



Application Template Deployment Guide

Oracle E-Business Suite 12.1

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Introduction

A member of the Citrix Delivery Center™ product family, Citrix® NetScaler® is a purpose-built Web application delivery solution that accelerates application performance up to five times while improving security and reducing Web infrastructure costs. In addition to delivering Web applications for thousands of corporate customers, NetScaler is also the delivery infrastructure of choice for most of the world's largest consumer websites, touching an estimated 75 percent of all Internet users each day.

NetScaler Applications Templates – introduced in NetScaler 9.0 – provide an application-centric view of the NetScaler system's policy configurations. From a single place within the GUI (AppExpert ➔ Applications) NetScaler administrators can: 1) Configure the various application features the NetScaler is fronting, 2) View which NetScaler functional modules (e.g., compression, caching, application firewall) are optimized and active for a given application unit.

Additionally, Application Templates allow you to drill down and see which individual NetScaler policies are active, and what policies are inactive but available, by application component and NetScaler module. From this same view, individual policies can be created, activated and deactivated.

Application templates can be downloaded, imported, modified and exported. Administrators can download application templates built by Citrix, Citrix Partners and members of the NetScaler community from the Citrix Community website. These templates are easily imported into any NetScaler running NetScaler 9.0 or higher, jump starting the configuration and deployment process. Templates developed in-house can be easily exported and shared within your organization, or posted back to the Citrix Community website for others to view and improve.

Solution Requirements

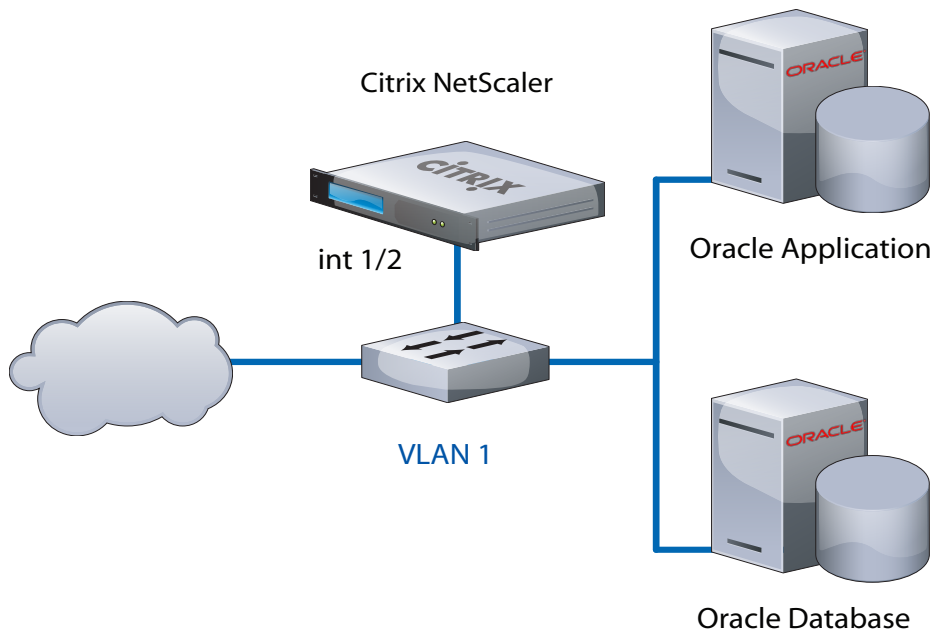
- Application Front-End Switch – NetScaler
- Oracle Enterprise Business Suite


Prerequisites

- Citrix NetScaler L4/7 Application Switch, running version 9 (Quantity x 2 for HA)
- Citrix Application Template for Oracle EBS 12.1
- Oracle Enterprise Business Suite Release 12.1
- Client laptop/workstation running Internet Explorer 6.0+, Ethernet port
- 9-pin serial cable -or- USB-to-serial cable

Network Diagram

The following is the Network that was used to develop this deployment guide.



VLAN Legend	NetScaler
 VLAN 1	VLAN 1: Interface 1/2, Untagged NSIP: 10.217.105.55 / 24 SNIP: 10.217.105.56 / 24 VIP: 10.217.105.58 / 24

Application Templates

Application Templates are a new and simple approach to configuration management for complex enterprise applications. Applications are listed in the left-most column. In one simple view, you can view what is most important to you in terms of application delivery directly below in the same column in what are called Application Units. You simply configure what constitutes the interesting traffic for each application delivery unit, and turn on the rules for compression, caching, rewrite, filtering, responder and application firewall. This is largely different from having to go into each feature and define complex rules and expressions individually, reducing the time to deploy, easing management and improving the bottom line.

What is important to the Application Expert is how the application is characterized by its content. In other words, what is the content that comprises the back-end application, and what are you most concerned with regarding its delivery. It is this content that we are most interested in, as we will build Application Templates surrounding this content.

Identification of workflows refers to the areas of the application that are important to Application Delivery, such as “Reports”, “Documents”, “Images”, “Stylesheets”, “Web Services” and “Portal Pages”. Each of these workflows can be specifically identified by the type of content they generate from Server to Client and vice-versa.

The process for entering Application Templates into the NetScaler Application Switch is simple. From the GUI, navigate to NetScaler ➤ AppExpert ➤ Applications. Select ‘Add’ to add the Application by name. Select ‘Add’ again to enter an Application Unit, which refers to the workflow, for example “Report Management”. Enter the Expression to identify the reports, for example `URL == ‘/*.pdf’`. From this basis, the important operations can be configured upon all reports that appertain to this application, such as compression, caching, rewrite, filtering, responder and application firewall.

One final step involves adding the front-end public endpoint and back-end servers. Then, by virtue of this configuration, load balancing is in effect for this application. Load Balancing algorithms and persistence can be modified from the default values.

Oracle EBS 12.1

Oracle E-Business Suite Release 12.1 enables businesses to think globally to make better decisions, work globally to be more competitive, and manage globally to lower costs and increase performance. With a new user experience and hundreds of cross-industry capabilities spanning enterprise resource planning, customer relationship management, and supply chain planning, this new release helps you manage the complexities of global business environments.

Citrix NetScaler Application Templates optimize Oracle data flows and applications, allowing companies to not only come up to speed fast, but to also speed up their application delivery infrastructure.

What this means to an Application Expert is you will see a myriad of content being passed through the Citrix NetScaler Application Switch.

Oracle E-Business Suite 12.1 is a comprehensive suite of integrated, global business applications that provide asset management, customer relationship management, enterprise resource planning, financials, human resources, procurement and spending, supply chain and order management, sales, service, contact center, marketing, workforce planning operations, and performance management to name a few.

Oracle E-Business Suite 12.1 is built on top of Apache Web server and uses Java server pages extensively (.jsp) along with some hypertext markup language (.html). The remainder of the public facing application is based on forms and reports, which are either text, pdf or interaction with a Java forms program that runs over HTTP. E-Business Suite 12.1 uses native Sun Java plug-in J2SE 1.5 (5.0) and requires this to be installed in the clients browser to run many of the Oracle programs. Oracle EBS 12.1 is integrated with industry standard specs like J2EE servlet, JSP's, SOAP, and JMS. Using the Sun JDK at the desktop has simplified administration of multiple Java applications.

We can peel back the layers of these workflows to identify the actual data that is transferred between Client and Server when this Application is in use. Under the hood, the workflows are characterized accordingly to the following table.

Oracle EBS 12.1 – Application Content

We know from experience that the Oracle EBS 12.1 workflows are characterized by jsp & html portals, css, javascript, images, forms and reports. We also know that Oracle uses port 8000. Under the hood, the workflows are characterized accordingly to the following table.

Workflow	Characterized By	Components
Portal Pages	Java Server Pages, HTML Content	.jsp, .jspx, .htm, .html, .xhtml, .xml
Styles and Scripts	Stylesheets, Javascript	.css, .js
Image Management	Images	.gif, .jpg, .jpeg, .tif, .tiff, .bmp, .wmf, .emf, .png
Forms	Java Forms Servlet	/forms/frmservlet
Reports	Report Formats	.txt, .doc, .docx, .dot, .dotx, .rtf, .wps, .pdf, .csv, .prn, .xsn, .xls, .xlsx, .xlt, .xltx, .xlsb, .xslm, .xltm, .dif, .slk, .xlam, .xla
Archives	Archive files including Java Archives	.pdf, .zip, .cs, .rar, .arj, .z, .gz, .tar, .lzh, .cab, .hqx, .ace, .ear, .gzip
Web Services Definitions	WSDLs and WSILs	?wsdl, .wsdl, ?wsil, .wsil, .xml
Web Services Schemas	XSDs	.xsd

Oracle EBS 12.1 – Policy Matrix

If we examine the workflows in Oracle EBS 12.1, we know that some of this content is compressible, while some is not. Some of this content is cacheable, while some is not. And so we form the basis of our Application Template. In summary, we want to configure the Application Template for the following features. A check indicates we want to enable the feature.

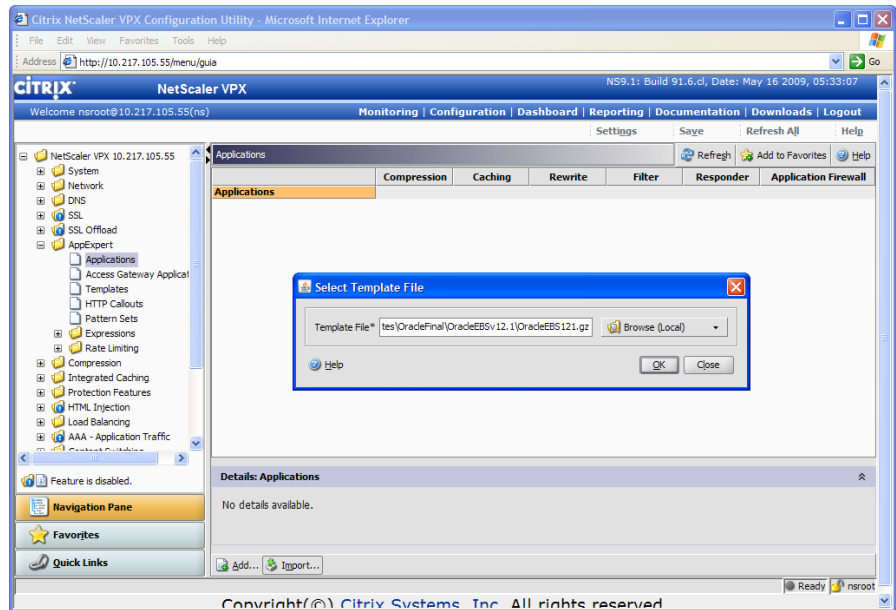
Oracle EBS 12.1	Compression	Caching	Rewrite	Filter	Responder	AppFw
Portal Pages	✓					
Styles and Scripts	✓	✓				
Images		✓				
Forms	✓					
Reports	✓					
Archives		✓				
Web Services Definitions	✓					
Web Services Schemas	✓	✓				

Oracle EBS 12.1 – Application Template

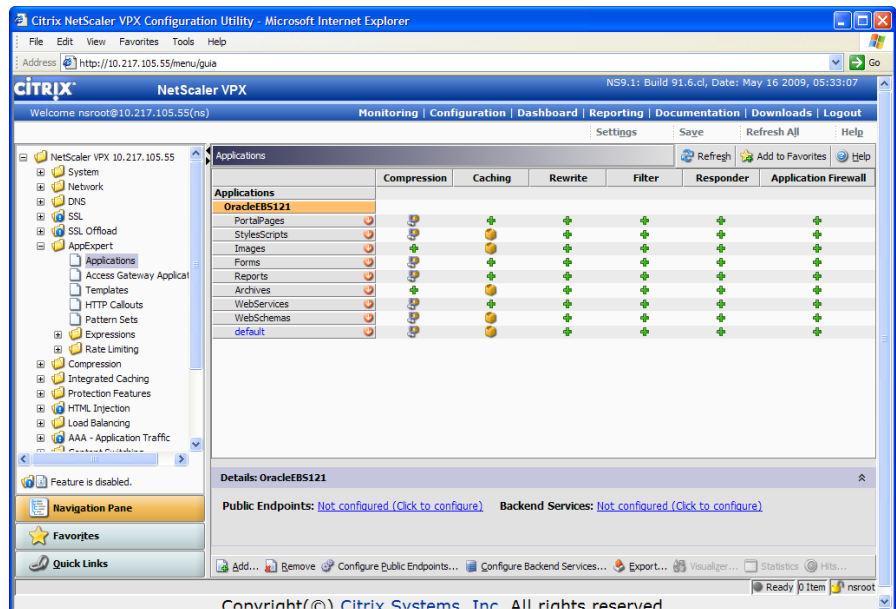
The AppExpert Application Template for Oracle EBS 12.1 has already been created, and it is stored on the Citrix Community website, <http://community.citrix.com/cdn/ns>. Download and import the pre-configured template to optimize the NetScaler for the Oracle EBS 12.1 application. The application templates are designed to match a specific NetScaler software release, make sure the template version matches the NetScaler software version.

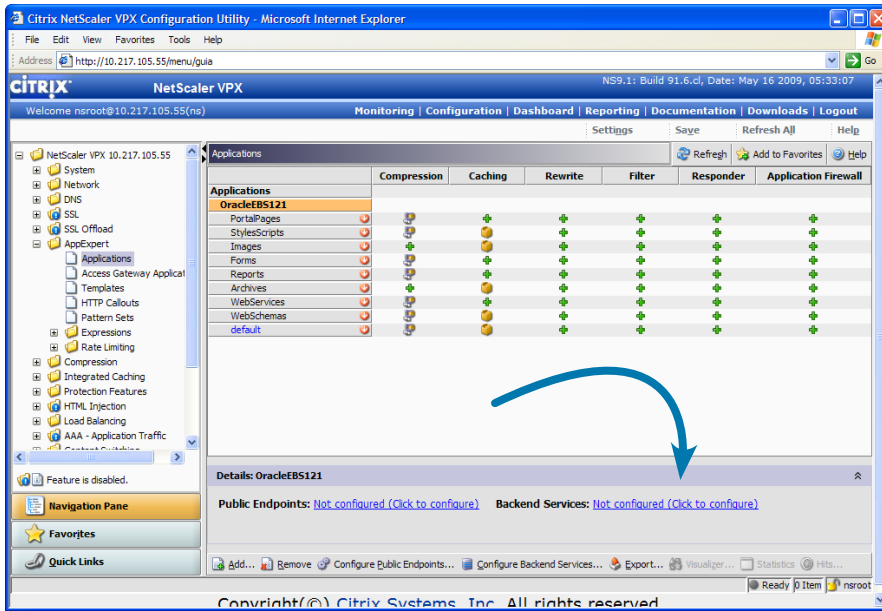
From the NetScaler GUI:
NetScaler →
AppExpert →
Applications →
Import.

Select the Oracle EBS 12.1 AppExpert Template that was downloaded from the Citrix Community site and save locally.

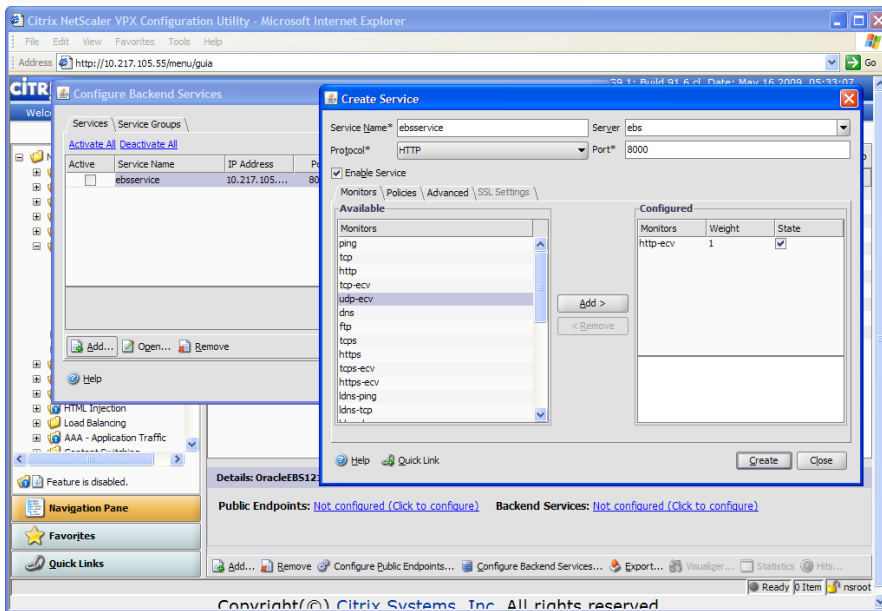


After import, you will notice the red arrows next to the application units, which means they are inactive.





To activate the Oracle EBS 12.1 template, select 'Configure Backend Services'.



Configure the Oracle EBS 12.1 template to send traffic to the backend Oracle server.

Service Name: ebsservice

Server: <ip address or server name>

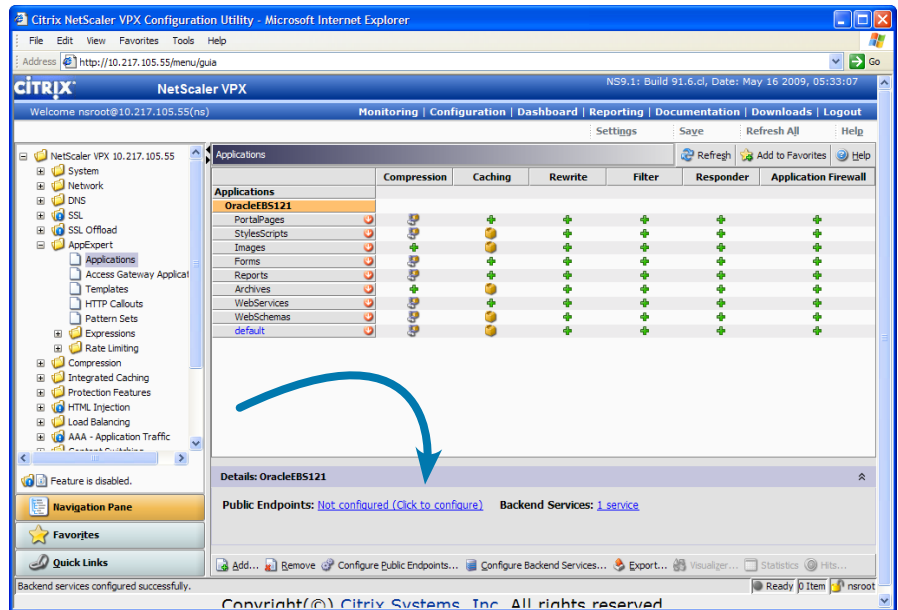
Protocol: HTTP

Port: 8000

Create.

Ok.

To activate the Virtual Interface for the Oracle EBS 12.1 template, select 'Configure Public Endpoints'.

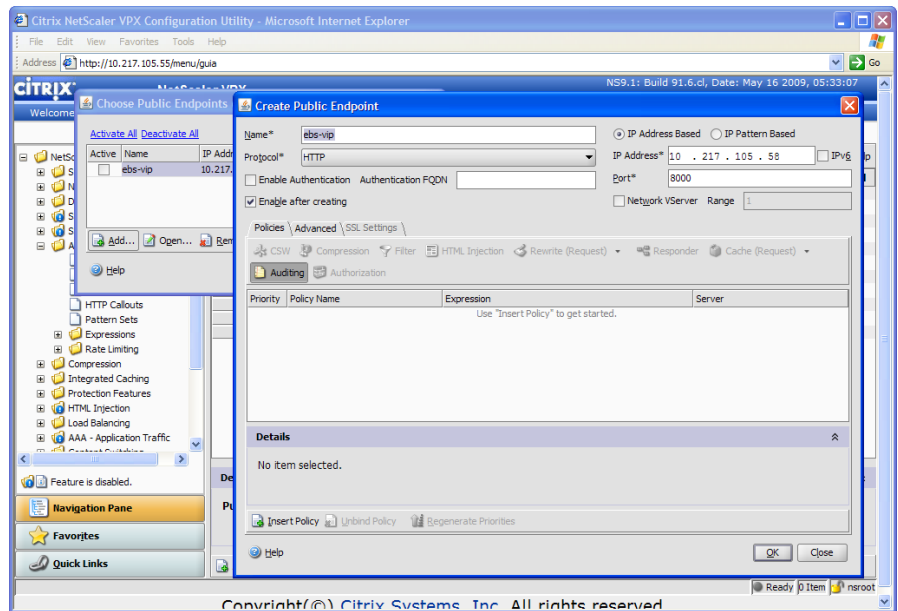


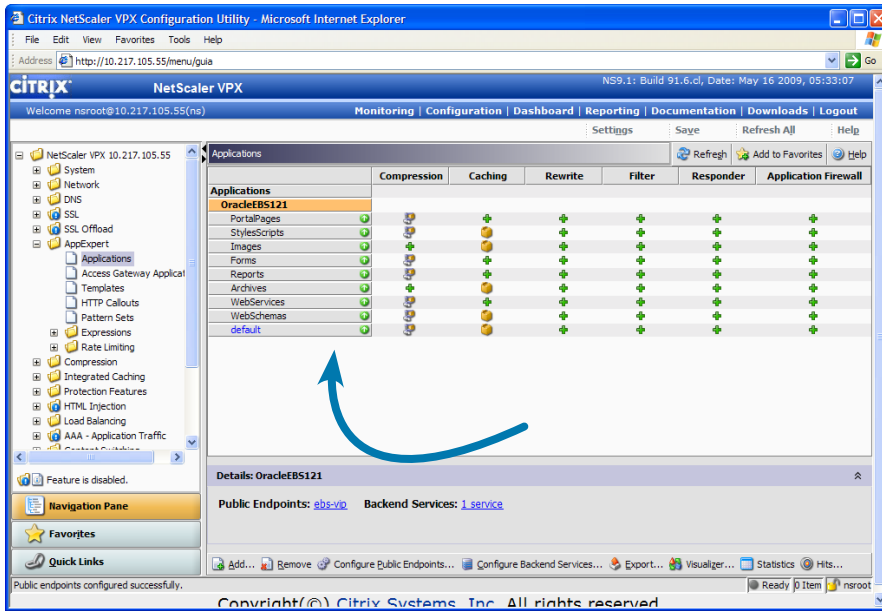
Configure the front-end VIP for the Oracle Application.

Name: ebs-vip
 Protocol: HTTP
 IP Address: x.x.x.x
 Port: 8000


Ok.

Ok.





The template application units will show green when both the front-end public vip and back-end servers are configured.

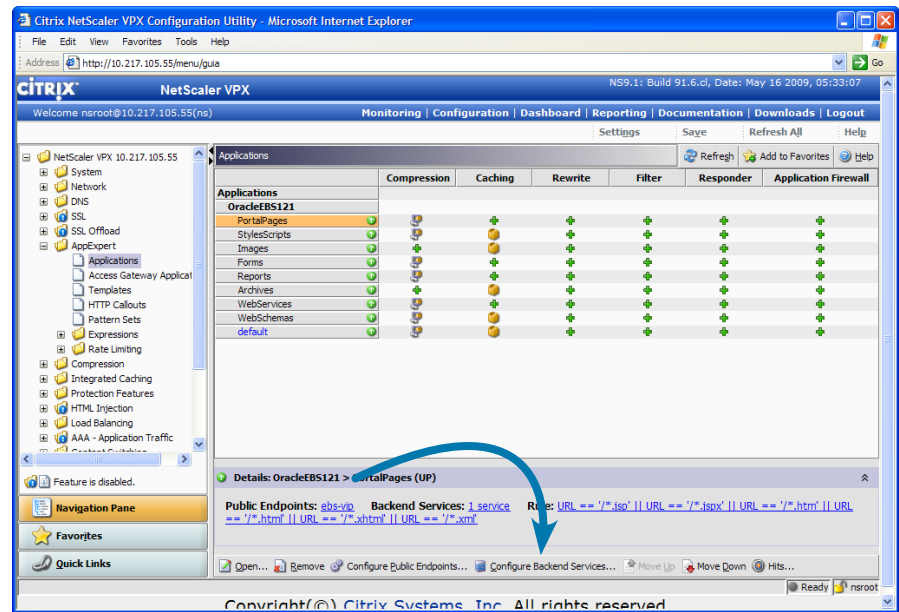
 Make sure you take this opportunity to “Save” the configuration.

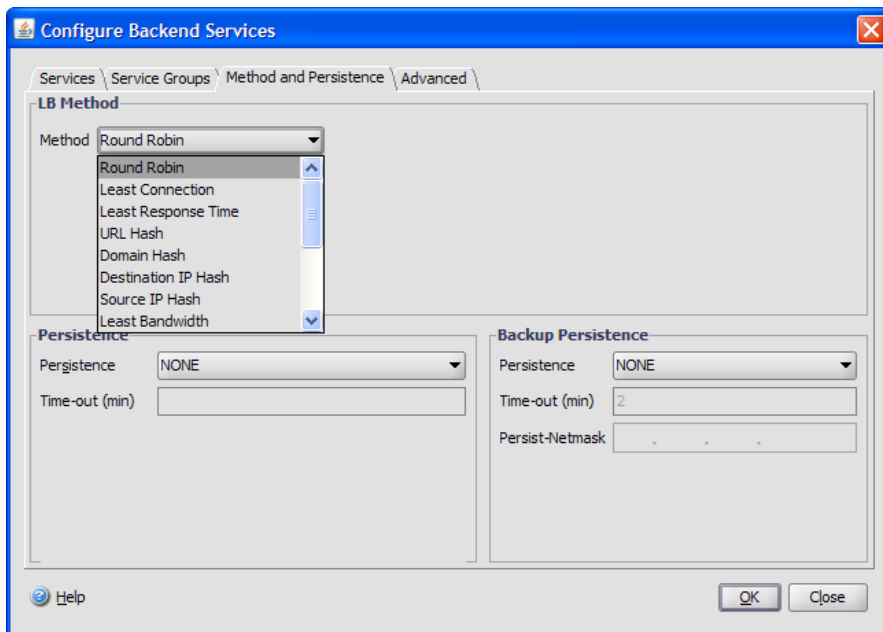
Oracle EBS 12.1 – Load Balancing

The AppExpert Application Template for Oracle EBS 12.1 is already set up for load balancing, compression and caching upon import. The load balancing algorithm can be modified, in addition the other template policies.

Load balancing distributes client requests across multiple servers to optimize resource utilization. Without load balancing and a limited number of servers providing service to a large number of clients, a server can become overloaded and degrade server performance. Load balancing prevents bottlenecks by forwarding the client requests to the servers best suited to handle them. Thus, the NetScaler balances the load on the servers.

A load balancing setup includes a virtual server (vserver) used to proxy multiple servers in a server farm and balance the load among them. The vserver identifies the server using the load balancing criteria and directs incoming client requests to it. When a client initiates a connection to the server, the vserver terminates the client connection and initiates a new connection with the selected server to perform load balancing.





Select the Method and Persistence tab.

Select the load balancing method.



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