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Looking for Linux
by Zoe Moleshead

Conservative market

When it comes to deploying IT infrastructure, the Middle East is more of a trend follower than a trailblazer, and for the regional proponents of the open source Linux operating system, this impacts both local development and uptake negatively.

"The Middle East is a rather conservative market, and people will only use Linux when it is really mature, known enough and fashionable enough," comments Dr. Ahmad Tantawy, technical director, IBM, MENA & managing director of the Cairo development centre.

The large hardware vendors also agree that a lack of familiarity with the Linux platform has held back deployments and installations in the region. "Generally, organisations are not familiar with the Linux platform — may be they haven't found the time or resources to do testing in their environment," adds Gareth Williams, area manager, Gulf region emerging markets, Dell.

To raise the profile and level of debate surrounding the Linux platform, there needs to be an increase in the number of local reference sites. Although Linux converts in the US and Europe include big name sites such as NASA, Amazon.com, and many government organisations, this needs to be translated into the local market.

"If I'm about to implement a solution or platform I want to be confident that this solution has been [successfully] implemented somewhere else," says Yasser Ragaei, product marketing manager, high performance servers, Gulf & Levant, Compaq.

However, Linux distributors and hardware vendors are beginning to drive momentum towards the Unix-like operating system as a viable alternative platform. Red Hat has stolen the lead on the other Linux distributors, establishing its regional office in Dubai last year and setting out its Linux stall.

"We are still in the first phase of establishing the company in the region. We are still training the channel and choosing companies to partner with," explains Yahya Kassab, business development manager, Red Hat, Middle East.

"[Our] first aim was just to tell people that we are here. Our second mission is educating people that don't know about Linux," he adds.

IBM has also been proactive in increasing the profile of Linux both globally and regionally. Last year, IBM's chairman and chief executive, Lou Gerstner, said the company was planning to devote nearly $1 billion and 1500 hundred in-house developers to its Linux initiative in 2001.

Locally, this has translated into efforts to Arabise Linux and the provision of training and awareness building, as well as participation in a standardisation group.

"We are actively particpaiting in a standardisation group within the open source community. The group is called Li18nux, and is setting up standards for the internationalisation of Linux," explains Dr. Tantawy.

"An IBM Egypt person is actually chairing the Middle East sub-group," he adds.

Although, the other vendors are loading up their servers, tuning databases and gearing applications to run Linux, very few are heavily promoting the platform in the region. The main reason behind this is Linux's money making potential — as it is open source and free to download, profits tend to be derived from support and services.

According to Gartner Group's vice president & research group director, Andy Butler this is one of the main drawbacks of the platform. "Nobody has quite figured out how they are going to make any money out of Linux," he says.

"In theory it [open source] is a superb model, but it makes it very unclear just how a software or hardware vendor is going to make it a profitable business."

Compaq's Ragaei adds that hardware vendors have also been adopting a reactive approach to Linux. "Most of the hardware vendors' response to Linux

has not been proactive. Linux has been gaining popularity with customers and they come and ask for Linux," he says. "Hardware vendors are reacting to this, by providing support for Linux and looking to grab market share."

Cost savings & stability

When it comes to Linux installations in the region the education and oil & gas sectors are at the forefront. For the region's universities and their tight IT budgets, the cost saving potential of Linux is pushing them to investigate the Unix-like operating system. Saudi Arabia's King Fahd University and King AbdulAziz University both already run Linux.

In Dubai, the University of Wollongong has been using Linux to run its web servers, as well as incorporating it into its teaching curriculum. The new licensing policies of Microsoft were one of the main reasons the university began looking for alternative operating systems.

"From an IT management point of view I've been concerned how Microsoft's new licensing strategy will impact my role as an IT manager. As a result I'm little reluctant to implement the latest Microsoft upgrade versions," says Richard Booker, IT manager, University of Wollongong.

"The same pressure to continually upgrade doesn't exist with Linux, and subsequently makes management easier," he explains.

Licensing fees can put a serious dent in an educational institute's IT budget. But for Red Hat's Kassab licensing fees are just one of the reasons why people should investigate Linux.

"30-50% of IT investment is going into buying a piece of paper. Open source has changed IT investment from buying a piece of paper — a license — to buying a solution," he claims.

The benefits of Linux, however, extend beyond just cost — the operating system is also touted as a secure and stable platform.

The Bahrain Government is using Linux in its IT environments. It is currently running four Linux servers, including two Compaq-based proxy servers and an Apache web server. It has found the system problem free, even during a recent upgrade to Red Hat 7.2 version.

"It is not acceptable to have to reboot a system," says Hassan Al Eid, the government's data network manager. "With Linux you can get free product upgrades.
When you install these you don't even have to reboot the system."

Linux is regarded as a more secure platform. Although it is fair to say that the platform has not been the target of hackers or crackers in the same way that Microsoft has, users of Linux say any problems or holes that do occur can be quickly and easily fixed.

"With Microsoft there are a lot of security holes, which you cannot fix yourself. We don't claim that there are no security holes in Linux, but there are not so many. And because it is open source you are able to fix [any problems] yourself," says Al Eid.

"If I need any support I can go to the Red Hat web site to find a solution or go onto the Internet. I also have my own expertise and knowledge," he adds.

However, questions are still being raised about how proven Linux actually is when it comes to meeting a business' mission-critical needs. Critics suggest that the platform still needs to mature. The fact that it is running in parallel environments in the oil & gas industry and as a web server does not prove the viability of Linux as a high-end platform.

"Web servers are not mission-critical applications. If the web server is down or having some problems this will not stop my business," explains Ragaei.

Gartner's Andy Butler adds, "I've heard reports that say 50% of the all the world's web servers are running Linux, and I don't disbelieve it if you take a unit view. But an awful lot of these will be hobbyist machines and, in terms of the amount of traffic that might be going across them, it is absolutely minute."

Immature support model

The absence of a cohesive and structured support model has also hindered the development of Linux. Red Hat has set about addressing the problem by establishing a local support line for customer inquiries.

"Whenever people buy solutions for Linux they can sign a support contract, and call regarding any problems," says Kassab.

Users running Linux on hardware platforms from the big vendors, such as IBM, Compaq, or Dell can also access established support networks. Compaq has also been working with Red Hat locally to find the best way to support regional Linux customers.

"A customer will not consider a solution unless he is sure he will get reliable and credible support," says Compaq's Ragaei. "We have been in contact with Red Hat to discuss how we are going to increase skills in the region, whether from the customer side or from our shared partner side. We need to get our partners qualified in Linux so we can give a dependable solution to our customers."

With an immature support model for Linux, it is vital that companies have skilled IT staff with a background or familiarity of working in Linux.

"Linux is going to suit people who have enough 'technical savvy' to be able to roll up their sleeves and have some responsibilities themselves," says Gartner's Butler.

"Organisations, which have little or no IT expertise are still going to be very dependent upon the relationships between the Linux distributors, software and hardware vendors," he adds.

The Linux platform is, however, beginning to establish itself on university curriculums. The University of Wollongong's Booker believes Linux will prove a valuable skill for future computer science graduates.

"Linux has gained a certain maturity and its adoption is becoming an industry trend," says Booker. "I'm sure that many computer science and Internet science students recognise that, and with a view to the IT job market, students who have Linux experience are going to be more employable."

But while the universities are ensuring their students gain hands on experience with Linux, the employment market is lacking skilled Linux professionals, and very few local training companies are offering Linux training.

According to Syam Pillai, vice president information technology at Habib Bank AG Zurich, "it is a chicken and egg problem, training needs cannot arise until the corporate sector change their minds. The corporate sector is not willing to take any risk until someone trains them and makes them aware that Linux is a better OS," he explains.

The few local training companies that are running Linux courses, such as GoldenSun and Technocampus, say there is some interest in Linux "from students and expatriates working in IT departments," says Huda Al Rostamani, relations development director at Technocampus.

The Network Center's general manager, Lisa Rutherford says interest in Linux has picked up since Gitex, but "I haven't had any customers beating down the door for Linux," she comments.

Red Hat's move into the region and its subsequent attempts to raise Linux awareness are beginning to pay some dividends for its training courses. The local Red Hat office has trained over 50 people and is registering a good mix of private sector and government interest.

"The first we did there were eight people and six of them were from the [local] government," says Kassab.

However, other training companies are reporting that it isn't just a lack of market awareness and demand for Linux training, but also pressure from Microsoft, that has prevented them from running Linux courses.

One local training company revealed that when it investigated the possibilities of starting Linux courses a Microsoft employee, "got very stroppy… and when I told them it was a matter of whichever one made money, he said he would make sure it was Microsoft," comments an anonymous source.

Another training company said that it felt it had to tow the Microsoft line because it

was where the majority of its business still came from.

When asked about the claims of these training companies Microsoft refused to comment. When asked a series of other questions relating to Linux in the Middle East, Microsoft also declined to comment.

Arabisation

Linux may still need maturity and development before users begin supporting mission critical operations on the platform, but IBM along with a number of the region's developer groups, including those based in Dubai and Saudi Arabia are working hard on Arabising Linux to build local developer skills.

Arabeyes is one developer group that is working on making Linux capable of supporting Arabic language. The group is currently working on developing a KDE Arabic interface.

"We expect to deliver an Arabic KDE interface by February," says Mohammed Elzubeir, a spokesperson for the group.

"As for the software development team, it's working on the fundamentals of giving users the ability to use Arabic on Linux and be able to spell check documents," he adds.

IBM has also extended its commitment to Linux in the region, by establishing a Cairo-based development team to work on Arabising Linux.

"We're redeveloping the code that is necessary to make Linux capable of handling Arabic properly," says IBM's Dr. Tantawy.

"IBM is not releasing a special Linux version, it is just [adding] to the effort by contributing code and putting it into the hands of the open source community," he adds.

The Saudi Linux Group is also targeting "an open source development centre, which will help in speeding up the development of Linux," says Dr. AbdulRahman Aljadhai, the group's director.

Although, regional Linux users believe that Arabising the operating system will play an essential part in the acceptance and uptake of Linux in the Middle East, some analysts and even Linux distributors remain sceptical about the necessity of Arabisation.

Desktop future

The future of Linux as a desktop platform is even more clouded, with analysts believing there is no long-term market for Linux in this area.

"As a client operating system we see very little future at all," states Garter Group's Butler. "It may at first appear more compelling to move to Linux, especially to save money. However, most organisations have a heavy dependency upon a rich software portfolio that requires them to be Microsoft compliant. It would be hard to consider doing a mass client level migration to Linux."

However, Habib Bank AG Zurich has taken an unique approach to its IT infrastructure. The bank is proving that vendor and operating system independence is possible by making Linux work at the desktop level. The bank, which has done the majority of its IT infrastructure development in Java, is running Linux "as a replacement for Windows," says Pillai. "It's a very cost effective solution."

The move away from Windows is also enabling the bank to efficiently utilise the 'fat machines' it needed to run Windows. "We are finding ways to utilise those resources using Linux. We can utilise the memory and since we run everything in Java the [added] memory means the applications perform better."

Syria-based NextLAN Internet Technology, is also planning to move away from its Windows flavour desktops to Linux in next couple of months. The Internetworking services company has been running Linux for three years, and is currently developing applications to run on the platform as well as helping other companies deploy Linux.

"We are using Intel servers, and also one Compaq Alpha server running Linux," says Anas Tawileh, spokesperson for NextLAN and also a member of Arabeyes.

"We are also running it on our database, MySQL and PostgreSQL servers, an Apache web server and SendMail server."

The company is also developing a host of server level business applications to run on the Linux platform, including "a package that manages business communications, enterprise collaboration, unified messaging, financials and inventory," explains Tawileh.

"Based on a customers specific needs we can modify the packages to fit, and that may include developing new modules or applications to support the business needs," he adds.

The next year should certainly prove interesting for Linux development in the Middle East. IBM and Arabeyes are working full tilt to complete much of their work in Arabising Linux during the first half of the year. Also, Red Hat will continue to build its profile and translate the increased awareness into Linux customers.

Linux deployment in the Middle East so far has remained the domain of the technically savvy personnel — call them geeks if you will — that have a grounding in Linux and are seeking to develop this into a viable business offering, and introduce the cost savings, flexibility, security and stability that Linux is developing a reputation for.

University plans further Linux deployments

Universities and educational institutes have been at the forefront of the Linux movement, recognising the cost-saving potential that the operating system offers. The Dubai-based branch of the University of Wollongong is one such institute. It began deploying Linux as a web server for its intranet in April 2001. According to the University's IT manager, Richard Booker, the first 10 months have proven highly successful.

"At the beginning of last year we trailed Linux on a couple of servers because of its reputation as a proven, stable environment," says Booker. "We [have] found that it has better flexibility and networking integrity than Microsoft."

The university, which is running Red Hat 7.1, is currently deploying one of the Linux servers to handle the web site for its 250 computer science students and lecturers.

"Students can log on and have access to lecture notes, course information, mail, and a forum for information exchange. Lecturers have access to update their particular course material and keep their information current," explains Booker.

An Apache server, with an ftp daemon: NcFTPd server educational license, is running Samba software to meet the university's local networking requirements, and providing students and lecturers with a secure connection to the Internet.

"It's got all the security features we want. In a university environment, security has to be really high priority because students — especially the smarter ones — will try to work around your security set-up wherever possible," comments Booker. "So far it's holding up well."

Compatibility and stability have also played key roles in the decision to run Linux. The university in Dubai runs library, grading and admissions applications, which are reliant on its main campus in Australia. Therefore, it has to maintain close network links with the university.

"[The] university servers in Australia [are] mostly Unix or Linux, and these can be changed at fairly short notice to meet our specific requests," says Booker. "Uniformity across systems on both campuses becomes important for security and reliability, therefore it is logical we should adopt similar standards."

Cost was another factor in the university's decision to adopt Linux. Microsoft licensing programme, unveiled last year, proved a decisive factor in the move to Linux.

"By deploying Linux there are substantial cost-saving benefits," says Booker. "Educational institutions with large student populations tend to have a huge financial investment in IT infrastructure, and when you're paying for software per seat or per user, licensing costs eat up quite a considerable portion of the IT budget," he explains.

The university is currently running three Windows NT systems, but is in the

process of upgrading to Windows 2000. Although Microsoft offers easier manageability and configurability, the increasing Microsoft product line and consequent support problems have added to the university's concerns about continuing too far down the Microsoft road.

"There are now so many different products across its server line that when they stop supporting a product it often causes problems with backwards compatibility, [which] is going to bite you somewhere down the track," says the IT manager.

Forced upgrades can also prove difficult and costly for organisations, thus making the free Linux downloads an obvious benefit of deploying the platform.

"For example, [if] you want to update proxy software. With Microsoft you have to purchase upgrade media through a reseller. With Linux you can download [components] directly from the Internet for free, and [they] tend to be much smaller in terms of size as well," says Joseph Aninias, computer engineer at the university.

The initial 10 months have proved a valuable exercise for the university. The system hasn't been rebooted once since going live, and the university is now planning to test Linux as a mail server and as a database server when it introduces Oracle to its teaching curriculum.

"We will continue to operate a mixed platform environment, but on balance the performance to date of our Linux servers has justified the implementation decision," concludes Booker.

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