



TESTING & INTEGRATION GROUP
SOLUTION GUIDE

Alteon Application Switch (AAS) optimizing the delivery of Oracle
E-Business 12.1.3

Contents

INTRODUCTION..... 2

RADWARE ALTEON..... 4

RADWARE ALTEON AND ORACLE E-BUSINESS ARCHITECTURE..... 6

PREREQUISITES IMPLEMENTATION NOTES 7

IMPORTANT IMPLEMENTATION NOTES..... 7

CONFIGURATION..... 8

 ALTEON ACTIVE CONFIGURATION 8

 ALTEON BACKUP CONFIGURATION..... 13

APPENDIX 1..... 14

 ALTEON ACTIVE CONFIGURATION SCRIPT..... 14

 ALTEON BACKUP CONFIGURATION SCRIPT 20

APPENDIX 2:..... 25

 RADWARE HTTP/2 GATEWAY..... 25

Introduction

The Radware and E-Business Suite joint solution ensures E-Business Suite 12.1 customer's solution resilience, efficiency and scale. Radware's Alteon Application Delivery Controller (ADC) guarantees E-Business Suite applications maximum availability, scalability and performance security by load balancing traffic for the web server content.

Alteon works in conjunction with E-Business Suite 12.1 servers to offload resource intensive processing, providing advanced health monitoring and avoiding system down time to deliver a best of breed subsystem. With a pay as you grow platform licensing model, Alteon ensures long term investment protection facilitating incremental growth demanded by today's Business.

Oracle E-Business Overview

With Oracle E-Business Suite 12.1, Oracle delivers on its Applications Unlimited commitment, the long-term plan to provide continuing enhancements to your existing investments in Oracle applications.

Oracle E-Business Suite 12.1 provides organizations of all sizes, across all industries and regions with a global business foundation that reduces costs and increases productivity through a portfolio of rapid value solutions, integrated business processes and industry-focused solutions.

With the latest release of Oracle E-Business Suite, customers can:

Achieve rapid value today with standalone solutions that are complementary to an existing 11i or Release 12 environment

Invest in ways to standardize and simplify with integrated business processes that reduce cost and minimize complexity

Strengthen competitive position with purpose-built industry solutions that drive greater value across the enterprise

Rapid Value Solutions

- Maximize value by connecting and optimizing supply, demand and design chains with the new Value Chain Planning solutions in Oracle Supply Chain Management
- Expect quick ROI by effectively managing pay for performance on a global scale with Oracle Incentive Compensation
- Increase operational efficiency and inventory management excellence to combat tight margins in today's fast-paced and challenging business environment with Oracle Warehouse Management (WMS)
- Achieve fast time to value by reducing deployment time and lowering overall total cost of ownership with analytics seamlessly integrated to transaction systems including Procurement & Spend Analytics, HR & Talent Management Analytics, Project Analytics, and Federal Financial Analytics

Integrated Business Processes

- Maximize the value of your workforce by managing talent enterprise-wide through a truly integrated Talent Management solution that connects strategic and transactional HR data and processes
- Improve visibility to estimated costs and make better sourcing decisions with Oracle Landed Cost Management (LCM)
- Increase agility by leveraging pre-built, sustainable integrations that reduce implementation risk and cost with AIA integrations

Purpose-Built Industry Solutions

- Increase the visibility of ROI for promotional funds and the effect of supplier price changes with Oracle Supplier Ship and Debit and Oracle Price Protection for Wholesale Distribution.

- Eliminate incomplete and inconsistent site and product data by centralizing all site and product information from heterogeneous systems with Oracle Site Hub and Oracle Product Information Management (PIM) for Retail.
- Reduce the overhead of managing reimbursable agreements with Project Accounting for Federal.
- Manage cash flow and ensure subcontractors satisfy contract deliverables with Subcontractor Payments for Engineering & Construction.

Radware Alteon

Alteon Application Switch Series 4-5 provide breakthrough performance, advanced application acceleration capabilities and on demand scalability needed to effectively meet contemporary network and business needs. Specifically designed for the majority of enterprises and carriers that operate in dynamic, ever-changing environments and face diverse requirements, the Alteon Application Switch provides the extendable throughput they need from 0 to 20Gbps for unparalleled scalability, business availability and performance.

Breakthrough Performance Delivering best Quality of Experience

Powered by state-of-the-art, custom-designed hardware platforms, the Alteon Series 4-5 ensure the best user experience and fastest response time for your mission-critical applications, resulting in effective, continuous business operation. The Alteon 4008 & 4416 provide up to 4Gbps of scalable throughput capacity while delivering breakthrough performance including 215K Layer 4 and 135K Layer 7 Transactions per Second (TPS). The Alteon 5412, targeting large data centers and carrier environments packed with four 10GE ports, supports up to 20Gbps of throughput capacity, 2.5 Million DNS queries per second, 535K Layer 4 and 300K Layer 7 Transactions per Second.

The beating heart of Alteon Series 4-5 is the Virtual Matrix Architecture (VMA), a one-of-a-kind technology that unleashes the power of Alteon's next-generation proprietary platforms. VMA is a fast, robust, and flexible architecture that leverages the entire system's capacity while providing the parallel performance of distributed processing.

Integrated Application Acceleration Capabilities

Alteon Application Switch Series 4-5 deliver a wide set of application acceleration capabilities including SSL offloading, web compression, caching, HTTP multiplexing and TCP optimization. These capabilities are designed to offload servers, address server performance issues, enhance response-time for best QoE and mitigate security risks. By offloading processor intensive operations from servers, Alteon frees the servers' CPUs to handle additional requests, eliminating the need to buy additional hardware in order to support application processing requirements and reducing CAPEX and OPEX.

The Alteon Application Switch is validated and certified by leading application vendors such as Microsoft, Oracle, SAP, IBM and others. When operating Alteon Application Switch Series 4-5 with Microsoft SharePoint for example, the response

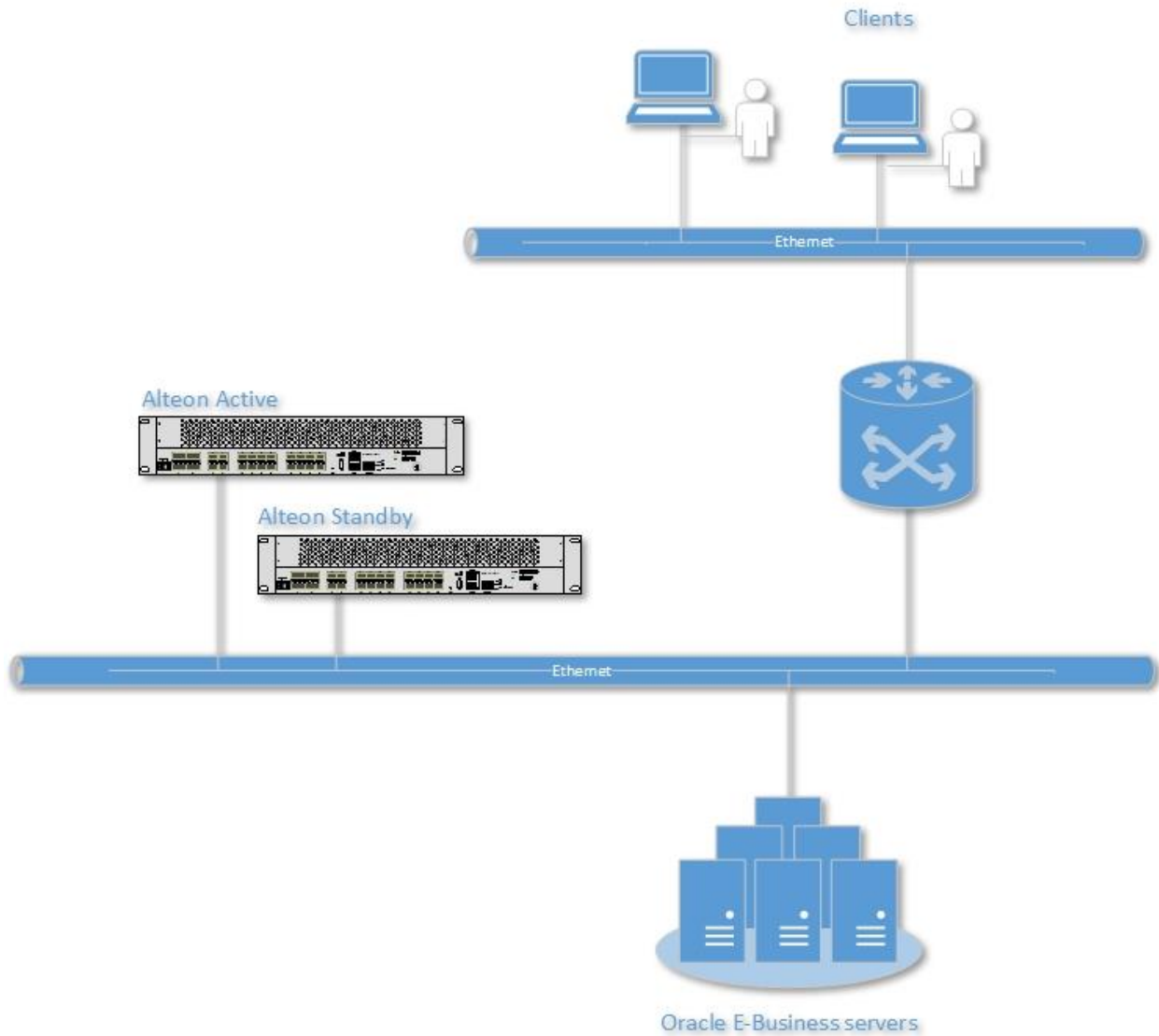
time of SharePoint servers is accelerated by 350% and the servers' CPU load is reduced by 40%. Similar benefits are achieved with other popular applications. Application acceleration capabilities have greater importance in virtual data centers where applications suffer from increased latency caused by virtualization infrastructure. Alteon reduces applications latency and improves QoE of virtual applications.

Intelligently Embedding Radware's 'On Demand' Infrastructure Approach

By embracing Radware's "Pay-as-you-Grow" approach, you only pay for the exact capacity currently required and prevent over-spending on the initial solution. Throughput capacity, acceleration capabilities and application-aware services can be added on demand to meet new business requirements – with no forklift upgrade of the device and without even restarting it.

The "Pay-as-you-Grow" approach enables you to overcome capacity planning challenges and reduces the risk associated with data center growth for best investment protection. Thanks to platform standardization and simplicity, there are two platforms to cover all of your application needs resulting in fewer spare parts, and less training and operations, to dramatically reduce OPEX.

Radware Alteon and Oracle E-Business Architecture



Tested Network Drawing

Prerequisites Implementation Notes

1. Oracle E-Business Suite installed and running version 12
2. When using SSL offloading must import the Certificate to the Alteon. For more information please refer to user the Alteon user manual.

Important Implementation Notes

1. This deployment has checked on Alteon v30.5 and support both hardware and software versions.
2. Oracle E-Business requires session timeout for 12 hours; Make sure that aging time on the Alteon is set to 720 minutes also at the Cookie insert field.
3. To sync configuration after configure the active Alteon please run the command `/oper/slb/sync` to copy the configuration (L2 and L3 network configuration need to be configured on the Alteon standby device before applying the sync command)
4. The implementation is using Radware new HTTP/2 Gateway mechanism for customer that use HTTP/2. To read more about HTTP/2 Gateway please refer to [Appendix 2](#).
5. HTTP VIP is used for redirect traffic to HTTPS
6. E-Business servers are working on port 8000.
7. Persistency is used by Alteon insert cookie mechanism.

Software and Hardware

The following is a list of hardware and software tested to verify the interoperability of the presented solution:

- Redhat 5.7 Enterprise servers
- Radware's Alteon v.30.5 (2 units)
- Oracle E-Business Suite v.12.1.3

Configuration

Alteon Active Configuration

Network Configuration

```
/c/port 1
    pvid 209
/c/l2/vlan 1
    learn ena
    def 0
/c/l2/vlan 209
    ena
    name "209"
    learn ena
    def 1
/c/l3/if 1
    ena
    ipver v4
    addr 192.168.60.2
    vlan 209
    peer 192.168.60.3
```

Sync Configuration

```
/c/slb/sync
    pips e
    certs e
/c/slb/sync/peer 1
    ena
    addr 192.168.60.3
```

Real Servers Configuration

```
/c/slb/real 1
    ena
    ipver v4
    rip 192.168.60.12
    name "Oracle.app1"
/c/slb/real 2
    ena
    ipver v4
    rip 192.168.60.13
    name "Oracle.app2"
```

Server Groups Configuration

```
//c/slb/group 1
    ipver v4
    metric roundrobin
    health http
    add 1
```


Alteon Load balancing Oracle E-Business 12.1.3
add 2
name "oracle.app"

Thursday, May 19, 2016

Alteon process directions

```
/c/slb/port "1"  
  client ena  
  server ena  
  proxy ena
```

Virtual Servers and Services Configuration

```
/c/slb/virt 1  
  ena  
  ipver v4  
  vip 192.168.60.200  
  vname "Oracle.e-buiss"  
/c/slb/virt 1/service 80 http  
  action redirect  
  group 1  
  rport 80  
  redirect "https://$HOST/$PATH"  
  dbind forceproxy  
/c/slb/virt 1/service 443 https  
  group 1  
  rport 8000  
  dbind forceproxy  
  tmout 720  
  ptmout 720  
/c/slb/virt 1/service 443 https/http  
  comppol 1  
  http2pol 1  
  cachepol 1  
  connmgt ena 10  
/c/slb/virt 1/service 443 https/ssl  
  svrcert cert 2  
  sslpol 11  
/c/slb/virt 1/service 443 https/pbind cookie insert  
/c/slb/virt 1/service 443 https/http/rcount 1  
/c/slb/gslb  
  off  
  hostlk ena  
/c/sys/access/https/cert WebManagementCert  
/c/sys/access/https/https e
```

HA Configuration

```
/c/l3/hamode switch  
/c/l3/ha/floatip FloatIP  
  ena  
  ipver v4  
  addr 192.168.60.1
```

```

if 1
/c/l3/ha/switch
  def 1
/c/l3/ha/switch/trigger/ifs
  add 1

```

PIP Configuration

```

/c/slb/pip/type port
/c/slb/pip/add 192.168.60.201 1

```

Compression Configuration

```

/c/slb/accel/compress
  on
/c/slb/accel/compress/comppol 1
  name "oracle.comp"
  minsize 1024
  ena

```

SSL Configuration

```

/c/slb/ssl/certs/key 2
/c/slb/ssl/certs/import key "2" text
-----BEGIN RSA PRIVATE KEY-----
Proc-Type: 4,ENCRYPTED
DEK-Info: DES-EDE3-CBC,D8A1045DF33941DF

```

```

FLbetBzbJ00vwD5MVqnsryPnwQV5pGID+kq/TypA2LGKu5FSujbKu4aXYQYQuwVz
HmCdNXrvjD+nSxNpVXZ/NAVi0RGhS/UC42g9kCOPvGq4LtBTolVf44sa1LZ6aWIq
pHvWBGD5b50FQkyjGSrgNljko8gnOe8v460RyL2OW9kwY9d8x2tpAM5En3wFK1aE
GJ5f4HDBp4MKPugsxgWIamooZDeW1nYprf4q8HJZCsPPE6F/DZ8pLNM3Vta4y8XJ
1QjRwgvvg4anNnhZWf8B+2MnWbLpWQ6DlMAKW76yTTVkhVixdln/VG7LcOgM+HQF
1GZuKwgO4bxLmIkNY+r6UKB6pRHhu9APXhIlg+LKP91pNLPJnRxPmBH7LeytVoYv
P26xMfgr4AiKOPw6Hx7ypxD8q4H5/MGUkgzaV8PkrZHGTT/8rdJb2D9vuwFw9oq
f+W52KkYs+tfo2RRgovaQPdkgKLM0jr17O8h5CsPS6VIOJwj86yjZIMxOMp+T8nW
HxFFcvP1gNgoB4+jSpndMN0BA2HI89FYrCh+IstyvCb3tGBGSFCKqiE5LoNEKwgR
aG5NRE5VxQhyf5q38RGgNXNPhgjzqppoG3PIz2GuyfcbdRwTwecXax7cI7L9E6B
5oaYQaTjMvGaol5oDq5KpioMig+ZFWVsKIMcXglDbHOgRU9ul4sl+VWXRqnTtgSL
9iYa2nrj5evC4Nsrc8/9E5q2LSM2E2Ca75D5dz215h7MFkExkkciu55uBBYu9vFo
8DfUkrn6Nm6grUub2tpfhWIMkRnXrWXgIICHApND/BU2eFe8+4HZEegxoRNcVAiW
UE9q12XBGVI2f4/tnSOuGNgF/PIAb+Iyi7KsM4/wE1CwMTa7GdYsL2HLUZ2MUTRj
nk+7zPI2LDm7ca+7jHV560zY9K0G4f0IkH/VDuMiL/Y0RxVnLkiDxJIjuQFW5Nro
dw8JuiodGe/x5oTtczFhtBNW+IXIB+3m5eyWNYtGrAcHEuRcrE+px2RIY0eFlrWB
qmBTRx0uEP0VI5TDi0aT+IHvYAsZ8UgHJSCXnlq6I4FzUGWgV5FUD49smHoPMkl0
W0vnSz/4qjOhn0ZiZOiDIap4ewqmrUT07ZbEV2IVOzi2SN/n7HYB4aQvlzHmTS/E
j9mGDSiLmb64PZ1IesPXz3gHsqx8VeV7UHLNZyi9o2beYIstKTYKzT8FEuy0IZwf
mM/Vcxb0pu93uwYuyIQYg9yBSSFx244aif/0cq9WosBxXowuXsBChXyCNNzlfKVz
h6bhFEYT1HdrtZPvAN+3rWA5BAbLi4ZldP57zeJj9TbbwJhXV/QhlonKenigaGBZ
hvzsBkIL1wlbqouVBomtZ5jXQpcyS5RtQWdqVMGh8fpz297wG8mhlOJ98HaQ9fyp
H4OhkK40pKAfp5edP59exAX5TXfzOast7AdRMi/T5kizbyWqzvI+nrlOX4E6ICqz
RCibNMxwG66POSNVjbgZ9IVjrany82dtLyT/T1sNgpHc1LSdAAsw8OgdKyUokLkr

```

k/aOJcmMpsbUdURLGQEJvv9s/P9ophvDv+poqC58vhRoKXQBkxWGmg==

-----END RSA PRIVATE KEY-----

/c/slb/ssl/certs/request 2

/c/slb/ssl/certs/import request "2" text

-----BEGIN CERTIFICATE REQUEST-----

MIICYjCCAUAoCAQAwHTEbMBkGA1UEAwwSYXBwdmlzLnJhZHdhcmUuY29tMIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAtnqkl3pj2RL2TpuWN1wiPL1WhXND Ce3IvmTAPs6BxvdYMn2w/kE62uBZ1SgdowSjDtIDNXOJqZLIPapz8CaK/L9a32Jz yLua77E/XsA8MoAsb22ek2QfGeYv1ifruuzCU7FZUXbZjPXu9HsMn0meOGmNiyXI Wvh2Lq8r2wp2Gq2L5o2zoIdpt5RaNtae297/ZIRCAXwO+oFGxK6ZxS2m47E4AS4D f6VwIA5pc48dhRaJSAiYMJeQFfv9LwDwFCZMR1sLGwWVN/glkFohCruzabBPIQC cSqVPaT/MS/asF0a4mbd2GnJNZnvHfHq1uIwCv/QpANwoH5wB0aGE2awQwIDAQAB oAAwDQYJKoZIhvcNAQEFBQADggEBAH7QvxtxcSX2cw0L5obrL+1yd77aeQ0sA/eG WLFf1+87xyLz4OPNQ6CnQ1at+vYONfLi0vIigmq7giB9grVg7keyiGIT8vnGpLCn rzOwwmjBduIRA9LJWCEiWHaZTtHdYcGMGAdJNG1FHIApZIECQ7iUPT3vyFIGR36E dH30VKnX2s4yoMnz2MHbntuVO2pCJbQmcDXM/1E4RZTTioLaczs7cKftgl2GfvO2 JtntZzFcGJJ81Vy/vU3f7tH9WyVWbNML+fJho6zOHmvrE0KChGE9PwISVtO6/l6 nzreI1n8Q7n+wUt9MbccJyCBcoxLAtrwL1bnBo+CF3+UbSsp/sU=

-----END CERTIFICATE REQUEST-----

/c/slb/ssl/certs/cert 2

/c/slb/ssl/certs/import cert "2" text

-----BEGIN CERTIFICATE-----

MIIDijCCAnKgAwIBAgIEVud+TANBgkqhkiG9w0BAQsFADAdMRswGQYDVQQDDDBJh cHB2aXMucmFkd2FyZS5jb20wHhcNMTYwNTA1MjAwMDA0WhcNMjYwMzE0MjAwMDA0 WjAdMRswGQYDVQQDDDBJhchB2aXMucmFkd2FyZS5jb20wggiMA0GCSqGSIb3DQE B AQUAA4IBDwAwggEKAoIBAQC2eqSXemPZEvZOm5Y3XCI8vVaFc0MJ7ci+ZMCmzoH G 91gyfbD+QTra4FnVKB2jBKMO0gM1c4mpksg9qnPwJor8v1rfYnPIu5rvsT9ewDwy gCxbvZ6TZB8Z5i/WJ+u67MJTSvIRdtmM9e70ewyfsZ44aY2LJcha+HYuryvbCnYa rYvmjbOgh2m3IFo21p7b3v9khEIBfA76gUbErpnFLabjsTgBLgN/pXAgDmlzjx2F FolICJgwI5AV+/0vAPAUJkxHWwsbBZU3+CWQWiEKu7NpsE8iVAJxKpU9pP8xL9qw XRriZt3Yack1me8d8erW4jAK/9CkA3CgfnAHRoYTZRBDAGMBAAGjgdEwgc4wDwYD VR0TAQH/BAUwAwEB/zARBglghkgBhvhCAQEEBAMCAkQwMgYJYIZIAYb4QgENBCUW I0FsdGVvbi9Ob3J0ZWwgR2VuZXJhdGVkIENlcnRpZmljYXRIMB0GA1UdDgQWBBS8 cSQ2WAIc9curKFmT6kQEMXPrTBIBgNVHSMEQTA/gBS8cSQ2WAIc9curKFmT6kQ EMXPraEhpB8wHTEbMBkGA1UEAwwSYXBwdmlzLnJhZHdhcmUuY29tggRXK535MAsG A1UdDwQEAwIC7DANBgkqhkiG9w0BAQsFAAOCAQEAhd0HQKTWm4bTIrBrVfttVVKD rzLhj9qGAwSLh4GZJ8qtdCoUq0fVQ2HhI9HDsuJSR04xrpQp/x/fTeuEKZaWioVk 4iFSpW+sU5aizocOIdtxsqtyX3qkmv3dy0gjrsx0CLjbIOLGrnBvd3VUI79MrZX NuJ8FPzFaBERIJOXD544Wio1mzRuX0tq71LldewPeqmXO+vQhEgI/tOz0WqRLud oxjWGZhxBI1FEjcgQ7ddIOoXSrW6gZNXI1n31oHjMXQryYIqWBJZ4o8Zb2Fu+xs Syr1FhM0zrzj5/HaGua5I5MMTPy+cIJSPEdITAtFIIRCP6jyXjiQAml7nLySKA==

-----END CERTIFICATE-----

/c/slb/ssl

on

/c/slb/ssl/sslpol 11

name "SSL.Offloading"

```
  cipher "http2"  
  ena  
/c/slb/ssl/sslpol 11/frver  
  tls10 enabled
```

Caching Configuration

```
/c/slb/accel/caching  
  on  
/c/slb/accel/caching/cachepol 1  
  name "oracle.cache"  
  ena
```

HTTP/2 Configuration

```
/c/slb/accel/http2/http2pol 1  
  ena  
  streams 10  
  header dis "X-HTTP2: on"
```

Alteon Backup Configuration

Network Configuration

```
/c/port 1
  pvid 209
/c/l2/vlan 1
  learn ena
  def 0
/c/l2/vlan 209
  ena
  name "VLAN 209"
  learn ena
  def 1
/c/l3/if 1
  ena
  ipver v4
  addr 192.168.60.3
  vlan 209
  peer 192.168.60.2
```

Sync Configuration

```
/c/slb/sync
  pips e
  certs e
/c/slb/sync/peer 1
  ena
  addr 192.168.60.2
```

HA Configuration

```
/c/l3/hamode switch
/c/l3/ha/floatip FloatIP
  ena
  ipver v4
  addr 192.168.60.1
  if 1
/c/l3/ha/switch
  def 1
/c/l3/ha/switch/trigger/ifs
  add 1
```

Appendix 1**Alteon active configuration script**

```
script start "Alteon Application Switch VA" 4 /***** DO NOT EDIT THIS LINE!
/* Configuration dump taken 16:58:06 Thu May 5, 2016
/* Configuration last applied at 13:44:11 Thu May 5, 2016
/* Configuration last save at 13:44:25 Thu May 5, 2016
/* Version 30.5.0.0, Mgmt MAC address 00:50:56:a3:7e:b2
/* When restoring this configuration, provide the same
/* passphrase used to encrypt the private keys.
/c/sys/access
    tnet ena
/c/port 1
    pvid 209
/c/l2/vlan 1
    learn ena
    def 0
/c/l2/vlan 209
    ena
    name "209"
    learn ena
    def 1
/c/l2/stg 1/clear
/c/l2/stg 1/add 1 2 209
/c/sys/access/sshd/ena
/c/sys/access/sshd/sshv1 dis
/c/sys/access/sshd/on
/c/l3/if 1
    ena
    ipver v4
    addr 192.168.60.2
    vlan 209
    peer 192.168.60.3
/c/slb/accel/compress
    on
/c/slb/accel/compress/comppol 1
    name "oracle.comp"
    minsize 1024
    ena
/c/slb/ssl/certs/key 2
/c/slb/ssl/certs/import key "2" text
-----BEGIN RSA PRIVATE KEY-----
Proc-Type: 4,ENCRYPTED
DEK-Info: DES-EDE3-CBC,D8A1045DF33941DF
```

```
FLbetBzbJ00vwd5MVqnsryPnwQV5pGID+kq/TypA2LGKu5FSujbKu4aXYQYQuwVz
HmCdNXrvjD+nSxNpVXZ/NAVi0RGhS/UC42g9kCOPvGq4LtBTolVf44sa1LZ6aWIq
pHvWBGD5b50FQkyjGSrgNljko8gnOe8v460RyL2OW9kwY9d8x2tpAM5En3wFK1aE
GJ5f4HDBp4MKPugsxgWIamooZDeW1nYprf4q8HJZCsPPE6F/DZ8pLNM3Vta4y8XJ
1QjRwgvvg4anNnhZWf8B+2MnWbLpWQ6DlMAKW76yTTVkhVitxdln/VG7LcOgM+HQF
```

```

1GZuKwgO4bxLmIkNY+r6UKB6pRHhu9APXhIlg+LKP91pNLPJnRxPmBH7LeytVoYv
P26xMfgr4AiKOPw6Hx7ypxD8q4H5/MGUkgzaV8PkfRZHGT/8rdJb2D9vuwFw9oq
f+W52KkYs+tfo2RRgovaQPdkgKLM0jr17O8h5CsPS6VIOJwj86yjZIMxOMp+T8nW
HxFFcvP1gNgoB4+jSpndMN0BA2HI89FYrCh+IstyvCb3tGBGSFCKqiE5LoNEKwgR
aG5NRE5VxQhyf5q38RGgNXNPhgjzqppoG3PIz2GuyfcbdRwTwecXax7cI7L9E6B
5oaYQaTjMvGaol5oDq5KpioMig+ZFWVsKIMcXglDbHOgRU9ul4sl+VWXRqnTtgSL
9iYa2nrj5evC4Nsrc8/9E5q2LSM2E2Ca75D5dz215h7MFkExkkciu55uBBYu9vFo
8DfUkrn6Nm6grUub2tpfhWIMkRnXrWXgIICHApND/BU2eFe8+4HZEegxoRNcVAiW
UE9q12XBGVI2f4/tnSOuGNgF/PIAb+Iyi7KsM4/wE1CwMTa7GdYsL2HLUZ2MUTRj
nk+7zPI2LDm7ca+7jHV560zY9K0G4f0IkH/VDuMiL/Y0RxVnLkiDxJIjuQFW5Nro
dw8JuiodGe/x5oTtczFhtBNW+IXIB+3m5eyWNYtGrAchEuRcrE+px2RIY0eFlrWB
qmBTRx0uEP0VI5TDi0aT+IHvYAsZ8UgHJSCXnlq6I4FzUGWgV5FUD49smHoPMkl0
W0vnSz/4qjOhn0ZiZOiDIap4ewqmrUT07ZbEV2IVOzi2SN/n7HYB4aQvlzHmTS/E
j9mGDSiLmb64PZ1IesPXz3gHsqx8VeV7UHLNZyi9o2beYIstKTYKzT8FEuy0IZwf
mM/Vcxb0pu93uwYuyIQYg9yBSSFx244aif/0cq9WosBxXowuXsBChXyCNNzlfKVz
h6bhFEYT1HdrTZPvAN+3rWA5BAbLi4ZldP57zeJj9TbbwJhXV/QhlonKenigaGBZ
hvzsBklL1wlbqouVBomtZ5jXQpcyS5RtQWdqVMGh8fpz297wG8mhlOJ98HaQ9fyp
H4OhkK40pKAfp5edP59exAX5TXfzOAST7AdRMi/T5kizbyWqzvI+nrlOX4E6ICqz
RCibNMxwG66POSNVjbgZ9IVjrany82dtLyT/T1sNgpHc1LSdAAsw8OgdKyUokLkr
k/aOJcmMpsbUdURLGQEJvv9s/P9ophvDv+poqC58vhRoKXQBkxWGmg==
-----END RSA PRIVATE KEY-----

```

```

/c/slb/ssl/certs/key WebManagementCert
/c/slb/ssl/certs/import key "WebManagementCert" text
-----BEGIN RSA PRIVATE KEY-----
Proc-Type: 4,ENCRYPTED
DEK-Info: DES-EDE3-CBC,C13BCB876DF2D0F3

```

```

3QvVgmTIJH4P+Eb+7Z5Hq6+PzK0kQWDPIHPIFd/6i7v9WF2/AjxMZChnh/GFqex4
y2pr2VmEg7ca4t5vuNPQBUzz9tJK7LQ4FsQLD6KPyUq1OkmonDdRWpGhtQTVM30K
8vadUUZXtwUQwwBoragh6YWNsAzggJSa0EzErKhVO4Q6Lm+YQIw1/B8lQoAhoUW
ueWFFiSaUBDJKzi7pnljtjaVJqfs3vT/aWV4wjhbIKiLD8yKSrVtW/sxpTvsLa2iD
Uep1O1+tGyemUXMtDSZEPgJOTBuBmMr2ACm3JPJ7Ym7ZSdXRvcJj0MOj9feVEpwm
ptagJ7kzJY8zvY0nVdgl1YN2WVB01AGM1FMrrYnzRxQvvGFmmt3m2cX1bWxEifXT
HJWSBVs/vGhk9NfpJ/X60Y5Ck8xhvt5WS6WtGupWfFjVXE2ohdJUG5YJCL5Zjkcy
JmJS9x2Xs9PYJIZ52CrgYHtH4adiIMfHkpEtUP4Q+Inw/vbAdEFX8gII9upAsmWS
ORr5ihZJjpF0cA6qezmuZk3rRsSVjggA8wMcrU5eABkRD894fGcpmdx4Z2gkuWxs
Ksra0MIWIPOvFJUoOce+KzxzZoRoOLVfy3mZn6oAiOApNvNnLi6AvF9L6ImVF5d5
5WoLsXwi3nTI6vfHJwdbwV6PF+JMI3eo5muSXBd9zNjk4ISW1mkBN1shLo5vbbZj
6SmmIn8+qJeSG6pni2VfJmy9YBnNN0IwKRG4a0jacRESHiuD+26ofAaR193uTpOe
RhC0Y9EFhRp0h2jy2IECyp4G3IBE96vTEG3FOAu3Im+dT9i7PQ1pFsgmxT5QUep6
+QuZo68ie8UUenWzbAStSrPRn+BNK2U8hh9oGq2AWwsc8Klp57fI7Pj8ys59R3oB
6P5vucEJI4ueXJrC12n5Nn8TiP85E9LVfVkkRErcbzFqC6fcmxQffTqboxoIg0SW
/qBqYL1QdF7gW+rAXOxs3lwoGcU7sAMbD2M8V/IQZxs7f0nKeVsa97G+/2ai58IG
aTBorqGpJDRo09/ZISYIUdBoK656SXMITSdq8muCdFMu+Cki69B4P5kKM6V1T7q1
Gf3llLaV1VmhodYANOimmeQXQFq/us/Su2/ySBEZg4KrI5ZToafCK368npOjyCah
Znii+kT5VhjQyKZB6LgDfzXzHOTNcQb3RQvxpOiGf6Bt8//alWsRKc9JyxqBGCa+
gusFGkQfrCxEO2N2LRFPGJ8s71V/nFMWgPF7y6pFT3CrhGoem1ZKzcJu8gCBMA751
RdmXW7ngCknqi0omdLmI9ZrSGCilopnEZcJiSwM30jdwRVNBbuNgPwlQ4mW3AEi0
+8iaqoG3l2bi0b8OY9U47RNT0ln0uyjycDOeJ4vdd9sSMctuyUg+/Djk6GOAfJhy
R9ObH82Kith6jcpq+3pNh6+VgKZ9TvsO6IqIhdyhaMcrn9ioLeO9p8LLmgNe8Rf7
O1ZaqbxeBqGpliNinN6uzyQ6rvU7StrxDTMvedW7CJPjQz10lw/KC4hoCe98GA4b

```

cZhNrzZ7v7TuvtfPMhPtjO3ELW+96TBCQSEt3cNMBEe0xQfMhbX5yA==

-----END RSA PRIVATE KEY-----

/c/slb/ssl/certs/request 2

/c/slb/ssl/certs/import request "2" text

-----BEGIN CERTIFICATE REQUEST-----

MIICYjCCAUAoCAQAwHTEbMBkGA1UEAwwSYXBwdmlzLnJhZHdhcmUuY29tMIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAtnqkl3pj2RL2TpuWN1wiPL1WhXND Ce3IvmTAPs6BxvdYMn2w/kE62uBZ1SgdowSjDtIDNXOJqZLIPapz8CaK/L9a32Jz yLua77E/XsA8MoAsb22ek2QfGeYv1ifruuzCU7FZUXbZjPXu9HsMn0meOGmNiyXI Wvh2Lq8r2wp2Gq2L5o2zoIdpt5RaNtae297/ZIRCAXwO+oFGxK6ZxS2m47E4AS4D f6VwIA5pc48dhRaJSAiYMJeQFfv9LwDwFCZMR1sLGwWVN/glkFohCruzabBPIIQC cSqvPaT/MS/asF0a4mbd2GnJNZnvHfHq1uIwCv/QpANwoH5wB0aGE2awQwIDAQAB oAAwDQYJKoZIhvcNAQEFBQADggEBAH7QvxtxcSX2cw0L5obrL+1yd77aeQ0sA/eG WLFf1+87xyLz4OPNQ6CnQ1at+vYONfLi0vIigmq7giB9grVg7keyiGIT8vnGpLCn rzOwwmjBduIRA9LJWCEiWHaZTtHdYcGMGAdJNG1FHIApZIEcQ7iUPT3vyFIGR36E dH30VKnX2s4yoMnz2MHbntuVO2pCJbQmcDXM/1E4RZTTioLaczs7cKftgl2GfvO2 JtntZzFcGJJ81Vy/vU3f7tH9WyVWbNML+fJho6zOHmvrE0KChGE9PwISVtO6/l6 nzreI1n8Q7n+wUt9MbccJyCBcoxLAtrwL1bnBo+CF3+UbSsp/sU=

-----END CERTIFICATE REQUEST-----

/c/slb/ssl/certs/request WebManagementCert

/c/slb/ssl/certs/import request "WebManagementCert" text

-----BEGIN CERTIFICATE REQUEST-----

MIICcTCCA VKCAQAwLDEqMCgGA1UEAwwhRGVmYXVsdF9HZW5lcmF0ZWRFQWx0Z W9u X0JCSV9DZXJ0MIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEA3Q6s/a5D VtxiqnqBC3E7gUuAK3FU7CQ9hmuvJqNeGq8F61ALxG1lwuTHf/avEZ6oajHQ98di Ryy2AUJOKTKZahD44Sd5v2z+DYC8Mx3bChmMN8BeOyqHY21BmxsYA6KPZshs4RLn pnFdmpuCNlpu6AUHElcRgAX88MvOCVQne6LeM/e3FpkTAXEJW2HG3TRfvX7NJs0O R5j3uxqu5pCOcmaV+qE/mqcftlgJbl5GGwUq5IwVvYLR/CGiNz10fp4Hhsl8yEljP ur2+7ewXzouCK57YEJNJ5e724Xeor9N4/NAcfR0E08tPVIIPSTSQxu2L1LFUj6r7 si4Uu7U/dJaTGQIDAQABoAAwDQYJKoZIhvcNAQELBQADggEBAEWJeOr02m07KGxB k0RiOoXGdVvt/w+ypVZzwtE2UwEdLzR6+maPR0WrubuJxU6HapNCCsDnQnLLMEJz SZeCRcYh+uDud6Lg7MstwXS8IL6QPmckJcKjM+9nAuhybqjkuL/3I2bTBzuRqLC0 yom+NCneoP2jdEk7ITBfC3/CGN8SvSfZ3q8B9peT8Ki8AyFewr8Zvasnw487aTVT e4eEq1TTZ7BbZaRjxdn7s6aNUaWoZZ9bpP1dUyn8sa+J1njrLxzXXOYSw/FNI7EU c2bBPIA1vTLyfZi+BJAsPizaxGDxeFqOtp0BqGj2FrLW51gUoep5bCYJ5iZGnP2x MWVr+aQ=

-----END CERTIFICATE REQUEST-----

/c/slb/ssl/certs/cert 2

/c/slb/ssl/certs/import cert "2" text

-----BEGIN CERTIFICATE-----

MIIDijCCANkgAwIBAgIEVYud+TANBgkqhkiG9w0BAQsFADAdMRswGQYDVQQDDDBJh cHB2aXMucmFkd2FyZS5jb20wHhcNMTYwNTA1MjAwMDA0WhcNMjYwMzE0MjAwMDA0 WjAdMRswGQYDVQQDDDBJhchB2aXMucmFkd2FyZS5jb20wggeiMA0GCSqGSIb3DQE B AQUAAA4IBDwAwggEKAoIBAQC2eqSXemPZEvZOm5Y3XCI8vVaFc0MJ7ci+ZMCmzoH G 91gyfbD+QTra4FnVKB2jBKMO0gM1c4mpksg9qnPwJor8v1rfYnPIu5rvsT9ewDwy


```

gCxbvZ6TZB8Z5i/WJ+u67MJTsVIRdtmM9e70ewyfSZ44aY2LJcha+HYuryvbCnYa
rYvmjbOgh2m3IFo21p7b3v9khEIBfA76gUbErpnFLabjsTgBLgN/pXAgDmlzjx2F
FolICJgwI5AV+/0vAPAUJkxHWwsbBZU3+CWQWiEKu7NpsE8iVAJxKpU9pP8xL9qw
XRriZt3Yack1me8d8erW4jAK/9CkA3CgfnAHRoYTZRBDAGMBAAGjgdEwgc4wDwYD
VR0TAQH/BAUwAwEB/zARBglghkgBhvhCAQEEBAMCAkQwMgYJYIZIAyb4QgENBCUW
I0FsdGVvbi9Ob3J0ZWwgR2VuZXJhdGVkIENlcnRpZmljYXRIMB0GA1UdDgQWBBS8
cSQ2WAIfc9curKFmT6kQEMXPrTBIBgNVHSMEQTA/gBS8cSQ2WAIfc9curKFmT6kQ
EMXPraEhpB8wHTEbMBkGA1UEAwwSYXBwdmlzLnJhZHdhcmUuY29tggRXK535MAsG
A1UdDwQEAwIC7DANBgkqhkiG9w0BAQsFAAOCAQEAhd0HQKTWm4bTIrBrVfttVVKD
rzLhj9qGAWSLh4GZJ8qtdCoUq0fVQ2HhI9HDsuJSR04xrpQp/x/fTeuEKZaWioVk
4iFSpW+sU5aizocOIdtxsqtyX3qkmv3dy0gjrSx0CLjbIOLGrnBvd3VUI79MrZX
Nuj8FPzFaBERIJOXD544Wio1mzRuX0tq71LldewPeqmXO+vQhEgI/tOz0WqRLud
oxjWGZhxBI1FEjcgQ7ddIOoXSrW6gZXNXI1n31oHjMXQryYIqWBjZ4o8Zb2Fu+xs
Syr1FhM0zrzj5/HaGua5I5MMTpY+cIJSPEdITAtFIIRCP6jyXjiQAml7nLySKA==
-----END CERTIFICATE-----

```

```

/c/slb/ssl/certs/cert WebManagementCert
/c/slb/ssl/certs/import cert "WebManagementCert" text
-----BEGIN CERTIFICATE-----

```

```

MIIDtzCCAp+gAwIBAgIEVYud9jANBgkqhkiG9w0BAQsFADAsMSowKAYDVQDDCFE
ZWZhdWx0X0dlbmVyYXRIZF9BbHRlb25fQkJJX0NlcnQwHhcNMtYwNTA1MTkyNDM4
WhcNMTcwNTA1MTkyNDM4WjAsMSowKAYDVQDDCFEZWZhdWx0X0dlbmVyYXRIZF
9B
bHRlb25fQkJJX0NlcnQwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQDd
Dqz9rkNW3GKqeQELcTuBS4ArcVTsJD2Ga68mo14arwXrUAvEbWXC5Md/9q8Rnqhq
MdD3x2JHK/YBQk6RMplqEPjhJ3m/bP4NgLwzHdsKGYw3wF47KodjbUGbGxgDoo9m
GyHhEuemcV2am4I2Wm7oBQcSVxGABfzwy84JVCd7ot4z97cWmRMBcQlbYcbdNF+9
fs0mzQ5HmPe7Gq7mkI5yZpX6oT+apx+2WAluXkYbBSrkjBXItH8IaI3PXR+ngeGy
XzISWM+6vb7t7BfOi4IrntgQk0nl7vbhd6iv03j80Bx9HQTty09WUg9JNJDG7YvU
sVSPqvuyLhS7tT90lpMZAqMBAAGjgeAwgd0wDwYDVR0TAQH/BAUwAwEB/zARBglg
hkgBhvhCAQEEBAMCAkQwMgYJYIZIAyb4QgENBCUWI0FsdGVvbi9Ob3J0ZWwgR2Vu
ZXJhdGVkIENlcnRpZmljYXRIMB0GA1UdDgQWBBS8cSQ2WAIfc9curKFmT6kQEMX
PrTBIBgNVHSMEUDBOgBR+JqBI9VRHVjvCXYSSoBjduAVqXjBxBgNVHSMEUDBOgBR
+JqBI9VRHVjvCXYSSoBjduAVqXqEwpC4wLDEqMCgGA1UE
AwwhRGVmYXVsdF9HZW5lcmF0ZWRFQWx0ZW9uX0JCSV9DZXJ0ggRXK532MAsGA1
Ud
DwQEAwIC7DANBgkqhkiG9w0BAQsFAAOCAQEAyebjh2h5p7MgR9mcs84PvhQ+URSn
HpKZfE3kXQpcPrATZofuhpQ8Rxhn2B7uyZmmJwN1ZCbdFXhb09bN0wQheI4xzvaz
RZYMq615sQmsLsexpNStGvcXvnWcpjjuI+/sCLGzL4U8wrTR/vIdwKmus3phITS1
9FAG7zbuGMxuK7YqPzIZynAANm7vw+k0No6fpdbjw8/f+KPJvF9sB9mm5nAph3d
DoyYpWeH4Decxkf5I1nFE1v92NDRKrJfKk+npplkBfUWgyTlwYQ/RFJH4vmDbLf
T3Qeg0ARPDpM8pnphLJxRE5ZrV3X8UaAd6SP0toBP4cftgBcLTAYeUP6xw==
-----END CERTIFICATE-----

```

```

/c/slb/sync/passphrs
68a1600c28a02004a3e235b4da0390c7493e5bda945a60e65c0743c2d3a68296
/c/slb/ssl
on
/c/slb/ssl/sslpol 11
name "SSL.Offloading"
cipher "http2"
ena
/c/slb/ssl/sslpol 11/frver

```

```
tls10 enabled
/c/slb/accel/caching
  on
/c/slb/accel/caching/cachepol 1
  name "oracle.cache"
  ena
/c/slb/accel/http2/http2pol 1
  ena
  streams 10
  header dis "X-HTTP2: on"
/c/slb
  on
/c/slb/adv
  direct ena
  vstat ena
  submac "ena"
/c/slb/sync
  pips e
  certs e
/c/slb/sync/peer 1
  ena
  addr 192.168.60.3
/c/slb/real 1
  ena
  ipver v4
  rip 192.168.60.12
  name "Oracle.app1"
/c/slb/real 2
  ena
  ipver v4
  rip 192.168.60.13
  name "Oracle.app2"
/c/slb/group 1
  ipver v4
  metric roundrobin
  health http
  add 1
  add 2
  name "oracle.app"
/c/slb/pip/type port
/c/slb/pip/add 192.168.60.201 1
/c/slb/port "1"
  client ena
  server ena
  proxy ena
/c/slb/port "2"
  client ena
  server ena
  proxy ena
/c/slb/virt 1
  ena
  ipver v4
```

```
vip 192.168.60.200
vname "Oracle.e-buiss"
/c/slb/virt 1/service 80 http
action redirect
group 1
rport 80
redirect "https://$HOST/$PATH"
dbind forceproxy
/c/slb/virt 1/service 443 https
group 1
rport 8000
dbind forceproxy
tmout 720
ptmout 720
/c/slb/virt 1/service 443 https/http
comppol 1
http2pol 1
cachepol 1
connmgt ena 10
/c/slb/virt 1/service 443 https/ssl
svrcert cert 2
sslpol 11
/c/l3/ha/mode switch
/c/l3/ha/floatip FloatIP
ena
ipver v4
addr 192.168.60.1
if 1
/c/l3/ha/switch
def 1
/c/l3/ha/switch/trigger/ifs
add 1
/c/slb/virt 1/service 443 https/pbind cookie insert
/c/slb/virt 1/service 443 https/http/rcount 1
/c/slb/gslb
off
hostlk ena
/c/sys/access/https/cert WebManagementCert
/c/sys/access/https/https e
/
script end /**** DO NOT EDIT THIS LINE!
```

Alteon backup configuration script

```
script start "Alteon Application Switch VA" 4 /**** DO NOT EDIT THIS LINE!
```

```
/* Configuration dump taken 17:02:01 Thu May 5, 2016
/* Configuration last applied at 13:47:24 Thu May 5, 2016
/* Configuration last save at 13:47:24 Thu May 5, 2016
/* Version 30.5.0.0, Mgmt MAC address 00:50:56:a3:21:fd
/* When restoring this configuration, provide the same
/* passphrase used to encrypt the private keys.
```

```
/c/sys/access
```

```
    tnet ena
```

```
/c/port 1
```

```
    pvid 209
```

```
/c/l2/vlan 1
```

```
    learn ena
```

```
    def 0
```

```
/c/l2/vlan 209
```

```
    ena
```

```
    name "VLAN 209"
```

```
    learn ena
```

```
    def 1
```

```
/c/l2/stg 1/clear
```

```
/c/l2/stg 1/add 1 2 209
```

```
/c/sys/access/sshd/ena
```

```
/c/sys/access/sshd/sshv1 dis
```

```
/c/sys/access/sshd/on
```

```
/c/l3/if 1
```

```
    ena
```

```
    ipver v4
```

```
    addr 192.168.60.3
```

```
    vlan 209
```

```
    peer 192.168.60.2
```

```
/c/slb/accel/compress
```

```
    on
```

```
/c/slb/accel/compress/comppol 1
```

```
    name "oracle.comp"
```

```
    minsize 1024
```

```
    ena
```

```
/c/slb/ssl/certs/key 2
```

```
/c/slb/ssl/certs/import key "2" text
```

```
-----BEGIN RSA PRIVATE KEY-----
```

```
Proc-Type: 4,ENCRYPTED
```

```
DEK-Info: DES-EDE3-CBC,5D330A2BEF243AD5
```

```
0/8WXk5RvXgxohbGKdLXzDKiP9hF1m3QHwRogleSUKGM4m6QblAnCimit6D4imr/
F6bvmxhx7IQ3tFcJ9o9L7dbhYfuuZVinMX2uLJ5ptzw8Vs/+CrXiVH897KyRd7JT
DY9FtuEGdWtRidF+BWD5CX/Fv6gAsmispah+Af0sy2NGz+FQ3AJN179/jx5yESOk
RKvuSk5KtpExEGH2LitWG0X8zQvAiD2P7EZdLbdB3Eg5V1fRhc6zXYI1+T1LVMb7
vsbw5tp9s25sgWD6Tdep3Jr7IQxHn+U6bETdbS8T2fVS1v3AZdDQM7bHRdokxGxD
7wzb2j djIIKVQeiz62ukK215VHpUurz3/qwxMEXCYMnwKS7+39LtCH8Ayr3PmUFw
J4vHeepvckMyK/jGoOOJIp0y7uhTkFa2C9BnwLPzVzVnPnnlBmpErxQLN58jwRQo
```

```

FnFDwSCvkhNfEVqcJVpi0fsGY0JaYnRsD5PbsixHoiqS1ooGhU00wTO/11nZehtf
zQgAxOpRjR/RKRWvLcDfN5cTxjMyLBoq947jcDN5a0cgG7hIrr/D01NGUCojPsxYq
DJyuFNFrMFA2/BRNhGJrlegsTTVr2vDCU88BXSahWW4sR/b5VZfBPf6tRt7jopDG
57uUoFcJw7DETIH/8XO/e5Wky824pZSZZazh63cJOOHNApPWCAuFAcAmGEMa7A/g
y4P8xwqZJYiDtBcdT8m2zSh/F1EI9wbz7b6ncdLYfPfsbEkUTqNHb0PsUfyBEVo
DhMby6tRqzJRoyTB15NG2B37Bjbr4AwsCfLz59EFHRizuiM5UW7pVswyIC3eoKzD
Vp2DXtyWHZLJmOkCpjbodR7Nsii/YUp7QVI5+TSqHR0FK6+D1oF/dQeh+jgIzJRa
niKwekAXkG1j8iYhdm7FH6/2+phiDeHhdS2fc+t/42LvoVSDfMgyT4EISZ37RYhA
4FeIMexXqeuJmE6ui1ZJRB8R+sLZYPKWukLS47qbyehVrkO0Gx6USeT9SJO9+AN+
lt00Gw756/CrU526/xB/wpCmZNPbhQHwVLZooL+60u99twy22jJznWNc80fEpuON
u8EfR5Z/ILE6bpoK3zbb8IKGI DyndQ1jFsOzTc0oeS1fjDk9eC9Al/dADA8oG3rb
Xx7XwOV3Z6JMX/04H1zaT2ss1cnxQzXqV6qR+mPaZ2dmd3iWEk6E/e5hnpYHWXZA
xEPsZxRJUYJNHY2+BhmNuPurRsTgRekTiUoXxNazKaeSQTU+5s5IZME mncuFipYf
IugFVq+4UFzKWU7zSyCbrDP1MeFuY1x/FqHA7Bi5aZvCybtMAC2ITQax9qBkS9xn
jWC4572bngPlsVWsgCVcHcQQLuOXC4KgaCqAoWzeDlhbKgN9waDpxYUKbudjtgK
G1wn9AKRu9Uy+9yFjejdml13TpluiT8zAD3hqHlg5/2WXTmO9UJ5OJCjPHSOTXmF
zwMWzs9mrZ5Klkwda+pbuGoHKX6FZTmuGRmXNwNBwXIEOO+/t5i4QAcj8I2/IDY
IKSr6e7trfpsMlzuXFeBD2FukN9KdMoyZmFs1SUFaEZGmVzrOGhb9A==
-----END RSA PRIVATE KEY-----

```

```

/c/slb/ssl/certs/key WebManagementCert
/c/slb/ssl/certs/import key "WebManagementCert" text
-----BEGIN RSA PRIVATE KEY-----
Proc-Type: 4,ENCRYPTED
DEK-Info: DES-EDE3-CBC,F4CB34782AD334C7

```

```

5LW+si+tfsUy+owfZvr/4A10A1dSrFlyqgrIEyPGq9AhnSzLWqZrcsdCtFwuwxS+
OBwZhTJTEbIaJL8vu4oKJcqliQXgXYkNS+yIRZPH4X4/+bxCOiOMD4+DyAMtISY
6rrXH42tWFWMrMTezhsLqM6KEhMvJZh2VyVUxXghCe5SAXJC5MBQSmP+ns/BR4he
hho1htm1UIgr/+0zeyP3W1of3SBqjL+NWI1pH1I8mo7YvfbX7sW143P8/0I3xKw
jsI4ogeJNflbmjA0NnuW420TO6QE33KImrwEWqbkvwLCzDppUi87janY7UdepBK9
u0SAJmq8ad9KU1AVD07iqM53Bc/A/9mso6fJ+Uafux6sdMKpw+QqLTF06xBXq6ks
fiXkf3a/sS2i8bcj+/zXIL0wMjDwByPK20L7WLKbc59S7eV2iyOt4i1thncmSiSv
DiP2N4e+xuqXkpUZoag/H+2i38vtSzfgjAcJSCRwhuu1eUXtWrKIKf0xH7PJhqI4
VRlgEEvPhmNh0Hh3l62aJTWJGNnOm3Gnh5o1s8xwv0tC/n0IiL3mZ9mWIAGXEI1V
3tfPbuZTgBqtSd5Rbm6zJa6vWkVi9CGSGdx9PFuxgRtrAEFD4W7EJo45bA0Eoq7Y
oZTnbS+TKMFbMh2lecw0Yu0Ph3W+9HWyvSy/Nv+Ch9NnKMHclQL6WDapWH6y7eI
vFA/WBItee5aBftIV30/773Lsxzkz8MP4wOzJkgzgpW/Rrmnw4i76puspxB+T7O
ri81VK8Ld9HMAIjV9jRpgOor4qsORv7SNcQvAy546l5TL9GcGbhgjae6vKIAAs5w
gM+jwTWfGsDWrArxDJWoY06ZiTRjXmJTbk6YmCq6gQoUAILGK703AqCnrrnJou/ai
u1/t8EIRbjGPhm584i7kGwvKCYbe8n2/LMCxYQ2QuTGA6FC4WyoSxzmxeGh8XhSA
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Kx+UmF1BYF/KRfyh9I6ePZ5bnEVOt+Fwb/SOyt/hQ/sg+IW6i+VZ7nN5Ry7yWPsi
gQeqK4g8BtXoWEA0StVBSH83HTkXLNRnK6vZCfuyEbsseyEBCBAFsb8TA6DTGjxy
TXtk9CAhAd52MAL6GRAGIBCso+VZEbL6Vmo9pvYenROkPAb6yEYrpJuOHcaVEpn
W1CfpaUAHUfab+5J+OxGIo+XHOzoO4j+V2gt0y45EBzKlrZdBGi0x53/jDLGPWak
ImEattHHd0LwpF3Wkp/1FMdasKZcNqrphvCCbCL/mx/dHOVsVK7w3BeYS1QkBmkd
PCXEGea3j/MnEqAri3x0PkMh5ZxNTLhPvXZJQzggO722vDM4w+6pNDolG1O7Y8k4
VQ/hUHRYTLijVsQd7hWhDJuvVc/Z3IfDxYHR7tPdP0IaQsjjeLUekwiteCRm+uGv
NNinDpNIWrrqr0FtfSfJRG4v1w358NpDW94C3EoxChqJnrlG5BuWCaO2pJh6tCMm
52FRt0FOoW/dOjdw066IkdVGTb3HA1M8+Rwlv6n+oVeh4S9yyWvJLQ==
-----END RSA PRIVATE KEY-----

```

```

/c/slb/ssl/certs/request 2
/c/slb/ssl/certs/import request "2" text
-----BEGIN CERTIFICATE REQUEST-----
MIICYjCCAUoCAQAwHTEbMBkGA1UEAwwSYXBwdmlzLnJhZHdhcmUuY29tMIIBIjAN
BgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAtnqkl3pj2RL2TpuWN1wiPL1WhXND
Ce3IvmTApS6BxvdYMn2w/kE62uBZ1SgdowSjDtIDNXOJqZLIPapz8CaK/L9a32Jz
yLua77E/XsA8MoAsb22ek2QfGeYv1ifruuzCU7FZUXbZjPXu9HsMn0meOGmNiyXI
Wvh2Lq8r2wp2Gq2L5o2zoIdpt5RaNtae297/ZIRCAXwO+oFGxK6ZxS2m47E4AS4D
f6VwIA5pc48dhRaJSAiYMJeQFfv9LwDwFCZMR1sLGwWVN/glkFohCruzabBPILQC
cSqVPaT/MS/asF0a4mbd2GnJNZnvHfHq1uIwCv/QpANwoH5wB0aGE2awQwIDAQAB
oAAwDQYJKoZIhvcNAQEFBQADggEBAH7QvxtxcSX2cw0L5obrL+1yd77aeQ0sA/eG
WLFf1+87xyLz4OPNQ6CnQ1at+vYONfLi0vIigmq7giB9grVg7keyiGIT8vnGpLCn
rzOwwmjBduIRA9LJWCEiWHaZTtHdYcGMGAdJNG1FHIApZIECQ7iUPT3vyFIGR36E
dH30VKnX2s4yoMnz2MHbntuVO2pCJbQmcDXM/1E4RZTTioLaczs7cKftgI2GfvO2
JtntZzFcGJJ81Vy/vU3f7tH9WyVWbNML+fJho6zOHmvrE0KChGE9PwISVtO6/I6
nzreI1n8Q7n+wUt9MbccJyCBcoxLAtrwL1bnBo+CF3+UbSsp/sU=
-----END CERTIFICATE REQUEST-----

```

```

/c/slb/ssl/certs/request WebManagementCert
/c/slb/ssl/certs/import request "WebManagementCert" text
-----BEGIN CERTIFICATE REQUEST-----
MIICcTCCAvmCAQAwLDEqMCgGA1UEAwhRGVmYXVsdF9HZW5lcmF0ZWRFQWx0Z
W9u
X0JCSV9DZXJ0MIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEA3Q6s/a5D
VtxiqnKBC3E7gUuAK3FU7CQ9hmuvJqNeGq8F61ALxG1lwuTHf/avEZ6oajHQ98di
Ryv2AUJOKTKZahD44Sd5v2z+DYC8Mx3bChmMN8BeOyqHY21BmxsYA6KPZsh4RLn
pnFdmpuCNlpu6AUHElCrgAX88MvOCVQne6LeM/e3FpkTAXEJW2HG3TRfvX7NJs0O
R5j3uxqu5pCOcmaV+qE/mqcftlgJbl5GGwUq5IwVyLR/CGiNz10fp4Hhsl8yEljP
ur2+7ewXzouCK57YEJNJ5e724Xeor9N4/NAcfR0E08tPVIIPSTSQxu2L1LFUj6r7
si4Uu7U/dJaTGQIDAQABoAAwDQYJKoZIhvcNAQELBQADggEBAEWJeOr02m07KGxB
k0RiOoXGdVvt/w+ypVZzwtE2UwEdLzR6+maPR0WrubuJxU6HapNCCsDnQNLLMEJz
SZeCRcYh+uDud6Lg7MstwXS8IL6QPmckJckJM+9nAuhybqjkuL/3I2bTBzuRqLC0
yom+NCneoP2jdEk7ITBfC3/CGN8SvSfZ3q8B9peT8Ki8AyFewr8ZVasnw487aTVT
e4eEq1TTZ7BbZaRJxdn7s6aNUaWoZZ9bpP1dUyn8sa+J1njrLxzXXOYSw/FNI7EU
c2bBPIA1vTLyfZi+BJAsPizaxGDxeFqOtp0BqGj2FrLW51gUoep5bCYJ5iZGnP2x
MWVr+aQ=
-----END CERTIFICATE REQUEST-----

```

```

/c/slb/ssl/certs/cert 2
/c/slb/ssl/certs/import cert "2" text
-----BEGIN CERTIFICATE-----
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cHB2aXMucmFkd2FyZS5jb20wHhcNMTYwNTA1MjAwMDA0WhcNMjYwMzE0MjAwMDA0
WjAdMRswGQYDVQQDDDBHhcHB2aXMucmFkd2FyZS5jb20wggeiMA0GCSqGSIb3DQE
B
AQUAA4IBDwAwggEKAoIBAQC2eqSXemPZEvZOm5Y3XCI8vVaFc0MJ7ci+ZMCmzoH
G
91gyfbD+QTra4FnVKB2jBKMO0gM1c4mpksg9qnPwJor8v1rfYnPIu5rvsT9ewDwy
gCxbvZ6TZB8Z5i/WJ+u67MJTsVIRdtmM9e70ewyfSZ44aY2LJcha+HYuryvbCnYa
rYvmjbOgh2m3IFo21p7b3v9khEIBfA76gUbErpnFLabjsTgBLgN/pXAgDmlzjx2F

```

```

FolICJgwI5AV+/0vAPAUJkxHWwsbBZU3+CWQWiEKu7NpsE8iVAJxKpU9pP8xL9qw
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VR0TAQH/BAUwAwEB/zARBglghkgBhvhCAQEEBAMCAkQwMgYJYIZIAyb4QgENBCUW
I0FsdGVvbi9Ob3J0ZWwgR2VuZXJhdGVkIENlcnRpZmljYXRIMB0GA1UdDgQWBBS8
cSQ2WAIfc9curKFmT6kQEMXPrTBIBgNVHSMEQTA/gBS8cSQ2WAIfc9curKFmT6kQ
EMXPraEhpB8wHTEbMBkGA1UEAwwSYXBwdmlzLnJhZHdhcmUuY29tggRXK535MAsG
A1UdDwQEAWIC7DANBkgqhkig9w0BAQsFAAOCAQEAhd0HQKTWm4bTIRBrVfttVVKD
rzLhj9qGAWSLh4GZJ8qtdCoUq0fVQ2HhI9HDsuJSR04xrpQp/x/fTeuEKZaWioVv
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Nuj8FPzFaBERIJOXD544Wio1mzRuX0tq71LldewPeqmXO+vQhEgI/tOz0WqRLud
oxjWGZhxBI1FEjcgQ7ddIOoXSrW6gZXNXI1n31oHjMXQryYIqWBJZ4o8Zb2Fu+xs
Syr1FhM0zrjz5/HaGua5I5MMTPY+cIJSPEdITAtFIIRCP6jyXjiQAml7nLySKA==
-----END CERTIFICATE-----

```

```

/c/slb/ssl/certs/cert WebManagementCert
/c/slb/ssl/certs/import cert "WebManagementCert" text
-----BEGIN CERTIFICATE-----

```

```

MIIDtzCCAp+gAwIBAgIEVYud9jANBgkqhkiG9w0BAQsFADAsMSowKAYDVQDDCFE
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WhcNMTcwNTA1MTkyNDM4WjAsMSowKAYDVQDDCFEZWZhdWx0X0dlbmVyYXRIZF
9B
bHRib25fQkJJX0NlcnQwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQDd
Dqz9rknw3GKqeQELcTuBS4ArcVTsJD2Ga68mo14arwXrUAvEbWXC5Md/9q8Rnqhq
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GyHhEuemcV2am4I2Wm7oBQcSVxGABfzwy84JVCd7ot4z97cWmRMBcQlbYcbdNF+9
fs0mzQ5HmPe7Gq7mkI5yZpX6oT+apx+2WAluXkYbBSrkjBXItH8IaI3PXR+ngeGy
XzISWM+6vb7t7BfOi4IrntgQk0nl7vbhd6iv03j80Bx9HQTTy09WUg9JNJDG7YvU
sVSPqvuyLhS7tT90lpMZAqMBAAGjgeAwgd0wDwYDVR0TAQH/BAUwAwEB/zARBglg
hkgBhvhCAQEEBAMCAkQwMgYJYIZIAyb4QgENBCUWI0FsdGVvbi9Ob3J0ZWwgR2Vu
ZXJhdGVkIENlcnRpZmljYXRIMB0GA1UdDgQWBBR+JqBI9VRHVjvCxYSSoBjduAVq
XjBxBgNVHSMEUDBOgBR+JqBI9VRHVjvCxYSSoBjduAVqXqEwpC4wLDEqMCgGA1UE
AwwhRGVmYXVsdF9HZW5lcmF0ZWRFQWx0ZW9uX0JCSV9DZXJ0ggRXK532MAsGA1
Ud
DwQEAWIC7DANBkgqhkig9w0BAQsFAAOCAQEAyebjh2h5p7MgR9mcs84PvhQ+URSn
HpKZfE3kXQpcPrATZofuhpQ8Rxn2B7uyZmmJwN1ZCbdfXhb09bN0wQheI4xzvaz
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T3Qeg0ARPDpM8pnphLjxRE5ZrV3X8UaAd6SP0toBP4cftBclTAyeUP6xw==
-----END CERTIFICATE-----

```

```

/c/slb/sync/passphrs
cafcc57b8aa88428a3b796b2780b34eb8d5ba16f0b816c7d6b18e0b75cfadc28
/c/slb/ssl
  on
/c/slb/ssl/sslpol 11
  name "SSL.Offloading"
  cipher "http2"
  ena
/c/slb/ssl/sslpol 11/frver
  tls10 enabled
/c/slb/accel/caching

```

```
on
/c/slb/accel/caching/cachepol 1
  name "oracle.cache"
  ena
/c/slb/accel/http2/http2pol 1
  ena
  streams 10
  header dis "X-HTTP2: on"
/c/slb/accel/fastview/fvrevision 3
/c/slb
  on
/c/slb/adv
  direct ena
  vstat ena
  submac "ena"
/c/slb/sync
  pips e
  certs e
/c/slb/sync/peer 1
  ena
  addr 192.168.60.2
/c/slb/real 1
  ena
  ipver v4
  rip 192.168.60.12
  name "Oracle.app1"
/c/slb/real 2
  ena
  ipver v4
  rip 192.168.60.13
  name "Oracle.app2"
/c/slb/group 1
  ipver v4
  metric roundrobin
  health http
  add 1
  add 2
  name "oracle.app"
/c/slb/pip/type port
/c/slb/pip/add 192.168.60.201 1
/c/slb/port "1"
  client ena
  server ena
  proxy ena
/c/slb/port "2"
  client ena
  server ena
  proxy ena
/c/slb/virt 1
  ena
  ipver v4
  vip 192.168.60.200
```



```
vname "Oracle.e-buiss"
/c/slb/virt 1/service 443 https
  group 1
  rport 8000
  dbind forceproxy
  tmout 720
  ptmout 720
/c/slb/virt 1/service 443 https/http
  comppol 1
  http2pol 1
  cachepol 1
  connmgt ena 10
/c/slb/virt 1/service 443 https/ssl
  svrcert cert 2
  sslpol 11
/c/slb/virt 1/service 80 http
  action redirect
  group 1
  rport 80
  redirect "https://$HOST/$PATH"
  dbind forceproxy
/c/l3/ha/mode switch
/c/l3/ha/floatip FloatIP
  ena
  ipver v4
  addr 192.168.60.1
  if 1
/c/l3/ha/switch
  def 1
/c/l3/ha/switch/trigger/ifs
  add 1
/c/slb/virt 1/service 443 https/pbind cookie insert
/c/slb/virt 1/service 443 https/http/rcount 1
/c/slb/gslb
  off
  hostlk ena
/c/sys/access/https/cert WebManagementCert
/c/sys/access/https/https e
/
script end /**** DO NOT EDIT THIS LINE!
```

Appendix 2:

Radware HTTP/2 Gateway

With the embedded HTTP/2 gateway, HTTP/2-enabled browsers immediately enjoy the following benefits:

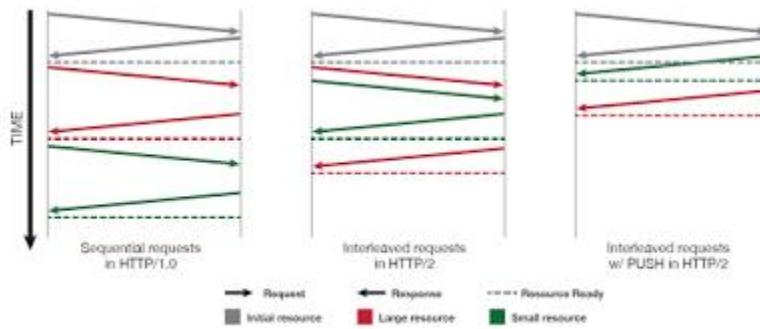


Figure 3 - How HTTP/2 Transaction Multiplexing and Server Push Accelerates Web Page Load Times vs. HTTP 1.1

- Multiplexing of Transactions** – HTTP/2 transactions are multiplexed by nature. An HTTP/2 browser can send any number of requests and receive the responses interleaved and out of order. This translates to fewer total connections, which eliminates setup time latency associated with each additional connection, hence, reduced total latency
- Header Compression** – HTTP headers have grown significantly over the years. For example, the cookies section transmitted with each request may include multiple cookies, each as long as 4K. With the HTTP/2 HPACK algorithm, recurring headers may be sent only once per client connection and not per request, which translates to reduced bandwidth
- Privacy/Security** – Encrypted HTTP/2 traffic is required to use only TLS 1.2 and above with ciphers that implement perfect forward secrecy (PFS) such as ephemeral DH and elliptic curves. This implies that HTTP/2 encrypted sessions are harder to break. The use of TLS (over SSL) has also become guidance by the PCI association
- Application Flow Control and Prioritization** – Since HTTP/2 supports multiple parallel transactions, a method for controlling the amount and preferred order of transferred data is necessary. Radware's extensive field experience with features that provide resource reordering for best browsing experience, such as deferrals, can now be leveraged to help users benefit from this HTTP/2 capability
- Server Push** – Radware is the first to offer H2 Push, enabling automated server push. While HTTP 1.1 is a unidirectional protocol, where only the client can request for resources, HTTP/2 is fully bidirectional and allows the server to initiate data transfer to the client. However, this requires a smart server that knows which resources to push to improve page rendering and load time. Knowing which resources to push to each client is not a simple task- it requires deep understanding of the Web application, and awareness of what is already in the browser cache. The automated server push capability can greatly improve user experience, but if the server doesn't know what's in a browser's cache, the server push capability of HTTP/2 cannot provide

HTTP 1.1	HTTP/2	Gain
Object delivery is ordered and blocking	Object transfer transactions are fully multiplexed, asynchronous and thus non-blocking	Non-blocking content delivery, ensuring none of the page resources will block the delivery of the other resources
Multiple TCP connections are required for faster load times	With HTTP/2 a single connection can multiplex and carry several requests in parallel	Fewer TCP connections to set up, reducing the inherent setup delay per connection (with higher impact on mobile networks). Requires fewer resources from the web server and browsers
Large textual repeating HTTP headers	Standardized header compression that can be shared among transactions	Reduced headers' payload, and never sending the same header information twice leading to reduced bandwidth consumption
Unidirectional communication – only the browser could initiate requests (or posts) of information	Bidirectional communication (server PUSH) – the server can initiate transmission of page resources even before the browser requests it	Application-driven acceleration allows resources to be in the browser cache, ready to be served when the browser requests them

Technical Support

Radware offers technical support for all of its products through the Radware Certainty Support Program. Please refer to your Certainty Support contract, or the Radware Certainty Support Guide available at:

<http://www.radware.com/content/support/supportprogram/default.asp>.

For more information, please contact your Radware Sales representative or:

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