade the current very old wired and wireless IT network infrastructure with a high performance wired & wireless network to enhance users connectivity experience.

## Upgrade Jimi2, ADH & ADH Reem Network Infrastructure

Upgrade the current very old wired and wireless IT network infrastructure with a high performance wired & wireless network to enhance users connectivity experience.

## Upgrade AV Solution in F3 Building

Upgrade the AV system in F3 building classrooms from Analog to Digital to enhance the classrooms academic activities.

## Tawam Hostel Wired and Wireless Upgrade

This site is running on bit old wired and wireless infrastructure. This project will help us to bring this site infrastructure level where end users can experience better connectivity experience.

## Day Care Nursery Wired and Wireless Infrastructure

Implement wired and wireless infrastructure for the new day care site.

#### Upgrade Projection in C1 Lecture Theater

Upgrade the legacy projection technology in C1 Lecture Theaters by replacing with new machines along with dedicated system instead of linked to info point.

## iPad Upgrade for University College

Upgrade the legacy iPad devices with latest version of iPad for University College faculty members.

#### Upgrade General Services Network Infrastructure

This site has very old wired and wireless IT network infrastructure. To enhance the staff productivity, we will upgrade the existing old infrastructure with a high performance wired & wireless network.

## Upgrade AV Solution in CIT Building

Upgrade the AV systems in CIT building classrooms from Analog to Digital to enhance the classrooms academic activities.

## B to B Electricity Payment System

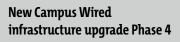
Develop a B to B solution (from Manual payment to electronic payment) by downloading the invoice from AADC system and upload it to the new system & generate invoice automatically.

## **FMHS IPT Migration**

Upgrade the FMHS IP Telephony to match the central campus telephony infrastructure.

#### **Teaching Assistant Program**

Develop an online TA management solution for all TAs who are abroad to communicate with each other, advisors, faculty & with the director of the TA program and also TA office to manage and track the TA's requests, conference, leave, & etc.



Upgrade existing Brocade network infrastructure to replace it with Cisco network infrastructure to have a robust infrastructure to support UAEU's growing needs and to ensure connectivity & interoperability with the rest of existing campus buildings network infrastructure & data center.

## Disaster Recovery Site hardware Upgrade

Replace the old intel hardware used in the Disaster recovery site with new hardware. VMware Cluster will be enabled to attain the high availability.

## Upgrade Banner ERP (from 8.x to 8.10)

Upgrade Banner ERP Modules to the latest available version to implement a new online Middle East Admission module & to ensure compatibility to accounting standards as required by the WASC accreditation.

## **Faculty Promotion System**

Develop in-house a web-based system that allow faculty members to apply for academic promotions and their applications can be evaluated internally and externally by reviewers and university administrators.

## **Upgrade Data Storage Switches**

Additional Data Storage switches to connect hosts to manage the applications demand.

#### **Undergraduate Admission**

Develop in-house an online admission application for undergraduate students and enhance the admission process with NAPO.

## Connect Great Hall and Auditorium with Video Wall and Sound

Implement sound and halls screen replication solution integrated with Video wall.

## TOEFL Institutional Testing Program (ITP) Results

Develop an online system that allow candidates to view their ITP test results through the CEC website for better communication and smooth process.

## Female Hostel Finger Print System

Purchase an off-the-shelf system & integrate with Banner or develop in-house and online system to automate the collection of the female hostel students night entry using the finger print.

## Female Hostel In & Out Permits System

Purchase an off-the-shelf system and integrate with Banner or develop in-house and online system to simplify and accelerate the process of Entry to & Exit of female student in the hostels.

#### e-Procurement Phase III

Enhance the in-house developed e-Procurement system by improving Registration, Tendering, & Evaluation models.

## **UAEU Data Storage Expansion**

Upgrade the UAE Data Storage capacity to support the increase demands from business applications.

## Research Management Solution

Develop an online research management solution including, automating the process of developing, submitting and approving grant proposals.

## Student Events Mobile Notification

Develop a mobile studnet events notification system for academic and none academic student activities.

## Petty Cash Approval on eServices & Mobile

Enhance the Petty Cash system by adding capabilities to approve Petty Cash requests through eServices & UAEU Mobile App.

#### **Upgrade SharePoint Portal**

SharePoint portal upgrade to the latest version.

#### **New Website Design Template**

To further enhance the reputation & branding of the University, enhance the UAEU public website with a new design for a fresh look, more customizable and easy to find the information needed.



