Windows Server 2012

Insights from early deployments of Windows Server 2012

Tony Lock, Freeform Dynamics Ltd, May 2013

Windows Server 2012 is a big bet for Microsoft, and is a major step forward as releases go. It brings together wide-ranging new capability and functional improvements in the underlying operating system coupled with advances in management, orchestration and automation courtesy of System Center 2012 Service Pack 1. But how ready is it for mainstream deployment?

In order to answer this question, a number of members of Microsoft's Rapid Deployment Program (RDP) were interviewed by Freeform Dynamics. As this program gives select customers early access to software for assessment in a real world environment, the feedback and conclusions emerging from this study provide valuable input for anyone considering adoption of the latest Windows Server and System Center releases.

Key Points

Windows Server 2012 offers a wide range of significant functional advances

Early adopters of Server 2012 indicate that much of the new and enhanced functionality is worth utilising. But they also stress that there is so much available that new users should prioritise what to implement first rather than trying to boil the ocean by attempting to implement everything at once.

Server 2012 delivers more value when combined with System Center 2012 SP1

To take full advantage of the capabilities of Server 2012 early adopters strongly recommend it be deployed in tandem with Microsoft System Center 2012 SP1. Without the latest System Center release, management and routine administration is more complex than it needs to be.

The new software is accompanied by a welcome simplification of licensing

Those interviewed report they are much happier with the new licensing models, especially with regard to transparency and ease of understanding. The fact that many capabilities are bundled into the core licences is appreciated as it simplifies planning and budgetary approvals.

There may be an opportunity to reduce the need for third party solutions

Early adopters report that the functionality available in Server 2012 and System Center 2012 SP1 may make it possible to reduce, or in some circumstances, eliminate the need for third party tools that were essential when utilising Server 2008.

You need to think differently, and established operational processes may need modification

To take full advantage of the new capabilities on offer, which enable a more flexible and streamlined way of working, members report that IT teams must be ready to modify, if not completely change, some of their operational processes and procedures to fully unlock the potential.

Training is essential

The wealth of new functionality available in the tools and the need to potentially make significant alterations to operational processes makes training of IT staff an imperative. Some RDP members also recommend taking advantage of any experience and best practice available from other early adopters and Microsoft partners.

This report was authored on an independent basis by Freeform Dynamics. Feedback was gathered via telephone interviews with members of Microsoft's RDP program, and the work was completed in March 2013.

Introduction and study overview

Conventional wisdom says it's best to wait for the first service pack to arrive before implementing any new operating system release from Microsoft. As Windows Server 2012 delivers a lot of capability that directly addresses many of the challenges and requirements faced by IT today, however, is it really necessary this time around to wait to take advantage of what's on offer?

This was one of the questions addressed during a research study in which feedback was gathered from senior IT professionals who had gained experience with Windows Server 2012 and System Center 2012 SP1 as part of Microsoft's Rapid Deployment Program (RDP). Each participant in the study spent upwards of an hour (sometimes substantially longer) with a Freeform Dynamics analyst talking through their views of the new offerings based on their use in a live systems setting.

Organisations represented included four large commercial enterprises, three IT services firms and a local government organisation, providing input across a range of different deployment scenarios. In the remainder of the report, we use direct quotes from study participants to illustrate some of the benefits, practicalities and challenges associated with these new and important server and tool releases from Microsoft, and to provide some words of advice.

Before getting into the specifics, though, let's start out by addressing the high level question about whether the software is ready for prime time use. In short, those with experience say "Yes", and to kick us off, here are some initial quotes that illustrate the general level of confidence that came through in the study in terms of stability and robustness:

> *"As with anything, Windows Server 2012 is not perfect, but we have not had any real issues with it so far. In the past we waited for Service Pack 1 to arrive before considering putting new server releases live. Even from the previews and Release Candidate, though, we gained enough confidence to deliver Windows Server 2012 live, which is not really something you expect from Microsoft."*

> *"We will roll Windows Sever 2012 out very quickly. The reason is the comfort factor of knowing that for 10 months of early deployment it's been rock solid with no significant issues. We have confidence in the platform."*

> *"Windows Server 2012 just stays up – but even if there are problems it is better. We had one hiccup on a patch Tuesday when one of the nodes in the cluster-aware update process lost its TCP/IP stack which caused some concern. I checked in remotely and resolved the problem with zero impact to the business. In the previous environment this would have wiped out the services. The new clustering capabilities allowed business to carry on without interruption."*

With that, let's walk through some of the more detailed feedback we received. Along the way, we will touch on general impressions, areas frequently highlighted in terms of quick wins, new management capability, and some of the things to build on for the future.

General impressions

During the study, each interviewee was asked to comment on their overall impression of Windows Server 2012 and System Center 2012 SP1 and what expectations they had. Without delving into specific functionality, a number of common areas of agreement were apparent.

Many told us that systems are much easier to manage with Server 2012 and that the potential for manual errors is significantly reduced. One quote that highlights this states:

> *"Things are a lot better now with Windows Server 2012, particularly with the new Server Manager, and being able to monitor the progress of activities. It's been rare that reboots are required to get things up and running. It is so easy to conjure changes now, and faster. Changes are now less error prone and we have more confidence when making them."*

This advantage is further reinforced when looking at how the Hyper-V 3 virtualisation layer is administered, most pointedly how it has helped simplify VLAN management, a task that server managers have not traditionally enjoyed.

> *"Hyper-V 3 network virtualisation allows a much cleaner environment where in the past it needed a lot of VLAN management. It's now much easier to manage this as the whole thing is flatter and easier to understand – not so many pointers to keep track of."*

But whilst the administration of systems has been made cleaner, taking advantage of the new management capabilities does require some operational changes. Chief amongst these concerns the requirement to get used to a new administrator interface.

> *"You have to take a step back, open your mind, think beyond the box you're used to, and understand what you've been offered. Some try to do things the old way but you must accept the need to change. If you do the reward is excellent. If you don't want to accept the changes, then you will be in for a fight. The new style start screen and no start menu can cause issues initially, but once you get your head around things, it becomes natural. And PowerShell can help a lot. It's great for doing things quickly and intuitively. It will allow the team to become more dynamic and can be used for a wide range of tasks."*

KEY TAKEAWAYS

- Hyper-V 3 is attracting considerable attention.
- Server Manager capabilities are enhanced.
- PowerShell improvements are seen to be beneficial.

Indeed, the final reference to PowerShell is a theme that recurs frequently, especially in the context of the automation of routine or complex operations.

Quick wins using Server 2012

Upgrading any system, never mind software responsible for running mission critical workloads, requires careful consideration of the 'risk / reward' balance. In order to take the decision to upgrade it is essential that the potential for system reliability and performance be established. Once these elements are confirmed, the decision on precisely when to upgrade is likely to depend on finding positive reasons to make the change. The interviews asked respondents what expectations they had of Server 2012 and System Center 2012 SP1, and whether their expectations were fulfilled.

Hyper-V 3

Several technical features were mentioned as prompting initial investigations. One of the primary reasons given for adopting the new software centres on Hyper-V 3 which is described by several interviewees as a good product with capabilities that actively encourage a rapid migration from Hyper-V 2 or earlier releases. Beyond that, the availability of Hyper-V 3 was mentioned as a potential prompt to switch over from using other virtualisation tools in order to reduce total licensing costs.

ANALYST COMMENT

RDP users recognise a number of benefits available in Server 2012, especially when combined with System Center 2012 SP1 that encourage early adoption of the tools. Even allowing for the close relationship such program members are likely to have with Microsoft, it is clear that upgrading to these platforms sooner rather than later should be considered.

> *"Moving a workload to another server with 'shared nothing' is magical. It would have taken a day to move in 2008, now it is just point and click. When an application was having problems recently, for example, it was easily moved to another physical host to prove there were no issues with the hardware, allowing us to then focus on optimising the app itself."*

"It was too easy for a Hyper-V 2 cluster to go offline – at the 50% limit it would shut down. The reliability of the clusters with Windows Server 2012 is massively improved with the last man standing concept."

"There is a change in thinking between what Windows Server 2012 is compared to what 2008 R2 was. The reality is that 2012 is Cloud. The tools may look the same, but behind the scenes, the engine has been revved up but also slimmed down. We can spin up big loads and run them with confidence. This can really help with the agility."

High Availability

In addition to hypervisor improvements, other features that attracted attention for quick benefits include advances in networking features and clustering to support high availability (HA) operations out of the box. Capabilities such as the ability to dynamically alter virtual machine resource allocation, including memory sizing etc., were also identified as helping solve issues previously considered difficult and / or costly to address.

"Clustering is now part of the standard edition, which means we can seriously look at good high availability across a number of solutions in the network. This is a big win."

KEY TAKEAWAYS

Hyper-V 3 workload movement, clustering and the dynamic allocation of physical resources are making 'HA' available to a wider range of applications than before.

"Hyper-V 3 is noticeably better than what's been in place before. We had 2 hosts in the previous infrastructure and if one went down we couldn't migrate the workloads to the other machine. With the improvements in the way that dynamic memory works we can now stack our entire VM infrastructure on a single box temporarily if needed, which was impossible before."

"Windows Server 2012 can help with migration, maintenance and rapid implementation of changes. We are able to add in extra hosts to a Hyper-V cluster and then live migrate to re-spread the load from maximum density after getting over a problem. This is very easy compared to how it was done before."

Network management

Improvements to networking capabilities were again mentioned as a quick win, although not one necessarily anticipated in advance.

"NIC teaming is a great new addition. During the migration from Windows Server 2008 R2 to the new cluster, we actually had a NIC failure, but we could complete the migration and replace the NIC without any impact to the business. Only the consultant and I knew that anything had happened."

"Virtual networking within Hyper-V has had a big impact on management of IP addresses and QoS."

ANALYST COMMENT

The improved network management enhanced for virtual environments is beneficial, but may require organisations with separate 'network' and 'virtualisation' teams to reorganise or at least to modify processes to get the most from the new opportunities.

While the tools may have simplified network administration, this does not mean that all challenges have gone away. Indeed, as has always been the case, proper network planning is essential.

"Plan network virtualisation from the outset as you cannot just drop it in without support from the network team. The concepts are game changing, but you cannot do it the old way"

Linux Guests

Another factor mentioned by an interviewee highlighted improvements to support for guest virtual machines running the Linux operating system, especially in terms of automating routine processes.

> *"One of the best things about Windows Server 2012 is better support for Linux to run on top of Hyper-V. Previously the use of Linux and other guest OSs required a lot of work to get the automation going. PowerShell has a much bigger usage now – we just script and run. This prompted not just consideration of 2012, but aggressive early adoption."*

ANALYST COMMENT

The addition of support for Linux guests on Hyper-V 3 could extend usage scenarios, but open source users may need to be convinced of the robustness of Microsoft's support.

Reliability and support

One final point worth mentioning concerned the comments of one RDP member pointing out that Hyper-V 3 running on Windows Server 2012 was very robust in their environment.

> *"Compared to our old VMware and Hyper-V 2 implementation which had lots of support tickets, our Windows Server 2012 Hyper-V 3 implementation has none so far after three months in production."*

Management and System Center 2012 SP1

During the course of the interviews it became very clear that while there are many advantages available through the early adoption of Server 2012, to get the most benefits upgrading to System Center 2012 SP1 is strongly recommended. Indeed, some comments concerning the delay between Server 2012 release and the availability of System Center 2012 SP1 caused a degree of frustration. With the release of SP1, it is now possible for organisations to exploit the tight integration between Server 2012 and System Center 2012 allowing planned initiatives to move forwards.

KEY TAKEAWAYS

Server 2012 is exploited more easily and robustly when used in combination with System Center 2012 SP1 for management.

> *"Our biggest problem initially was the delay between Windows Server 2012 launching and the arrival of System Center 2012 SP1. We would have liked for this to be available at the same time, even in beta. For Windows Server 2012 to be fit for purpose, you need to migrate workloads with minimal downtime. Without System Center 2012 SP1, the process was slow, time consuming and labour intensive."*

> *"We had been evaluating Windows Server 2012 for a year or so on test systems. We were ready to move quickly and could have gone on to release, but waited for System Center 2012 SP1. It was a bit of a disappointment that it took so long to get this out, but System Center 2012 SP1 and Server 2012 work so well together we are now very happy."*

One of the major points revealed in several of the conversations illustrates that when System Center 2012 SP1 and Server 2012 are deployed in tandem they have many capabilities that previously required third party tools. These capabilities, coupled with the inbuilt integration, now included as standard, makes both the deployment and on-going management of systems more straightforward.

The new capabilities contained may provide a route for some organisations to remove, or significantly reduce, the need for third party tools. This clearly offers the opportunity to lower software licensing and maintenance costs, which in certain circumstances

ANALYST COMMENT

Management capabilities enhanced in Server 2012 and Service Center 2012 SP1 should simplify many tasks that were previously awkward to perform, including network administration and storage management in virtualised environments.

Core operational processes and responsibilities may need to be modified to unlock the full potential.

could be a major factor encouraging early adoption.

> *"Windows Server 2012 reduces a lot of additional cost and effort – it eliminates the need for many costly third party utilities such as virtualisation, management and orchestration, data dedupe, etc., as much of this is now included in the basic licence."*

The combination of dynamic resource allocation, simple management, automation of administrative tasks, inbuilt HA and the opportunity to reduce licensing costs provides encouragement for the early adoption of Server 2012 and System Center 2012 SP1. In organisations with a moderately virtualised environment, migrating to the new platform may be attractive even if the guest OS remains on Server 2008 etc. for the short to medium term. Some RDP members state the business case for moving to Server 2012 can be made by the Hyper-V enhancements on their own, with everything else being bonus benefits.

Capabilities to build on

Those interviewed also provide ample evidence that while the platform has features encouraging early adoption, Server 2012 has capabilities that could prove attractive for the long haul.

Storage

Of these, storage related features including site to site replication and integration with OEM equipment, were mentioned along with in-built data deduplication. The costs associated with storage acquisition and its long term management are growing rapidly. Perhaps even more importantly, the visibility of costs associated with storage is now reaching the board room, giving advances such as those enabled in Server 2012 a significant impact on storage investment and management going forwards.

> **ANALYST COMMENT**
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> Storage resources are under pressure. The cost of acquiring and managing storage over long periods of time is taxing budgets and human skills. Anything that reduces storage costs will be welcomed.

> *"Our storage costs are plummeting. We get up to a 70% reduction in the cost of storage with the right workloads. Not everything can go on these yet though. Hyper – V replicas happen every 5 minutes, and this is a bit of an arbitrary limit. We would like to choose replication intervals based on workload requirements, everything from 'real-time' through to any limit we choose – 4 hours, 8 hours, 24 hours etc. Much more granularity is required, but it's a good start."*

Another feature widely recognised is the extension of storage platforms supported by Server 2012. The ability to be able to utilise all classes of storage from direct attached, through low cost NAS and SAN, up to top of the range systems has been nearly universally welcomed. The growing cost of storing data as the volume of information being held expands rapidly makes it highly likely the addition of these storage related capabilities will go down well in the broader Microsoft user base.

> **ANALYST COMMENT**
>
> The simplification of storage administration also holds out the potential to enhance service availability via fewer human errors.

> *"It was very easy to make the case to move to Server 2012. Last year we were migrating the virtual machines between two regions based on a very expensive high end EMC storage solution – the RecoverPoint replication appliance with the Cluster Enabler add-on. Now we can use the built in Window Server 2012 tools to cut costs dramatically. It's still early days so we don't have a fully automated failover scenario yet, but using PowerShell and System Center 2012 Service Pack 1 we should get a lot closer."*

These facilities have been understood and deployed by the service provider community even more readily than the typical commercial company or government end-user.

Licensing and Software portfolio reduction

Software licensing has long troubled IT professionals with its complexity, especially for products that may offer additional functionality under separate licence conditions. The simplification that is apparent in the functionality offered in Server 2012 is appreciated by several of the interviewees.

In particular the feature parity between Standard and Data Centre versions, where virtualisation scale is perceived to be the main differentiator, is seen to make it simpler to architect and deploy workloads without worrying about base platform requirements and mixed estates. In addition, the inclusion of advanced features such as HA in the base Standard edition attracted positive comments.

"We are using Server 2012 for things like high availability out of the box without needing to pay a lot more for an HA version of an app or platform. Our plan was to deploy Biztalk Server on Windows Server 2008 R2 Enterprise for clustering. With Hyper-V 3, we can use the standard edition to replicate virtual machines between servers and if there is any failure we can activate backups on other machines, saving a substantial sum in licensing."

ANALYST COMMENT

The benefit of simplified licence management should not be underestimated. Apart from reducing management overhead, you can make operational decisions without having to worry so much about the commercial or compliance implications.

That said, there is still considerable confusion around when to switch between Standard and Data Centre editions. Even with the tools Microsoft has made available to help here, there is a sense that things could still be further simplified and optimised.

When it comes to comparing the capabilities in Server 2012, especially in the area of virtualisation, the overall feeling is that Server 2012 and System Center 2012 SP1 are now very competitive with alternative solutions. Several of those interviewed commented that where a workload does not require another virtualisation platform for support reasons or customer demand, it can be seen to be an additional cost burden, and not a trivial one at that.

In this context, the Data Centre product where virtualisation and management come as standard without needing premium 'bolt-ons' or expensive licence activations is perceived to be giving competing products a very good run for its money.

Automation

After several years of discussion, automation and scripting are starting to be more widely appreciated. This is especially evident in the service provider community where cost of service delivery and operational excellence are core mandates. Traditional end customer companies are slower to appreciate the benefits, but are generally appreciative of the potential, particularly around PowerShell and the new GUI enhancements built on top of PowerShell operations.

ANALYST COMMENT

Automation is becoming ever more important as IT use increases and skilled human administrators are tasked to do more.

"Windows Server 2012 just feels a lot more natural and easier to work with. We were nervous about managing server core boxes with Windows Server 2008 where we were always having to log in to do key administrative tasks with PowerShell and Sconfig. With Server 2012 we are using Server Manager with confidence, so the amount of time spent logging onto the actual box is minimal. Lights-out operation is so much better."

Compatibility and support

Very few of those interviewed reported concerns over the use of Server 2012 in either lab testing or production environments. The few issues that did arise were usually dealt with promptly by Microsoft and/or the OEM partners.

In terms of application compatibility, a key concern, the approach most commonly adopted by RDP program members has been not to force fit existing workloads onto Server 2012. Instead the majority have chosen to work with suppliers or wait for ISVs to formally support the workloads running on Server 2012.

> **ANALYST COMMENT**
>
> Application compatibility is essential. Despite RDP members reporting few issues, application due diligence must be performed.

Overall, the feeling is that Server 2012 is stable 'out of the box' and there is no need to test it for extended periods of time before deploying it in live environments. The RDP members we spoke to are looking to migrate workloads sooner rather than later to take advantage of the scalability, reliability and rich feature solution.

> *"We've not had any compatibility issues to speak of, but we waited for updated releases of software to be ready and supported. For example, we waited for a Dell Host Integration toolkit to integrate with EqualLogic SAN."*

Core Infrastructure enhancements

Server 2012 contains enhancements to some mature infrastructure services that are essential to everyday use of IT platforms. The new software makes it possible to run infrastructure components such as DNS, DHCP and Active Directory more flexibly than in the past in fully supported virtual environments. These changes may not be seen to provide obvious immediate benefits to organisations, but they certainly help justify the move to Server 2012 sooner rather than later.

> **ANALYST COMMENT**
>
> Some of these benefits may not be easy to recognise until something goes wrong. But they should be considered when making a business case.

> *"DHCP management enhancement looks really good. DHCP is one of those things that you want to just work but it can occasionally be a real pain as it just stops working. DHCP failover in Windows Server 2012 looks good and we plan to make heavy use of it."*
>
> *"Active directory upgrade with recycle bin is a key initial driver."*

Once again these new capabilities are proving attractive to service providers or organisations where they need to operate systems in separate environments.

> *"Under our old system, we needed separate environments for different tenants. Now we can run them on one platform! Windows Server 2012 SRIOV enables different networks to be pushed through the NICS to the core switches. This is much more flexible and reduces our previously many clusters down to a few, with no need for boundaries and separate environments. Multi-tenant is possible, and there is no need for separate hosts for internet facing apps vs internal ones."*

Practicalities of implementation

While many of the benefits to be wrested from the early adoption of Server 2012 and System Center 2012 SP1 are clear, certain challenges remain.

Prioritise feature adoption

Beyond those expected of any upgrade process, interviews with members of the RDP program revealed that one of the most significant challenges is simply working out precisely what goodies are in the new bag. Coping with the breadth of the enhancements suggests organisations should prioritise a few and establish some quick benefits before moving on.

"Don't do a big bang - prioritise and then factor in the rest."

KEY TAKEAWAYS

Don't try and do everything possible at once. Pick the most important features to exploit first.

"Create a sandbox area and just get to know it as so much has changed – file servers, RAS, Hyper-V, Server Manager etc. The more you run 2012, the more advantages you get. Even low level things like access to network shares show big benefits."

"It is a step change from Windows Server 2008 R2 to this. The dedupe options, DHCP, SMB 3 and Hyper-V improvements are just the tip of the iceberg. There are a lot of changes and it's easy to forget about new features. It's important to understand how to get the benefits and optimisations on the table."

While this may take some experienced Windows server administrators by surprise, the range of benefits available could cause challenges unless upgrades are well thought through. And not just at the usual 'technology' level.

Learn from early adopters / channel partners

Some interviewees made a point of mentioning that it was good to learn from the experiences of their channel partners. In particular they point out that having made some mistakes themselves as part of their training programmes, channel partners provide the opportunity to understand what not to do as well as making adoption smoother.

And garnering such experience is likely to cover not simply understanding the technology but will almost certainly need to extend to modification of established operational processes. As one interviewee stated:

KEY TAKEAWAYS

There is no substitute for experience and best practice. Don't reinvent wheels.

"Just because you do things in a particular way now, don't think you can do them in the same way with the new release"

Management benefits

One area of near universal agreement concerns how important it is to get to grips with the new management features.

"Embrace Server Manager, you'll love it. This is the big thing - get to know it and you'll find life is so much easier."

Training

Naturally enough, implementing new systems, learning new management tools and working out how to modify operational processes requires a considerable upgrade in skills. But as we all know, getting training budgets approved and converted into trained systems managers is a tough challenge, especially in times when all expenditure is under scrutiny.

ANALYST COMMENT

Don't skimp on training. If essential training is not undertaken and experience garnered, benefits will be delivered much more slowly and, probably at greater cost.

"The first thing to do is get all the administrators certified for Windows Server 2012, as there are a lot of changes. This is a new technology, not just an in-place upgrade of an existing solution. Think of it as a game changer for IT service delivery, not just a more modern version of what's in place."

Making the business case

Many of the elements required to build a solid business case for the early adoption of Server 2012 and System Center 2012 SP1 have already been mentioned earlier in the document. It is worth

noting however, that several of the advantages available can have tangible cost benefits around which business cases may be formed.

New functionality saves money

In terms of the potential to reduce costs, several areas stand out as holding potential. Among these making high availability affordable for a much wider range of applications than has previously been the case springs out, as does the opportunity to save significant costs on storage management.

> *"As there are so many improvements we will be making a conscious effort to move our cluster to Windows Server 2012 quickly rather than run Server 2008 R2 to its end of life. Many of these capabilities are limited if you are not using Windows Server 2012, so Windows Server 2008 R2 actually ends up being a net drain on operating costs."*

Indeed, the storage savings available combined with the potential to optimize systems with a consequential reduction in power costs was also mentioned.

> *"Hyper-V 3 removed obstacles in Windows Server 2008 R2 allowing us to consolidate more, reduce power consumption, upgrade the SAN and Backup, have cheaper file storage, better thin compute, improved RAS and SQL server scale out, as well as supporting our BYOD agenda."*

Licensing

The opportunity to reduce costs by eliminating or reducing use of third party tools is an area that was highlighted by several RDP participants.

> *"Licensing and flexibility. The whole Windows Server 2012 package is a different animal to what it was."*
>
> *"We have a simplified licensing approach with a Microsoft only stack – we no longer need the additional hypervisor solution used previously. Hyper-V 3 is as good as or even better than the other software and is included in the licence, saving us overhead."*
>
> *"Microsoft has simplified the licensing. Microsoft is starting to give something more for the licence – buy this get that, trade up and get a whole lot more."*

ANALYST COMMENT

It may well be possible to utilise new features present in Server 2012 and System Center 2012 SP1 to reduce the usage of other tools. But IT runs on more than software, it also operates on the skills, experience and comfort zones of IT staff and corporate policies, which needs to be borne in mind when making substitutions.

Other thoughts

One or two interviewees mentioned benefits that do not fall into either the 'technical' nor 'financial' categories. While these ideas may be less material and harder to quantify, they do hold the potential to advance IT Service delivery, service availability and quality.

> *"This creates an opportunity for IT to move up a level in the business – to talk about business value and not nuts and bolts. We can speak about how to give the business a competitive advantage."*

This approach is very much in line with other research we have carried out over recent years where forward thinking IT organisations report many advantages from delivering IT services rather than focussing solely on IT infrastructure and application management.

On a more practical level, the new functionality available has already triggered some RDP program members to consider making significant changes to the architecture they employ to host and provide failover for their systems.

"As a consultant, we have a few scenarios in mind. Customers wanting to reduce storage costs can keep their data in the primary DC with big SAN systems, and have a secondary DC with Direct Attached Storage hosts and lower costs. The built in replication ships the data across. The second DC doesn't need full licence costs. In the branch office we are seeing customers using Hyper-V Replica to replicate back to the primary DC. In the event of a local branch failure you can run the VM from the primary DC."

Conclusion

It is evident from the discussions with members of the Microsoft RDP program that there are clear technical and business advantages available through the early adoption of Server 2012 and System Center 2012 SP1.

Some of the advantages identified may have obvious financial benefits associated with them, particularly via removing or reducing the requirement to license and maintain third party software. Additional benefits discussed included the ease of making systems highly available, thereby potentially expanding the range of applications and business services covered.

Of course we need to appreciate that the RDP community is heavily engaged with Microsoft, and therefore often has a greater than average understanding of the platforms provided, and receives a special level of support during their early adoption activities. That said, the people we spoke with, while generally very positive, were also pragmatic and realistic in their assessments.

Beyond the early experiences reported here, it's important to understand that with these latest server and tool releases, Microsoft is enabling its customers to put a strategic foundation in place for the future. One of the commentators we quoted early on, for example, made reference to Windows Server 2012 being 'Cloud' in nature.

With this in mind, we would encourage you to take a look at the reports listed in the Further Reading section below. Again based on Freeform Dynamics research, these provide additional important context in which the rapidly evolving Windows technology stack should be considered over the longer term.

In the meantime we hope this report has helped you to understand some of the benefits and practicalities of Windows Server 2012 and the latest incarnation of the System Center management environment, and we would like to express our thanks to the members of the Rapid Deployment Program who took the time to speak with us.

Further Reading

The following reports are all available as free downloads from www.freeformdynamics.com.

A Vision for the Data Centre
http://www.freeformdynamics.com/fullarticle.asp?aid=1604

Private Cloud in Context
http://www.freeformdynamics.com/fullarticle.asp?aid=1534

From Virtualisation to Private Cloud
http://www.freeformdynamics.com/fullarticle.asp?aid=1544

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