

Applies To:

Adaptive computing and SAP Adaptive Computing Controller

Summary

Dynamic assignment of IT hardware resources, to serve specific application services, is called Adaptive Computing. The Adaptive Computing Controller enables SAP customers to manage the available hardware resources dynamically and assign them to the various business solutions and applications.

By: Vishal Gupta

Company: HCL Technologies

Date: 22 March 2006

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Adaptive computing and its purpose

Currently enterprises are paying more attention towards optimization of IT landscape, system maintenance and administration and they are focusing on return on investment (ROI) and total cost of ownership (TCO). Adaptive computing infrastructure can play a crucial role towards this optimization. A computing infrastructure is called adaptive, if it allows the dynamic assignment of hardware resources to serve specific application services.

Adaptive Computing Controller

With Adaptive Computing, SAP NetWeaver offers an approach for the dynamic assignment of hardware resources, so that application-related requirements can be met more effectively. SAP Adaptive Computing Controller (ACC) is a management-like system application based on the J2EE engine of the SAP Web Application Server.

SAP ACC Provides a way to virtualize application services, and provides a single point of control for flexible compute resource assignment for existing and new code to run on dedicated or changing hardware. With ACC, administrators can monitor the run-time data of logical and physical landscapes, start, stop or relocate application services, and assign hardware resources to application services dynamically or manually.

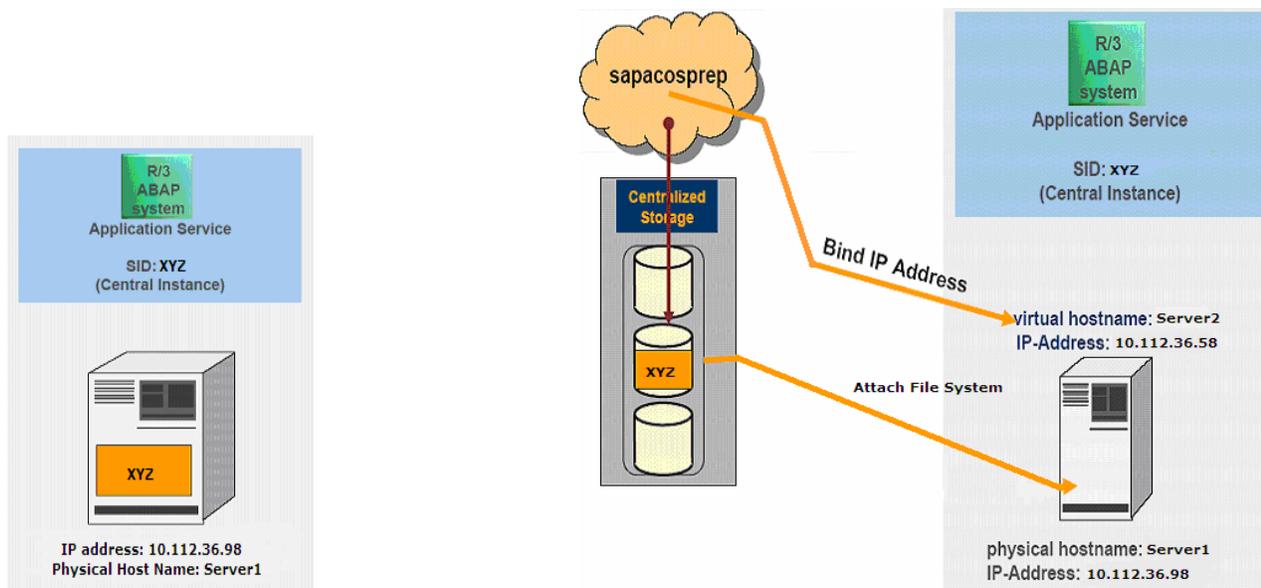


Figure 1: Application service installation Without *AC

Figure 2: Application Service virtualization with *AC

* AC means Adaptive Computing

Figure 1 depicts the installation of application services on specific physical server. SAP R/3 system application service XYZ is installed and running on static physical host server1.

Figure 2 depicts that even though application service is installed on some other physical host but it is running on different physical host. This virtualization is possible through agents like sapacosprep (which initiates the OS specific preparations like configuring the NW interfaces, managing the mounts. This program is directly called by the ACC via SSH and reports back to the ACC the return codes and the output of the OS commands.), sapacoscol (as long as this agent reports any application specific virtual interface to the ACC, the controller shows the physical host, where the interface is up, as used for this service) and saposcol (a general available agent from SAP for collecting OS information per host). Virtual IP addresses and logical host names ensure that the user has the same view, regardless of the hardware actually used.

Steps to achieve Adaptive computing with ACC

1. Application services are pooled in logical landscape and physical servers (hardware resources) are pooled in physical landscape.
2. Select an application service (Say AS1) from logical landscape.

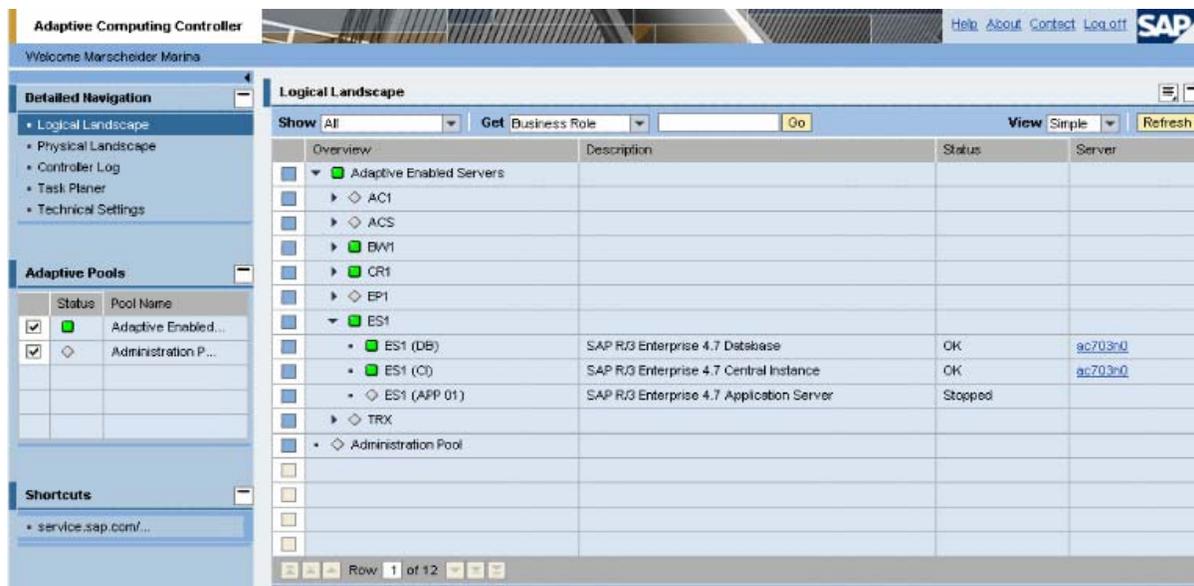


Figure 3: Application services in ACC-logical landscape

3. Select the specific server from the drop-down box (for application service 'AS1' to run at) or opt for auto select.
4. Click the start application service button (if AS1 status is stopped). AS1 will start running on specific server if it meets the hardware requisites, otherwise a message will be prompted.

5. If AS1 is in running status, click stop application service button (if you want to stop AS1 service) or click relocate application service button (if you want to relocate AS1 to other server).
6. Physical landscape provides the details of server (hardware) utilization by application services.

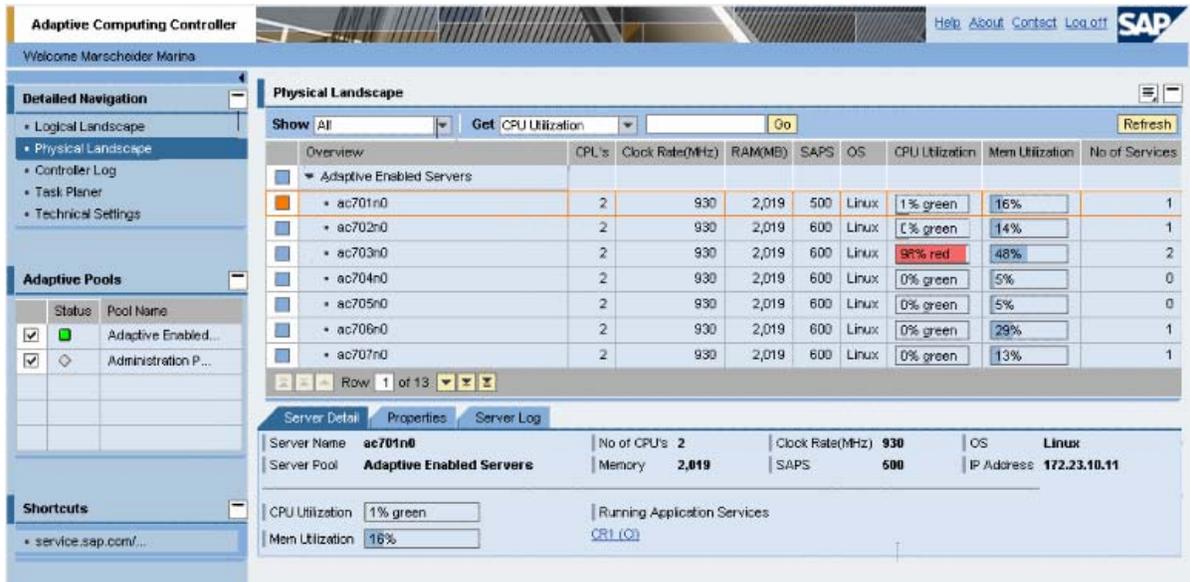


Figure 4: Physical servers in ACC-physical landscape

7. Controller log is used to see the timed details of application services status and servers utilized.
8. Task planer is used to start/stop/relocate the application service at predefined time.

Author Bio



Vishal Gupta is SAP NetWeaver consultant working with HCL Technologies since 2005 with strong focus on SAP XI. He has keen interest in optimization of business processes and IT infrastructures with the help of innovative software solutions. He has 3.5 years of experience in SAP NetWeaver and Microsoft technology.

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