

Converting a Cisco ACE configuration file to F5 BIG-IP Format

Joe Pruitt, 2012-11-12

In September, Cisco announced that it was [ceasing development](#) and pulling back on sales of its Application Control Engine (ACE) load balancing modules. Customers of Cisco's ACE product line will now have to look for a replacement product to solve their load balancing and application delivery needs.

One of the first questions that will come up when a customer starts looking into replacement products surrounds the issue of upgradability. Will the customer be able to import their current configuration into the new technology or will they have to start with the new product from scratch. For smaller businesses, starting over can be a refreshing way to clean up some of the things you've been meaning to but weren't able to for one reason or another. But, for a large majority of the users out there, starting over from nothing with a new product is a daunting task.

To help with those users who are considering moving to the F5 universe, DevCentral has included several scripts to assist with the configuration migration process. In the [Advanced Design and Config wiki](#), we've created a topic aptly titled "[Cisco](#)" that includes scripts to convert ACE configurations into it's F5 counterpart. We've also included scripts that cover Cisco's CSS and CSM products as well.

In this article, I'm going to focus on the `ace2f5-tmsh` in the `ace2f5.zip` script library.

The script takes as input an ACE configuration and creates a TMSH script to create the corresponding F5 BIG-IP objects.

ace2f5-tmsh.pl

```
$ perl ace2f5-tmsh.pl ace_config > tmsh_script
```

We could leave it at that, but I'll use this article to discuss the components of the ACE configuration and how they map to F5 objects.

ip

The ip object in the ACE configuration is defined like this:

```
ip route 0.0.0.0 0.0.0.0 10.211.143.1
```

equates to a tmsh "net route" command.

```
net route 0.0.0.0-0 { network 0.0.0.0/0 gw 10.211.143.1 }
```

rserver

An "rserver" is basically a node containing a server address including an optional "inservice" attribute indicating whether it's active or not.

ACE Configuration

```
rserver host R190-JOEINC0060
  ip address 10.213.240.85
rserver host R191-JOEINC0061
  ip address 10.213.240.86
  inservice
rserver host R192-JOEINC0062
  ip address 10.213.240.88
  inservice
rserver host R193-JOEINC0063
  ip address 10.213.240.89
  inservice
```

It will be used to find the IP address for a given rserver hostname.

serverfarm

A serverfarm is a LTM pool except that it doesn't have a port assigned to it yet.

ACE Configuration

```
serverfarm host MySite-JoeInc
  predictor hash url
  rserver R190-JOEINC0060
    inservice
  rserver R191-JOEINC0061
    inservice
  rserver R192-JOEINC0062
    inservice
  rserver R193-JOEINC0063
    inservice
```

F5 Configuration

```
ltm pool Insiteqa-JoeInc {
  load-balancing-mode predictive-node
  members { 10.213.240.86:any { address 10.213.240.86 }}
  members { 10.213.240.88:any { address 10.213.240.88 }}
  members { 10.213.240.89:any { address 10.213.240.89 }}
}
```

probe

a "probe" is a LTM monitor except that it does not have a port.

ACE Configuration

```
probe tcp MySite-JoeInc
  interval 5
```

```
faildetect 2
passdetect interval 10
passdetect count 2
```

will map to the TMSH “ltm monitor” command.

F5 Configuration

```
ltm monitor Insiteqa-JoeInc {
  defaults from tcp
  interval 5
  timeout 10
  retry 2
}
```

sticky

The “sticky” object is a way to create a persistence profile. First you tie the serverfarm to the persist profile, then you tie the profile to the Virtual Server.

ACE Configuration

```
sticky ip-netmask 255.255.255.255 address source MySite-JoeInc-sticky
  timeout 60
  replicate sticky
  serverfarm MySite-JoeInc
```

class-map

A “class-map” assigns a listener, or Virtual IP address and port number which is used for the clientside and serverside of the connection.

ACE Configuration

```
class-map match-any vip-MySite-JoeInc-12345
  2 match virtual-address 10.213.238.140 tcp eq 12345
class-map match-any vip-MySite-JoeInc-1433
  2 match virtual-address 10.213.238.140 tcp eq 1433
class-map match-any vip-MySite-JoeInc-31314
  2 match virtual-address 10.213.238.140 tcp eq 31314
class-map match-any vip-MySite-JoeInc-8080
  2 match virtual-address 10.213.238.140 tcp eq 8080
class-map match-any vip-MySite-JoeInc-http
  2 match virtual-address 10.213.238.140 tcp eq www
class-map match-any vip-MySite-JoeInc-https
  2 match virtual-address 10.213.238.140 tcp eq https
```

policy-map

a policy-map of type loadbalance simply ties the persistence profile to the Virtual . the “multi-match” attribute constructs the virtual server by tying a bunch of objects together.

ACE Configuration

```
policy-map type loadbalance first-match vip-pol-MySite-JoeInc
  class class-default
    sticky-serverfarm MySite-JoeInc-sticky

policy-map multi-match lb-MySite-JoeInc
  class vip-MySite-JoeInc-http
    loadbalance vip inservice
    loadbalance policy vip-pol-MySite-JoeInc
    loadbalance vip icmp-reply
  class vip-MySite-JoeInc-https
    loadbalance vip inservice
    loadbalance vip icmp-reply
  class vip-MySite-JoeInc-12345
    loadbalance vip inservice
    loadbalance policy vip-pol-MySite-JoeInc
    loadbalance vip icmp-reply
  class vip-MySite-JoeInc-31314
    loadbalance vip inservice
    loadbalance policy vip-pol-MySite-JoeInc
    loadbalance vip icmp-reply
  class vip-MySite-JoeInc-1433
    loadbalance vip inservice
    loadbalance policy vip-pol-MySite-JoeInc
    loadbalance vip icmp-reply
  class reals
    nat dynamic 1 vln 240
  class vip-MySite-JoeInc-8080
    loadbalance vip inservice
    loadbalance policy vip-pol-MySite-JoeInc
    loadbalance vip icmp-reply
```

F5 Configuration

```
ltm virtual vip-Insiteqa-JoeInc-12345 {
  destination 10.213.238.140:12345
  pool Insiteqa-JoeInc
  persist my_source_addr
  profiles {
    tcp {}
  }
}

ltm virtual vip-Insiteqa-JoeInc-1433 {
  destination 10.213.238.140:1433
  pool Insiteqa-JoeInc
  persist my_source_addr
  profiles {
    tcp {}
  }
}
```

```
ltm virtual vip-Insiteqa-JoeInc-31314 {
  destination 10.213.238.140:31314
  pool Insiteqa-JoeInc
  persist my_source_addr
  profiles {
    tcp {}
  }
}

ltm virtual vip-Insiteqa-JoeInc-8080 {
  destination 10.213.238.140:8080
  pool Insiteqa-JoeInc
  persist my_source_addr
  profiles {
    tcp {}
  }
}

ltm virtual vip-Insiteqa-JoeInc-http {
  destination 10.213.238.140:http
  pool Insiteqa-JoeInc
  persist my_source_addr
  profiles {
    tcp {}
    http {}
  }
}

ltm virtual vip-Insiteqa-JoeInc-https {
  destination 10.213.238.140:https
  profiles {
    tcp {}
  }
}
```

Conclusion

If you are considering migrating from Cisco's ACE to F5, I'd consider you take a look at the [Cisco conversion scripts](#) to assist with the conversion.

F5 Networks, Inc. | 401 Elliot Avenue West, Seattle, WA 98119 | 888-882-4447 | f5.com

F5 Networks, Inc.
Corporate Headquarters
info@f5.com

F5 Networks
Asia-Pacific
apacinfo@f5.com

F5 Networks Ltd.
Europe/Middle-East/Africa
emeainfo@f5.com

F5 Networks
Japan K.K.
f5j-info@f5.com

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