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## SOLUTIONS BRIEF

# POLICY DEFINED CONVERGED INFRASTRUCTURE

Faster deployment and optimization of application behavior on Vblock® Systems leveraging an automated policy-based approach

### Use Case: SAP® Business Warehouse on SAP HANA®

Complex, multitier applications like SAP® Business Warehouse have application profiles that require thousands of interaction rules to be enforced based on dozens of policies for availability, security, performance, service levels, and scalability. In addition, there are other attributes and requirements related to distributed users, virtual and physical resources, and an ever-changing set of security, governance, and compliance standards. Traditional environments require separate applications, network, security, and other infrastructure teams to work together to successfully handle SAP provisioning, deployment, and configuration. Implementations are usually slow, expensive, and error prone, and are difficult to maintain over time. Now there's a better way.

VCE, SAP, Cisco, and Vnomic have collaborated to develop a solution that dramatically accelerates the deployment and ongoing operations management of large-scale SAP applications. With SAP Business Warehouse on SAP HANA®, Policy-Defined Converged Infrastructure simplifies and speeds up adherence to corporate and industry requirements on an ongoing basis without risking availability. This solution is possible due to innovations in application infrastructure modeling, automated and programmable policy deployment, and the predefined converged infrastructure from VCE that provides a well-defined and dependable foundation that can be accurately represented in a software model.

### Solution Elements

- **VCE Vblock Systems** are the leading converged infrastructure according to Gartner.<sup>1</sup> True convergence is powered by market-leading innovations from Cisco, EMC, Intel, and VMware. We have a very close partnership with SAP to help accelerate SAP deployments and streamline operations. Vblock Systems are a predefined converged platform that makes automated policy deployment for programmable infrastructure and operations possible.

- **Cisco Application Centric Infrastructure (ACI)** is an innovative data center architecture that simplifies, optimizes, and accelerates the entire application lifecycle through a common policy management framework. Network, security, virtualization, and applications teams can now work together within a common management architecture, enabling the disconnected management processes that have burdened most data centers to finally come together.

Cisco ACI includes the *Cisco Application Policy Infrastructure Controller (APIC)*, which serves as the single point of automation and fabric element management in both physical and virtual environments. With it you can build fully automated and scalable multi-tenant networks. Other Cisco ACI components include the Cisco Nexus 9000 Series Switches and the Cisco Application Virtual Switch (AVS) for the network edge.

- **Vnomic Automated Delivery and Governance Platform** is an application-centric automation framework capable of controlling the most sophisticated applications and infrastructures.

The *Vnomic Modeling Framework* allows users to concisely express application components, their dependencies, interrelationships, and infrastructure requirements as application building blocks.

The *Vnomic Service Designer* allows service architects to snap together building blocks into error-free application service models, which describe sophisticated application landscapes, independent of infrastructure. Policies are used to expose and configure customization points.

The *Vnomic Desired State Controller* interprets these application service models as holistic desired state specifications. It automatically computes a concrete topology and a correctly ordered sequence of infrastructure operations to provision compute, network, and storage resources with deployment operations to materialize software components and initialize their state and configuration operations to ensure that infrastructure, software components, and services are able to operate correctly.

<sup>1</sup> Sources: 1) Gartner Market Share Analysis: Data Center Hardware Integrated Systems, 2013 and <http://www.vce.com/landing/gartner>



## How it Works

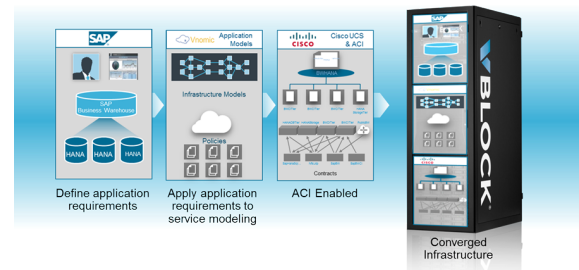
To deploy SAP Business Warehouse on SAP HANA, the Vnomic Modeling Framework is used to first declaratively describe all the components, services, and their interrelationships, which comprise SAP BW/SAP HANA landscapes. Using the Vnomic Service Designer, the components are architected into an infrastructure-independent Application Service Model representing suitable deployment topologies required in the landscapes.

Cisco ACI provides the critical framework that enables these complex communication requirements to be implemented in real-world network installations. It provides a declarative model to provision and control the network through policy. This eliminates the need for special state-dependent logic and sequencing during orchestration. It also provides a set of application-centric abstractions, including application components, contexts, end points, and contracts. Since these abstractions exist in both the application and network domains, the required semantics are fully communicated and thus upheld by the fabric.

Vblock Systems provide a known, well-defined target for this application model with a rich set of infrastructure components to meet all application needs. A controlled set of infrastructure components enables the Vnomic Desired State controller to optimize the deployment of the model. You can build one model to run on any target Vblock Systems with sufficient capacity.

So welcome to a new solution to simplify and accelerate the modeling and deployment of SAP Business Warehouse on SAP HANA. It's as easy as 1) Defining policies, 2) Using policies to create application network profile templates, 3) Automating policy configuration across your infrastructure

on Vblock Systems, and 4) Providing lifecycle management for Day 1 and Day 2 operations.



For more information visit [www.vce.com/solution/SAP](http://www.vce.com/solution/SAP)

## Enterprise Value

The Policy Defined Converged Infrastructure provides an array of benefits, including

- A predefined converged infrastructure system that enables:
- Faster deployment and changes for sophisticated applications, such as SAP Business Warehouse on SAP HANA
- Ongoing agility and operational control of SAP Business Warehouse
- Elimination of complex error-prone processes
- Alignment of network behavior with application requirements
- Continuous security and compliance assurance and remediation

## ABOUT VCE

VCE accelerates the adoption of converged infrastructure and cloud-based computing models that dramatically reduce the cost of IT while improving time to market for enterprises and service providers globally. Through its leading Vblock Systems, VCE delivers the industry's only true converged infrastructure, leveraging Cisco compute and network technology, EMC storage and data protection, and VMware virtualization and virtualization management. VCE solutions are available through an extensive partner network and cover horizontal applications, vertical industry offerings and application development environments, enabling customers to focus on business innovation instead of integrating, validating and managing IT infrastructure.

**For more information, go to [vce.com](http://vce.com).**

