



# Validating Session Persistence Using Cisco Application Control Engine (ACE)

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The purpose of this document is to help customers verify the persistence settings on Cisco ACE load balancer. It provides instructions for checking persistence settings on the hardware device to ensure proper functionality of the Oracle E-business suite.

Session persistence sometimes referred to as “stickiness” is an ACE feature that allows the same client to maintain multiple simultaneous, or subsequent, TCP or IP connections with the same real server for the duration of a session. A session is defined as a series of transactions between a client and a server over some finite period of time (from several minutes to several hours). This is especially important for EBS to maintain a session state.

Depending on the configured SLB policy, the ACE “sticks” a client to an appropriate server after the ACE has determined which load-balancing method to use. If the ACE determines that a client is already stuck to a particular server, then the ACE sends that client request to that server, regardless of the load-balancing criteria specified by the matched policy. If the ACE determines that the client is not stuck to a particular server, it applies the normal load balancing rules to the content request.

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## Step 1

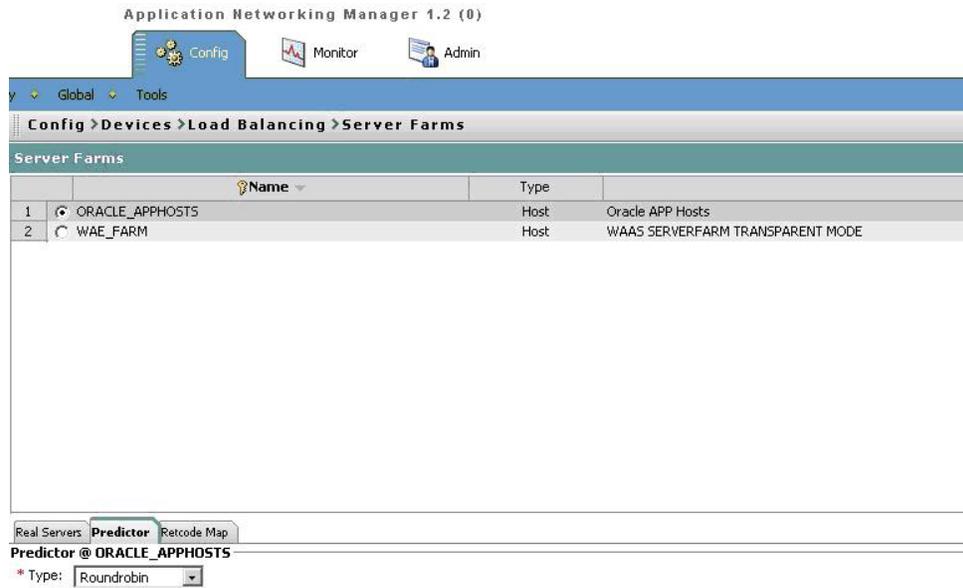
Validate the load balancing method used. This controls how client requests are balanced by ACE between Application nodes.

- a. From the Cisco ANM (Application Networking Manager) screen, select Config | Devices | Load Balancing | Server Farms.
- b. Select the Server Farm defined for Oracle Application hosts. In this example select ORACLE\_APPHOSTS.
- c. Select the Predictor Tab and ensure the proper SLB Type is selected. In this example SLB is set to “Round Robin.”



Figure 1-1 shows the Server Farms and SLB method chosen.

**Figure 1-1 Server Farms and SLB Method**



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Client cookies uniquely identify clients to the ACE and the servers providing the content. A cookie is a small data structure within the HTTP header that is used by a server to deliver data to a Web client and request that the client store the information. In certain applications, the client returns the information to the server to maintain the connection state or persistence between the client and the server.

When the ACE examines a request for content and determines through policy matching that the content is sticky, it examines any cookie or URL present in the content request. The ACE uses the information in the cookie or URL to direct the content request to the appropriate server.

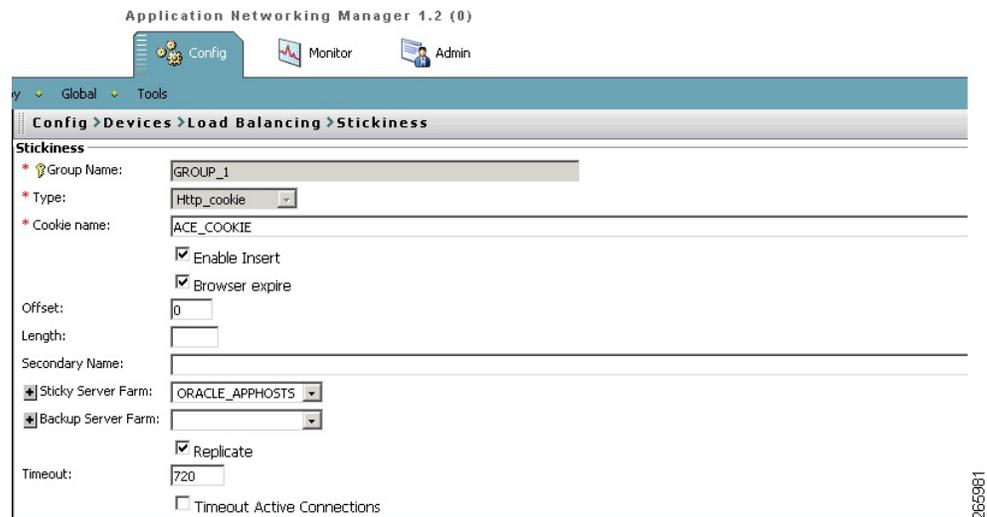
Using Cookie Insert, the ACE inserts the cookie on behalf of the server upon the return request, so that the ACE can perform cookie stickiness even when the servers are not configured to set cookies. The cookie contains information that the ACE uses to ensure persistence to a specific real server.

**Step 2** Confirm persistence/stickiness settings are correct.

- a. From Cisco ANM (Application Networking Manager) screen, select Config | Devices | Load Balancing | Stickiness.
- b. Select cookie method type “Http\_cookie,” and check “Enable Insert” and “Browser Expire”. Custom name is provided for Cookie name. In this example it was defined “ACE\_COOKIE”.
- c. Select the Sticky Server Farm that you want stickiness to be enabled for. In this example select ORACLE\_APPSHOSTS.
- d. Select Timeout for the session cookie expiration. In this example it was set to 720 minutes (12hrs). The expiration time is configurable according to business requirements.

Figure 1-2 shows the Session Persistence/Stickiness settings.

**Figure 1-2** Session Persistence/Stickiness Settings



## Validating SLB Policy and Persistence Through CLI

ACE configuration information pertaining to Oracle E-Business Suite.

### Cookie and Session Persistence

```
sticky http-cookie ACE_COOKIE_ORACLE GROUP_1
  cookie insert browser-expire
  replicate sticky
  serverfarm ORACLE_APPHOST
```

### Server Side Load Balance Policy

```
serverfarm host ORACLE_APPHOSTS
  predictor roundrobin
  probe ORACLE_DB_CHECK
  rserver ORACLE_APPHOST_1
  inservice
  rserver ORACLE_APPHOST_2
  inservice
  rserver ORACLE_APPHOST_3
  inservice

policy-map type loadbalance http first-match APPHOST_POLICY
  class class-default
    sticky-serverfarm GROUP_1

probe http ORACLE_DB_CHECK
  port 8000
  interval 2
  faildetect 2
  passdetect interval 2
  credentials sysadmin sysadmin
  request method get url /oa_servlets/AppsLogin

policy-map multi-match VIPS
  class APPHOST_VIP
```

```
loadbalance vip inservice
loadbalance policy APPHOST_POLICY
loadbalance vip icmp-reply
ssl-proxy server PROXY_1
```

### SSL Configuration

```
parameter-map type ssl SSL_PARAM_1
  cipher RSA_WITH_RC4_128_MD5

ssl-proxy service PROXY_1
  key key1.pem
  cert cert1.pem
  ssl advanced-options SSL_PARAM_1
```

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