

## User report: Optimised memory management

### Service-oriented data storage with administration software

Virtualisation will remain one of the most important computer centre trends until 2012 and it will also affect memory environments. This is the conclusion reached by the Gartner Group whilst also drawing attention to the growing complexity of memory management<sup>1</sup>. Business Volume Qualicision (BVQ), an administration software package developed by Wiesbaden system integrator System Vertrieb Alexander GmbH (SVA) in cooperation with F/L/S Fuzzy Logik Systeme GmbH, a subsidiary of PSI AG, significantly simplifies and improves the utilisation of virtualised Tiered Storage Architectures: Users can save up to 20% on hardware, energy and administration costs.

A growing number of enterprises<sup>2</sup> are utilising virtualised, multi-level memory infrastructures (Tiered Storage) whose memory classes are distinguished by performance and costs. In addition, memory management should be as simple and transparent as possible. Issues concerning the required capacity and its

chronological utilisation often remain open, as do performance optimisation and classification. The results are unused resources, unexpected bottlenecks, difficult problem analysis, poor load distribution and increased personnel costs. Thus, the savings potential offered by the memory concept is not fully exploited.

Analyses show that only 25% to 40% of the performance capacity of Tiered Storage Infrastructures is actually used.

#### Memory management based on business needs

The memory experts at SVA and F/L/S have developed an intelligent solution to these problems in the form of Business Volume Qualicision (BVQ). It enables the placing of virtual drives (volumes) based on Service Levels, which are derived from actual business needs. The targeted Service Level of the application data in these Business Volumes is classified via the data class, whilst the memory class defines the memory value in accordance with predetermined price/performance categories. The optimisation process works on the principle of a control loop as shown in figure 1. A comparison between both classes reveals which combinations are expedient and meet business requirements or indicate where a new placing is needed. The purpose of the Qualicision module from F/L/S is to realise a self-optimising approach in the future.

#### Supplement to the IBM strategy

BVQ offers an interface to IBM's "SAN Volume Controller" (IBM SVC) virtualisation solution. The required performance measurement values and topology information relating to the Tiered Storage Infrastructure of IBM SVC are collected virtually in real time. This information is then extended in BVQ according to levels, costs, performance and compliance specifications. Figure 2 shows some of this information in the BVQ "Tree Map" view.

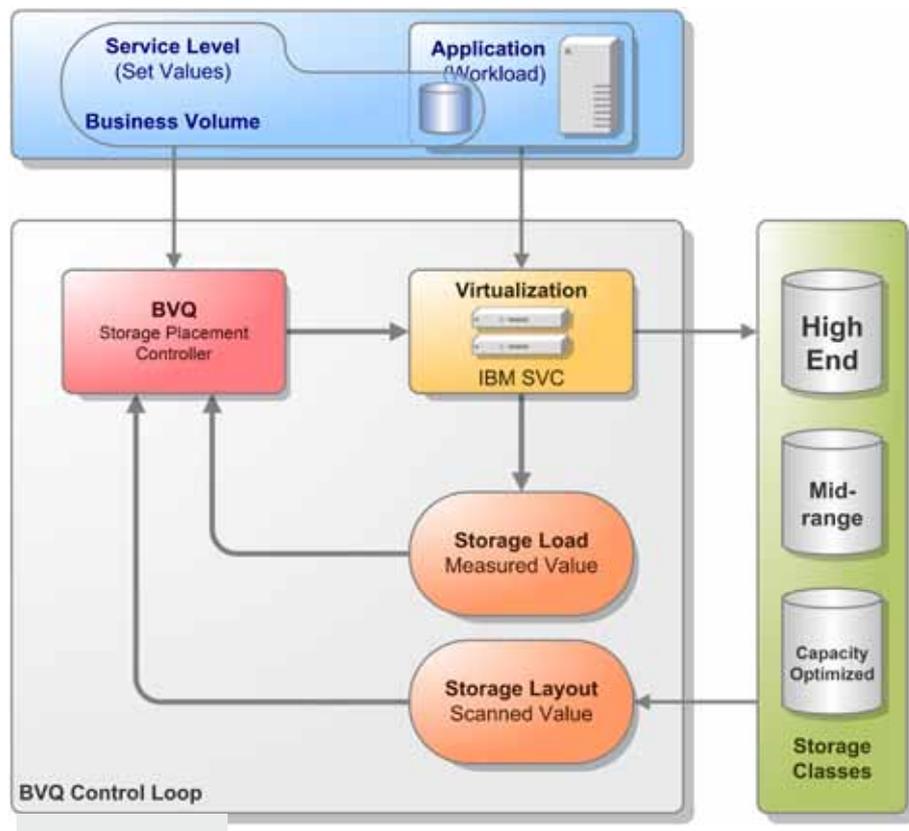


Figure 1: BVQ control loop

Source: F/L/S Fuzzy Logik Systeme GmbH



Figure 2: BVQ "Tree Map"

Source: F/L/S Fuzzy Logik Systeme GmbH

BVQ therefore represents an ideal supplement to the IBM Enterprise Management Strategy and can be fully integrated into the IBM Service Management Framework.

### Fast Return on Investment

Measured long-term growth rates for capacity and transaction load form the basis for planning requirement-oriented memory purchases. One concrete customer situation analysed by BVQ revealed that 70% of the high-end memory capacity was hardly used. Performance-optimised capacity extension dimensioning reduced the investment volume by 14%.

Coupling service levels to memory costs enables performance-related accounting and cost control. Additionally, automated reporting functions significantly reduce documentation costs, whilst analysis functions with placement recommendations prevent unnecessary and costly downtimes. Thus, Business Volume Qualicision significantly increases the efficiency of SVC-based memory virtualisation. 

- <sup>1</sup> Philip Dawson: "Virtualization Changes Virtually Everything". Fringe lecture at the Gartner Strategy & Technology Conference, December 2008, Frankfurt am Main, Germany.
- <sup>2</sup> Sabine Prehl: "Worldwide CIO Survey: Users Invest in IT Despite Crisis", in: Computerwoche Online dated 15/01/2009

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### Company

#### System Vertrieb Alexander GmbH

SVA GmbH is one of Germany's leading system integrators in the field of data centre infrastructure. SVA's commercial goal is to couple high-quality IT products from various manufacturers with the project know-how, services and flexibility of SVA to provide customers with ideal solutions.

SVA is a Premier Business Partner of IBM in Germany and a TrueNorth Platinum Solutions Partner of HDS. The company's certified "System Storage Solution Center" in Wiesbaden provides SVA experts and customers with comprehensive demonstration, development and training scenarios with all the hardware and software solutions currently available from various manufacturers.

#### Core topics:

- High-availability architectures
- High performance computing
- Data backup and disaster recovery
- Storage area networks
- Virtualisation solutions in server and SAN environments
- Consulting and outtasking

#### Locations:

Wiesbaden, Berlin, Hamburg, Munich, Dresden, Hannover, Saarbrücken, Dusseldorf, Karlsruhe, Stuttgart

Employees: 150

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