Moodle Deployment

https://campus.barracuda.com/doc/41091206/

The Barracuda Load Balancer ADC increases the scalability and reliability of your Moodle deployment.

Product Versions and Prerequisites

You must have:

- Barracuda Load Balancer ADC version 5.1 or 5.2.
- Moodle 2.6 or earlier versions.
- Installed your Barracuda Load Balancer ADC(s), connected to the web interface, and activated your subscription(s).

Terminology

Before you begin deploying the Barracuda Load Balancer ADC with Moodle, familiarize yourself with these terms:

Term	Definition
Moodle	Modular Object-Oriented Dynamic Learning Environment. A free software e-learning platform or a course management system that provides easy-to-edit, secure, and structured course web sites.
NFS	Network File System. Lets machines mount a disk partition on a remote machine as if it were a local disk. It allows for fast, seamless sharing of files across a network.
Fully Qualified Domain Name (FQDN)	The unique name for a specific computer or host that can resolve to an IP address (e.g., www.example.com).
Service	A combination of a virtual IP (VIP) address and one or more TCP/UDP ports that the Barracuda Load Balancer ADC listens on. Traffic arriving over the specified port(s) is directed to one of the real servers associated with a particular service.
Instant SSL	Instant SSL provides SSL (HTTPS) access to content on servers without having to modify the servers or the content on the servers. The Barracuda Load Balancer ADC rewrites the "http" links in the response to "https".

Moodle Services Deployment Options

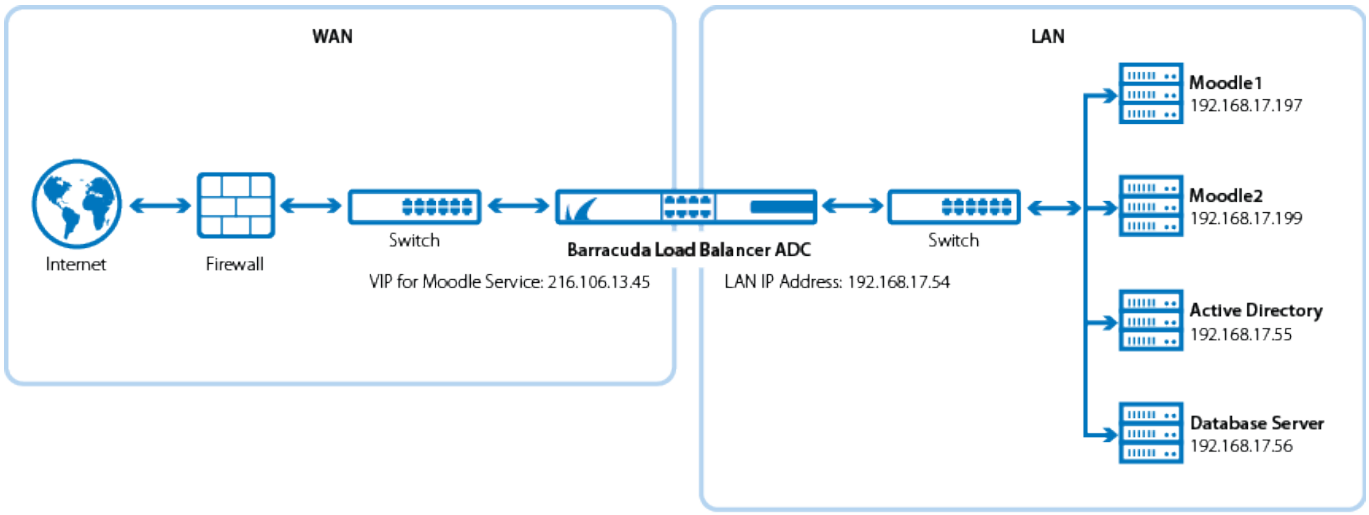
Deployments of Moodle services are supported in either a **one-armed** or a **two-armed** topology. This can be either a single or multiple subnet configuration. Unless the users must directly access individual servers, it is recommended that you place the servers in one or more subnets that are reachable by an internal-facing port of the Barracuda Load Balancer ADC. If users must directly access individual servers, a one-armed deployment is recommended.

Direct Server Return (DSR) is ***not*** supported in a Moodle services deployment.

You can create either an Instant SSL or HTTP service. If you want to enforce encryption for all connections to your Moodle servers, create an Instant SSL service. Otherwise, create an HTTP service.

The following diagram shows an example of how the Barracuda Load Balancer ADC can be deployed with Moodle services in a web farm.

Deployment Scenario



Deploy the Barracuda Load Balancer ADC for Moodle

To deploy the Barracuda Load Balancer ADC for Moodle services in a web farm, complete the following steps :

Step 1. Install Moodle in a Web Farm

Install the latest Moodle software on the back-end servers.

It is recommended that you place the database on a separate server. You can use either NFS or Samba to share the Moodle database between the database server and the back-end servers.

Step 2. Create Services on the Barracuda Load Balancer ADC

You can create either an Instant SSL or HTTP service. If you want to enforce encryption for all connections to your Moodle servers, create an Instant SSL service. Otherwise, create an HTTP service.

Create an Instant SSL Service

1. Log into the Barracuda Load Balancer ADC as the administrator.
2. Go to the **BASIC > Certificates** page and create the required certificate.
3. Go to the **BASIC > Services** page.
4. Click **Add Service** and enter the values in the corresponding fields.

Name	Type	IP Address	Port	HTTP Service Port	SSL Settings	Certificates	Load Balancing
Moodle_InstantSSL	Instant SSL	The IP address of the FQDN that clients use to access. For example, 10.5.7.205.	443	80	◦ **Secure Site Domain** – Enter the domain name of your Moodle server. If the internal and external domain are different, you can use wildcard characters. For example: `*.barracuda.com` ◦ If your Barracuda Load Balancer ADC is running version *5.1.1 and above*, set the **Rewrite Support** option to **On**. For versions *below 5.1.1*, this option is named **Instant SSL**.	Select the certificate that you uploaded for the service.	◦ **Persistence Type** – Select **Source IP**. ◦ **Persistence Netmask** – Enter: `255.255.255.255`

5. Click **Add Server** to configure the real servers. In the server settings, ensure that you:
   - Enter the IP addresses of the back-end servers. For example, 192.168.17.197 and 192.168.17.199.
   - Use port 80.
   - If traffic must be encrypted when it is passed to the real servers, enable **Server uses SSL**. Otherwise, non-encrypted traffic is passed to the real servers because the

Barracuda Load Balancer ADC decrypts the incoming traffic.

6. If the Moodle server uses compression, configure the web translations. By default, the Barracuda Load Balancer ADC does not decompress encoded content. If the Moodle servers use compression, create an **HTTP Request Rewrite** condition to remove the Accept-Encoding header.
   1. Go to the **TRAFFIC > Web Translations** page.
   2. In the **HTTP Request Rewrite** section, create the following rule:

Rule Name	Sequence Number	Action	Header Name	Old Value	Rewrite Condition
Remove_Encoding	2	Remove Header	Accept-Encoding	*	*

Create an HTTP Service

1. Log into the Barracuda Load Balancer ADC as the administrator.
2. Go to the **BASIC > Services** page.
3. Click **Add Service** and enter the values in the corresponding fields.

Name	Type	IP Address	Port	Load Balancing
Moodle_HTTP	HTTP	The IP address of the FQDN that clients use to access.	80	◦ **Persistence Type** – Select **Source IP**. ◦ **Persistence Netmask** – Enter: 255.255.255.255

4. Click **Add Server** to configure the real servers. In the server settings, ensure that you:
   - Enter the IP addresses of the back-end servers. For example, 192.168.17.197 and 192.168.17.199.
   - Use port 80.

Figures

1. Moodle_deployment_new.png

© Barracuda Networks Inc., 2024 The information contained within this document is confidential and proprietary to Barracuda Networks Inc. No portion of this document may be copied, distributed, publicized or used for other than internal documentary purposes without the written consent of an official representative of Barracuda Networks Inc. All specifications are subject to change without notice. Barracuda Networks Inc. assumes no responsibility for any inaccuracies in this document. Barracuda Networks Inc. reserves the right to change, modify, transfer, or otherwise revise this publication without notice.