

# **Optimising Capacity and Performance Management for Cloud Services**

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## Abstract

BrightSolid is a leading cloud service provider. The company provides a number of cloud base and data centre solutions to their customers. Recently, the company has a genuine interest in capacity management significantly because they are aware of efficiency in their work place. This includes power consumption, stuffing and most importantly their datacentre. Recently, new platforms called "Hyper-V" are introduced to the company. As they are aware, they may not fully optimise this platform. "Optimising Capacity and Performance Management" becomes their interest. The project aims to find "Key Performance Indicators (KPIs)" for the company to further comprehend their new platform's utilisation and find out more about their resources usage.

The project starts with identify main data source. At the initial state for this project, data source is unknown. As the data source is not known beforehand, the majority of time on this project is dedicated to find where the relevant data resides. The company has been using a number of systems and amongst those, there are a few monitoring tools that they are believed that these monitoring tools could be used as the data source namely System Centre Operation Manager (SCOM), Xymon and PowerShell. SCOM is selected as the main data source due to data abundance.

The next step is that data is used to address capacity management in the area of performance and planning by finding out relevant KPIs and threshold to monitor cloud assets. Finally, an implementation of online dashboard aims to assist BrightSolid to monitor cloud memory performance in three areas: 1) the memory utilisation of the entire cluster with fitted regression line. 2) the memory utilisation of each host in the cluster and 3) memory available to deploy new VMs. However, this does not conclude capacity and performance management. There are some other areas that should look at as well such as networks and storage.