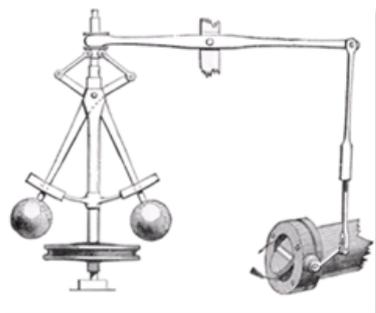


# F5 and SAP Integration - Auto configuration and monitoring under BIG-IP V10



Nojan Moshiri, 2009-17-04



Are there ways that **F5 Networks** and **SAP** can make your

**SAP operations simpler, more elegant and more automated, with appropriate controls in place to detect abnormalities?**

**With V10, F5 Networks is delivering three things: first, template based configuration support for SAP Enterprise Portal and Web Based SAP ECC Instances (so that a few questions and one submit button perfectly configures your instances). Second, integration with SAP's ASLR (described below) to automatically detect and help configure all available SAP instances (so that your hunt for SAP instance numbers and port numbers during configuration is over). And third, a complete monitor that individually logs into each configured SAP Instance and checks that instance's unique health status (and then reacts appropriately).**

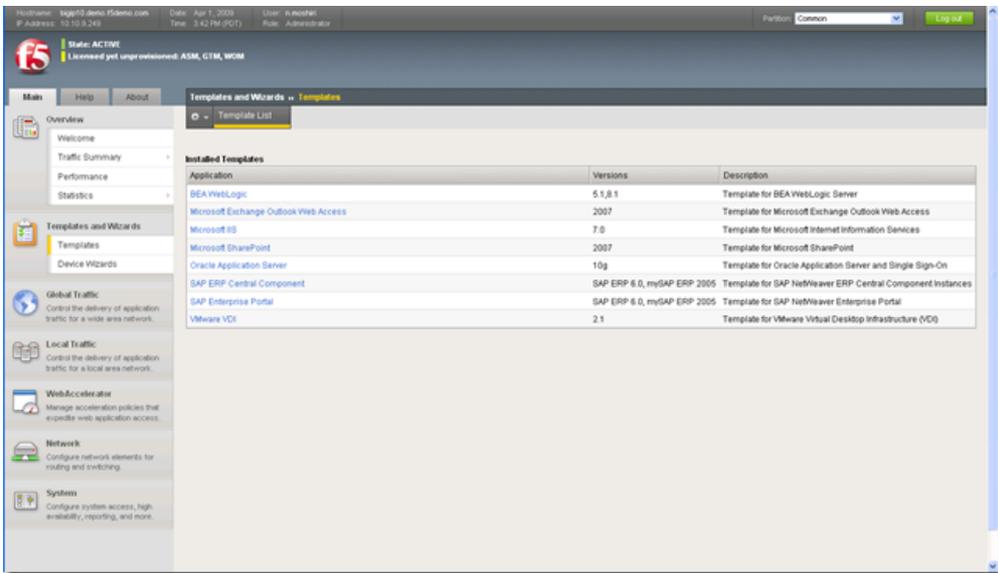
SAP and F5 Networks's partnership manifests itself in exceptional ways and participating in the [SAP Enterprise Services Community](#), part of SAP's [Communities of Innovation](#) was one of these opportunities. SAP's idea was elegant and came with a very practical goal: SAP reached out to all of the networking partners and asked us how we can simplify SAP NetWeaver operations.

The initial presentation from SAP asked this high level question and presented a series of APIs that could be used to build these solutions. SAP challenged us with the analog of the [fly wheel governor](#) (pictured above); could we invent a system that controls SAP based on the current working conditions. Through a series of working sessions with SAP we went to work at [F5 Networks](#) to solve this problem and the results of our work will be presented at the [Americas SAP User Group Meeting \(ASUG\)](#) in May.

Our solution has three components, **detection** of SAP instances, **configuration** of SAP web instances (Portal or other web based ECC instances) for high availability, web acceleration and security and **monitoring** of SAP web instances from login to database for a complete picture of what is up and what is down. These steps are performed with the aid of the SAP Application Server List Retrieval (ASLR) API which is part of the SAP Message Server (standard on all SAP NetWeaver installations out-of-the-box).

[Configuration - Support for SAP Enterprise Portal and all your Web Based SAP ECC instances.](#)

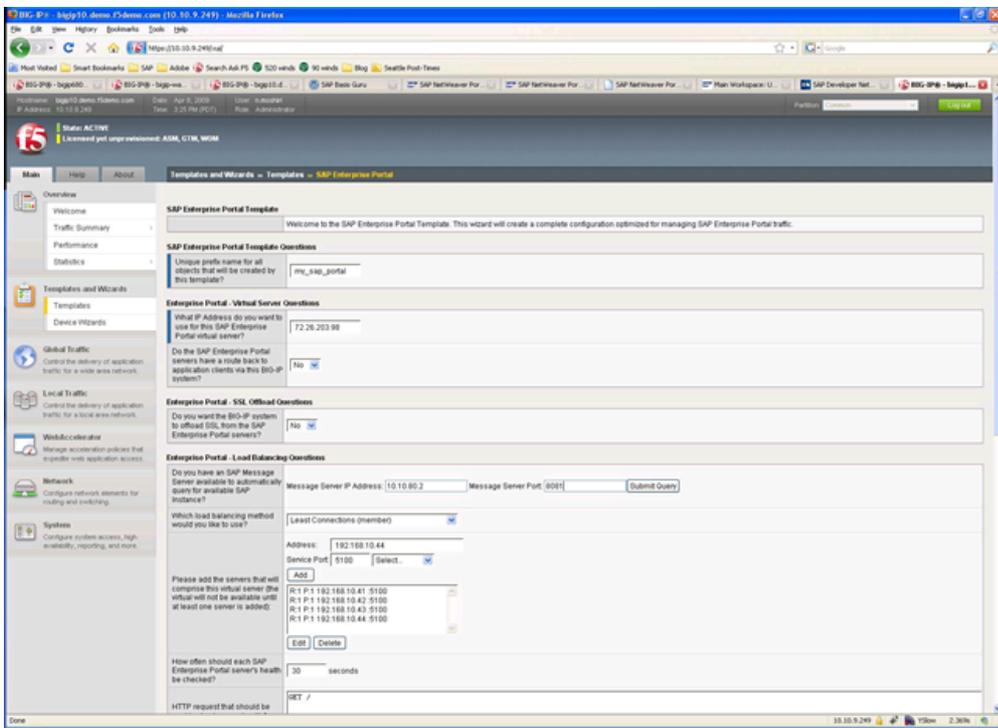
With [F5 Networks](#) BIG-IP V10 templates for SAP ERP Portal and SAP ECC instances, configuring BIG-IP with advanced application delivery controls is accomplished with just a few questions to be answered on one single page. Below, you can see a screen shot of my BIG-IP and the templates we have available today, especially for SAP, Enterprise Portal and a more generic SAP ECC template for the installation of any additional SAP Web Based instances.



Detection - Integration with SAP ASLR to automatically configure all SAP instances. The hunt for SAP instance numbers and port numbers is over.

With the coming addition of SAP ASLR integration (planned for after the upcoming ASUG meeting), we will have the message server integration pictured below. While this may look like a very small number of questions, the template takes care of all of the aspects of configuring SAP Portal. Of note to me is how easy it was previously for customers to miss important optimizations even though we detail and clearly document these in our deployment guides (for example the [SAP Deployment Guide for V9](#)). With BIG-IP V10 SAP application delivery will be the fastest possible through the network, every time.

Now, by providing the **SAP Message Server IP Address and port number**, BIG-IP automatically retrieves and populates the SAP instances in the load balancing portion of the questionnaire. **The hunt for instance numbers and port numbers is over, with the cooperation of ASLR and BIG IP Application Templates.**

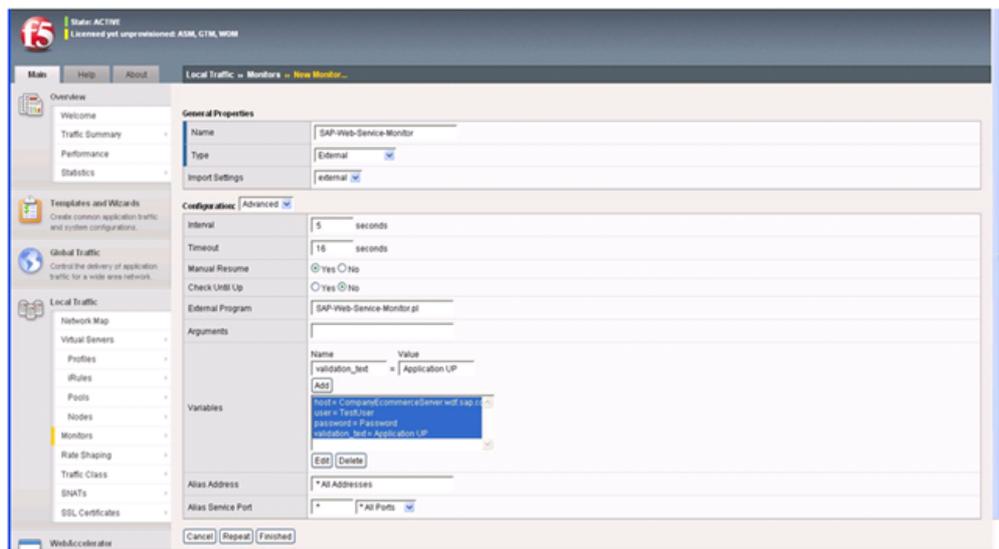


Monitoring - A complete monitor that individually logs into each SAP Instance and checks that instance's unique health status (and then reacts appropriately)

One of the shortcomings that F5 Networks has found with the APIs as they stand today is that although graceful shutdown is well detected by the ASLR API, more is needed to address unforeseen outages. We hope that with the community involvement this will be addressed in coming versions of the API.

To solve this issue now, our SAP templates install a series of health monitors to cover the state of SAP Web Instances up the entire stack. We begin with automatic configuration of ping and port monitors (which indicates the individual server or VM instance is up). We then configure a monitor which checks for HTTP/1.1 presence (which indicates that SAP Dispatcher is up) and finally we now will recommend the addition of a health monitor to log into the SAP Web Application portal and check for a specified piece of validation text (we then log out, of course). None of this configuration requires any command line interaction and can be delegated to SAP NetWeaver or Basis administrators.

Edit-June16,2010: As a point of clarification, some users have wondered if the SAP template for BIG-IP installs the in-depth scripted monitor I discuss here. The answer is no . The scripted monitor is a recommendation for users interested in in-depth monitoring and needs to be installed manually. Please email me for additional questions or for a copy of the script. Below you can see that we allow the configuration of the login username, password and validation text all via the UI.



For more on this project from our wonderful partners at SAP I highly recommend checking out Joerg Nalik's post at the SAP Community Network: [Catching Up with Deploying and Operations Automation](#).

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