

*Alteon Application Switch*  
**Microsoft SharePoint 2013 Integration Guide**

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## TABLE OF CONTENTS

<b>SOLUTION OVERVIEW .....</b>	<b>3</b>
<b>MICROSOFT SHAREPOINT 2013.....</b>	<b>4</b>
<b>RADWARE ALTEON ADC.....</b>	<b>4</b>
<b>ALTEON AND MICROSOFT SHAREPOINT 2013 SOLUTION ARCHITECTURE.....</b>	<b>5</b>
ALTEON ACTIVE CONFIGURATION.....	6
Network Configuration.....	6
VRRP Configuration.....	6
Compression Configuration .....	7
SSL Configuration .....	7
SLB Configuration .....	8
Proxy NAT Configuration .....	9
ALTEON BACKUP CONFIGURATION.....	9
Network Configuration.....	10
VRRP Configuration.....	10
PIP Configuration .....	10
Sync Configuration.....	11

## Solution Overview

The Radware Application Delivery Solution provides high availability, improved user QoE, and faster performance for Microsoft SharePoint 2013 servers.

The Radware Alteon Application Switch delivers a complete set of high availability and acceleration features that are dynamically allocated without altering your network configuration. Alteon's unique OnDemand architecture accommodates the future growth requirements of the Microsoft SharePoint 2013 solution, typically for large and medium sized enterprises, while offering cost-effective scalability and full protection of existing investments.

Key benefits of the Radware Alteon Application Switch for Microsoft SharePoint Server 2013 Joint Solution include:

- High availability – Guarantees 24x7 availability for the Microsoft SharePoint server, ensuring that users are able to access required business documents and share information at any given time. Alteon's advanced health monitoring is capable of detecting any faulty element in the Microsoft SharePoint Server 2013 deployment, ensuring that user traffic bypasses the faulty elements and is always routed to a health element.
- Acceleration and Optimization– Alteon's advanced acceleration capabilities, which include SSL offloading, caching, compression, and TCP multiplexing, enhance the end-user experience by providing faster response time for SharePoint 2013 users while reducing the bandwidth and server resources, as follows:
  - SSL offloading offloads the SSL encoding/decoding CPU-intensive tasks from the SharePoint 2013 Web servers to the Alteon Application Switch accelerator hardware, freeing those Web servers to handle their core tasks of processing complex business related transactions. By offloading SSL tasks to Alteon, organizations may save up to 20% in CPU usage for each SharePoint 2013 Web front-end server.
  - Alteon caching ensures that static content is served by Alteon and not by the SharePoint 2013 Web servers, resulting in faster download times of client content while decreasing the load on the SharePoint 2013 Web servers. By enabling caching, Alteon decreases the load on the SharePoint 2013 Web servers by up to 40%.
  - Alteon compression ensures that each page a user views is compressed to a smaller size before the page is sent to the user. This capability has two main benefits for organizations that deploy the SharePoint Server 2013 solution: it provides faster download times for the viewed content, and it reduces the bandwidth required to support the SharePoint Server 2013 solution. Enabling compression may reduce up to 65% of the bandwidth usage and may improve the page load time by 300%.
- Ensure SLA – To help customers measure the SharePoint application performance and ensure it meets their expected SLA at all times, Radware provides an Application Performance Monitoring (APM) module, enabling a proactive approach to monitoring and maintaining a high SLA for customer applications. The APM module monitors the actual end-user QoE, enabling application administrators to take a proactive approach in

maintaining application SLAs – as soon as they receive an indication of application transaction performance decline.

- CAPEX and OPEX Savings – Alteon creates greater savings and lowers the Total Cost of Ownership (TCO) for organizations that deploy the Microsoft SharePoint 2013 solution. By offloading server processing, Alteon’s acceleration capabilities reduce CAPEX by reducing the number of servers, as well as reducing the bandwidth consumption required to support the same number of SharePoint users. In addition, Alteon reduces OPEX by decreasing the management costs of the SharePoint Server 2013 solution with Alteon centrally managing all SSL connections and keys in one secured location. Central handling of the SSL transactions and keys ensures simpler management and better security for the organization private keys.

## Microsoft SharePoint 2013

SharePoint Server 2013 provides a comprehensive solution for working in a connected information mode, enabling people to transform the way they work while preserving the benefits of structured processes, compliance, and existing IT investments.

SharePoint Server 2013 has been optimized for the way people work, providing people with a familiar, consistent view of information, collaboration, and process, and IT with a comprehensive, easily-managed and integrated platform to meet the needs of the business.

## Radware Alteon ADC

Radware’s Alteon ADC solution provides advanced and comprehensive application delivery capabilities needed to effectively meet the challenges of application deployment, SSL acceleration and offloading, and application delivery in today’s data centers. Equipped with advanced application acceleration capabilities, a global server load balancing solution and a comprehensive Layer 7 modification tool, Alteon ADC is well positioned as the leading ADC in the industry. Alteon ADC also spearheads the ADC virtualization trend with ADC-VX™, the industry’s first ADC virtualization and consolidation platform based on a specialized ADC hypervisor, and Alteon virtual appliance (Alteon VA).

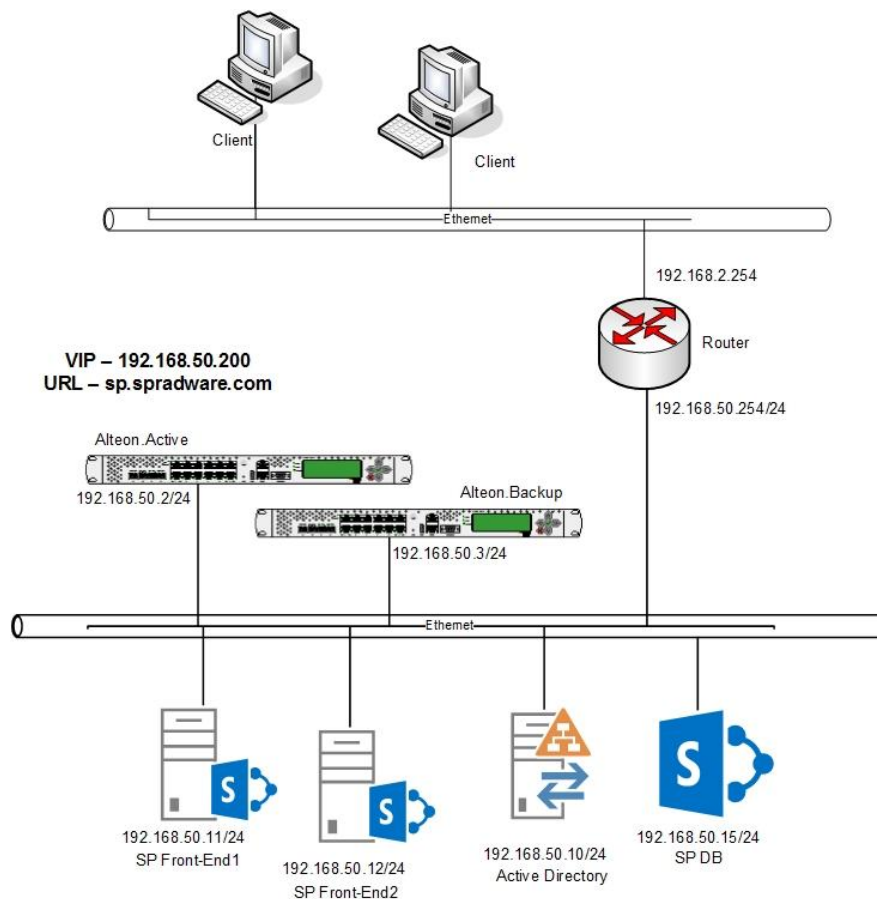
For more information, visit the Alteon Web page:

<http://www.radware.com/Products/ApplicationDelivery/Alteon/default.aspx>

## Alteon and Microsoft SharePoint 2013 Solution Architecture

The following figure illustrates a typical Alteon and Microsoft SharePoint 2013 Solution Architecture:

**Figure 1 - Alteon and Microsoft SharePoint 2013 Solution Architecture**



Notes regarding this solution architecture:

- SharePoint 2013 exposes an internal hostname that must be exposed as an internal Web hostname to remote users accessing the Alteon VIP. To achieve that, SharePoint 2013 should be configured with alternate mapping addresses. For more information, refer to: <http://sharepoint.microsoft.com/blog/Pages/BlogPost.aspx?PID=804>
- Using SSL offloading requires setting a Layer 7 modification rule in the Alteon configuration to translate an internal <http://sp.spradware.com> URL to an external <https://sp.spradware.com> URL. For more information, refer to the detailed configuration in the section [SSL Configuration](#) in this document.
- HTTP compression should be activated in Alteon.
- The persistency mechanism is performed by the Alteon Insert Cookie mechanism.

## Alteon Active Configuration

This section includes example Alteon code to implement the Alteon Active configuration for the Alteon and Microsoft SharePoint 2013 solution, including:

- [Network Configuration](#)
- [VRRP Configuration](#)
- [Compression Configuration](#)
- [SSL Configuration](#)
- [SLB Configuration](#)
- [Proxy NAT Configuration](#)

### Network Configuration

```
/c/port 1
  pvid 20
/c/l2/vlan 1
  learn ena
  def 0
/c/l2/vlan 20
  ena
  name "VLAN 20"
  learn ena
  def 1
/c/l2/stg 1/clear
/c/l2/stg 1/add 1 2 20
/c/sys/sshd/ena
/c/sys/sshd/on
/c/l3/if 1
  ena
  ipver v4
  addr 192.168.50.2
  vlan 20
/c/l3/gw 1
  ena
  ipver v4
  addr 192.168.50.254
```

### VRRP Configuration

```
/c/l3/vrrp/on
/c/l3/vrrp/vr 20
  ena
  ipver v4
  vrid 20
  if 1
  prio 254
  addr 192.168.50.1
/c/l3/vrrp/vr 21
```

```
ena
ipver v4
vrid 21
if 1
prio 254
addr 192.168.50.200
```

### Compression Configuration

```
/c/slb/accel/compress/comppol 1
name "comp1"
minsize 1
ena
```

### SSL Configuration

```
/c/slb/ssl/certs/key 1
/c/slb/ssl/certs/import key "1" text
```

```
-----BEGIN RSA PRIVATE KEY-----
Proc-Type: 4, ENCRYPTED
DEK-Info: DES-EDE3-CBC, 6A193C5D6F02C013
```

```
FQ0Inb5NzgsM750q6RplQ2uzmN8Wv8AihhBxb/cXxZ4oUUBICWF4YvKIBXclqvh+
pbvE+2Aya9iH+1/W+zQMmqP1SBaSU3uy61ekyaBhL8SVVptgy9kT6m9VYcSCJzf8
xG0aQ9gZN0BvxGXR8iTvuxtu608dmskPqsLYy5zOWYFicygUoNVctScmQxvJSe8z
JxruEjFt7uYqXtIltPSCO3aDFaBaQvqcXgpYoBP1am6X06uwec/mVWHhk1XgB/yo
LKpcgwhLSw+QDGnQ6PUkF6itdmNnHrGx+u5EcqGDqd8z/1358tNYEpo6whB9piMv
gzaC7VJa41+QSXZS35q3++YStMmo9UMzRB48C5sAfbwaZH4ZLy1V8VWrA7Zx4N7y
vAKbwWSnAuVva9jXHeKatRm/Ei2gPuwK4pkV3HnBncWuds98chalzeoDaXr4ZqFs
jGJ5MN8Q7Sy5mDmG3/bfZzAZ0GxBfcVc3XpEfudwp2SExUIizd/ekN+O1HnCcKYR
hda6AU1IkFXTHEby6ObNJ+11hsM9AN66+13qAjmKj9BkZ/G9Wq+2iRZWEoHfgm8n
MLDPWq5muuNop6MpgYshFBCTUWMyDG5w4yHjXcfX9c2LajH+uqTjogNrzutsWkkb
AOFB2mWi4hWUbfItbyK0CTJ+5h0/K8tuqnqc8hC6u2TuyEHLyCcYpGZh/N1EGaiO
XcjbXY6pwpOa9qA/+5Ktej5V3EHVDhssI9udOY5QJHj6NtZmZfyaouI9AG1cw2Rg
skfDCsYA7klj5aA75PFoWQI/EPovcdA1hoVORTj/Wc8HicZUoXyZmg==
```

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

```
/c/slb/ssl/certs/srvrcert 1
name "sp"
/c/slb/ssl/certs/import srvrcert "1" text
```

```
-----BEGIN CERTIFICATE-----
MIICPjCCAg+gAwIBAgIEURpntjANBgkqhkiG9w0BAQUFADAoMRkwFwYDVQQDExBz
cC5zchJhZHdhcmUuY29tMQswCQYDVQQGEWJTTDAeFw0xMzAyMTIxNzAxMjdaFw0y
MzAyMTAxNzAxMjdaMCgxCgYDVQsQIb3DQEBAQUAA4GNADCBiQKBgQDLl6Vf+G+RPkCGBkRD
eWhEqMkXJNPazzvSDOnJGqprZNqXi8xxyZOTNxsMhGpGCqContWlY8vG9SwnG/Tr
k2dGypDCj6ui3CrOEwVwVGgosmxYA7Hnp0IMcHnKXNoo76RSleEK3ENYpX6shrNy
```

```
4qr3lCZI/IAiZWuWqpAjrCnWwIDAQABo4HcMIHZMA8GA1UdEwEB/wQFMAMBAf8w
EQYJYIZIAYb4QgEBBAQDAgJEMDIGCWCGSAGG+EIBDQQLFiNBbHRlb24vTm9ydGVs
IEdlbmVyYXRlZCBDZXJ0aWZpY2F0ZTAdbGNVHQ4EFgQURlS07nRu4830h55G/Ey1
Hc7P2kcwUwYDVR0jBEwwSoAURlS07nRu4830h55G/Ey1Hc7P2kehLKQqMCgxGTAX
BgNVBAMTEHNwLnNwcmFkd2FyZS5jb20xCzAJBgNVBAYTAklMggRRGme2MAsGA1Ud
DwQEAwIC5DANBgkqhkiG9w0BAQUFAAOBgQAgQU21qp1LSBagHubSJCCZECuQm9j5
rm2KRQu+K40aRje33yQaYa8BiMK36g4//9srRlBIxttpDb7n9amofAQWE5qWLCZz
P7d6KCvpJYL4WQahVMFpL+GS5goPg1laxDYf8fv5Lpv6XGaZmOeAGLAKJqvKxSXE
x5YdATTtN6krdg==
-----END CERTIFICATE-----
```

```
/c/slb/ssl
on
/c/slb/ssl/sslpol 1
name "sp.ssl"
ena
```

## SLB Configuration

```
/c/slb/ssl
on
/c/slb/ssl/sslpol 1
name "sp.ssl"
ena
/c/slb
on
/c/slb/sync
prios d
certs e
/c/slb/sync/peer 1
ena
addr 192.168.50.3
/c/slb/real 1
ena
ipver v4
rip 192.168.50.11
name "SP2013.server.1"
/c/slb/real 2
ena
ipver v4
rip 192.168.50.12
name "SP2013.server.2"
/c/slb/group 1
ipver v4
metric roundrobin
add 1
add 2
name "sp.group"
/c/slb/port 1
```



```
client ena
server ena
proxy ena
/c/slb/virt 1
ena
ipver v4
vip 192.168.50.200
vname "SP.vip"
/c/slb/virt 1/service 443 https
group 1
rport 80
dbind ena
/c/slb/virt 1/service 443 https/http
compol 1
/c/slb/virt 1/service 443 https/ssl
svrcert cert 1
sslpol 1
/c/slb/real 1/layer7
addlb 1
/c/slb/real 2/layer7
addlb 1
/c/slb/virt 1/service 443 https/pbind cookie insert
/c/slb/virt 1/service 443 https/http/rcount 1
/c/sys/access/https/cert WebManagementCert
/c/sys/access/https/https e
```

### Proxy NAT Configuration

```
/c/slb/pip/type vlan
/c/slb/pip/type port
/c/slb/pip/add 192.168.50.201 1
```

### Alteon Backup Configuration

This section includes example Alteon code to implement the Alteon Backup configuration for the Alteon and Microsoft SharePoint 2013 solution, including:

- [Network Configuration](#)
- [VRRP Configuration](#)
- [PIP Configuration](#)
- [Sync Configuration](#)

**Note:** To enable Alteon configuration synchronization, run the **/cfg/slb/sync** command on the active Alteon once you have completed the configuration of the backup Alteon as described in this section. Otherwise, SLB configuration on the backup device must be done manually as described in the [Alteon Active Configuration](#) section in this document.

## Network Configuration

```
/c/port 1
  pvid 20
/c/l2/vlan 1
  learn ena
  def 0
/c/l2/vlan 20
  ena
  name "20"
  learn ena
  def 1
/c/l2/stg 1/clear
/c/l2/stg 1/add 1 2 20
/c/sys/sshd/ena
/c/sys/sshd/on
/c/l3/if 1
  ena
  ipver v4
  addr 192.168.50.3
  vlan 20
/c/l3/gw 1
  ena
  ipver v4
  addr 192.168.50.254
```

## VRRP Configuration

```
/c/l3/vrrp/on
/c/l3/vrrp/vr 20
  ena
  ipver v4
  vrid 20
  if 1
  addr 192.168.50.1
/c/l3/vrrp/vr 21
  ena
  ipver v4
  vrid 21
  if 1
  addr 192.168.50.200
```

## PIP Configuration

```
/c/slb/pip/type vlan
/c/slb/pip/type port
/c/slb/pip/add 192.168.50.202 1
```

## Sync Configuration

```
/c/slb/sync
  prios d
  certs e
/c/slb/sync/peer 1
  ena
  addr 192.168.50.2
```

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