



SOLUTION BRIEF

**THREE EASY STEPS TO REAL-TIME ANALYTICS IN AN
AZURE CLOUD**

A Goldman Sachs study published earlier this year projects that spending on cloud computing infrastructure and platforms will grow at a 30% CAGR from 2013 through 2018 compared with 5% growth for the overall enterprise IT market.

Louis Columbus,
Forbes

CACI delivers its higher education student information system as a cloud service. Customers also often want their data locally available as well for reporting and use in internal systems. This requires CACI to provide a means to deliver this data to their customers, from the cloud to their on-premises environments, in real-time.

THE MOVE TO THE CLOUD

Cloud computing is enabling information, services, and applications to be accessed on demand, anywhere, from any device, by any user, at little or no cost. Universal access to high-speed network connectivity effectively frees users from reliance on the enterprise infrastructure. This new found freedom means that businesses can streamline the traditional obstacles and challenges faced by the CFO, CIO, and IT department.

Very few organizations maintain 100% cloud based environments. The vast majority of businesses have existing on-premises systems that must co-exist with cloud based infrastructure, platforms, and applications in a hybrid architecture. The benefit to this approach is that enterprises are not forced to choose between cloud or on-premises solutions, and have the flexibility to implement solutions that run in either environment. However these benefits present certain IT challenges. A hybrid architecture demands orchestration of data and services across both on-premises and cloud environments.

EMERGENCE OF CLOUD BASED DATA WAREHOUSING, BI, AND ANALYTICS

One of the fastest growing categories of cloud based business applications is data warehousing and business intelligence (BI). These solutions have traditionally been deployed on-premises and consequently have been off limits to mid-size businesses and departments within large corporations. This is because of their high cost and lengthy deployment cycles that typically take months, or even years. The emergence of cloud services is now making it possible for even the smallest business units to implement reporting and analysis solutions within days, at a fraction of the cost.

According to a recent Redwood Capital “Sector Report on Business Intelligence”, the market for cloud based BI solutions is projected to grow from \$.75B in 2013 to \$2.94B in 2018, attaining a CAGR of 31%. The current strong growth in cloud based BI and analysis is in sharp contrast from the early days of cloud computing when data security, network bandwidth, hardware costs, and integration complexity inhibited market adoption.

Several evolutionary advances in cloud computing have removed many of those early barriers, the most significant of which has been the introduction of Platform as a Service (PaaS) and Infrastructure as a Service (IaaS) offerings from major vendors such as Microsoft and Amazon. Platform as a Service (PaaS) is the cloud rendition of application infrastructure, providing a framework to develop or customize cloud applications. Infrastructure as a Service (IaaS) offerings encompass hardware computing resources as well as storage and networking capabilities. Both provide on-demand, pay-as-you-go access to hardware, database, and middleware that can be supplemented with reporting and analysis tools in a robust, secure, and scalable environment.

The rapid growth in cloud based BI is accompanied by increasing demand for near real-time access to information, often from mobile devices. Many organizations are leveraging PaaS and IaaS environments to deploy operational data stores and data warehouses in the cloud, populating them in near real time with data originating in disparate on-premises sources as well as cloud based sources.

A survey¹ of BI and data warehousing professionals cited in the report found that 41% of respondents update their data warehouses multiple times each day, and 30% continuously update their data warehouses in near real time. The five most common use cases include operations, customer service and support, sales, IT and network management, and marketing.

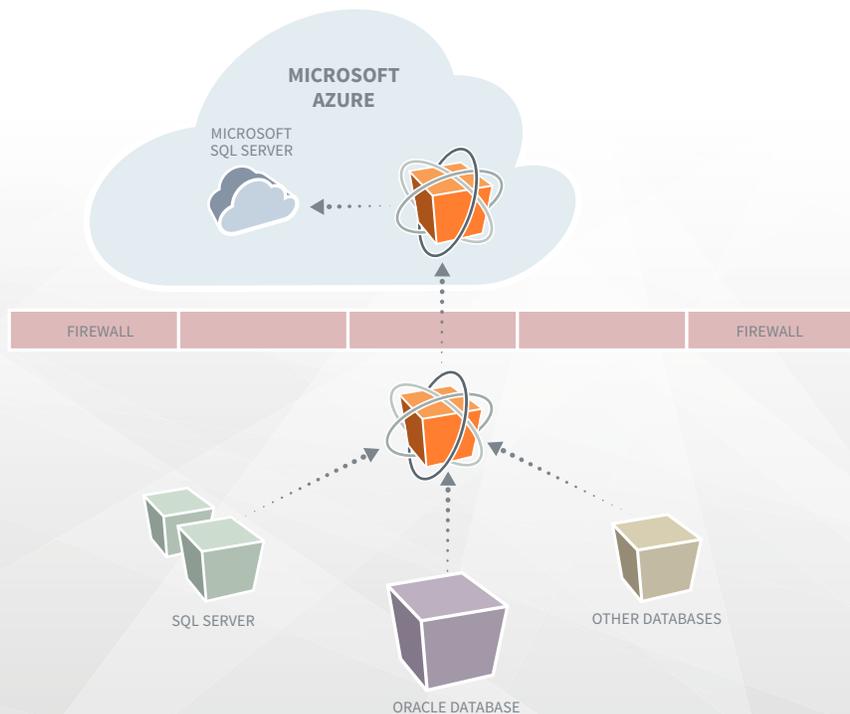
**Philip Russon, David Stodder,
Fern Halper, TDWI**

MICROSOFT AZURE – IAAS AND PAAS FOR CLOUD BASED BI AND ANALYTICS

Microsoft Azure is among the most popular environments for deploying BI and analytics in the cloud. Customers have the choice between a comprehensive IaaS offering, which is 100% public cloud based and includes SQL Server, SQL Server Reporting Services, and Big Data/Hadoop services, or a PaaS offering that has more limited functionality, but can be fully cloud based or deployed in a hybrid environment. Both options give end-users the ability to interact with their data through Microsoft Office 365 and SharePoint Online, as well as Microsoft Power BI tools.

Regardless of which Azure option is used, data integration technology is required for the initial data warehouse load, and ongoing incremental updates. The most common requirements for integrating on-premises data sources with an Azure data warehouse include the following:

- Ability to access heterogeneous data sources
- Connectivity to multiple data sources (channels)
- Ability to accommodate high data volumes
- Ability to perform incremental updates in near-real-time
- Robust configuration management, scheduling and operations capabilities



1-2-3 GO JUMP START REAL-TIME ANALYTICS IN AN AZURE CLOUD WITH HVR

The Azure platform provides basic bulk data load capabilities, however it does not support incremental update capabilities, heterogeneous data sources, and other common requirements for real-time reporting and analysis. HVR addresses these needs with a solution specifically designed to enable rapid deployment and lights out management of a real-time reporting and analysis solution in an Azure cloud.

¹ TDWI, “Best Practices Report on Real Time Data, BI and Analytics”

Getting started is fast and easy.

1. Visit our website at <http://www.hvr-software.com> and watch videos to learn how the software works, how it's used in organizations like yours, and how it can potentially be used to address your issues.
2. Start a free trial of the HVR Azure Edition to test the software in your environment. Request a trial license and download HVR at www.hvr-software.com/azure.
3. Setup the software using HVR's automated installation process and let HVR guide you through the installation, configuration and setup. HVR will automatically create a virtual machine (VM) to load in your Azure cloud. An easy to use graphical user interface will guide you through a range of options for configuring your integration environment. After defining your sources and data mappings (aka channels), a target DDL is automatically generated. You can then perform your initial data load and have complete flexibility in determining the frequency of your incremental updates.

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Once you've set your environment up, operations management can be fully automated. HVR software features advanced infrastructure to send data that is compressed and optionally encrypted to the cloud. The ability to dynamically "compare and repair" data between the sources and targets, ensures that data is always accurate and in synch between your on-premises data sources and your Azure data warehouse.

Why spend days or weeks writing and debugging scripts, building data integration maps, and creating and installing VMs? Let HVR help you get your real-time analytics environment deployed in an Azure cloud in an hour or less.

ABOUT HVR

At HVR, we believe it should be easy to deliver large volumes of data efficiently, reliably and at the right time into your data store of choice. Our software, the HVR High Volume Replicator, does exactly this using real-time data capture between data sources including SQL databases, Hadoop, data warehousing and business intelligence data stores as well as the most commonly used file systems.

For those organizations where real-time data replication is a mission critical process, HVR has been proven to be a reliable, secure and scalable solution by some of the largest global companies and leading government and defense organizations. HVR Software is a privately held company with offices in North America, Europe and Asia Pacific.

For more information, please contact us at info@hvr-software.com