System requirements

In order to get your server working in good condition we've made a check-list for you. Your system doesn't have to comply to this list but operation and performance will be less. Computers Now-a-days will have far better requirements, however, these are the absolute minimal requirements.

Minimal system requirements

- A 600 MHz Pentium 3 (or better) processor
- 256 MB memory
- 45 MB of free disk space
- Windows 2000, XP, Windows Vista / 7 / 8 based operating system
- Color monitor having at least a resolution of 800 x 600 pixels

Advised system requirement

- A 2 GHz Pentium 4 or Athlon-XP processor
- 512 MB memory
- 45 MB of free disk space
- Windows 2000 or XP based operating system
- Color monitor having at least a resolution of 1024 x 768 pixels

Server 4 does not support Windows 95, 98, 98 Me, 98 SE, NT 4 and older NT versions.

Memory requirements

Depending of the purpose you assign to the server, memory consumption can grow from 30 MB up to 200 MB. For example, a medium-sized intranet/internet web application uses about 35 MB of memory. If you planned the use of a database or ODBC objects, memory consumption could increase even more.

The table below indicates the type of server and recommended installed memory. Note that PIASe is an active script language that forces the server to cache compiled script in memory for performance reasons. External objects use up memory too depending the type and purpose of the object.

Application type	Recommended memory
Only HTML documents	128 Mb
HTML and PIASe active scripting	256 Mb
HTML/PIASe and external objects	512 Mb

Network requirements

Document Server cannot work without a TCP/IP4 enabled network. Most networks systems are TCP/IP4 enabled, older network types may use other protocols and you must check your network manuals to see if your network can support TCP/IP4.

It is recommended to use a 100 Megabit or 1 Gigabit Network Interface Card. Older 10 Megabit cards (mostly used for lap-top's) will serve too but may form a bottle-neck for network-traffic and eventually bring down the overall band-width.

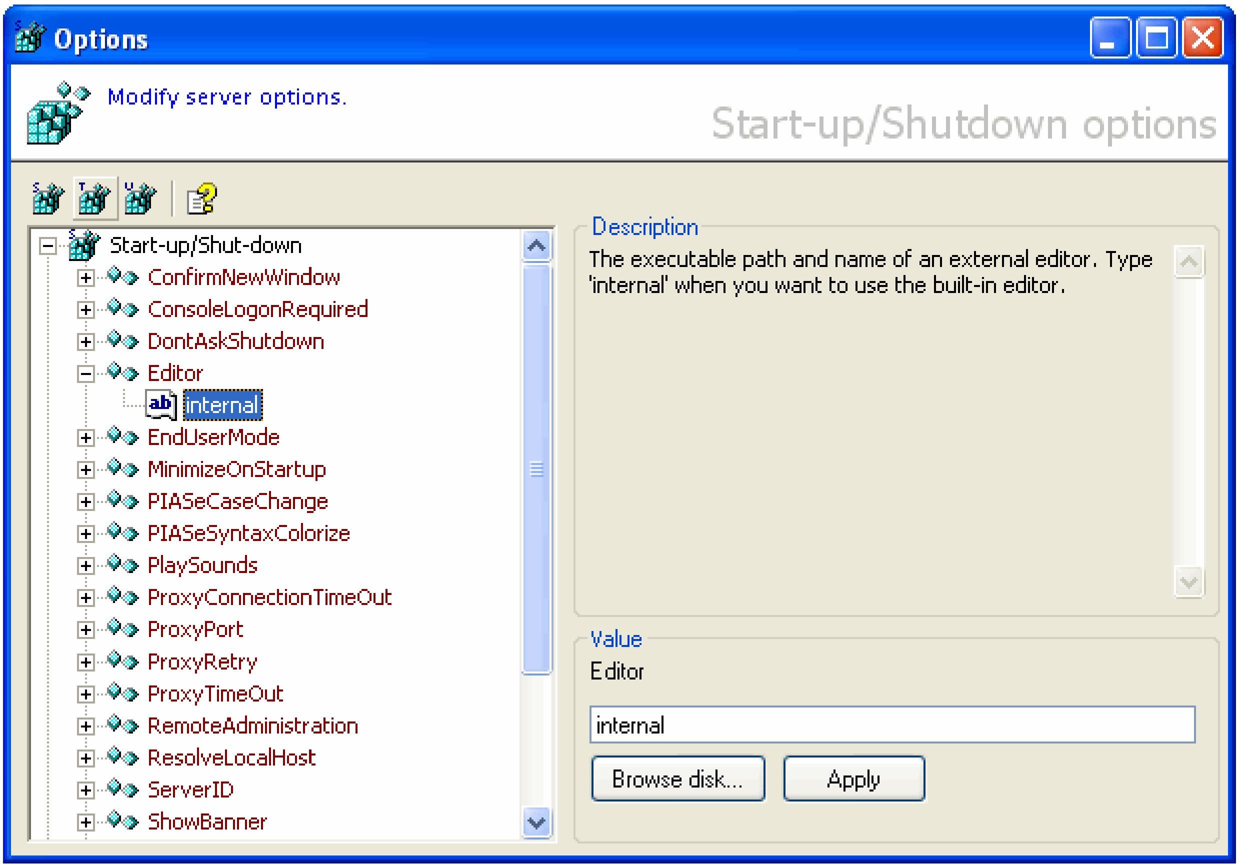
Gateway/Firewall

Any hardware gateway/firewall will do but you may need to enable HTTP services on port 80 to pass through for either internal traffic, external or both. Check the DMZ/Virtual-server gateway-settings and a possible provider-block on the external port 80 if you want to receive requests via the internet.

IPV4 only

Server 4 is not supporting IPV6.

Configure the server



- Start-up/Shut-down
  - ConfirmNewWindow
  - ConsoleLogonRequired
  - DontAskShutdown
  - Editor
    - internal
  - EndUserMode
  - MinimizeOnStartup
  - PIASeCaseChange
  - PIASeSyntaxColorize
  - PlaySounds
  - ProxyConnectionTimeOut
  - ProxyPort
  - ProxyRetry
  - ProxyTimeOut
  - RemoteAdministration
  - ResolveLocalHost
  - ServerID
  - ShowBanner

Description

The executable path and name of an external editor. Type 'internal' when you want to use the built-in editor.

Value

Editor

internal

The "Configuration" window

⇨ To change the Start-up/Shutdown options click:

⇨ To change the TCP Web server options click:

⇨ To change the UDP Broadcast-server options click:

Default factory settings

The server is installed having a factory configuration setting. This factory setting can be used in network and internet environments without causing performance trouble. Some networks however, may need a slightly different configuration to maintain good performance.

There are over 40 fields divided in three groups you may configure: Startup/Shutdown, TCP and UDP.

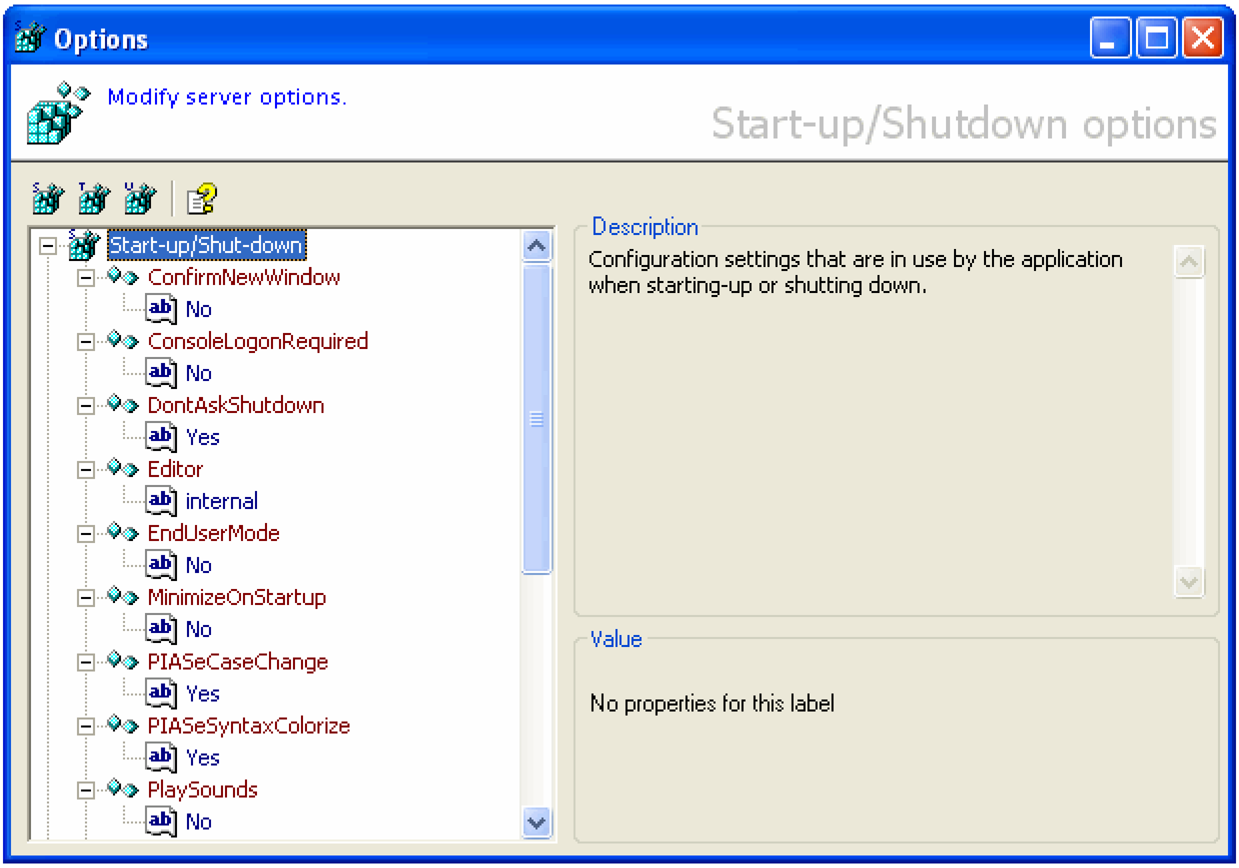
Reconfigure after upgrade

When you're upgrading the server to a new version, the configuration-data (start-up/shut-down, TCP and UDP) will be reset to default.

This includes the administrator password !

After upgrading, The user, authentication and firewall tables remains unchanged with the exception that the firewall will block all non-local traffic until you change the administrator password.

Startup and Shutdown options



Start-up/Shut-down
- ConfirmNewWindow
  - No
- ConsoleLogonRequired
  - No
- DontAskShutdown
  - Yes
- Editor
  - internal
- EndUserMode
  - No
- MinimizeOnStartup
  - No
- PIASeCaseChange
  - Yes
- PIASeSyntaxColorize
  - Yes
- PlaySounds
  - No

Description

Configuration settings that are in use by the application when starting-up or shutting down.

Value

No properties for this label

The "Startup/Shutdown" window

Click on the "Startup/Shutdown options" toolbar button () to open the startup/shutdown options window. In this window you can alter configuration settings regarding the startup and shutdown of the server.

First, select a fieldname from the tree. When selected, you'll see a short description of the selected field. Press enter to start editing, change the value and press enter again or click the "Apply" button to save the new value.

ConfirmNewWindow

☑ Checkbox

⇨ **Obsolete for SL Server 4.**

Check if you want a confirmation when a client-side script or a href-link causes the internal browser to open a new window or popup-window.

ConsoleLogonRequired

☑ Checkbox

Check to confirm the administrator's password before a user wants to execute a menu or toolbar command

DontAskShutDown

☑ Checkbox

If checked, the program will **not** ask for a confirmation when shutting down the application.

Editor

text

The executable path and name of an external editor. Type "internal" when you want to use the built-in editor or click on the "Browse disk" button to select an editor program.

EndUserMode

☑ Checkbox

Check to use the program as a viewer and only allow the administrator to access the console. The "**ConsoleLogonRequired**" setting is required and will be set automatically when checking this option.

MinimizeOnStartup

☑ Checkbox

Check to minimize the program to the system tray once started.

PIASeCaseChange

☑ Checkbox

If checked, the editor will capitalize VB/PIASe synatx where needed.

The **PIASeSyntaxColorize** must be checked in order to have effect.

PIASeSyntaxColorize

☑ Checkbox

If checked the editor will colorize VB/PIASe syntax.

PlaySounds

☑ Checkbox

⇨ **Obsolete for SL Server 4.**

Play sounds at startup and shutdown and when the about dialog is shown.

PopupBlocker

☑ Checkbox

⇨ **Obsolete for SL Server 4.**

If checked, the browser will close popup windows automatically. This setting determines the default setting when the application is starting. It does not apply to the current setting in the browser window(s).

ProxyConnectionTimeout

1234

Number of milliseconds before the proxy will abort a pending connection attempt to an external server (valid values are 50 - 30000 millseconds).

Note that the proxy will retry to connect N times as stated in "**ProxyRetry**".

ProxyPort

1234

Enter your default (proxy) port to access the internet. This value is usually 80 but could be different when you use a proxy to access the internet.

ProxyRetry

1234

Number of connection retries the proxy will perform before reporting an connection.

Valid values are 1 - 12 times.

ProxyTimeOut

1234

Number of seconds before the proxy will abort a pending transaction with an external server without receiving any data from it.

Valid values are 1 - 30 seconds.

RemoteAdministration

☑ Checkbox

Check to allow the administrator to logon remotely.

If not checked, the administrator can only logon using the local machine's loopback IP address (127.0.0.1). If checked, the administrator is allowed to logon from virtual any computer connected to the internet.

ResolveLocalHost

☑ Checkbox

If checked, the built-in browser will resolve the name of the local host before browsing to a location at the local host. If not checked, the host will be addresses as 127.0.0.1. Note that a Network Interface Card and a TCPIP network-driver must be present for name resolving.

Document Server will try to resolve the hostname at start-up. This may take a few seconds if the hostname cannot be resolved for reasons.

ServerID

text

Enter your server-ID of the service.

The ID is included in the HTTP response header and will be visible to clients. Use a server-ID when automated clients expect some sort of server identification.

Example of a custom server-ID (red) in the headerfield "Server" (blue) of the response header:

```
HTTP/1.0 200 OK
Server: SL Server 4/4.0.4;+MyServer
Date: Wed, 15 Oct 2003 23:47:53 GMT
Expires: Wed, 15 Oct 2003 23:47:53 GMT
Location: /Help/Manual/i010 Sessions/
Set-Cookie: uid=a7259ca65934ae6b0d38cf805a3daef6; path=/
Content-Type: text/html
Content-Length: 728
```

Note that plus signs (+) are required when using spaces in the "Server" header-field. You are not required to type a plus sign when using spaces in your ID when you enter the string in the ServerID textbox, the server will convert spaces automatically.

ShowBanner

☑ Checkbox

Check to display the "About" dialog at startup.

StartStopScript

text

Location and name of the server start/stop script. Only change this setting when you need to use an alternate start/stop script. Otherwise set it to '**/admin/server/startstop.os**'

TimeZone

text

Timezone and (if needed) the number of hours to add or subtract for converting local time to GMT or other time zones.

Use the following format as shown in the samples below:

Time zone...	Where...
GMT	Exact time of the prime meridian
GMT –0500	5 hrs east of the prime meridian
GMT 0230	2 ½ hrs west of the prime meridian

UseSha160CypherStrength

☑ Checkbox

Check to use SHA 160 bits cypher strength to encrypt / decrypt data (Microsoft Base Cryptographic Provider v1.0 required).

WindowsHeightAdjustment

1234

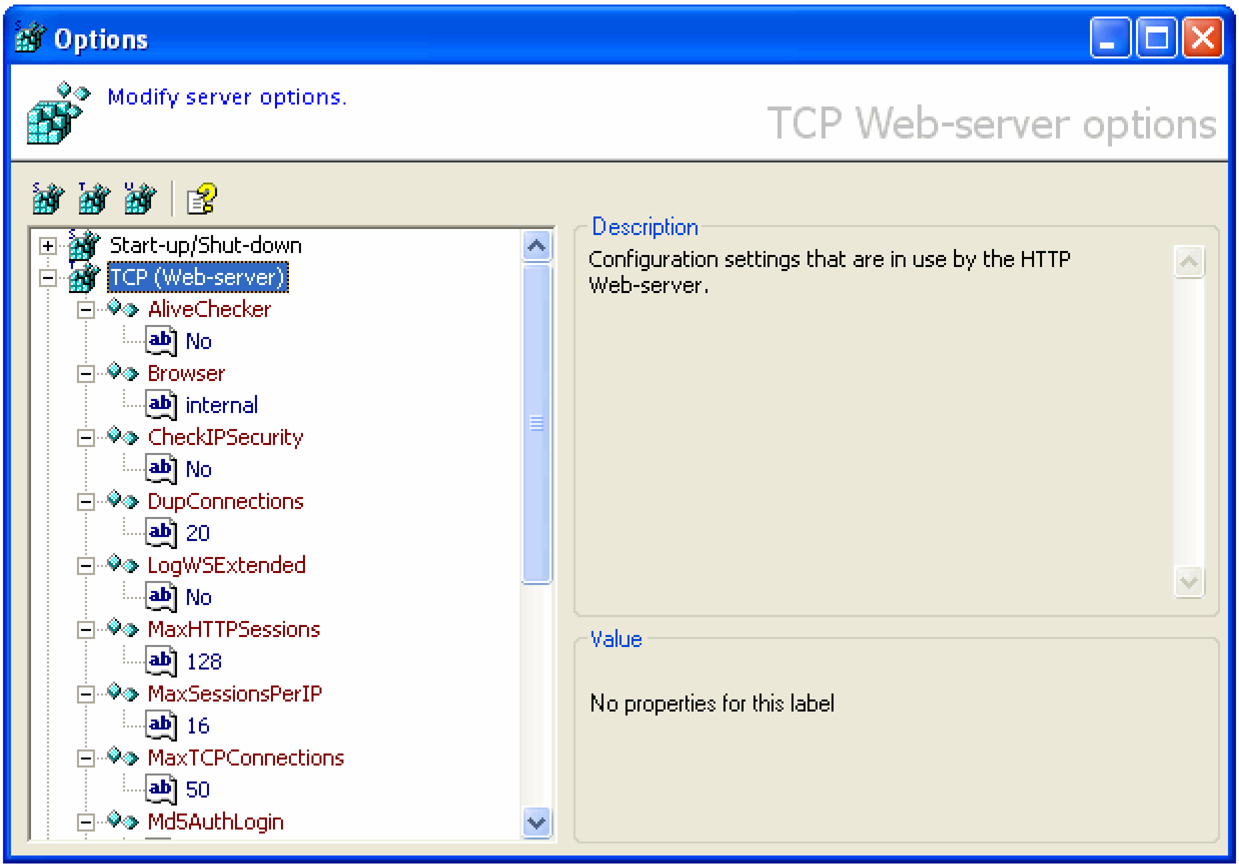
Adjust window height when using enlarged title bars (XP, Window Blinds, etc). The value represents the number of twips (units of measurement) a window should add to it's total height to keep controls in the visible window area.

Note that Windows Vista, 7 or 8 may also have side-borders that are wider than the classic Windows border width. The specific border width cannot be set.

Settings:

Windows 2000 (standard theme)	XP (Luna theme)	Custom theme's
0	100	Tweak...

TCP Web server options



Start-up/Shut-down
TCP (Web-server)
AliveChecker
No
Browser
internal
CheckIPSecurity
No
DupConnections
20
LogWSExtended
No
MaxHTTPSessions
128
MaxSessionsPerIP
16
MaxTCPConnections
50
Md5AuthLogin

Configuration settings that are in use by the HTTP Web-server.

No properties for this label

The "TCP Web-server options" window

Click on the "TCP options" toolbar button () to open the TCP webserver options window. In this window you can alter configuration settings regarding the functioning of the TCP webserver.

First, select a fieldname from the tree. When selected, you'll see a short description of the selected field. Press enter to start editing, change the value and press enter again or click the "Apply" button to save the new value.

AliveChecker

☑ Checkbox

⇨ **Use with Windows 98 only.**

If checked, Tests are performed to test for a functioning server periodically and if the server fails, a full socket reset is executed to enforce normal operation. Check this value only when the server is installed on a Win98 system.

Browser

text

⇨ **SL Server 4 does NOT use the internal browser, You must select an external browser.**

Location and name of the default browser to use. Type 'internal' when you want to use the built-in browser. The use of internet-explorer is recommended.

CheckIPSecurity

☑ Checkbox

Check to prevent two or more IP addresses having the same session-ID (Also called session hijacking). Some versions of Internet Explorer on certain type of networks may cause a session-hijack. This value is default unchecked.

On local intranets browsers may use local host (127.0.0.1) and the actual IP address of the NIC. This may cause a (unwanted) session hijack detection.

DupConnections

1234

Number of connections a HTTP client may establish at the same time. Connections made by clients may run up as many as 40 depending the type of page that is accessed. Connections will be dropped if a client is exceeding this value.

If you’re planning to use a-synchronous connections (AJAX) set this value to its maximum.

LogWSExtended

☑ Checkbox

Check to log extended request and response information. (Double-click a webserver log-entry from the webserver-log window to retrieve the details). Note that writing extended log data may cause the server to perform less.

MaxHTTPSessions

1234

The number of maximum HTTP sessions the server can handle at the same time. Increase this value when the server encounters 'Too many sessions' errors on a regular basis. The recommended value is 128 sessions.

MaxSessionsPerIP

1234

The maximum number of unique sessions one client may establish. Keep this value between 4 and 16 sessions. A client is identified by its IP-address and you may want to increase this value when an IP-address is proxy-serving many clients.

MaxTCPConnections

1234

The number of maximum TCP connections at the same time. Connections consume memory and processor- time. You may need to decrease this value when the application is locking other applications. The recommended value is 50 connections.

Md5AuthLogin

☑ Checkbox

Check when you want your clients to authenticate using RSA MD5 hash algorithm. Unchecking this item will use the clear-text (base64) login method (not recommended).

OutputBlockSize

1234

Size of a TCP packet in bytes. Data is not sent to a client in one part but in chunks. This enables the server to serve all clients in a round-robin manner. Keep this value between 1024 and 8192 bytes and reduce this value when you expect a lot of traffic or when the network is having problems with larger packets. Increase this value when overall data- transfers are getting too slow. The recommended packet-size is 4096 bytes.

ScriptFirewall

text

VFS Location and name of the firewall script. Only change this setting when you need to use an alternate firewall script. Otherwise set it to '**/admin/server/firewall.os**'

ScriptServerResponse

text

VFS Location and name of the HTTP server response script. Only change this setting when you need to use an alternate server response script. Otherwise set it to '**/admin/server/tcpserver.os**'

ServerPort

1234

Port where the HTTP server is listening to. Most, If not all browsers will look for a HTTP server on port 80.

ServerRoot

text

A folder on your disk where the rootfolder of the HTTP server starts.

Never address the root of the server as a network-path (**\\machine\etc**) because double slashes are not accepted in the VFS and will be converted to a single slash. Map a network-folder as a drive (map **\\Machine\Etc\** to **Z:\** for example), and use the the assigned drivename.

Note that network traffic doubles when you're mapping network paths (traffic goes from network-path to server and from server to client).

StackTimerInterval

1234

Interval in milliseconds before the next series of TCP packets are sent to waiting clients. When many clients are downloading large quantities of data you may want to increase this value up to a maximum time of 1000 milliseconds enabling the round-robin scheduler to complete its tasks in decency without halting or stalling the OS. 50 milliseconds is recommended for normal operation.

Note that increasing the interval will lower bandwidth but enables more clients to connect in the timeframe of the interval. If clients cannot connect during this timeframe, the next frame will be used to connect and cause a longer waiting-time for the client.

TTLAdmin

1234

Number of seconds before an inactive administrator HTTP session ends. The administrator does a lot of monitoring and studying of data and TTL time is mostly largest for admin. However, if the administrator is using many sessions it could happen that a 'Too many sessions' error may appear. If so, reduce the admin TTL time. The recommended time for user admin is 1200 seconds (20 min).

TTLAnonymous

1234

Number of seconds before an inactive anonymous HTTP session ends. Anonymous users do not logon to the service and most of the time they will not use session memory. Therefore a short TTL time must be applied for user anonymous. If the server reports many 'Too many sessions' errors you may want to reduce the TTL time's for anonymous, user and admin. The recommended time for an anonymous user is about 60 seconds.

TTLConnect

1234

The number of seconds a client may take to connect to the TCP service. Malicious clients could overrun the maximum connection count disabling access to the server by connecting without sending a request. It is recommended to keep the TTLconnect time and the number of **DupConnections** to a minimal to prevent this type of DoS.

TTLTimerInterval

1234

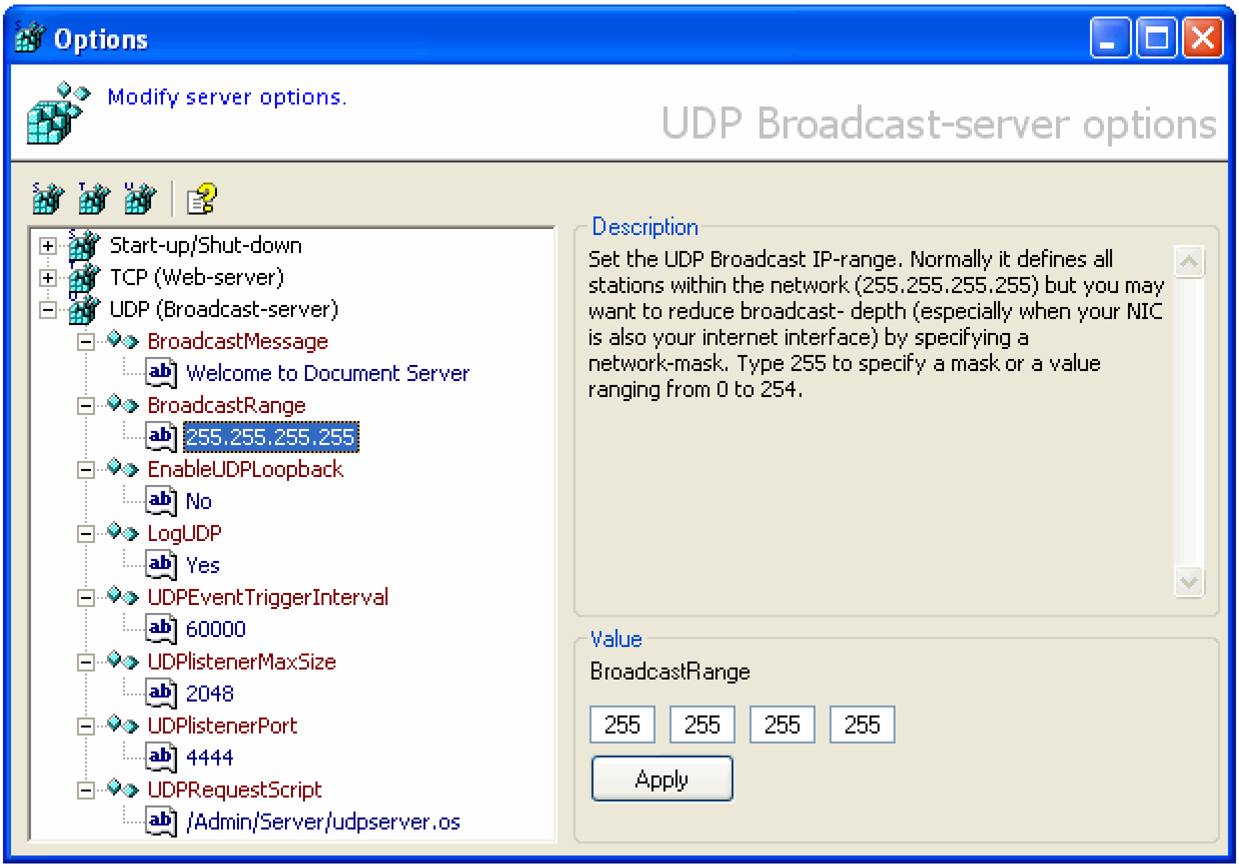
Interval in milliseconds before a TTL check is executed. TTL or Time-to-live defines the time a session or a connection-attempt is maintained (kept in memory). The application checks per N milliseconds to see if a session or a connection-attempt has expired. A nominal value is 1000 milliseconds for fast computers and 5000 milliseconds for slower computers (=<800Mhz).

TTLUser

1234

Number of seconds before an inactive user HTTP session ends. Users logged on to the server use session memory. Keep this TTL time to an average time a user need to complete a page and continues to a next page. If the server reports many 'Too many sessions' errors you may want to reduce the TTL time's for anonymous, user and admin. The recommended time for a user is about 600 seconds (10 min).

UDP Broadcast server options



- Start-up/Shut-down
- TCP (Web-server)
- UDP (Broadcast-server)
  - BroadcastMessage
    - Welcome to Document Server
  - BroadcastRange
    - 255.255.255.255
  - EnableUDPLoopback
    - No
  - LogUDP
    - Yes
  - UDPEventTriggerInterval
    - 60000
  - UDPlistenerMaxSize
    - 2048
  - UDPlistenerPort
    - 4444
  - UDPRequestScript
    - /Admin/Server/udpserver.os

Description

Set the UDP Broadcast IP-range. Normally it defines all stations within the network (255.255.255.255) but you may want to reduce broadcast- depth (especially when your NIC is also your internet interface) by specifying a network-mask. Type 255 to specify a mask or a value ranging from 0 to 254.

Value

BroadcastRange

255 255 255 255

The "UDP Broadcast-server options" window

Click on the "UDP options" toolbar button () to open the UDP Broadcast-server options window. In this window you can alter configuration settings regarding the functioning of the broadcast-server.

First, select a fieldname from the tree-view. When selected, you'll see a short description of the selected field. Press enter to start editing, change the value and press enter again or click the "Apply" button to save the new value.

What is UDP broadcasting ?

UDP broadcasting is a system mainly used to notify other services/clients by broadcasting short messages to a group of network stations in a particular network environment without knowing their host ID number.

A UDP server in common does need not to reply when it received a broadcasted packet but programmable options to respond to an individual network station are available within the PIASe programming library of Server 4.

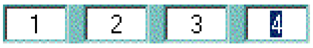
Server 4 will be installed having no active UDP listener. Keep the UDP listener disabled if you're not planning to use a broadcast system to prevent useless processing consumption. To implement the UDP broadcast system you need to have some knowledge about UDP and PIASe script programming.

BroadCastMessage

text

This message will be included as a part of the broadcast-message the UDP broadcast-server will submit when you enable EnableUDPLoopback.

BroadcastRange



1 2 3 4

Set the UDP Broadcast IP-range.

Normally it defines all stations within the network (255.255.255.255) but you may want to reduce broadcast-depth (especially when your NIC is directly connected to your internet modem) by specifying a network-mask. Type 255 to specify a mask or a value ranging from 0 to 254.

When entering digits, press '**.**' to continue to the next number.

EnableUDPLoopback

☑ Checkbox

Check to Enable the UDP interval. Note that the UDP service is activated by toggling the toolbar buttons 🟩 / 🟥 and only listens to broadcasts. When the button is lit green, the UDP service is enabled.

To enable the submission of broadcast- packets you need to check this field as well.

LogUDP

☑ Checkbox

Check to log UDP transactions in the web-server log.

UDPEventTriggerInterval

1234

Number of milliseconds before the next UDP event is triggered. The UDP server does not respond to a received packet like the HTTP service does but broadcast its packets every N period of time. Set this value depending the actuality of the data . If the broadcast represents real-time data, Values between 1000 and 5000 milliseconds are appropriate while static data or slow updated data do not require fast updates and values between 30000 and 60000 milliseconds are appropriate.

UDPListenerMaxSize

1234

Maximum size of a UDP packet that the UDP listener will accept. To prevent overrun or flooding of the UDP listener you may want to set a limitation on the received packet size.

UDPListenerPort

1234

Port where the UDP broadcast- server is listening to. For the default UDP port set this value to 4444. UDP broad- casting is a method to address services and clients without the need to address them directly. Data-packets submitted by the UDP service must be small in size and there is no guarantee that a packet will arrive at its destination.

UDPRequestScript

text

Location and name of the UDP event script. Only change this setting when you need to use an alternate UDP event script. Otherwise set it to '**\Admin\Server\udpserver.os**'