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Enjoy your Connectivity

High Availability Internet for UAEU



“ We currently have 1Gbps link to Ankabut, 1Gbps link to Etisalat and 1Gbps link to Du ”

Until 30th December 2012, UAE University was connected to the Research Network via 1Gbps Ankabut link and to the commodity Internet via 1Gbps Etisalat link. To increase the reliability and visibility of the internet connection, UAEU used Multihoming, which is a situation where a network is served by more than one Internet Service Provider (ISP).

One requirement for multihoming is the use of the Border Gateway Protocol (BGP) on an Internet link. To use BGP, an Autonomous System Number (ASN) assigned by a regional Internet register is needed. In our case, the regional Internet register is RIPE NCC.

“ .. By connecting through Ankabut, Etisalat and Du to both research and commodity Internet, UAEU has achieved high availability internet and load-balancing.

UAEU had earlier registered as a RIPE NCC member on June 2010 in order to have seamless connectivity to both Ankabut and Etisalat. Since then, UITS has been planning to get a second ISP link to connect to the Internet from Du. However, Internet connectivity from Du was not readily available in Maqam area at that time as they did not have the fiber link.

On the 31st December 2012, Du finally completed their fiber link and device installation at UAEU. Since then, UITS has been testing the new Internet service from Du with selected test users to ensure its reliability.

There were issues to be addressed from day to day during the testing that needed the involvement of all of our uplink Internet providers: Ankabut, Du and Etisalat.

Finally, on 10th April 2013 after working together with our providers, we resolved all the issues and the installation was up and running.

We currently have 1Gbps link to Ankabut, 1Gbps link to Etisalat and 1Gbps link to Du. As such, we effectively have 1Gbps connectivity to the global research network via Ankabut-Internet2 and 2Gbps connectivity to the commodity Internet via Du and Etisalat.

High availability Internet is achieved by advertising our Internet prefixes (whole Internet Protocol [IP] address range) to both Du and Etisalat (via BGP). In order to have load-balancing, a more specific prefix is advertised to Du and another to Etisalat.

This way, whenever a machine in a remote-end communicates with a machine in UAEU, the best path between Ankabut, Du or Etisalat is chosen by the routers of the remote ISPs. Whenever an ISP link is down from UAEU's side, other ISPs routers will still relay the traffic to our active ISP link.

By connecting through Ankabut, Etisalat and Du to both research and commodity Internet, UAEU has achieved high availability internet and load-balancing.

By Syazwan Hisyam

Learn More

For those who are interested in this topic, the BGP site at <http://bgp4.as> is a good place for you to start reading. You can also explore the Internet numbered resources allocated to UAEU by doing some queries on the RIPE database at <http://www.ripe.net/>. If you want to get more information about how UAEU is connected to Ankabut, Du & Etisalat and onwards, <http://www.robtex.com/> provides you with great tools for this purpose.



Active Directory is the Major backbone for UAEU for all authentication and authorization services. Most of UAEU services use Active Directory for authentication and authorization such as email, eLearning, desktop authentication, etc.

An AD domain controller authenticates and authorizes all users and computers in a Windows domain type network. For example, when a user logs into a computer that is part of a Windows domain, Active Directory checks the submitted password and determines whether the user is a system administrator or a regular user. AD is also responsible for installing or updating software and assigning and enforcing security policies for all computers.

Domain Upgrade

Active Directory (AD) is a directory service created by Microsoft for Windows domain networks and included in most Windows Server Operating Systems. It is known at UAEU as “Academics” domain.

Active Directory was previewed in 1999 and first released with Windows NT server. Then it was included with Windows 2000 Server edition and revised to extend functionality and improve administration in Windows Server® 2003.

Additional improvements were made in Windows Server 2003 R2, Windows Server® 2008 and Windows Server® 2008 R2, and with the release of the latter the domain controller role was renamed *Active Directory Domain Services*.

The UAEU Domain functional level was at 2003 32-bit, but as part of UITs continuous service improvement and using the latest technologies the decision was made to upgrade the domain functional level to 2008 R2 64-bit. The project was started and completed by UITs team.

By raising the domain functional levels, Active Directory 2008 R2 Domain Services make it possible for UITs to introduce advanced features into our environment and allows UAEU to take advantage of the improved security that is offered by the Windows Server® 2008 and Windows Server® 2008 R2 operating systems.

Using 64-bit OS capability to handle the load helped UITs to reduce the number of domain controllers used to serve the UAEU community better and faster in administration by introducing new features that did not exist in the 2003 functional level.

By Hussein Jaradat



Enjoy your Connectivity

Wireless infrastructure upgrade to support modern mobile devices

Wireless networks are becoming commonplace on university campuses around the world. Their popularity stems from the "out of the box" experience of immediate and easy access to resources everywhere on campuses.

UAE University (UAEU) has a wireless network in place, providing coverage for the whole campus for a while. However, given the rapid shift towards the use of mobile technology by the university community, it became evident that the wireless network and its underlying infrastructure needed to be enhanced to meet student, faculty and staff expectations.

Indeed, in November 2012 University Information Technology Services (UITs) initiated the upgrade of its wireless network infrastructure and completed it on 4th of Jan 2013.

With the view of staying competitive and encouraging innovation, this latest upgrade achieves high data rates of 300 MBps based on IEEE 802.11a/b/g/n standards, thus enabling the infrastructure to support Bonjour services and Airplay services for projection via Apple devices i.e. iPad and Mac books in accordance with the UAEU iPad project.

By Umair Gul Memon



IT Service Management & Delivery

The concept of service management and delivery is concerned mainly with the services offered to customers; it focuses on the strategic planning, operating, maintaining and delivery of the service ensuring its continuity and availability.

In any planned services, the main phase is strategic planning, which focuses mainly on aligning the services offered to the business needs and supports them by performing continuous improvement to meet and even exceed customer expectations.

Information technology services act as an important tool for users to perform their tasks. In the absence of such a tool, performing tasks becomes more time consuming, if not impossible, which triggers the need for service

delivery techniques to ensure the continuity and availability of the service.

Service availability focuses primarily on ensuring that the service is always available when required. Here, service continuity entails continuous evaluation of risks, availability of contingency plans, and most importantly, service restoration and recovery in case of service disruption.

As the main service provider for information technology services at UAEU, UITS offers a wide range of services to its customers - staff, faculty and students - by providing the latest technology in infrastructure, enterprise application and technical support services.

Given the relative interdependency of these services and UITs eagerness to manage them in a professional manner, UITs has made it a priority to provide its members with the required training to adopt the best practices frameworks such as ITIL, Cobit and MOF.

In Support of the above, UITs has recently launched new online support system which will provide users the possibility to login their service requests, issues and track their status.

A user- friendly interface has been considered for the ease of use, and a customized notification system has been added to keep customers well informed of the progress of their cases. An escalation matrix has also been introduced to meet our predefined service level agreement , and as a result, our KPI for the first quarter of 2013 shows that UITs has achieved 88.49% in

attending incidents and service request. Following provides more details:

- Total Number of tickets created in 1st quarter is 1859
- Total Number of Tickets resolved within the resolution time is 1645
- Total number of calls at the helpdesk 2841

The new online system gives us the opportunity to receive feedback from our valued customers. Thanks to their responses, we aim to continuously improve on quality of service and time response by constantly reviewing all surveys completed by our valued customers.

By Eyad Elian

“ UITs KPI for the first quarter 2013 shows that UITs has achieved **88.49 %** in attending incidents and service request



Helpdesk Page

Visit Helpdesk Page to get the support you need!

Helpdesk Page consists of UITs Helpdesk contacts, link to video tutorials, downloads, forms, FAQs, UITs News, Services Status, Common Issues and how to solve them, with important links for all UITs services. Visit Helpdesk Page to get the support and the information you need:

<http://www.uaeu.ac.ae/uits/help/index.shtml>



Video Tutorial

UITs had developed some tutorial videos to help the UAEU community use the various UAEU services and applications available on their desktops. To facilitate the search, videos have been categorized based on the services offered. Visit the Video Tutorials webpage now to learn more about the applications.

<http://www.uaeu.ac.ae/uits/videotraining/index.shtml>



UAEU Student Housing Transfer System shines Internationally

The Student Housing Transfer Request system developed in-house was among few other systems displayed on the opening of The 2013 Ellucian Summit held in Philadelphia, USA. The systems were part of the nomination for The 2013 Ellucian inspire awards. Banner users from around the world were invited to submit award nominations for one of their services.

Nominations had to fit into one of three categories: Operational Excellence, Constituent Service and Student Success. The Student Housing Transfer Request was a finalist under the Operational Excellence category. The system was recognized for its impact on operation efficiency for its users. The key outcomes of the system in terms of impact and improvements at UAE University can be summarized as follows:

- Paperless application; the system is environment friendly adhering to University Go Green initiative.
- Housing administrators now need no more than an hour or so to setup the system at the beginning of each transfer period.
- Students request room changes online using SSB in the comfort of their home, library or any other place that has internet access.
- Students can see which buildings have vacancies; they do not have to apply if there are no vacancies at their preferred building thus saving time.
- System automatically checks building rules, restrictions and criteria for transfer.
- Students who meet the criteria get immediate approval.
- Applications are approved on first come first serve basis thus guaranteeing fairness.
- Students get a response within minutes as opposed to several days or more with the traditional paper application.

By Abdullahi Qani



More Online Services

More with Blackboard upgrade: More enhancements are on the way to support learning and teaching here at UAEU. Upgrading Blackboard Learn is coming with lots of surprises, it introduces lots of performance enhancements and new features for a complete new experience for the user. Stay tuned for the new social learning, blogs, and the enhanced features of discussions, learning modules, course relationship management and more.

Save yourself a trip to the Student Health Insurance Department and go online instead :

With UAEU students at the centre of attention, UITs and Student Affairs are collaborating on another automated system which is currently at the planning stage. This self-service system will allow UAEU students to submit their health insurance card requests online through eService. Eligible students will be able to request the issuance, renewal and replacement of their Health In-

surance Cards. Students will also track the status of their requests, which will be handled, reviewed, and approved by the system administrator.

Get your car in: UITs and Students Affairs are working on a new online service that will allow UAEU hostel students to request their parking permits online. Thanks to this online system, which will be available via eService in UAEU portal, students will be able to submit a request for their parking permits as well as track the status of their requests.

More with Banner upgrade: UAEU initiated a very important upgrade of Banner systems including student, HR and Finance to the latest 8.x version. This upgrade will ensure UAE University is at the latest release of Banner modules. The upgrade will provide bug fixes for some pending issues and provide some more advanced features like flex registration and improved workflows. It will also provide a much better, more controlled and clean interface of self-service modules. Finally, it will ensure a smooth transition to the upcoming Banner XE/9.

Live ...

Your "To Whom It May Concern" and "Experience" letters are just a couple of clicks away!

With the usual cooperation between UITs and HR to provide UAEU employees easy access to HR services, UITs has now completed and launched self-service facilities for faculty and staff who will be allowed to generate "To Whom It May Concern" and "Experience" letters online via eService. This project will facilitate the process of requesting these letters while reducing the amount of printing by HR department.

By Mariam Al Ketbi & Muhammad Masood Sarkar



Teaching & Learning, *iPad in UGRU classrooms*

“Mobile learning is defined as any sort of learning that happens when the learner is not at a fixed, predetermined location”. In this context, We strongly believe that the mobile technology, when well implemented will help students to be more engaged in learning, have 24/7 access to content and internet, share knowledge with large communities and more. This technology will revolutionize the way a student will access all types of information: media, academic research, and books. In addition, students can produce digital work, blog, chat, and email with peers and teachers.

Deployment considerations

The success of iPad integration is based on the institution infrastructure. UGRU WIFI has been upgraded to ensure that all relevant areas have the correct wireless coverage and that iPads can easily connect to the network and internet.

Educational considerations & concerns

How is the class managed?

We connect our iPad to Smart boards using three types of connections; VGA cable, AirServer or AppleTV. The last two options require that your iPad and connectors should be on the same multicasting enabled subnet. To use the Apple TV/AirPlay with your iPad, both devices (AppleTV box and iPad) must be configured to join the same WIFI SSID.

How is storage managed?

There are several ways to manage content on the iPad. Several apps are available to access cloud/remote storages such as Dropbox, Ftp Client Pro, WebDAV. iPad comes with a default iCloud storage of 5GB to store your music, photos, documents, and more and wirelessly pushes them to all your devices automatically.

Giving secured access to UAEU

Resources

All our students and teachers have secure access to a variety of resources provided to UAEU iPad users. Examples of these resources are:

- Access to their Webdav enabled homefolders from their iPads using many available Webdav apps.
- Access to the UGRU FTP server using FTP secure apps.
- The iFiles app is used as a file manager, document viewer, text editor, voice recorder, WIFI drive and more.

- The Citrix receiver allows faculty and students to access their enterprise files, applications and desktops on the go from your office.

Additionally, Course Management systems like Blackboard and Moodle are available to all UGRU iPad Users.

Maintenance

Providing assistance and maintenance to thousands of devices is a huge challenge. However, Mobile Device Management solutions would help us to manage large-scale deployments of mobile devices.



Interesting Apps used in UGRU classrooms

- *Socrative* allows a teacher to quickly check student understanding through quizzes or "exit-tickets", and students can respond directly from the iPad.
- *Nearpod* brings the classroom to life with interactive mobile presentations that teachers create and customize themselves. To Use the Nearpod Content Tool, a teacher simply uploads a pdf or start a new presentation and add interactive features. The app also allows push information, questions, and activities to students' mobile devices.
- With *Polleverywhere* students can vote on classroom polls by going to poll4.com or by going to a teacher specific Poll everywhere URL. The site offers multiple choice and open response polls which can be created by the teacher.

Educational materials for all, quench your thirst for learning!

The iTunes U app provides a gateway to complete courses from leading universities and schools around the world. iTunes represents the world's largest digital catalog of free education content. The good news is UAEU now has an account on iTunes U where you can subscribe to course materials which have been uploaded by UAEU Faculty. Thus, Teachers get to share their ideas in a powerful new way, and UGRU students get a rich, immersive learning experience.

Download iTunes U now in your iPad, iPhone, or iPod touch and enjoy subscribing to UAEU courses material and more.

By: Sharath Hegde

Get started with your Apple devices

Tutorial: How to create your Apple ID

An Apple ID is a username you use for everything you do with Apple services. You don't have to create a new account for each service, a single Apple ID can be used to access most, if not all, Apple services.

An Apple ID can be created in different ways. In this tutorial we have chosen for you the easiest and quickest tips to follow.

Step (1)

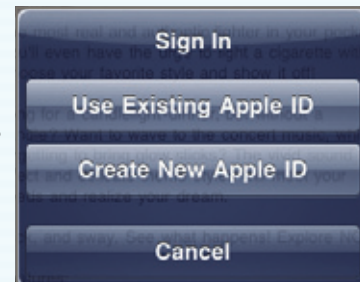
If you don't have an Apple ID and you access "App Store" to install free apps, click on the "Free" button which will turn green as shown in figure 1, And click on "Install".



Figure (1)

Step (2)

A small window should pop up prompting you to Sign In. As you do not have an Apple ID yet, click on "Create New Apple ID".



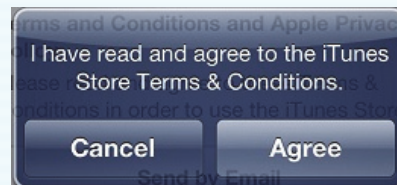
Step (3)

When the "New Account" window opens, select from the "Store" list the UAE store (See the window to the right) and click "Next".



Step (4)

Read the terms and conditions and if you agree, scroll down and click on "Agree". A window will appear prompting that "I have read and agreed to the iTunes Store Terms and Conditions", click on "Agree".



Step (5)

Fill in your details. confirm the email address is correct and valid as you will need to verify this later. Once done, click on “Next”.

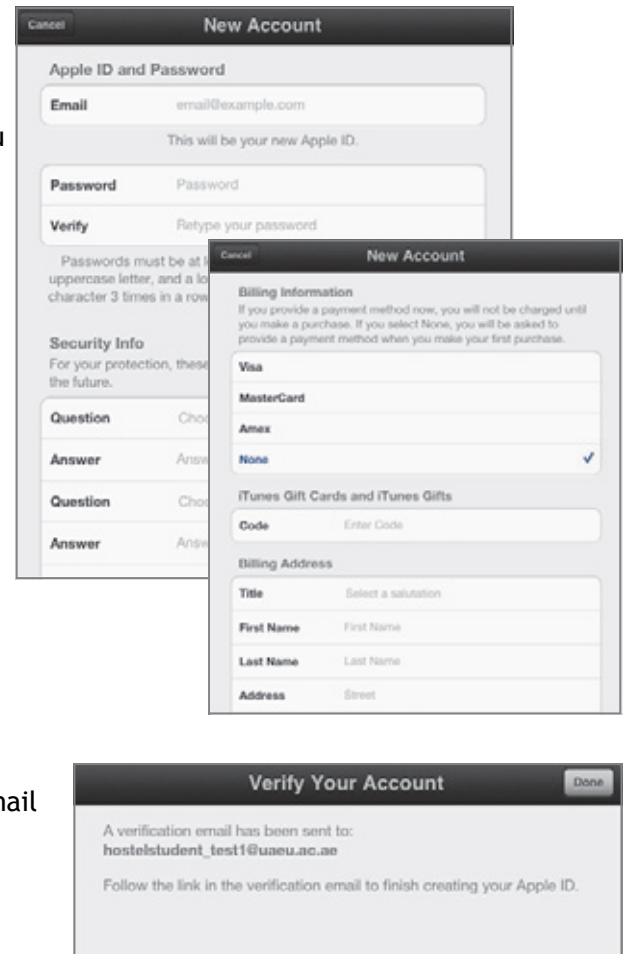
Step (6)

For free accounts, change the payment method to “None” or select your card type and enter the relevant details. Fill in your “Billing Address” and “Phone” and click on “Next”.

Notes: iTunes Gift Cards are not applicable to UAE Store, so leave it blank. If you do not see “None” as an option, double check that you chose a FREE app in Step 1

Step (7)

You are almost done with your Apple ID. You just have to check your email and verify your account from there. Congratulation.



The image displays three screenshots from the Apple ID creation process. The first screenshot, titled 'New Account', shows the 'Apple ID and Password' section with fields for Email (email@example.com), Password, and Verify (Retype your password). Below this is a 'Security Info' section with fields for Question and Answer. The second screenshot, also titled 'New Account', shows the 'Billing Information' section with a note about payment methods and a list of options: Visa, MasterCard, Amax, and None (selected with a checkmark). Below this is an 'iTunes Gift Cards and iTunes Gifts' section with a Code field. The third screenshot, titled 'Verify Your Account', shows a message: 'A verification email has been sent to: hostelstudent_test1@uae.ac.ae. Follow the link in the verification email to finish creating your Apple ID.'



iTunes

A popular media player software from Apple for Mac and Windows. iTunes is widely used by millions of people to organize the music they play on their computers as well as all the content they download to their iPods, iPhones and iPads. It integrates Apple's online store for purchasing songs, videos and applications, and it administers the copy protection that was formerly applied to purchased songs.



iCloud

It is a free cloud storage service from Apple which offers you the ability to store music, photos apps, contacts, documents, etc on the Internet rather than on local storage such as your computer or external storage devices.

Microsoft DreamSpark

More than a spark



DreamSpark is a Microsoft program developed for educational purposes. It provides students and faculty members with software and tools for learning, teaching and research purposes. It offers a list of latest software, technologies and tools to help make teaching and learning more creative and fun. DreamSpark allows students and faculty members to download all software and tools at no cost.

DreamSpark offers various types of development software that are free and easy to download. They include Development and Design tools such as Visual Studio Professional 2012, and servers and applications such as Windows Server 2012. They are available for download under Student Software Catalog.

To take advantage of DreamSpark, students need to register in the program. To register, visit DreamSpark website (<http://www.dreamspark.com/>), create an account and verify your identity by searching and selecting UAE University from the list available. By this verification you can get the benefit of DreamSpark resources, and you will be verified for 12 months. After registration, you can download the software and all resources you need and enjoy learning free of charge.

For more information, visit UITS website (<http://www.uaeu.ac.ae/uits/>), under Hardware and Software, go to Microsoft Software Assurance and browse Microsoft DreamSpark

By Jamila Al Ameri

The Arabic Version of UAEU Branding

To support the usage of UAEU Branding and Arabic Language, UITS has just completed their work on converting the current UAEU English branding templates and broadcast messages, PowerPoint, brochures to Arabic templates. You can get the templates by visiting UITS Website:

http://www.uaeu.ac.ae/uits/services/web_downloads/index.shtml

Secure Your Approval, *digital signature*



Most people do not differentiate between the two concepts of electronic and digital signatures, and mostly they use the term electronic signature or e-signature. Important differences do exist and are outlined below.

An electronic signature can be as basic as a typed name or a digitized image of a handwritten signature. Consequently, e-signatures are very problematic with regards to maintain the integrity and the security, as nothing prevents one individual from typing another individual's name.

A digital signature is an electronic equivalent of an individual's signature. It authenticates the document or communication to which it is attached and validates the authenticity of the sender. Furthermore, it also confirms that the document or communication, to which it is attached, has not been tampered with, en route from the sender to the receiver. Digital signatures are based on public key infrastructure in which the signer has a private key which is an encrypted hash of his/her signature and a public key which is a digital certificate issued by a PKI authority.

Manual signature pitfalls

- Increased operational & back office overhead
- Less secure and prone to fraud
- Longer waiting times
- Legal compliancy and limited liability can be questioned
- Less efficiency and productivity
- Slower document routing

Benefits of digital signatures

- Expedites approval process of paper intense workflows.
- Location is no longer a factor for globalized businesses. Sending contracts by courier costs money and takes time. With digital signatures, contracts and other doc-

uments can be instantly signed online.

- Automates business processes - eliminates the inefficiencies and significant costs of printing, handling, mailing, scanning, and archiving paper documents.
- Graphical signature - Digital signatures look like they would on a paper document.
- Reducing costs of printing, handling, filing, mailing, faxing, scanning and archiving paper documents.
- Provides evidence of signer's identity, intent and data integrity thus guaranteeing data security and providing non-repudiation.

Why adopt digital signatures?

It is estimated that every year, 30 billion paper documents are copied or printed by US companies. When factoring the costs of copying, scanning, archiving, routing, and retrieving lost documents, each paper-based signature is estimated to cost \$6.50. According to [Co-Sign](#) customer usage statistics, the average authorized employee signs 500 documents a year at a total cost of \$3,250. Organizations are implementing digital signature solutions to:

- automate and expedite business processes
- cut operational costs
- improve efficiency and collaboration
- go green
-

Environmental effects of switching to digital signature

The average signer signs just over 2 documents per workday, or 500 documents per year. These numbers equal a usage reduction of half of a tree, $\frac{3}{4}$ of a barrel of oil, and 150 pounds of carbon emissions per signer, per year.

By Muhammad Masood Sarkar



Office 2013

New Surprises

.. What's new ?



If you are a fan of Microsoft Office, you will no doubt enjoy the new surprises in the Office 2013 package. To start with, MS office 2013 is compatible with all available mobile technology. It now works more efficiently on touch devices and is totally integrated with cloud storage facility, allowing users to access files anywhere anytime.

Now let's dig deeper to illustrate the new Office 2013 features.

What's New in MS Word 2013?

- **Insert Videos** Prior to the new release, MS Word afforded us the ability to insert pictures, but now, guess what, you can watch videos with no fuss.
- **Edit PDF Files:** A new feature in Word 2013 allows you to convert PDF files and edit contents without the need for another program.

Additionally, Tracking changes, probably the most useful tool, has also been enhanced to provide more efficiency.

What's New in MS Excel 2013?

Similarly, more features have been introduced in Excel 2013. These include:

- filling empty cells using flash fill to insert large data into tables
- filtering records using Time Line

Charts Recommendations feature which displays for you a number of charts that are appropriate to your data.

These are some highlights of the new version of MS Office 2013 which should give you a glimpse of the creative enhancements introduced in the program.

Get your copy now and enjoy the experience of these powerful new tools. To learn more about the new features, visit:

<http://office.microsoft.com/en-us/support/whats-new-in-office-2013-HA102830213.aspx>

By Wael Hassan

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