ALOHA LOAD BALANCER MICROSOFT TERMINAL SERVICES LOAD-BALANCING WITH SESSION BROKER

"APPNOTE" #0051 — TERMINAL SERVICES LOAD-BALANCING WITH SESSION BROKER

This technical note will help you go through the implementation of Terminal Services Load-Balancing using ALOHA and MS Session Broker.

REQUIREMENTS

You must have one Windows Server 2008 to act as a Session Broker.

PURPOSE

Use the ALOHA LoadBalancer to load-balance Microsoft Terminal Services.

COMPLEXITY



VERSIONS CONCERNED

ALOHA v4.2 and above

TARGET NETWORK DIAGRAM



CONTEXT

The following setup is to be used in Terminal Services environments, in order to load-balance incoming connections.



MICROSOFT WINDOWS 2008 SERVER CONFIGURATION

FIRST SERVER CONFIGURATION (WITH BROKER):

The "**Remote Desktop Services**" Role **(1 & 2)** must be installed on both servers. On the first server, two Role Services must be installed:

- Remote Desktop Session Host (3)
- Remote Desktop Connection Broker (4)

	rdesktop - 10.0.0.22	
File Action View Hele		
Server Manager (LYNC2) Remote Desktop Services Web Server (IIS) Features Diagnostics Score Storage Storage	Roles View the health of the roles installed on your server and add or remove roles and features.	
	🔿 Roles Summary	Roles Summary Help
	Roles: 2 of 17 installed Remote Desktop Services 2 Web Server (IIS)	Add Roles
	⊙ Remote Desktop Services	Remote Desktop Services Help
	Provides technologies that enable access to a server running Windows-based programs or the full Windows desktop.	
	⊗ Role Status	Go to Remote Desktop Services
	Messages: None System Services: All Running Events: None in the last 24 hours Best Practices Analyzer: To start a Best Practices Analyzer scan, go to the Best Practices Analyzer tile on this role's homepage and click Scan this Role	
		Add Role Services
	Role Service Status	Remove Role Services
	Remote Desktop Sesion Host Installed 3 Remote Desktop Virtualization Host Not installed Core Services Not installed RemotePix Not installed Remote Desktop Connection Broker Installed Remote Desktop Web Access Installed Remote Desktop Web Access Installed Description:	
	Remote Desktop Session Host (RD Session Host), formerly Terminal Server, enables a server to host Windows-based programs or the full Windows desktop. Users can connect to an RD Session Host server to run programs, save files, and use network resources on that server.	•
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SECOND SERVER CONFIGURATION (WITHOUT BROKER):

The "**Remote Desktop Services**" Role (2) must be installed on the second server as well. Only the "**Remote Desktop Session Host**" Role Service is to be installed on the second server (3).

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Server Manager (LVNC2)	Poles	
evver manager (LTWC2) Construction Configuration Configuration	Wew the health of the roles installed on your server and add or remove roles and features.	
		Roles Summary Help
	Roles: 2 of 17 installed Remote Desktop Services 2 Web Server (IIS)	Add Roles
	© Remote Desktop Services	Remote Desktop Services Help
	Provides technologies that enable access to a server running Windows-based programs or the full Windows desktop	
	⊘ Role Status	Go to Remote Desktop Services
	System Services: All Running Events: None in the last 24 hours Best Practices Analyzer: To start a Best Practices Analyzer scan, go to the Best Practices Analyzer tile on this role's homepage and click Scan this Role	
	Role Services: 2 installed	Add Role Services
	Role Service Status Remote Desktop Session Host Installed 3 Remote Desktop Wrtualization Host Not installed 3	
	Core Services Not installed RemoteFX Not installed Remote Desktop Licensing Not installed Remote Desktop Connection Broker Not installed Remote Desktop Gateway Not installed	
	Remote Desktop Web Access Installed Description: <u>Remote Desktop Session Host (RD Session Host)</u> , formerly Terminal Server, enables a server to host Windows -based programs or the full Windows desktop. Users can connect to an RD Session Host server to run roorstree, see files and use network energies on the server.	
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BOTH SERVERS:

We now need to put each server in the appropriate "Farm", and specify which "Broker" is to be used.

In the "RD Session Host Configuration" menu item (1), double-click on "Member of farm in RD Connection Broker" (2).

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Server Manager		
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Server Manager (LYNC2)	RD Session Host Configuration: lync2	Actions
E 😭 Remote Desktop Services	Configuration for Remote Desktop Session Host server:	RD Session Host Configuration: lync2 🔺
E 😫 RemoteApp Manager (lync2.xlc.local)	LYNC2	🚢 Create New Connection
Remote Desktop Configuration: Manager MRD Session Host Configuration: lync2	You can use Remote Desktop Session Host Configuration to configure settings for new connections, modify the setti	Q Refresh
🕀 📷 Remote Desktop Services Manager 1	whole.	View 🕨
Web Server (IIS) Features		Help
Diagnostics	Connections	
Gonfiguration	Connection Name Connection Type Transport Encryption Comment	
E Storage	Microsoft nor 7.1 top Client Compatible	
	Edit settings	
	General	
	Pelete temporary folders on exit Yes	
	Use temporary folders per session Yes	
	Restrict each user to a single session Yes	
	E User logon mode Allow all connections	
	Licensing	
	Remote Desktop licensing mode Not specified	
	Remote Desktop license servers Not specified	
	RD Connection Broker	
	Member of farm in RD Connection Broker Yes	
	RD IP Virtualization	
	P Virtualization Not Enabled	
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On the popup window, click on "Change Settings..." (1), a new window opens:

- Select "Farm member" (2)
- In the "**RD Connection Broker server name**" input field **(3)**, write the name of the first server. You need to make sure that name resolution is operational.
- In the "**Farm name**" input field **(3)**, write the name chosen for the server farm (any name would do, just make sure to use the same name on both server).
- Click on [OK].

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File RD Connection Broker Settings	X	
Select how you want this Remote Desktop Session Host server to be used with RD Connection Broker.		Actions
Select how you want this Remote Desktop Session Host server to be used with RD Connection Broker. Remote Desktop Vitualization Vitual machine redirection Provides redirection for vitual machines used in RemoteApp and Desktop Connection. Remote Desktop Services Dedicated fam redirection Provides dedicated redirection for the specified fam. Vitual member 2 Joins this Remote Desktop Session Host server to the specified fam. Note a should configure the server name: LYNCI Fam Name: BD Connection Broker server name: LYNCI Fam Name: BD Connection and fam membership CK Cancel BD Con	Sktop Session Host server: iguration to configure settings for new connections, modily the setting mingure settings on a per-connection basis, or for the RD Session H ion Broker RD IP Virtualization ber of farm C1 ARM1 Change Settings roker Load Balancing tr in the farm: 100 your load balancer supports the control tokers. for reconnection: cont Connection:	Actions RD Session Host Configuration: lync2 Create New Connection Refresh View Help Help
	Alap.(BA3EFE9558DE-4622-828 ▼ OK Cancel Apply	FB 🕞 👘 🎼 17:56 🜉



The information you entered on the previous window should now be displayed in the **(1)** zone.

- Select "Use token redirection" in the dropdown menu (2).
- Tick the checkbox corresponding to the main IP address in (3).
- Click on **[OK]**.

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Remote Desktop Services Generation S		🚢 Create New Connection
Remote Desktop Connection Manager	You can use Remote Desktop Session Host Configuration to configure settings for new connections, modify the settir	Q Refresh
Remote Desktop Services Manager	connections, and delete connections. You can configure settings on a per-connection basis, or for the RD Session H whole. properties	View
Web Server (IIS) Features	Connection Broker RD IP Vitualization	👔 Help
Diagnostics	Connect General Eldensing the connected block in the relation of the vicualization	
Configuration E Storage	Connectio	
	BD Connection Broker	
	Change Settings	
	Edit set	
	Genera Participate in Connection Broker Load-Balancing	
	E Delete Felative weight of this server in the farm: 100	
	Restric	
	User k Select taken redirection	
	Licensi use of RD Connection Broker routing tokens.	
	Remol Select IP addresses to be used for reconnection:	
	Remol IP Address Network Connection	
	RD Cor 680:100.7f:ffe Local Area Connection" 9	
	Memb fe80::5efe:10.0 isatap.(BA3EFE99-58DE-4622-828 💌	
	BD IP	
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LAYER 7 CONFIGURATION

ALOHA CONFIGURATION:

Add the following lines to the **LB Layer 7** configuration. The lines specific to Terminal Services loadbalancing are the bold ones.

- Make sure to replace server names and IP addresses to match your setup.
- In the **Frontend** Section, choose the IP binding according to your needs

```
backend bk ts
  balance leastconn
  mode tcp
  log global
  option tcplog
  default-server inter 3s rise 2 fall 3
  timeout server 300s
  persist rdp-cookie
  server LYNC1 10.0.0.21:3389 maxconn 1000 weight 10 check
  server LYNC2 10.0.0.22:3389 maxconn 1000 weight 10 check
frontend ft ts
  bind /ssl:ft ts accept-proxy
  bind 0.0.0.0:3389 name rdp
  mode tcp
  log global
  tcp-request inspect-delay 5s
  tcp-request content accept if RDP COOKIE
  option tcplog
  timeout client 300s
  maxconn 1000
  default backend bk ts
```

Click on [OK], then [Apply].

