20: Virtualisation innovation

The Middle East region is still behind Europe and the US when it comes to virtualisation adoption, according to regional virtualisation experts.

28: Data centre trends for 2013

Experts unveil the top trends and vendor innovations in the data centre sphere for 2013 and beyond.

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Disaster recovery is no longer a massive expense with the advent of virtualisation and cloud.

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Disaster recovery:
A necessity, not a luxury

Disaster recovery is no longer a massive expense with the advent of virtualisation and cloud, and with innovations in the disaster recovery sphere making it easier to deploy and maintain a DR site it is an insurance policy all enterprises should look at, according to regional experts.

There are many threats that will cause business disruption, from man-made threats such as viruses or war, to environmental threats such as floods and earthquakes. Many can be broadly classified as security threats, including virus attacks, hardware/firmware corruption, accidental deletion, hacking or physical break-ins.

According to Yasser Zeineldin, CEO at eHosting DataFort, 56% of business disruption threats are related to hardware/software, power, telecommunications, 20% have a malicious intent, and 24% are natural disasters.

This last category may be one of the most important trends in disaster recovery, as climate change is believed to be responsible for an unprecedented level of losses due to natural disasters. For example, recent events like Hurricane Sandy in North America caused approximately $50 billion in damages, including leaving eight million homes and businesses without power.

The intensity and widespread nature of such natural disasters means backup and recovery centres need to be located far enough out of region for adequate safety and recovery.

Disaster recovery is a very big trend for 2013 and beyond, and for many companies it is an insurance policy that they did not think they required, until they needed it. The notion that 'my data will never be affected' was prevalent

Yasser Zeineldin, CEO at eHosting DataFort says that 56% of business disruption threats are related to hardware or software.

in the market, but now there is the realisation that it is important to have a disaster recovery plan, particularly from a compliance point of view.

"Across the region there is a lot more interest in disaster recovery from both the enterprise and the SMB sector. The fact of the matter is yes it is becoming a lot more affordable and manageable and the complexity of disaster recovery solutions has come

down enormously in the last few years," explains Aman Munglani, research director at Gartner.

The cost of hosting has also been coming down rapidly, making deploying a disaster recovery site much more available to a larger number of companies. This means that when the primary site and secondary site belongs to in-house the third site can either be with a service provider or a disaster recovery provider.

From an overall perspective the falling cost per gigabyte and the availability of scale-up systems are making disaster recovery faster and cheaper.

According to Philippe Elie, director of operations, EMEA, Riverbed, disaster recovery is a hit in UAE and GCC at the moment.

"I was attending and IDC event in Saudi one month ago and when I was polling the audience, the great majority was thinking of or already deploying a disaster recovery product and the trends are the focus on security and

the threat around security and the fact now that it is getting cheaper," he says.

TRENDS

While disaster recovery is an old hat technology, its adoption has not been as invasive or common as virtualisation because of its cost. However, that is changing. Basil Ayass, enterprise product manager at Dell Middle East says the major trend he is seeing is that disaster recovery adoption is spreading rapidly.

"Adoption is increasing, especially with the recent hurricane Sandy in the US, and we have had the security breaches at Aramco, RasGas that were made public and the press reported heavily on those. So, customers are aware that today the security situation is getting worse and all enterprise customers today have disaster recovery in place or have plans with aggressive timelines to implement it," he states.

Organisations are also now

"Today the trend we are seeing in disaster recovery is that it does not have to be a replication of your primary site. Now with solutions like virtualisation we have virtual replication, virtual storage, virtual networking, which enables you to build a disaster recovery site that is a fraction of the size and cost of your primary site and it does not have to be with the same vendors."

Basil Ayass enterprise product manager at Dell Middle East

In disaster recovery scenarios, most people will still have access to mobile devices, so they can achieve the core functionality of their business and that is coming a key piece of technology in disaster recovery says Alan Mitchell from CommVault.

trying to achieve more with less in the disaster recovery sphere, leading to an increasing reliance on virtualised technology. Within the disaster recovery environments there is also more emphasis on access to mobile devices and smartphone technology.

"In disaster recovery scenarios, most people will still have access to mobile devices, so they can achieve the core functionality of their business and that is coming a key piece of technology in disaster recovery. We are also starting to see the green shoots of the move towards cloud technologies, not yet being fully adopted, but I think that moving forward that will become very relevant to disaster recovery," says Allen Mitchell senior technical account manager, MENA. CommVault.

Companies also need to structure in their data and the way that it is stored, companies can not afford to wait for hours or days to recover data. The recovery win-

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> **Aman Munglani, research director at Gartner**

dow is the time it takes to recover data from the back up site to the main site and enterprises often complain of bandwidth problems here in the UAE. CommVault says that with the bandwidth issue, the recovery window is far too long.

VIRTUALISATION IN DISASTER RECOVERY

Dell says that along with the trend of trying to make disaster recovery more flexible and easier, comes the fact that in the past disaster recovery required you

to replicate your primary data centre, so whatever you have invested in data centre A, you have to go and replicate it and use the same equipment by the exact same vendors.

"Everything in A had to be copied in B and most people don't even know what they have – they bought it five years ago or more and maybe some of the vendors are out of business, the technology is old, that is why it was so complex. Today the trend we are seeing in disaster recovery is that

it does not have to be a replication of your primary site. Now with solutions like virtualisation we have virtual replication, virtual storage, virtual networking, which enables you to build a disaster recovery site that is a fraction of the size and cost of your primary site and it does not have to be with the exact same vendors," explains Ayass.

Data protection strategies used to be focused on making a local backup copy on tape and hauling the tapes offsite for protection. Today there are many innovations to electronically move the data over the network to lessen the data loss and improve the recovery times. For example, virtual tape systems enable a disk-to-disk data transfer to the backup facility before moving data to tape. In addition, synchronous and asynchronous data replication between disk systems electronically sends data offsite. Finally, a remote storage virtualisation network provides continuous availability by caching and replicating data in real time.

Commvault says that most organisations are moving away from a reliance on tape so it is much easier for organisations to use and recover disk copies, and deduplication is reducing the size of data and making it more bandwidth efficient, which is easing the process of moving it from site to site. Replication technologies are making life easier as well as the more intelligent storage applications and devices are easing the burden of disaster recovery.

"These storage and data protection systems take advantage of innovations in inter-data centre networking which now offer more saleable, low latency and deterministic data transfer to the recovery site. For example Carrier Ethernet network services more easily scale in granular increments from 100 Mbps to 10 Gpbs speeds than SONET/SDH technology, which required costly stair steps to move up in bandwidth. And packet optical systems can go all

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the way to 100 Gbps if needed. This networking flexibility enables companies to more easily afford the right amount of bandwidth and performance for the job, instead of inefficient over-provisioning or insufficient data throughput," explains Mervyn Kelly, EMEA marketing director, Ciena.

Future technologies will enable even more sophisticated Performance-on-Demand to tailor network performance, capacity, and latency and cost parameters to individual enterprise disaster recovery requirements

According to Injazat Data Systems, current regional technology trends in the disaster recovery field mainly focus on two areas, virtualisation and cloud-based disaster recovery which offer easier and far more affordable disaster recovery solutions.

"Although virtualisation has been around for some time, it is only now that virtualised environments in the region are getting to

a mature and stable stage where IT Executives are feeling comfortable to extend it to their disaster recovery strategy," says Chris Bester, senior consultant, Injazat Data Systems.

CLOUD IN DISASTER RECOVERY

Public Cloud-based disaster recovery is another trend in the disaster recovery space, however, according to Injazat, it is a bit slow in the uptake mainly because organisations are still reluctant to relinquish control of their data (albeit for recovery purposes) to a third party public cloud provider where the data from multiple entities are hosted.

"On the other side of the coin though, as building your own private cloud environment for disaster recovery is not viable from a cost benefit perspective, we saw an increase in enquires and requests in recent months for hosting organisations like

Companies that have outsourced their data:

1. Dubai World Trade Centre
- As organisational priorities changed, a decision was taken to outsource the Disaster Recovery project.
- Key reason was to convert capital expenditure (CAPEX) to operating expenditure (OPEX) by choosing a lease model as compared to building a new data centre ourselves.
- The Disaster Recovery hosting site at eHosting DataFort hosts the three most critical business systems for DWTC. These include: Event and exhibition management system, financial systems, shared drives

2. Dubai Airport Free Zone
- DAFS worked on a future plan based on a government mandate.
- DAFS need to protect the production site and replicate data to a disaster recovery site.
- No capital investment required for building a disaster recovery site.
- eHDF provided a disaster recovery hosting environment at its data centre.

3. Societe Generale
- French bank providing corporate investment banking and private banking in the region. The group has over 100 people in the region, spread across multiple office locations, including Abu Dhabi, Bahrain and the Kingdom of Saudi Arabia.
- Project: Disaster Recovery (DR) hosting site with Business Continuity Seats

- Scope: DR hosting site at eHDF Data Centre - serving all their branches including Riyadh, Abu Dhabi, Bahrain and Dubai.
- Business Continuity Seats - Users can utilise eHDF's premises, connect to the DR site in the eHDF data centre, utilise LAN environment, access 24/7 service desk, etc.

Why did they come to eHDF?
- Infrastructure and communication costs had escalated in housing disaster recovery seats at Societe Generale's own premises
- A review of the IT investments indicated that it would be more cost effective to work with a service provider like eHDF

Key Benefits:
- Cost effective
- Minimises downtime and keeps the business up and running in the event of a disaster
- Scalable and has the capacity to further expand in another two years as business grows in the future
- Secure, reliable hosting for DR site infrastructure & data, be it external customer data / internal company data. This is especially important for confidential and sensitive banking data and applications
- Access to expert set of engineers and technical personnel who facilitate smooth running of business
- Able to achieve a virtualised environment by consolidating their infrastructure by more than 30%

Although virtualisation has been around for some time, executives are only now beginning to feel comfortable in deploying it in their disaster recovery strategy says Chris Bester from Injazat.

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>
> **Chris Bester, senior consultant, Injazat Data Systems.**

ourselves to provide private cloud services," explains Bester. "Further to this, outsourcing data centre services for disaster recovery is becoming more appealing to many organisations as one of the alternatives when considering setting up a disaster recovery site."

OUTSOURCING DISASTER RECOVERY SITES:

A current trend in the market is having hosting or service providers to provide disaster recovery-space, hardware and cooling. These companies are putting up data centres in the UAE and in Qatar, Saudi and Egypt and are providing cost effective disaster recovery locations.

One of the biggest obstacles in the past to building a disaster recovery site was that companies had to buy real estate and build a new data centre, which was a huge obstacle for most medium businesses, now that they do not need to have their own space, they can move to a service provider and that service provider will provide the space for them and then they can own a DR site

without paying for the space, the power, the cooling, the outsource that to a service provider, and that makes disaster recovery a lot more attainable.

"With the new innovations, we are providing our customers with very small servers; we have moved storage and networking into blade. Today we have a disaster recovery in a box kind of a solution. So, to build a disaster recovery site you no longer need a room or a data centre, you just need a part of a rack, it can be more than enough for a lot of businesses and they just protect their mission critical applications in case of disaster they need the company to continue running," states Ayass.

There is also another option for disaster recovery for the larger companies, moving into a three-site disaster recovery. These large enterprises are worried that if the disaster recovery site is in the same country it could be impacted, so they are moving into a third site and that is where the trend of mobile data centres is beginning to emerge.

"We are seeing requirements in countries like Saudi, Kuwait and Egypt where companies want a disaster recovery site, but they want it to be mobile so they can move it in case of a revolution, so we are building these mobile data centres. We get a container, a standard shipping container and we build disaster recovery sites inside the container and you can put them on the roof, in a basement, anywhere and if you need to move in case of a major disaster you can put it on a truck and drive it and your DR site can go with you to wherever you are relocating to," explains Ayass.

However, outsourcing your disaster recovery site may not be the right move for all companies.

WHEN TO OUTSOURCE YOUR DATA:

The deployment and location of the disaster recovery site is dependent on many factors.

Large organisations with over $1 billion in revenue typically own an average of four data centres totaling 60,000 square feet. These companies may find it more economical to set up inter-data centre networks and use their own facilities for backup/recovery or even move to an active/active configuration for more continuous availability.

Smaller organisations may typically have consolidated into a single data centre. These companies may use a disaster recovery data centre from vendor such as SunGard or IBM BCRS to provide recovery services.

"There is not a single answer for every company's disaster recovery needs, so most organisations need to put a lot of time into developing their Business Impact Analysis to determine the right strategy for their organisation," states Ciena's Kelly.

Managing data centre disaster

Investment trends in DR and BC sites in the region

- Around 84% of the respondents had already identified an alternate business continuity work site for employees in the eventuality of an exigency, in striking contrast to 58% in 2009.
- Of the 84 per cent of respondents that had identified an alternate Business Continuity work site, 55% said their preferred destination was the UAE. Close to 18% opted for Saudi Arabia, 7% for Bahrain, 6% chose Egypt, while 4% preferred Oman and Kuwait, and 2% identified Qatar. The remaining 4% expressed interest in seeking an alternate work site outside the Middle East.

Results based on a survey by eHosting DataFort and Continuity and Resilience in nine Middle Eastern countries. The survey covered various industry verticals such as financial services (37%), IT/Telecom (16%) and government (10%).

recovery in the right way requires highly specialised personnel and creates infrastructure demands and additional costs for an enterprise. These requirements are reason enough for many organisations to consider whether they should handle disaster recovery in-house or utilise a third-party DR provider.

eHosting DataFort has actively worked with various clients who have invested in outsourcing disaster recovery and business continuity. According to Bester, some larger institutions tend to keep their disaster recovery in-house due to various factors but others with limited resources tend to outsource.

"Whichever route you take, your decision should be based on solid business intelligence gathered through a proper Business Impact Analysis [BIA] and Risk Analysis [RA] process. We experienced a recent increase in requests for assistance with the BIA process from various organisations across a number of business sectors as they are typically trying to solidify their disaster recovery strategies to accommodate regulatory and business demands," he states.

In the Middle East disaster recovery is mainly kept in house according to Sam Tayan, regional director, VMware MENA.

"When someone is keeping your data for you in terms of the integrity if that data the value of that data, you look for regulations, and maybe that is an area where more could be done, and you also look for other aspects such as insurance underwriting and things like that. Again that is an area in this part of the world that there is work to be done. If you are a company that wants to outsource your disaster recovery, you are more likely to do that when you have a well understood regulatory environment, a well understood insurance underwriting environment as well, and that is why here the tendency is to do it in house," he explains.

Natural disasters such as the recent Hurricane Sandy have made companies realize just how important disaster recovery is.

FRESH AIR COOLING

Another trend is fresh air cooling, one of the prohibitive things for DR is the prohibitive cost of DR, especially in the summer that we experience in the Gulf, and so Dell is building solutions around fresh air.

Dell works with noth eBay and Bing, and both of these customers have asked Dell to build disaster recovery and data centres for them that survive up to 45 degrees Celsius.

These companies are building disaster recovery sites and they are not cooling them, they are leaving them in open air and using fresh air to keep it running.

"We are providing fresh air solutions to our largest customers and now we have made that available to smaller customers and customers across the Middle East, which saves on CAPEX and OPEX.," says Ayass.

FOCUSING ON THE BIG PICTURE

Yasser Zeineldin, CEO at eHosting DataFort says that an IT platform is only well-designed and robust when it's supported by an equally well-designed and robust infrastructure. Organisations must not narrowly focus on specialised segments such as servers and app design, but also understand how all aspects of the infrastructure make a huge impact on systems when considering scalability.

"IT managers must take an holistic view of clients systems and make sure all factors are taken into account when designing solutions. Enterprise architecture including networks, servers and applications must be clearly understood to know how they are relay, interact and impact scalability and performance," he states.

Understanding how to tie together diverse network compo-

nents to guarantee uninterrupted operations is crucial to a sound technology management operational plan. While time consuming, these are critical processes to ensure an organisation's ability to recover from unplanned events with minimal or no disruption of services and operations.

REGIONAL DR INVESTMENT

Costs have become more manageable and that is making disaster recovery more affordable and more achievable to most large organisations.

The investment in disaster recovery is always tied to the business. Typically a Business Impact Analysis is performed to measure the impact of each application, and ranked according to its criticality of sustaining business. This helps set a recovery point objective – how much data

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In the current sensitive political scenario in the Arab region as well as the erratic economic conditions around the world, the UAE has emerged as an obvious safe haven, providing comfort through a host of opportunities that boost investor confidence and attract a large influx of people eager to set up business here.

Additionally, the UAE's strategic geographical location and the strong infrastructural network are key contributors to the increase in foreign direct investment in the ICT sector. The political insecurities in the region served as a good wake-up call to Middle East enterprises on the importance of investing in a disaster recovery strategy for the long term.

"The unpreparedness and losses have prompted organisations to gear up for the future through putting in place disaster recovery solutions. Despite the chances of disasters actually occurring from a political crisis are minimal, organisations are now aware of the potential damage of downtime and data loss to a business operation," says Zeineldin.

In Middle Est-based organisations with established disaster recovery programmes, executives now expect their IT department heads to harness the benefits of current technology offerings such as virtualisation and cloud-based solutions to provide data recovery for exactly the same or even a lower budget.

might be lost in a disaster, and the recovery time objective – how fast does this application need to be restored. In addition, threats to be considered may vary by geographic location so each data centre environment is unique.

This analysis helps set the strategy and architecture for disaster recovery required and cost justification for the business. So companies are becoming more aware of the threats because of a number of factors, including these natural disasters and an increasing level of mandatory data protection regulations from government or industry.

In the region, as the costs of setting up a disaster recovery site have become more manage-

able, vendors have been able to provide companies with more flexibility in terms of what they can purchase to set up a disaster recovery site,

"We see them investing more in disaster recovery and we see not only companies that have disaster recovery invest more in it, but new companies start moving into a business continuity or disaster recovery solution," explains Ayass.

The Arab Spring fostered the shift of international and regional companies to a more stable political environment, thus making Dubai and the UAE as a whole as an attractive option to relocating regional offices/operations or at least having a secondary disaster recovery site located here.

Disaster recovery statistics

eHosting DataFort in conjunction with Continuity and Resilience launched an Industry survey report on Business Continuity Management Trends in Region the study was conducted across Nine Middle East Countries and highlighted:

- 25% of the respondents confirmed that they plan to use an external Data Centre Service Provider for Production / DR site. This shows that there is increased awareness about using a service provider's skills and expertise to host Disaster Recovery sites in order to maintain continuity of business in case of a disaster.
- 39% of the respondents confirmed that they have requirements of Disaster Recovery (DR) seats within the next two years.
- 35% of the respondents rated the overall reliability of their current IT backup and recovery system and procedures as very reliable and the rest 65% were not very sure of the overall reliability of their current IT backup and recovery systems and procedures. This shows that IT backup and recovery systems for organisations need to be made more reliable.

* The report covered various industry verticals such as financial services (37%), IT/Telecom (16%) and government (10%).