



Microsoft Office Communication Server 2007 R2 Deployment Guide

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Microsoft Office Communications Server

Office Communications Server 2007 R2 is the Microsoft platform for presence, instant messaging, conferencing, and enterprise voice.

Load Balancing OCS

The Basics

A hardware load balancer is required in an Enterprise pool with more than one Enterprise Edition server. A load balancer is not required for a Standard Edition server or a single Enterprise Edition Front End Server. A load balancer is required, for arrays of Office Communications Server 2007 R2 Edge Servers. The load balancer performs the critical role of delivering scalability and high availability across multiple servers connected to a centralized database on the Office Communications Server 2007 R2, Back-End Database.

Microsoft recommends that Full NAT mode (SNAT) should be used, this can be achieved with our appliances using HAproxy. They do not recommend using Direct Server Return mode, although this does work with our appliances.

Port Requirements

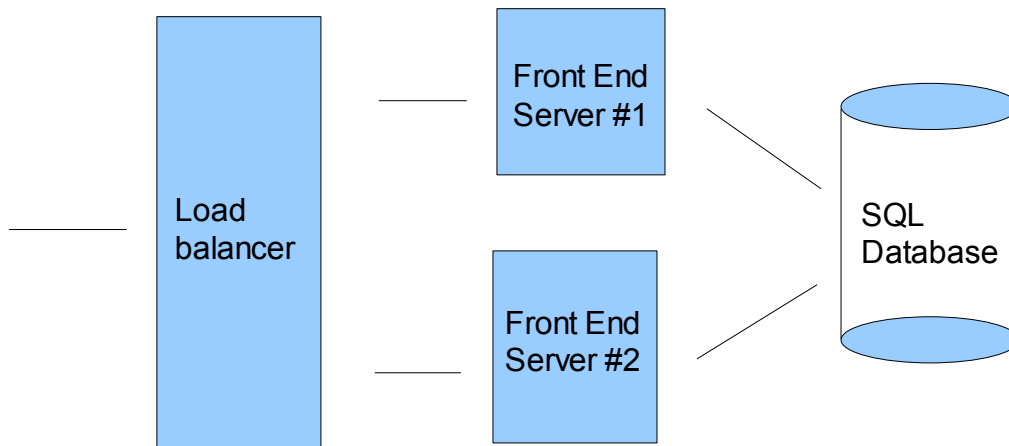
The following table shows the ports that must be load balanced.

5060	SIP communication over TCP
5061	SIP communication over TLS
135	To move users from a pool and other remote DCOM-based operations
443	HTTPS traffic to the pool URLs
444	Communication between the focus (Office Communications Server 2007 R2 component that manages conference state) and the conferencing servers
5065	SIP listening requests for Application Sharing
5069	Monitoring Server
5071	SIP listening requests for Response Group Service
5072	SIP listening requests for Conferencing Attendant
5073	SIP listening requests for Conferencing Announcement Server
5074	SIP listening requests for Outside Voice Control
8404	TLS (remoting over MTL) listening for inter-server communications for Response Group Service

Please refer to [http://technet.microsoft.com/en-us/library/dd572362\(office.13\).aspx](http://technet.microsoft.com/en-us/library/dd572362(office.13).aspx) for more details.

Deployment Architecture

The load balancer is deployed before the front-end servers to provide load balancing and fail-over functionality.



Loadbalancer.org Appliance Configuration

All configuration is completed via the Web User Interface.

Accessing the WUI

The WUI can be accessed from a browser at: ***http://192.168.2.21:9080/lbadmin***

(replace 192.168.2.21 with the IP address of your load balancer)

Username: loadbalancer

Password: loadbalancer

Once you have entered the logon credentials the Loadbalancer.org web interface will be displayed.

Configuring the Virtual Server

- Goto *Edit Configuration > Virtual Servers (HAProxy)*
- Click [**Add a new Virtual Server**]
- Type an appropriate name for the Virtual Server, e.g. OCS-Front-End
- Enter an IP address followed by :5060 (e.g. 192.168.2.171:5060), the other ports will be specified later
- Change the persistence mode to Source IP
- Click the Update button
- Now click [**Modify**] next to the newly created Virtual Server
- In the Extra Ports field enter all relevant ports separated by commas:
5061,135,443,444,5065,5069,5071,5072,5073,5074,8404
- Set the balance mode according to your needs (recommended: Least Connection)
- Set the Check Port to 5061
- Click the Update button

The screenshot shows the 'EDIT CONFIGURATION > VIRTUAL SERVERS (HAProxy)' page in the Loadbalancer.org interface. The page has a dark header with 'English' in a dropdown, 'ENTERPRISE VA v6.8 Master' in red, and the 'loadbalancer.org' logo. A navigation bar contains 'View Configuration', 'Edit Configuration', 'Maintenance', 'Reports', and 'Logs'. The main content area displays a configuration form for a virtual server named 'OCS'. The form fields are as follows:

Label	OCS	?
Virtual Server (ipaddress:port)	192.168.2.171:5060	?
Extra Ports	5061,135,443,444,5065,5069,5071,5072,5073,5074,8404	?
Persistence mode	Source IP	?
Balance mode	Least Connections	?
Timeout	30	?
Table Size	10240	?
Fallback	127.0.0.1:9081	?
Check Port	5061	?
File to check		?
Response expected		?
Maximum Connections		?

At the bottom of the form is an 'Update' button.

Configure the Real Servers

- Goto *Edit Configuration > Real Servers (HAProxy)*
- Click [**Add a new Real Server**] next to the relevant Virtual Server
- Type an appropriate name for the server, e.g. OCS-Real-1
- Enter the IP address without specifying a port (e.g. 10.20.1.1)
- Click the Update button
- Now repeat for your other real servers

English

ENTERPRISE VA v6.8 Master

loadbalancer.org

View Configuration | Edit Configuration | Maintenance | Reports | Logs

EDIT CONFIGURATION > REAL SERVERS (HAProxy)

OCS	(192.168.2.171:5060)	[Add a new Real Server]
OCS-Real-2	10.20.1.2	1 [Modify] [Delete]
OCS-Real-1	10.20.1.1	1 [Modify] [Delete]

















[Virtual Servers]

Configure Global Settings

OCS uses a SIP timeout of 30 minutes. This needs to be configured on the Load Balancer. Change the clitimeout and srvtimeout values from 43000 to 1800000 as follows:

- Goto *Edit Configuration > Global Settings*
- Change clitimeout to 1800000
- Change srvtimeout to 1800000
- Click the Update button

EDIT CONFIGURATION > GLOBAL SETTINGS

Layer 4:		
Check Interval	<input type="text" value="6"/>	
Check Timeout	<input type="text" value="3"/>	
Negotiate Timeout	<input type="text" value="5"/>	
Quiescent	<input type="text" value="no"/>	
Default Forwarding Method	<input type="text" value="DR"/>	
Email Alerts	<input type="text"/>	
Auto NAT	<input type="text" value="off"/>	
Pound SSL:		
Logging	<input type="text" value="off"/>	
Client Timeout	<input type="text" value="30"/>	
Global Server Timeout	<input type="text" value="60"/>	
Transparent Proxy	<input type="text" value="off"/>	
Layer 7 (HAProxy):		
Logging	<input type="text" value="off"/>	
Redispatch	<input type="text" value="on"/>	
contimeout	<input type="text" value="4000"/>	
clitimeout	<input type="text" value="1800000"/>	
srvtimeout	<input type="text" value="1800000"/>	

Finalising the Configuration

To apply the new settings, Haproxy must be restarted as follows:

- *Goto Maintenance > Restart HAProxy*

To view / check HAProxy settings:

- *Goto View Configuration > Layer 7 (HAProxy)*

The configuration should include something similar to the following:

```
listen OCS 192.168.2.171:5060
    bind 192.168.2.171:5061,192.168.2.171:135
    bind 192.168.2.171:443,192.168.2.171:444
    bind 192.168.2.171:5065,192.168.2.171:5069
    bind 192.168.2.171:5071,192.168.2.171:5072
    bnd 192.168.2.171:5073,192.168.2.171:5074
    bind 192.168.2.171:8404
    mode tcp
    option persist
    balance leastconn
    stick-table type ip size 10240k expire 30m
    stick on src
    server OCS-Real-1 10.20.1.1 weight 1 check port 5061 inter 2000 rise 2 fall 3
    server OCS-Real-2 10.20.1.2 weight 1 check port 5061 inter 2000 rise 2 fall 3
    server backup 127.0.0.1:9081 backup
    option redispatch
    option abortonclose
    maxconn 40000
```

Summary

Loadbalancer.org appliances provide a very cost effective solution for highly available load balanced OCS environments.

If you have further questions please don't hesitate to contact us at support@loadbalancer.org