



Real Problems,
Virtual Solutions.

WHITE PAPER

The Hosting Dilemma

Try delivering an application to any number of users and you'll understand how difficult correctly scaling your application's infrastructure is.

Whether your application is an e-commerce vehicle, a CRM or anything else, the initial expenditure is always eye watering. Especially if you're a small business, planning for rapid growth.

Web servers, application servers, database servers, load balancers, firewalls, switches, the components stack up quickly.

Add to this the actual space and power requirements and you'll not only be spending out in the short term, but continually thereafter.

Without even discussing the complexity of managing your new assets, it's easy to see that there must be a better way.

The Challenge

Application architecture: Your application may not have been built with the future in mind. What if you want to supply your software as a service or scale beyond a single server? You don't have to completely re-architect your software – clever use of virtualisation and disposable infrastructure can do this for you.

Time to market: Getting your infrastructure right takes time. If your business changes, you want to know you have the ability to react to it quickly. Most existing infrastructure solutions tie you in to vendor lead-times, often long for specialist equipment like load balancers etc.

Data centre visits: With physically hosted equipment, you don't have the type of control that you need. A trip to the data centre to move a connection from one unit to another isn't a constructive use of time.

Wasteful test environments: Quality assurance and application testing usually require separation from the production systems. Putting systems in place specifically for this is a waste of money. Unless you exactly duplicate the production environment, how can you be absolutely sure that your application will work flawlessly in production?

Scalability planning: Scale out or scale up. It all means yet more hardware. Formerly, you might have added servers to alleviate conflicts between co-habiting software or to keep portions of your business separate for security or management purposes. This largely happens organically over time, as you amass a complex and time-consuming network. The time taken just keeping things working cannot be underestimated.

Idle servers: Server hardware is often under-utilised. It is not unusual for equipment to sit idle for much of the time. When scaling infrastructure, it

is important to be able to handle peaks in demand. Up until now, that has meant over-specifying your equipment or buying more of it.

Power consumption: As servers become more powerful and feature rich, so their power usage increases. Over time, servers have become smaller and packed more densely, which has called for data centres to provide higher levels of power – a scarce and expensive commodity.

Hardware failure: Your hardware will fail at some point. There's no two ways about it. What counts is how you handle that failure and alleviate any effects to your business. Planning for disasters is complex and usually requires standby systems, with costs that don't provide an immediately tangible benefit. By adding redundancy at a lower level, you can gain the same benefits with minimal outlay.

The Solution – Virtual Private Data Centre

Building scalability into your application: Although your application may not have been built to support multiple customers in a single install or scale past a single server, disposable infrastructure makes it simple and quick to provide the same template application to hundreds of customers simultaneously. The provisioning process can be fully automated and tied into your back-end systems, as required.

Days to market, not months: Since we base our solutions on standard commodity hardware, built to our standardised exacting specifications, we can add new capacity to your solution simply and quickly without disruption. New capacity can even be "turned up" within a day.

No more data centre visits: Within our systems, you create a fully virtualised private data centre within which you can add and remove any type of hardware-equivalent appliance and connect them in any way you choose. Further, you can create, use and tear down multiple virtual infrastructures at the same time. You have complete control.

Zero cost test environments: In exactly the same way that you create your infrastructure by dragging and dropping virtual appliances onto your application's canvas, you can also create a direct copy of an existing canvas. Copying the canvas copies both the virtual infrastructure and the existing data, so you can be safe in the knowledge that your test environment is identical to production.

Scale at the click of a button: Need another web server? Just drag another onto the canvas. A high number of pre-configured and optimised virtual appliances, from load balancers to MySQL servers are provided from day one. Further appliances or customisations of existing ones can also be added.

Reduction in power usage: Power utilisation on idle servers is not radically different to busy ones. However, by increasing server utilisation you don't need so much equipment and therefore reduce your overall power

consumption. Additionally, we have considered the power utilisation of the hardware we use and carefully chosen every component, contributing to a greener data centre.

Worry free hardware failure: Using in-built monitoring functions, our solutions recognise and act on failures almost immediately. Whether an entire server fails, or a single virtual appliance, the platform will automatically recover. Even your data is safe, since we use distributed data mirroring. Adding full redundancy is as simple as adding another server, beyond those of your current needs (commonly known as N+1). You no longer need to consider failover firewalls, redundant NAS devices or keeping the data synchronised, as that's all handled for you.

Thank you for taking the time to read this whitepaper. To discuss how we can help you overcome your business' hosting dilemmas, please contact us via e-mail at sales@areti.net or telephone +44 (0)20 8315 5800.

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We're taking virtualisation past virtual servers and making the infrastructure part of the application, not the other way round.

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- Richard Seabrook
Senior Technical Manager