F5 White Paper

Application Ready Solution Templates

Streamlining the deployment of optimized applications.

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Contents

Introduction

Understanding what is happening at the application level is one of the keys to ensuring that applications are secure, fast, and available. You must be able to inspect every packet from the perspective of the network and the application, which requires the ability to examine the payload and understand it as an application message. Then the controls must be in place to transform, redirect, and deliver those packets. This is sometimes called "application fluency" and is at the heart of the F5® BIG-IP® family of products.

As products evolve and include more options, these controls become increasingly complex and their configuration and management becomes necessarily more difficult. And as application delivery solutions become more unified, integrating multiple focus points into a single platform, this complexity grows even more. When that solution is focused on delivering applications, the solution's specific behavior and its environment must also be taken into consideration during configuration. Configuring this type solution for optimal execution is almost overwhelming.

F5 BIG-IP application delivery solution has always included a wide variety of options for optimizing not only the applications it is responsible for, but its own performance as well. Therefore, administrators must not only understand the network and the BIG-IP solution, but the applications being managed as well. In order to configure the BIG-IP device so it ensures the secure, fast, and available delivery of applications, administrators must deal with a lot of different variables, not to mention the time and effort involved in optimizing the entire infrastructure.

In addition, BIG-IP administrators must have a depth of knowledge of both network and application specifics in order to create an optimized configuration.

F5 has developed and published Application Ready Solution guides to assist administrators in optimizing BIG-IP deployments for both specific applications such as Oracle, Microsoft, Siebel, and SAP, as well as generic applications delivered via HTTP. While these deployment guides have reduced the effort required to configure BIG-IP devices, configuration still requires manual intervention.

Manual configuration is time-consuming, tedious, error-prone, and increases in complexity with every additional product or feature module deployed on the BIG-IP device. The addition of security with BIG-IP® Application Security Manager™ (ASM), for example, necessitates additional configuration and testing above and beyond what is required to configure core BIG-IP devices to deliver applications.

In an effort to simplify the process of configuring BIG-IP according to best practices, in the newest BIG-IP version (v10) will include a new feature called "Templates."

Introducing Templates

Templates are modules of code, resources, and documentation that enable BIG-IP product modules to be optimally configured to work alone and in-concert for specific applications. Here, the term application is used broadly to mean a system of hardware and software that performs a business function. These may be branded applications such as Oracle or Exchange, or applications such as load balancing generic HTTP servers or other F5 products. These templates simplify the creation of virtual servers, pools, profiles, monitors, F5 iRules™ scripting language, and other pertinent configuration parameters needed to optimize BIG-IP deployments for specific applications like SharePoint.

The resulting profiles created through the use of Application Ready Solution Templates are portable, and can be easily shared with other deployed BIG-IP systems. The profiles can also be further tailored to address unique situations and environments so applications are as fast and secure as possible.

The templates contain common default values and minimize the number of GUI clicks required to configure the BIG-IP device. The common default values contained in the templates have been determined through rigorous testing and collaboration with application vendors and represent an optimal configuration for BIG-IP devices and the application in question.

Templates are an ideal starting point, designed to reduce the time and effort necessary to configure BIG-IP devices for the delivery of an application, but the configuration created through the use of templates is not static. While the configuration created is optimal for BIG-IP devices and the specific applications for which the template was created, F5 recognizes that each organization's infrastructure and environment is unique and may require specific changes to the configurations. The configurations created by using Application Ready Solution Templates can be modified as necessary to reflect the unique conditions that may affect the delivery of applications.

Using Templates

Templates are deployed as RPM files and manually installed on BIG-IP devices. Once installed, templates appear in the BIG-IP GUI under a new navigation option called "Templates and Wizards."
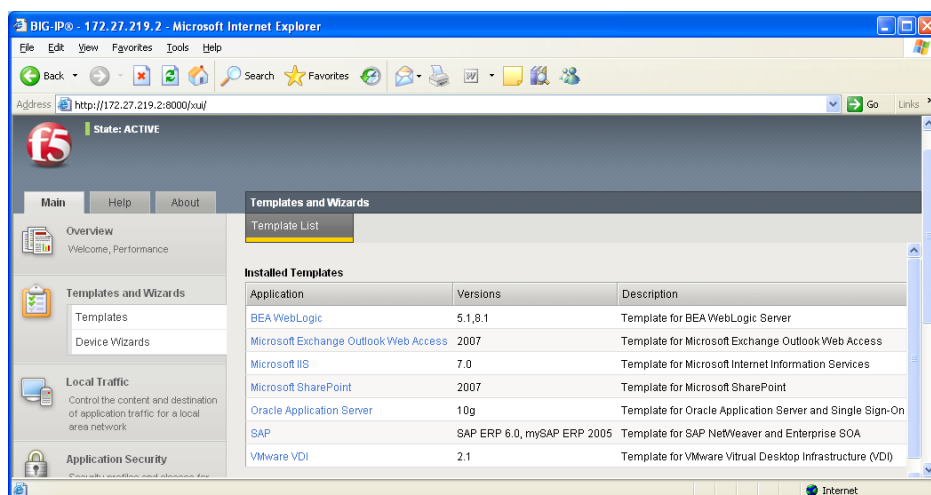

Figure 1: Default Templates

A number of templates will be included with the release of BIG-IP v10. These templates are pre-installed and available for immediate use. Templates included in the BIG-IP v10 release are:

- Microsoft IIS 7.0

- Microsoft SharePoint '07

- Microsoft Exchange '07 Outlook Web Access

- Oracle WebLogic

- Oracle 10g AS

- SAP NetWeaver

- VMware VDI

As additional templates are developed by F5, they will be available on DevCentral, F5's developer community site, and included in maintenance releases. Templates, like other configuration details of BIG-IP devices, can easily be shared across multiple BIG-IP deployments by synchronizing BIG-IP devices.
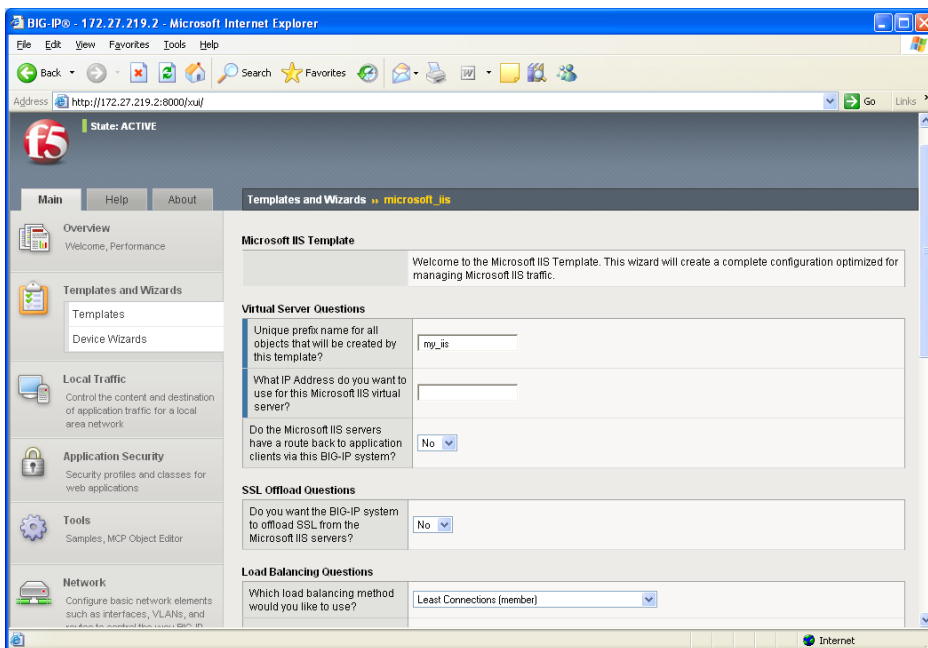
Figure 2: Microsoft IIS Template

Templates pre-populate most of the standard settings for common applications and reduce the number of manual inputs, greatly reducing the time to deploy a BIG-IP device as well as the possibility of misconfiguration and conflicts. Because these templates are an extension of F5's Application Ready Solution guides, they are developed with intense application-specific testing and cooperation with the application vendors.

Once the templates are installed and available, the process of using them to deploy an application is guided by a wizard specifically designed to enable the rapid deployment of applications and BIG-IP devices in an optimized configuration. The wizard gathers the information it needs from the administrator, such as the virtual server IP address and whether acceleration or security options are desired, and then automatically creates the configuration necessary to deploy that application.
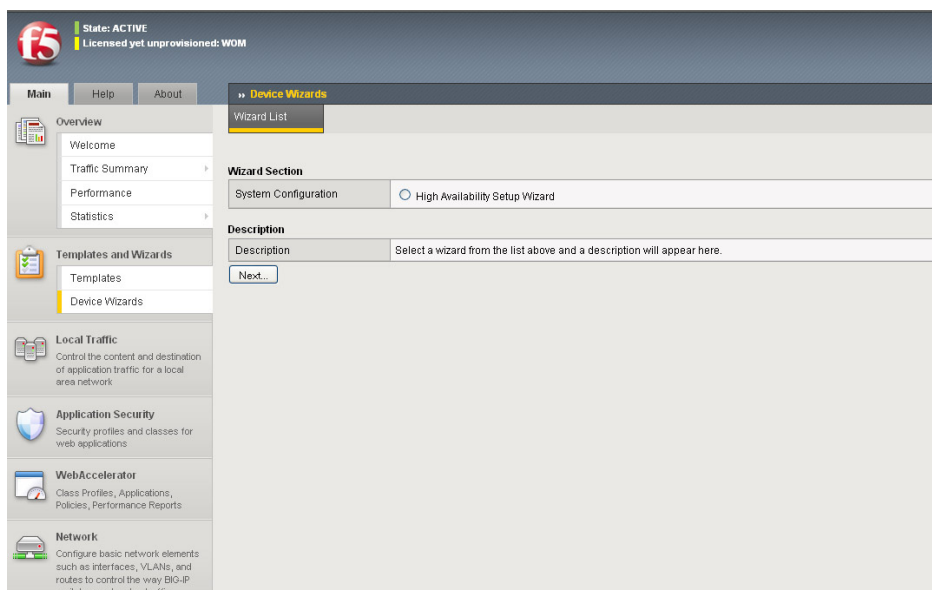
Figure 3: Wizard-based Configuration

There is no need for an administrator to understand the internal system when using a template to configure BIG-IP devices for application delivery. This enables organizations to quickly deploy applications using BIG-IP devices even if the administrator has never worked with BIG-IP devices before. This further reduces the investment necessary to take advantage of BIG-IP solutions and increases the myriad options for improving application performance and security.
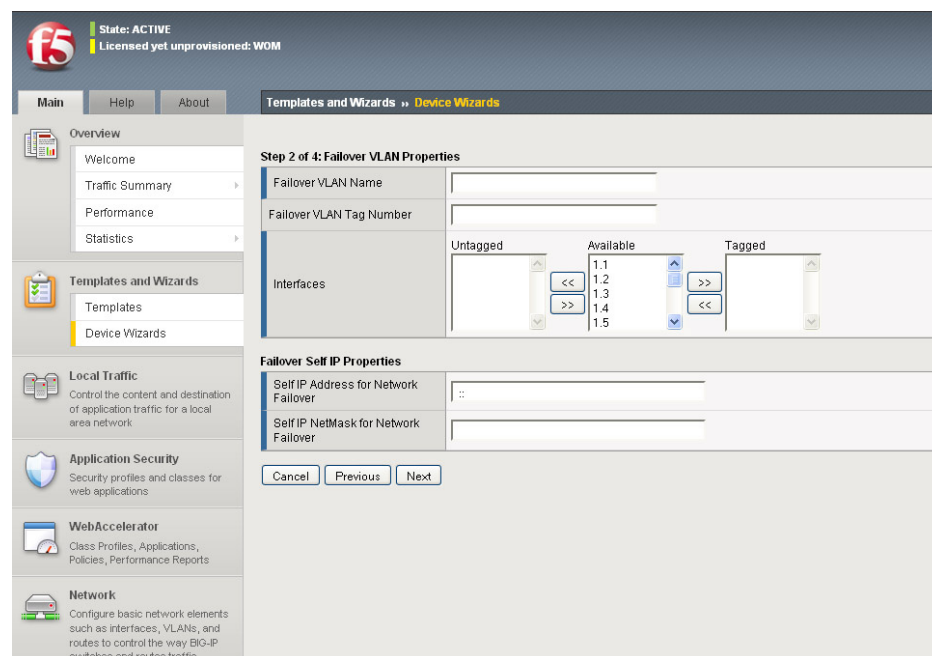

Figure 4: Wizard-based Configuration

Conclusion

F5 BIG-IP v10 supports the trend to consolidate by unifying many application delivery-focused solutions in a single Application Delivery Network platform. This consolidation reduces operating and management costs, but can introduce complexity into the configuration and deployment that can easily offset those savings.

F5's Application Ready Solution Templates are designed to ensure that the savings realized through consolidation are protected by reducing the time, effort, and application-specific knowledge required of administrators to optimally deploy applications that are secure, fast, and available through the use of BIG-IP devices.