Load Balancing Pool Types

We offer several types of load balancing pools, which each have different advantages.

- **HTTP**: the default type; also known as HTTP; Fully Layer 7
- **HTTPS**: standard HTTPS pool
- **Session persistent pools**: Several more described below

To create one of these pools, designating the `--type` parameter when creating the pool. You will not be able to change the type after creation.

Usage example:

```bash
manage-lb-pool create --ip LAX1:8.19.73.223 --name ProdLB --port 443 --type https_offload --certificate ~/certfile --key ~/privatekeyfile . . .
```

```
LB pool created:
  id: LAX1:1382
  name: ProdLB
```

**HTTP Fast: Ad Optimized**

The HTTP fast pool type is optimized specifically for display advertising, including ad servers, pixel servers, and other high volume systems. It is a streamlined version of the HTTP type pool optimized for speed under ideal traffic conditions by accelerating certain types of HTTP connections and reducing the number of connections opened to the back-end HTTP servers. HTTP Fast pools are less CPU intensive and therefore more cost effective.

**HTTPS Offloading**

"Https_offload" allows server-side traffic (communication between the load balancer and the nodes in a pool) to be passed over HTTP and client-side traffic (traffic with the outside world) to be passed over HTTPS. In other words, the load-balancing pool must contain only HTTP nodes, but the end user will interact with the pool over HTTPS protocol.

Creating an HTTPS Offload pool is the same as creating an [HTTPS pool](#) except for the "--type" parameter. Please note that you cannot change an HTTPS pool to an HTTPS Offload pool by changing the pool's port. You must create a new pool with the "type" specified as HTTPS.

**Distinguishing between HTTP and HTTPS Client Requests**

If you use an HTTPS Offload pool, all the communication between the load balancer and your web application will appear to be HTTP. You may want to distinguish between HTTP and HTTPS browser requests.

The easiest method is to change the port on the load-balancing pool. For example, set HTTP pool nodes to listen on 1.1.1.1:8000 and HTTPS pool nodes to listen on 1.1.1.1:8443.

**HTTP Secure Redirect**

This pool type redirects users to HTTPS when they connect to a Virtual IP using HTTP. Currently you must use port 80 for this pool type.

The following parameters and commands are not applicable to this pool type because the pool cannot contain nodes:

- Method used for load balancing
- Request string
- Search string
- SSL-related parameters (certificate, private key, and intermediate certificate chain)
- manage-lb-pool status/add-node/remove-node/activate-node/deactivate-node

**SMTP**

For this pool type, all connections are performed over SMTP protocol.

Note: search/request strings cannot be set for a SMTP LB pool, however, pool members are monitored by the load balancer, which checks that the nodes are up and responding to commands on a regular basis. These checks are successful if the mail server (on a node) responds to the standard SMTP HELO and QUIT commands.
Further Reading

- HTTPS Load Balancing (Will walk you through SSL Certificate steps.)
- Using Key Pairs with HTTPS Pools
- SSL Certificate and HTTPS Load-Balancing Problems