

## **SYMANTEC APPLICATIONHA: INTELLIGENT APPLICATION AWARENESS IN VIRTUAL ENVIRONMENTS**

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Symantec's recent product refresh for their ApplicationHA product reinforces their commitment to providing application level awareness and high availability to virtual environments. Symantec ApplicationHA is to virtual environments, what Veritas Cluster Server (part of Storage Foundation HA) was to physical environments – a true multi-platform, multi-application aware clustering and high availability platform. ApplicationHA should open the floodgates for migration of Tier 1 mission critical applications to virtual environments – something that many IT organizations are shy to undertake since the virtual infrastructure lacks application awareness that is available in physical environments because of OS based clustering solutions. ApplicationHA plugs this critical void – it provides a layer of intelligence to the virtual infrastructure so it can take corrective action as needed if the application state changes, thus creating an additional layer of application high availability on top of the existing virtual machine availability. Customers adopting ApplicationHA should benefit from Symantec's industry leading experience in integrating over five hundred applications with Veritas Storage Foundation HA. Symantec's vision for ApplicationHA extends the one they have for Storage Foundation HA. While ApplicationHA was initially born out of a multi-pronged collaboration with VMware, Symantec plans to provide similar functionality for virtualization platforms in the future. ApplicationHA, like its sibling Storage Foundation HA will truly revolutionize how applications are handled in a virtual infrastructure.

### **THE BARRIER TO VIRTUALIZATION OF MISSION CRITICAL APPLICATIONS**

Server virtualization has worked wonders in most IT environments – it has brought about a dramatic change in how compute resources are purchased and consumed. It has accelerated the adoption of a utility model for IT services, allowing companies to oversubscribe their compute and storage resources and in the process increase their utilization. It has fueled the adoption of the cloud for platform and infrastructure as services and accelerated the adoption of stateless computing: A true virtual world in which applications are completely run in a platform agnostic manner.

But while businesses have cranked up the conversion of Tier 2 and Tier 3 applications to virtual infrastructure, they continue to resist the virtualization of Tier 1 and mission critical applications. In fact in most environments, the graph of virtualization adoption to application critical looks like a logarithmic curve with the adoption pretty much dying off as the criticality increases. This is a serious barrier to overcome for vendors of virtualization solutions such as VMware and Microsoft. In spite their attempts to provide high availability and disaster recovery protection for their tenants i.e. guest operating systems or virtual machines, businesses remained unconvinced that their Tier 1 applications will be afforded the same level of service level guarantees they enjoy in dedicated physical environments.

They have good reasons to not be convinced. The source of these reasons lies in how virtualization vendors view applications running inside virtual machines. While the virtual infrastructure may know about the state of the guest operating environment, it does not have much visibility into the state of applications running atop the guest. So should an application falter or fail, there is nothing much the virtual infrastructure can do about it. Businesses have to thus rely upon external monitoring tools to alert them on the failure of an application with an additional set of tools to take corrective action. Such actions are obviously done outside the purview of the virtual infrastructure leaving the application availability disconnected from the former.

Many vendors like Microsoft, Oracle and even Symantec have qualified their clustering technology to run within the virtual machines to provide OS based clustering. They have done so by simply treating the virtual machine as a physical machine. While this is a good stop gap measure, such technology still suffers from the previous problem in that it runs independent of the virtual infrastructure i.e. neither side knows about each other. So any actions taken by each technology can result in the other component faulting out. This lack of coordination can lead to the clobbering of resources across the virtual infrastructure. For example actions taken by VMwareHA can cause the OS clustering components to fault, or perhaps result in the clustered virtual machines to end up on the same physical hypervisor compromising true high availability should the physical server ever crash.

Deploying OS based clustering means that businesses have to give up use of virtualization features such as vMotion and DRS in the process losing the mobility and dynamism that is offered by virtual infrastructure to its tenants. Deploying their applications in the virtual infrastructure also means that they have to carry over the cost and complexity of maintaining OS based clustering to the virtual infrastructure. For example, having to maintain a standby VM poses additional OS and application maintenance overhead such as patch management, software licensing costs and clustering maintenance.

This is a far from an optimal co-existence – not something businesses like to hear when it comes to protecting their most important applications. Current tools force customers to make difficult trade-off between exploiting virtualization, ensuring availability, and reducing complexity.

## **APPLICATIONHA – THE BEST OF BOTH WORLDS**

Symantec allows businesses to eliminate this trade off with ApplicationHA. In working with VMware, they have created the perfect solution for this problem – that provides businesses the best of both worlds. Symantec has mated the capabilities of its own application high availability and clustering solution with the native ones of the virtual infrastructure. This effort born out of collaboration between Symantec and VMware is known as ApplicationHA – a solution that brings “application awareness” to the virtual infrastructure. ApplicationHA allows administrators to monitor their applications running inside virtual machines thus automating application recovery – locally or geographically as necessary.

Businesses familiar with Symantec’s single UI strategy will appreciate the option to use either VMware vCenter or Veritas Operations Manager to monitor application status, providing health status, detecting and/or correcting application failures. Furthermore, given Symantec breadth of experience integrating over five hundred applications with Storage Foundation HA, businesses can be assured that no matter how diverse their application environments, they are able to create a highly efficient availability and clustering framework.

Symantec has ensured that ApplicationHA remains an agile and lightweight platform that can be quickly deployed via the virtual infrastructure management framework. This is an important differentiation in virtual environments that have little room to spare for overhead. Furthermore,

ApplicationHA conveniently integrates with existing DR and automation tools such as VMware's Site Recovery Manager (SRM).

## **TANEJA GROUP OPINION**

With the newest release of ApplicationHA, Symantec has brought the product closer to primetime – ensuring that it becomes a vehicle for mass conversion of Tier 1 and mission critical applications to virtual infrastructure. ApplicationHA should help VMware in increasing its market penetration in Tier 1 environments while improving Symantec's market position as the information protection company.

Furthermore, Symantec's approach to developing ApplicationHA jointly with VMware forms a model for more collaborative efforts with other virtualization hypervisors developers like Microsoft, IBM, Oracle and others – whose products also suffer from the same limitations that VMware's did. Symantec's initial investment in making Storage Foundation HA a true multi-platform, multi-application clustering solution of choice will handsomely pay off as such vendors approach Symantec to develop the next generation of ApplicationHA for their own hypervisor solutions.

ApplicationHA champions the case for businesses wanting to virtualize their tier1 and mission critical applications but having to hold back because of lack of functionality. ApplicationHA offers them the peace of mind that their applications are protected the same way as before. ApplicationHA should thus minimize the barriers preventing adoption of virtualization for Tier 1 and mission critical applications – a goal that vendors like VMware having been chasing for a long time. Symantec has made that goal easier to accomplish.

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