

| IBM Software Group

# "Performance Tuning von Web Applikationen"

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# Agenda

- Messen der Performance einer Web Applikation
- Performance-Probleme, und wie man damit umgeht
- Fragen und Antworten



# Messen der Performance einer Web Applikation

## Definition

## Tools

Subjektiv

FasterFox (Firefox Extension)

Solex (Eclipse Plugin)

domlog.nsf

iSpy

IBM Page Detailer



# Definition - Performance

- „Performance /pə'fɔ:məns/ (engl.) bezeichnet in der Informatik den Ressourcenverbrauch und die Qualität der Ausgabe von Programmen und Hardware. Meistens ist mit Performance die Datenrate gemeint, also die Menge von Daten, die innerhalb einer bestimmten Zeitspanne verarbeitet werden kann.“
- Quelle: [http://de.wikipedia.org/wiki/Performance\\_\(Informatik\)](http://de.wikipedia.org/wiki/Performance_(Informatik))



# Definition - Antwortzeit

- Antwortzeit (engl. response time) bezeichnet die Zeitspanne zwischen dem Absenden einer Nachricht am Computer (z.B. durch das Drücken der Eingabetaste) und dem vollständigen Empfang der zugehörigen Antwort am Terminal. [...]
- Einflussfaktoren auf die Antwortzeit können u.a. sein:
  - \* Bei der Datenübertragung: Netzleistung (Effizienz) und Netzlast
  - \* Bei der Wartezeit: Rückstau bei hoher Anfragerate
  - \* Bei der Bearbeitungszeit: Leistung der Rechner und des Datenbanksystems, Qualität des Datenbankdesigns und der Programmierung.
- Quelle: <http://de.wikipedia.org/wiki/Antwortzeit>



# Subjektive Messung

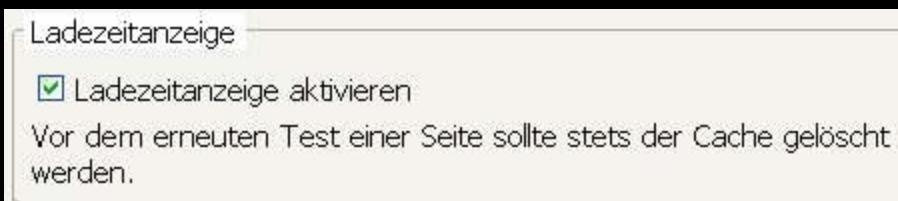
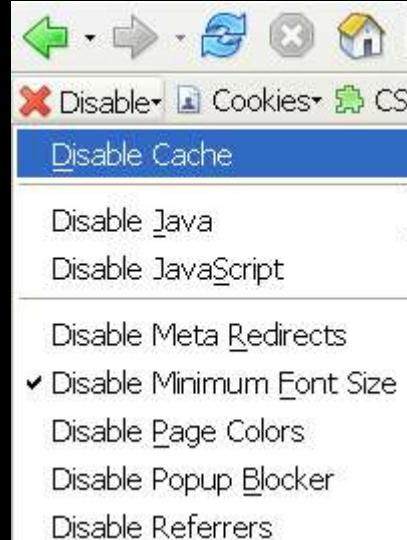
- Messung durch manuelle Zeitnehmung
- Vorteile:
  - Geringe technische Anforderungen
- Nachteile
  - Ungenaue Messungen
  - kurze Ladezeiten sind kaum messbar
  - Cache des Browsers kann die Messung verfälschen





# Fasterfox / Firefox Extension

- Zeigt die Ladezeit einer Seite an
  - Vorteile:
    - Geringe technische Anforderungen
    - Auch für kurze Ladezeiten anwendbar
  - Nachteile:
    - Cache des Browsers kann die Messung beeinflussen
    - Cache kann mit der Web Developer Toolbar deaktiviert werden.
- <https://addons.mozilla.org/extensions/moreinfo.php?id=60>
- Limitiert auf den Firefox Browser



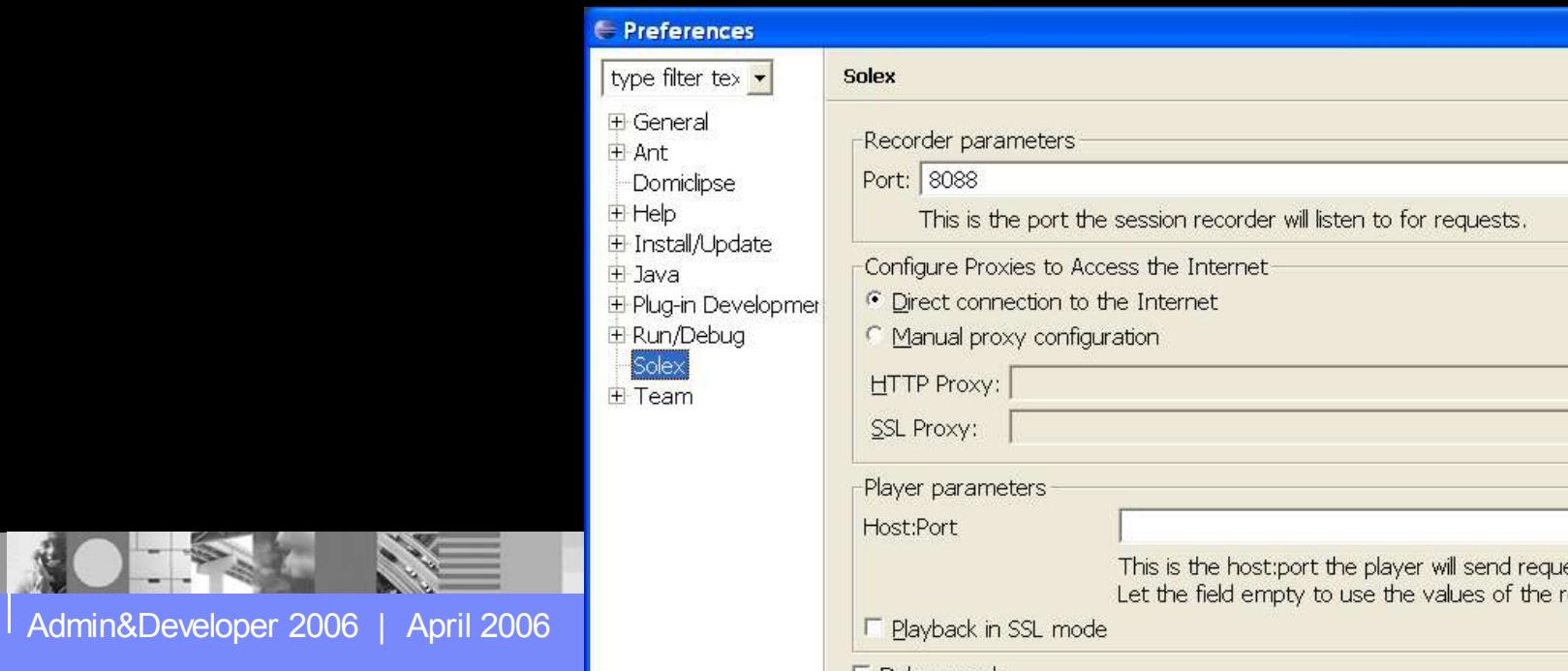
# Fasterfox Beispiel

The screenshot shows a Mozilla Firefox window with the title bar "Interface | matters: Microsoft Attacked! - Mozilla Firefox". The menu bar includes "Datei", "Bearbeiten", "Ansicht", "Gehe", "Lesezeichen", "Extras", and "Hilfe". The address bar shows the URL "http://interfacematters..". The main content area displays a yellow banner with the text "Interface | matters". To the left of the banner is a cartoon illustration of a zombie-like alien pointing a gun at a Microsoft logo, with a speech bubble saying "Exchange must go!". Below the banner, the date "Thursday, April 06, 2006" is shown. A section titled "Microsoft Attacked!" contains text about doodling on a tablet PC and creating a custom banner. The "About Me" sidebar features a photo of Chris Blatnick, his name, and a bio. A red arrow points from the text "champion the cause of usability and user interface design..." down towards the "Adblock" extension icon in the bottom right corner. The status bar at the bottom shows "Fertig", "1.402s", and "Adblock".

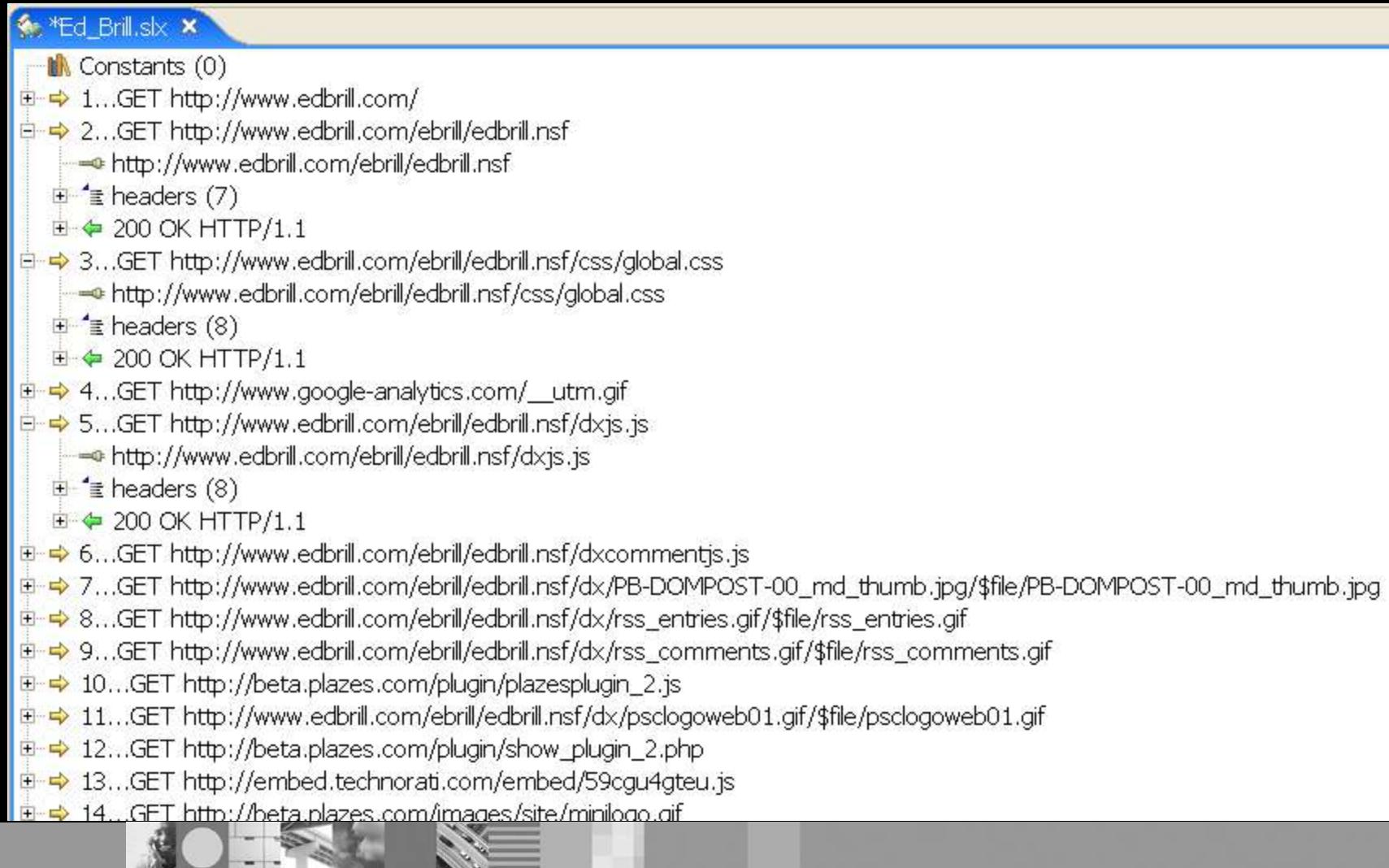


# Solex / Eclipse Plugin

- Solex zeichnet HTTP Sessions auf und kann sie später erneut „abspielen“.
- Für die Aufzeichnung tritt Solex als lokaler Proxy auf.
- Optional können Filter gesetzt werden sowie Requests durch dynamische Formeln ersetzt werden



# Aufgezeichnete Session



```
*Ed_Brill.slx x
└ Constants (0)
  └ 1...GET http://www.edbrill.com/
  └ 2...GET http://www.edbrill.com/ebrill/edbrill.nsf
    └ http://www.edbrill.com/ebrill/edbrill.nsf
  └ headers (7)
  └ 200 OK HTTP/1.1
  └ 3...GET http://www.edbrill.com/ebrill/edbrill.nsf/css/global.css
    └ http://www.edbrill.com/ebrill/edbrill.nsf/css/global.css
  └ headers (8)
  └ 200 OK HTTP/1.1
  └ 4...GET http://www.google-analytics.com/__utm.gif
  └ 5...GET http://www.edbrill.com/ebrill/edbrill.nsf/dxjs.js
    └ http://www.edbrill.com/ebrill/edbrill.nsf/dxjs.js
  └ headers (8)
  └ 200 OK HTTP/1.1
  └ 6...GET http://www.edbrill.com/ebrill/edbrill.nsf/dxcommentjs.js
  └ 7...GET http://www.edbrill.com/ebrill/edbrill.nsf/dx/PB-DOMPOST-00_md_thumb.jpg/$file/PB-DOMPOST-00_md_thumb.jpg
  └ 8...GET http://www.edbrill.com/ebrill/edbrill.nsf/dx/rss_entries.gif/$file/rss_entries.gif
  └ 9...GET http://www.edbrill.com/ebrill/edbrill.nsf/dx/rss_comments.gif/$file/rss_comments.gif
  └ 10...GET http://beta.plazes.com/plugin/plazesplugin_2.js
  └ 11...GET http://www.edbrill.com/ebrill/edbrill.nsf/dx/psclogoweb01.gif/$file/psclogoweb01.gif
  └ 12...GET http://beta.plazes.com/plugin/show_plugin_2.php
  └ 13...GET http://embed.technorati.com/embed/59cgu4gteu.js
  └ 14...GET http://beta.plazes.com/images/site/miniloao.aif
```

# Playback

- Playback der zuvor aufgezeichneten Session

- URI
- Status Code
- Time To First Byte
- Time To Last Byte

request	status code	TTFB (ms)	TTLB (ms)
1..GET http://www.edbrill.c...	302	370.0	461.0
2..GET http://www.edbrill.c...	200	731.0	5788.0
3..GET http://www.edbrill.c...	200	901.0	941.0
4..GET http://www.google-...	200	231.0	231.0
5..GET http://www.edbrill.c...	200	1201.0	1231.0
6..GET http://www.edbrill.c...	200	411.0	431.0
7..GET http://www.edbrill.c...	200	230.0	280.0
8..GET http://www.edbrill.c...	200	1312.0	1312.0
9..GET http://www.edbrill.c...	200	161.0	171.0
10..GET http://beta.plazes...	200	280.0	280.0
11..GET http://www.edbrill....	200	330.0	1472.0
12..GET http://beta.plazes...	200	281.0	281.0
13..GET http://embed.tec...	200	410.0	410.0
14..GET http://beta.plazes...	200	60.0	70.0
15..GET http://www.google...	200	100.0	110.0
16..GET http://static.techn...	200	421.0	631.0
17..GET http://www.edbrill....	200	291.0	291.0
18..GET http://www.edbrill....	200	340.0	1973.0
19..GET http://www.edbrill....	200	881.0	911.0
20..GET http://www.google...	200	100.0	100.0



# Domino Web Server Log / domlog.nsf

HTTP Request:	
Server Address:	test.brandlechner.at
Date:	16.04.2006 11:59:17
User Address:	192.168.2.130
Authenticated User:	-
User Agent:	Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1; SV1; .NET CLR 1.1.4322; FDM; .NET CLR 2.0.50727)
Cookie:	
Request:	GET /homepage.nsf HTTP/1.1
Status:	200 OK (Request fulfilled)
Content Length:	5918 bytes
Content Type:	text/html; charset=windows-1252
Process Time:	7571 ms
Error:	
Translated URI:	C:/Program Files/Lotus/Domino/data/homepage.nsf
Translated Request:	test.brandlechner.at/homepage.nsf
Decoded Query:	
Referring URL:	
Decoded Query:	



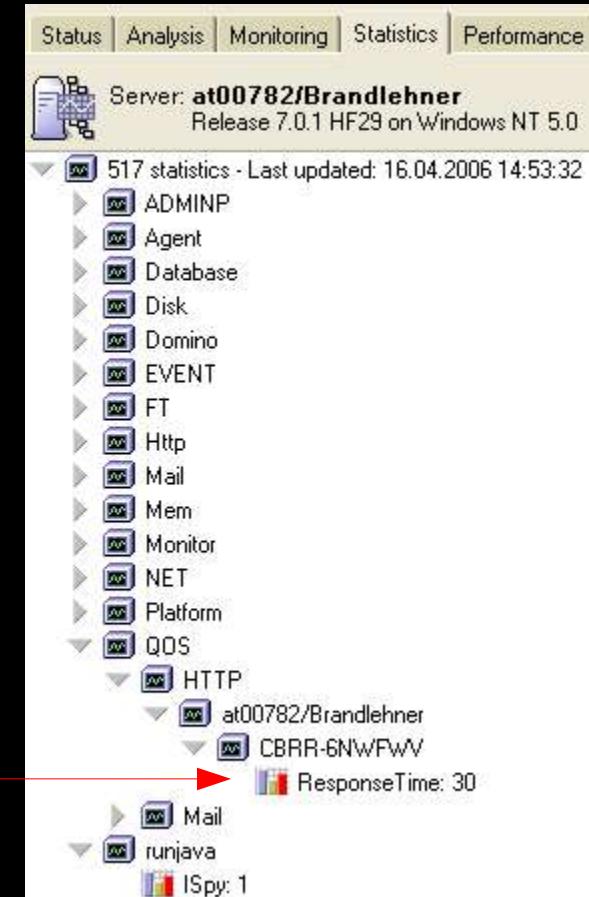
# domlog.nsf - Facts

- Zeichnet (optional alle) HTTP(S) Zugriffe auf
- Vorteile:
  - Verarbeitungszeit des Domino Servers wird aufgezeichnet
- Nachteile:
  - Logging belastet den Server
    - Reduzieren auf das Wesentliche
      - Ausnehmen von URLs (\*.gif, ...)
      - Ausnehmen von MIME-Types (text/css, ...)
    - Alternative: Logging in Textfiles



# ISpy / events4.nsf

- Erzeugt „Quality of Service“ Statistiken  
QOS.HTTP.<Destination Server>.<DUID>.ResponseTime  
Die ResponseTime wird in ms angegeben.
- Intervall konfigurierbar  
(default: 15 Minuten)
- Timeout-Schwellwert konfigurierbar  
(default: 30 Sekunden)  
Timeout generiert einen Event



# Page Detailer

- <http://www.alphaworks.ibm.com/tech/pagedetailer>

## IBM Page Detailer

A graphical tool that enables Web content providers to rapidly and accurately measure client side performance of Web pages.

Date Posted: July 2, 2003

[Overview](#)[Requirements](#)[Download](#)[FAQs](#)[Forum](#)[Reviews](#)

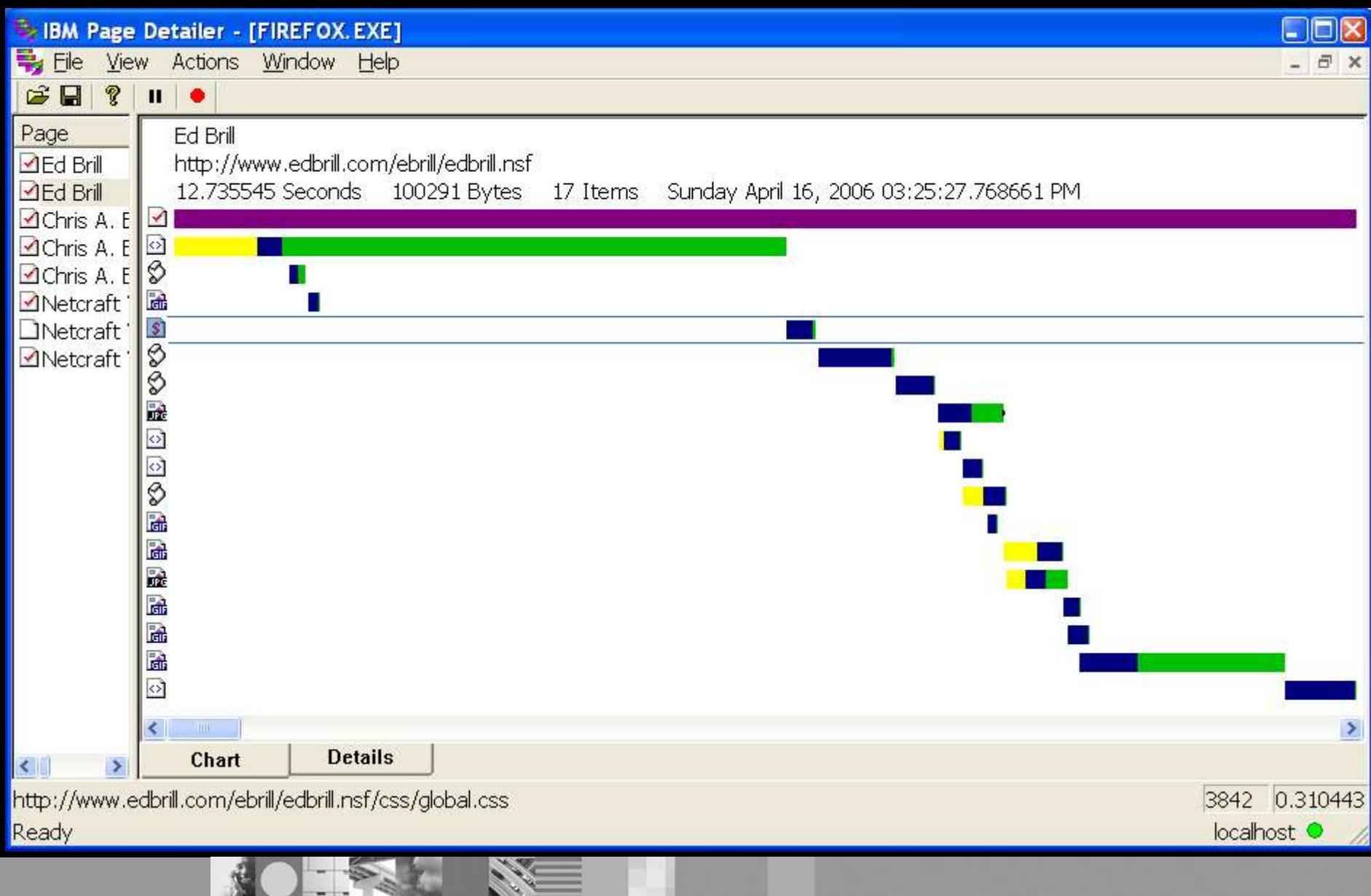
### What is IBM Page Detailer?

IBM Page Detailer is a graphical tool that enables Web site developers and editors to rapidly and accurately assess performance from the client's perspective. IBM Page Detailer provides details about the manner in which Web pages are delivered to Web browsers. These details include the timing, size, and identity of each item in a page. This information can help Web developers, designers, site operators, and IT specialists to isolate problems and improve performance and user satisfaction.

### How does it work?

IBM Page Detailer places a probe in the Windows Socket Stack to capture data about timing, size, and data flow, and then it presents the collected data in both graphical and tabular views, clearly showing how the page was delivered to the browser.





# Das „Expires“ Tag im HTTP Header

```
--- WD_CV_WS2_HTTP_HEADER_REQUEST(1057) CSTRING(7) Length=461
    GET /Brandlehner/cab_blog.nsf/js/blogsphere_252.js HTTP/1.1
    Host: chris.brandlehner.at
    User-Agent: Mozilla/5.0 (Windows; U; Windows NT 5.1; de; rv:1.8.0.2)
    Accept: /*
    Accept-Language: de-at,de;q=0.8,en;q=0.5,en-us;q=0.3
    Accept-Encoding: gzip,deflate
    Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
    Keep-Alive: 300
    Connection: keep-alive
    Referer: http://chris.brandlehner.at/
    Pragma: no-cache
    Cache-Control: no-cache

--- WD_CV_WS2_HTTP_HEADER_REPLY(1056) CSTRING(7) Length=239
    HTTP/1.1 200 OK
    Server: Lotus-Domino
    Date: Mon, 17 Apr 2006 20:58:54 GMT
    Last-Modified: Mon, 17 Apr 2006 20:58:52 GMT
    Content-Type: text/javascript
    Content-Length: 3838
    Expires: Tue, 18 Apr 2006 20:58:52 GMT
    Content-Language: en
```

Das „Expires“ Tag bestimmt, wie lange der Browser ein Element cachen darf/soll.



# Was tut man nun zur Verbesserung?

- „Mehr Blech“ - Skalierung durch mehr Server
  - Verteilung nach Aufgabe
  - Load Balancing
- Performance Tuning am Domino Server
- Vermeidung von unnötiger Last
- Änderungen am Applikationsdesign



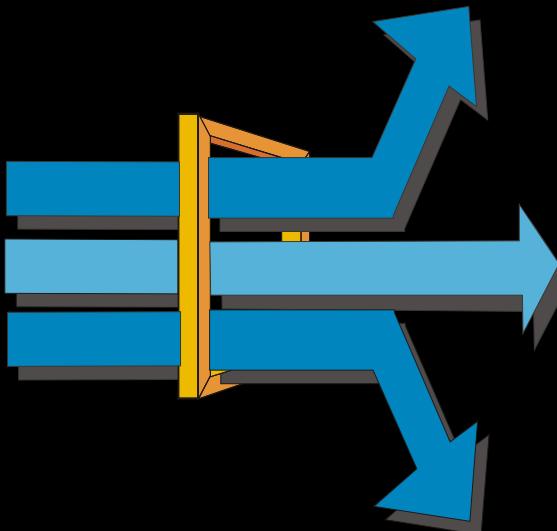
# Aufgabenverteilung zwischen Servern

IBM Software Group website screenshot showing the 'Migrate to the Penguin Rebate Program' page.

**Page Title:** Migrate to the Penguin Rebate Program

**Page Content:**

- Left Sidebar:** Lotus Notes & Domino Library, Competitive info, Case studies, Demos & trials, Services, Support, developerWorks, Business Partners, Related links (Lotus, IBM Workplaces, WebSphere Portal and WebSphere Everywhere products at a glance, Lotus software advantage, Warranty info, Lotus Domino Solutions Catalog).
- Main Content:** Headline: "IBM Linux Migration Program for Partners can help customers realize the benefits of migrating to Lotus Notes and Domino on a Linux platform". Sub-headline: "IBM software for Linux providing an open, robust and scalable platform for applications". Includes a penguin icon and a brief description of the rebate program.
- Right Sidebar:** More info (Press release: Migrate to the Penguin), IDC Insight: The Domino Effect, Get Adobe® Reader®.
- Bottom Sidebar:** Lotus Linux Customers (Monyah Richards integrates its global supply chain with Lotus Domino on Linux), ASPCA helps infrastructure woes to better provide for the welfare of animals, Get Adobe® Reader®.
- Footer:** Over 100 IBM Business Partners Invested in Migration Efforts. IBM continues to expand its Business Partner migration ecosystem, with over 100 business partners currently involved in helping to migrate customers to Lotus Notes and Domino and/or develop migration tools for the transition. Collectively, the Business Partner community, including Ingram and The



Datenbank  
<http://www.ibm.com/xyz.nsf>

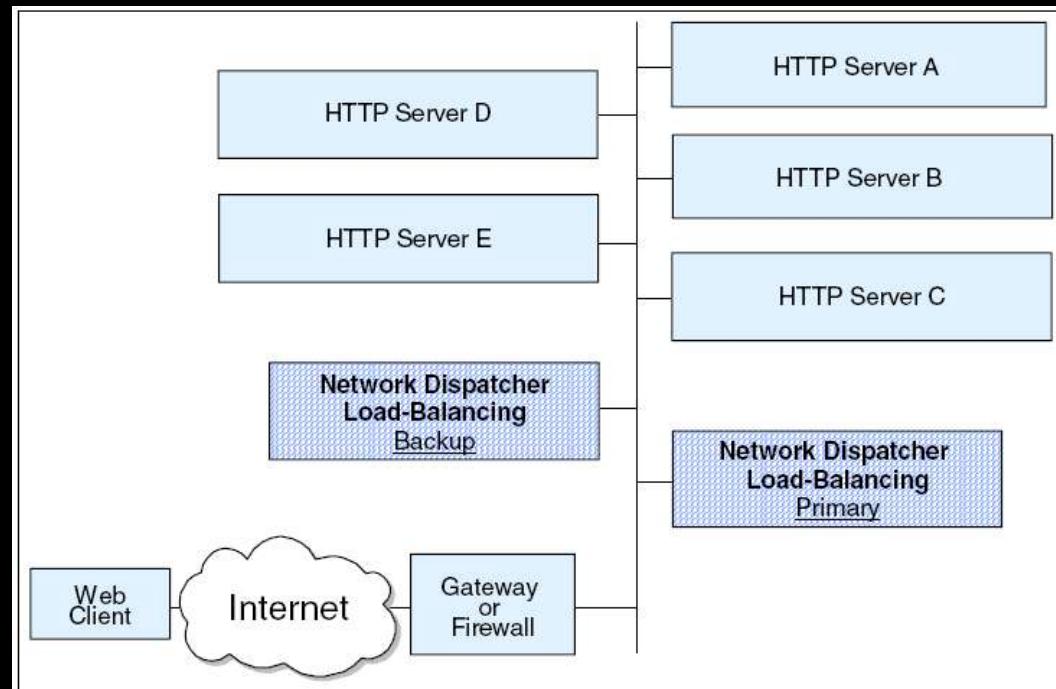
Bilder  
<http://images.ibm.com/xyz/1.jpg>

Statische Dateien  
<http://download.ibm.com/xyz/hannover.pdf>

# Load Balancing

- Network Dispatcher (WebSphere Edge Server)
- Cisco Local Director (Hardware)
- Reverse Proxy Load Balancer

<http://www.apsis.ch/pound/> (OpenSource für: Linux, Solaris, OpenBSD)



# Tuning – Domino Web Engine

- Server Dokument – Domino Web Engine
  - maximum cached designs

„historisches“ Feature, kaum Auswirkungen

maximum cached users

dieser Wert kann die Performance dramatisch beeinflussen

Je nach User-Anzahl von 64 auf bis zu 10000 erhöhen!

<http://www-128.ibm.com/developerworks/lotus/library/domino7-internet-performance-tuning.html>

Cached user expiration interval

bestimmt, wie lange der cache gültig ist, in dieser Zeit werden

Änderungen an ACL, Gruppen & Internet-Kennwort NICHT aktualisiert.

Kann üblicherweise angehoben werden.



Memory Caches	
Maximum cached designs:	128
Maximum cached users:	64
Cached user expiration interval:	120 seconds





# Tuning – Domino Web Agents

- **Run web agents concurrently?**

Sofern keine Applikation in Verwendung ist, welche explizit Probleme mit dieser Einstellung hat, sollte diese Option Enabled sein.

- **Web agent timeout**

Dieser Wert dient zum Schutz vor Agentproblemen.

Tipp: Ab Domino 7 eine DDM Probe auf lange laufende WebAgents setzen.

- *... später noch mehr zu Web Agents*

Web Agents	
Run web agents concurrently?	Enabled <input type="button" value="▼"/>
Web agent timeout:	30 <input type="button" value="seconds"/>



# Tuning – Domino HTTP Basics

- DNS Lookups

Schlecht für die Performance, also Disabled falls kein anderer Grund dieses Feature unbedingt erfordert.

Falls enabled, zumindest den DNS cache aktivieren

- Number (of) active threads

Alle HTTP-Requests werden an diese Threads verteilt.

- Strategie

- Effekt

The screenshot shows the 'Basics' configuration panel in the Domino Administrator. The 'Bind to host name:' dropdown is set to 'Disabled'. The 'DNS lookup:' dropdown is set to 'Disabled', indicated by a red arrow. The 'DNS lookup cache:' dropdown is set to 'Enabled'. The 'DNS lookup cache size:' input field is set to '256'. The 'DNS lookup cache found timeout:' input field is set to '120 seconds'. The 'DNS lookup cache not found timeout:' input field is set to '240 seconds'. The 'Number active threads:' input field is set to '4', indicated by a red arrow. A red annotation 'hierzu gleich mehr' is placed next to the 'Number active threads:' field.

# HTTP Threads – Strategie (Technote 1201715)

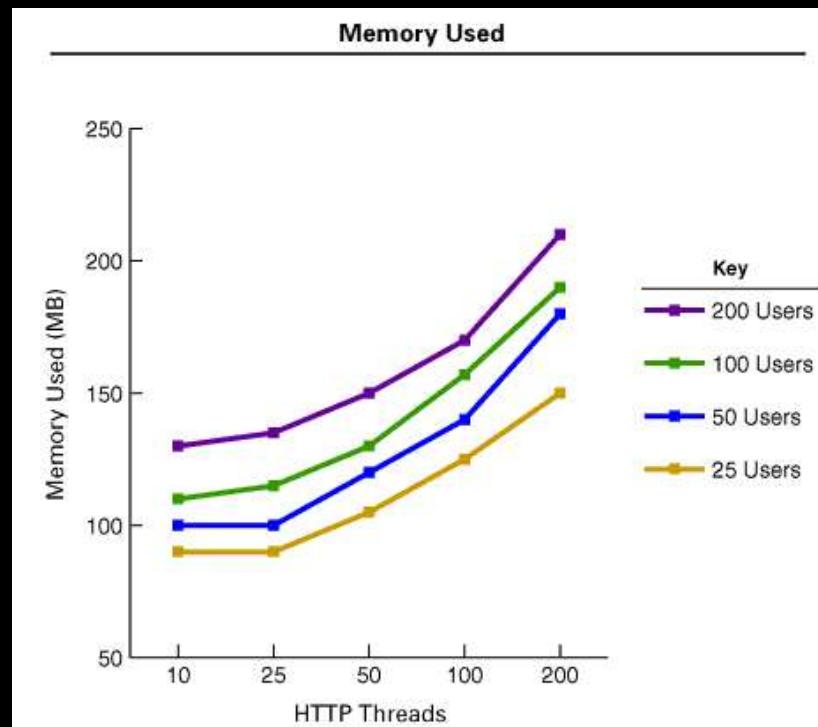
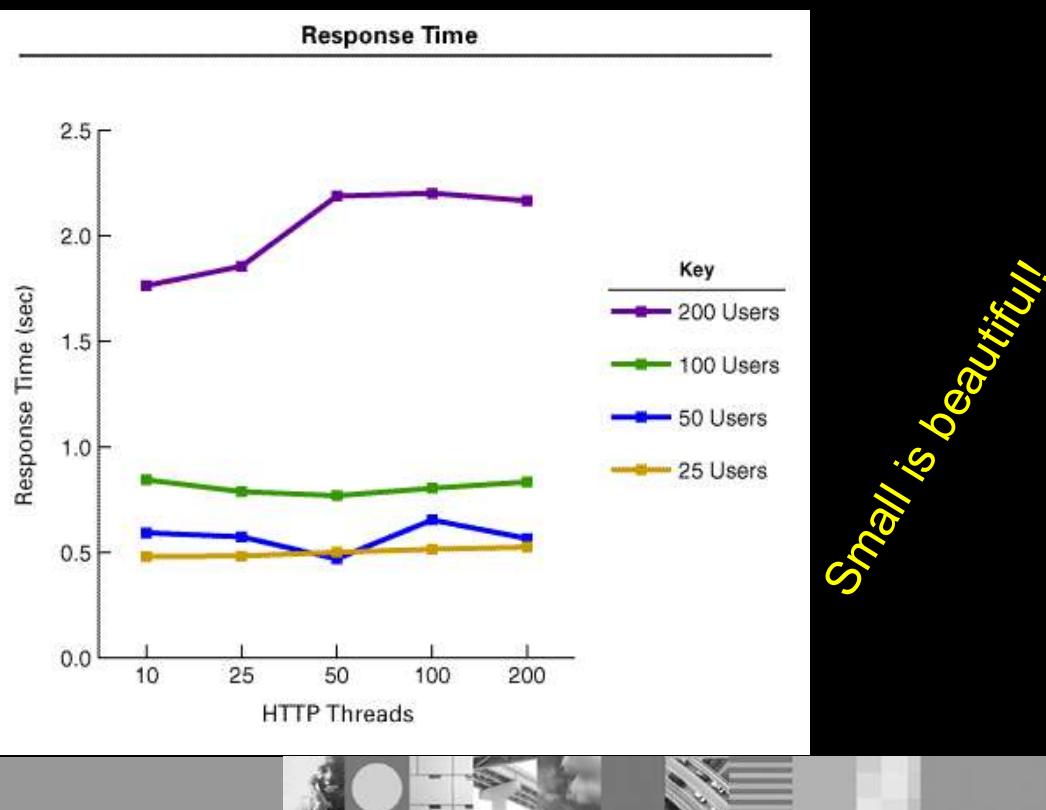


- **HTTPQueueMethod=0** - This setting is the default, and represents no change in queueing from the R6.0 and above. The accept thread will evenly distributed network connections to all worker threads using a round robin method. Connections are assigned to a specific thread.
- **HTTPQueueMethod=1** - This setting will cause the accept thread to find the worker thread that has the least number of network connections assigned to it and assign the new network connection to that worker thread. It is still possible that a new network connection may be assigned to a thread that is in the process of processing a long running request. It is recommended but not required that persistent connections are disabled when using this option to get the maximum effect. This will limit the possible wait time if a new network connection is queued to a thread that already is busy with other connection(s)
- **HTTPQueueMethod=2** - This setting will cause the accept thread to put the incoming network connections on a queue from with the worker threads will pull from. This is the same model as R5. It is also recommend but not required that persistent connections be disabled when using this option to get the maximum effect.



# HTTP Threads - Effekt

- http://www-128.ibm.com/developerworks/lotus/library/ls-HTTP\_Threads\_settings/side1.html



# HTTP - Network Settings

- The "**Listen Queue Size**: 512" indicates the number of simultaneous network connections to the server's network card. It is a low level setting, which directly affects your network cards TCPIP socket layer. In addition, each operating system has also its own internal maximum Listen Queue Size, and if you set Domino's LQS higher than the operating system's, the operating system's limit will be used instead.
- When Domino's HTTP task starts, it initializes the network card among with this parameter, telling the network card that you can only accept 512 simultaneous connections, if there are more incoming connection requests, they will have to wait until the queue gets smaller than 512.
- *Thanks to Mika Heinonen for that explanation: <http://siipi.com/mika>*

Network Settings	
Listen queue size:	512
Maximum number of concurrent network sessions:	540

# HTTP – Network Settings

- **Maximum number of concurrent network sessions**
- In der Dokumentation nicht erklärt, es scheint ratsam zu sein, diesen Wert gleich oder größer als die „Listen queue size“ zu setzen.

<http://www-128.ibm.com/developerworks/lotus/library/domino7-internet-performance/>

## Network Settings

Listen queue size:	<input type="text" value="512"/>
Maximum number of concurrent network sessions:	<input type="text" value="540"/>

# Authentifizierung

- Wenn möglich „Multiple Server (SSO) Session authentication“ verwenden

Der Server muss keine neue User-Session aufbauen sondern prüft nur noch den Ltpa-Token (Session Cookie)

- Die Anzahl der „maximum active sessions“ an die Anzahl der erwarteten „concurrent user“ anpassen



Server: **domino02/DOMINO** hetzner2.protektor.at

Basics | Security | Ports... | Server Tasks... | **Internet Protocols...** | MTAs... | Miscellaneous | Transactional Logging | Shared Mail | D...

HTTP | Domino Web Engine | DIIOP | LDAP |

### HTTP Sessions

This section does not apply as "Load Internet configurations from Server\Internet Sites documents" has been enabled.

---

Maximum active sessions: **1000**



# Vermeidung unnötiger Last

- „Schutz vor Spidern“ - robots.txt
- Caching statischer Dateien

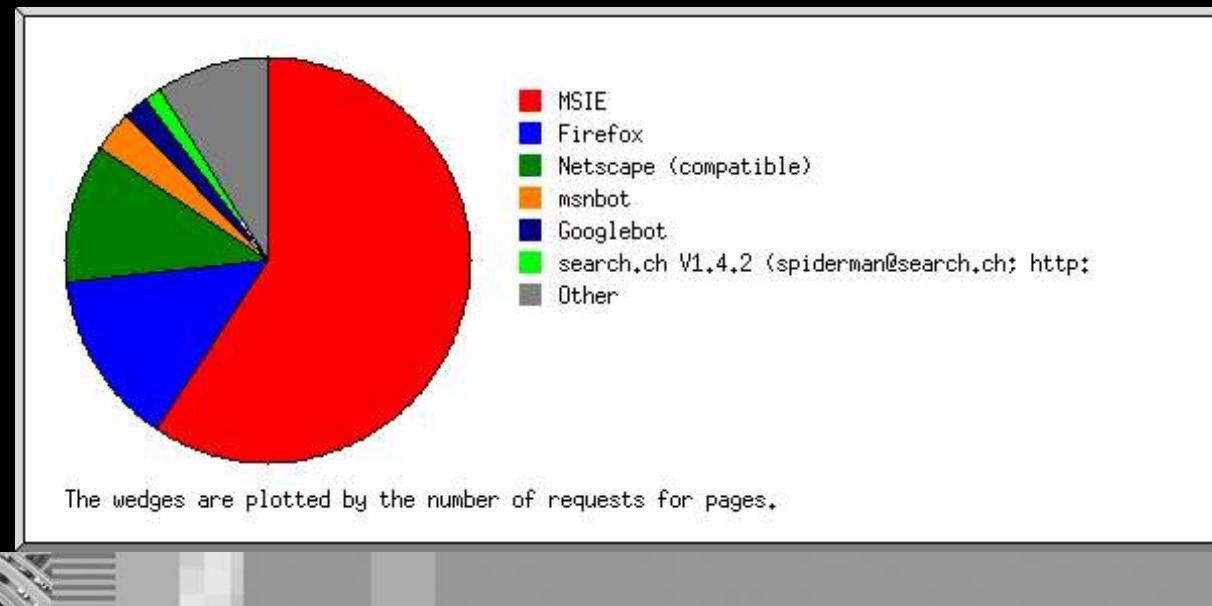


# robots.txt

```
# This is a file retrieved by webwalkers a.k.a. spiders that
# conform to a defacto standard.
# See <URL:http://www.searchengineworld.com/robots/robots_tutorial.htm>
# Format is:
#   # User-agent: <name of spider>
#   # Disallow: <nothing> | <path>
# Sites listing Bots by User-agent:
# - http://net-promoter.com/robots-txt/spider_list
# - http://www.pgts.com.au/pgtsj/pgtsj0208d.html
# -----
User-agent: *
Disallow: /help
Disallow: /icons
Disallow: images/*.gif
Disallow: images/*.png

User-agent: psbot
Disallow: /*

User-agent: msnbot
Disallow: /*.gif
```



# Client-Caching statischer Dateien

- <http://www-128.ibm.com/developerworks/lotus/library/dwa-clientperf/>
- Mögliche Angriffspunkte:
  - /icons/\* - Icons
  - /download/\* - Applets
  - /\$File/\* -
    - Kann auf „read only“ sites Sinn machen
    - \*.css – Cascaded Style Sheet
- Ein Admin kann hier nur gut eingreifen, wenn der Entwickler “vernünftige“ URLs generiert.

**Web Site Rule**

Basics | Comments | Administration

**Basics**

Description: icons rule

Type of rule: HTTP response headers

Incoming URL pattern: /icons/\*

HTTP response codes: 200, 206

Expires header:

Don't add header  
 Add header only if application did not  
 Always add header (override application's header)

Specify as number of days  
 Specify as date

Expires after 364 days

Custom headers:

Name:	Value:	<input type="checkbox"/> Override
Name:	Value:	<input type="checkbox"/> Override
Name:	Value:	<input type="checkbox"/> Override

# Applikationsdesign

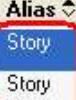
- „Hide“ Formeln
- Bevorzugte Designelemente
- @DbLookup
- WebQueryOpenAgent
- @SetHTTPHeader
- JavaScript
- DocType



# „Hide“ Formeln

- Wenn möglich, vermeiden
- Man sieht oft noch Anwendungen, in denen eine Maske für Notes UND Web entwickelt wird wobei spezifische Teile lediglich „versteckt“ werden

Besser (weil schneller und auch übersichtlicher) ist es, für Notes und Web getrennte Designelemente anzulegen

New Form					
Name	Alias	Last Modified	Last Modified By	Language	
ClientStory	Story	14.03.2006 07:13:51	Chad Schelhout/Schelhout	✓ ✓	
Web - Story	Story	21.02.2006 16:34:56	Christian Brandlehner/Brandlehner	✓	
Client - Story Response	StoryResponse	28.02.2006 11:02:53	Christian Brandlehner/Brandlehner	✓	
Web - Edit Comments	StoryResponse	21.02.2006 16:35:09	Christian Brandlehner/Brandlehner	✓	
NotesVideo_de	Video	18.01.2006 09:08:30	hobbes/qtzar.com	✓ German	
NotesVideo_en	Video	18.01.2006 09:08:30	hobbes/qtzar.com	✓ English	

# Bevorzugte Designelemente

- „Image Resources“ sind besser als eingebettete Bilder in Dokumenten

Name	Alias
imgND6.gif	images/nd6.gif
imgND7.gif	images/nd7.gif
imgND8.gif	images/nd8.gif

Der Pfad im Alias kann wieder für HTTP Rules (Expires Tag) verwendet werden



# Bevorzugte Designelemente

- Auch „File Resources“ sind schneller als zB dieselben Dateien als Anhang in einem Dokument
  - „File Resources“ sind durch den selbst definierbaren Mime type sehr vielseitig verwendbar

The screenshot shows a software interface for managing file resources. On the left, there is a toolbar with buttons for 'New File Resource', 'Open File', 'Open With...', 'Refresh', and 'Export'. Below the toolbar is a table listing five file resources:

Name	Alias
anchors.htc	FCKeditor/editor/css/behaviors/anchors.htc
ar.js	FCKeditor/editor/lang/ar.js
bg.js	FCKeditor/editor/lang/bg.js
browser.html	FCKeditor/editor/filemanager/browser/default/browser.html
bs.js	FCKeditor/editor/lang/bs.js

To the right of the table is a detailed view of a selected file resource ('browser.html'). This view includes a toolbar with icons for file operations, a 'File Resource' dropdown, and a 'Properties' section. The 'Properties' section shows the following details:

- Web Properties
- Read Only checkbox (unchecked)
- Mime type: `text/javascript` (highlighted with a red box and a red arrow pointing to it from the text below)
- Created: 30.03.2005 23:19:20 by Christian Brandlehner/Brandlehner
- Last modified: 19.04.2006 07:59:09 by Christian Brandlehner/Brandlehner

Wichtig: Niemals den Mime type vergessen!

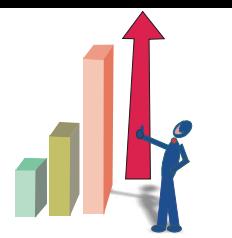
# @DbLookup

- „*The only time to use a nocache is when you have a demonstrated problem without it. Too many people use it as if it was part of the standard syntax of @dblookup, rather than as a problem solver.*“

Alan „Eddy“ Bell



- Fazit: Man verwendet ReCache sonst liest Domino die Daten, unter Umgehung aller Caches, direkt von der Platte!!



# WebQueryOpenAgent

- Möglichst vermeiden

Der IMG Trick mit HTTP Status Code 302 (moved temporarily):

```

```

...

Call CodeToIncreasePagecounter(duid)

Print "[/icons/ecblank.gif]"

...



# WebQueryOpenAgent - Performance

- Agent Profiling – auch für WQOA verwenden!

17.04.2006 13:15:02 CEDT

Elapsed time: 34 msec

Methods profiled: 11

Total measured time: 29 msec

Class	Method	Operation	Calls	Time
View	GetAllDocumentsByKey		4	14
View	Refresh		1	8
View	GetFirstDocument		1	5
Database	GetView		3	1
Document	[expandedname]	Set	1	1
DocumentCollection	Count	Get	13	0
Document	[expandedname]	Get	8	0
Document	HasItem		3	0
Session	CurrentDatabase	Get	2	0
Session	DocumentContext	Get	2	0
Database	GetProfileDocument		1	0



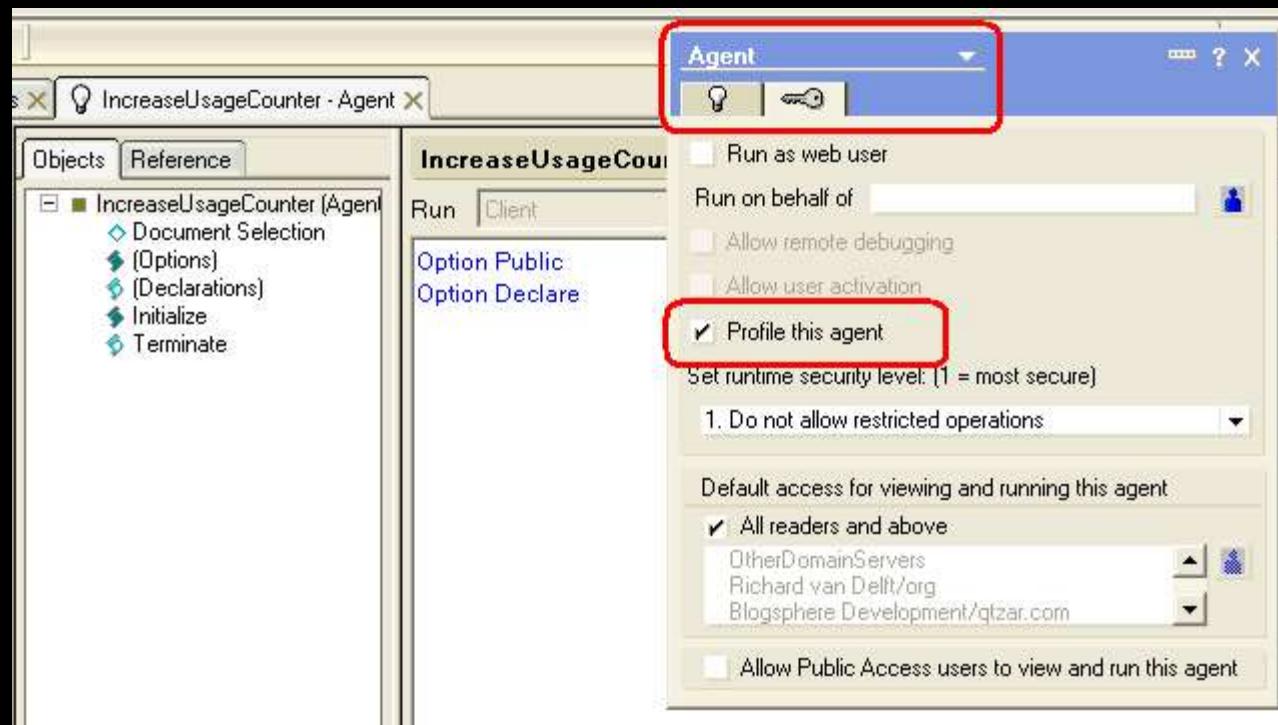
# Agent Profiling - \$BEProfile

- In der Datenbank muss es eine Maske mit dem Namen „\$BEProfile“ und darin ein RichText-Feld „Body“ geben



# Agent Profiling – im Agenten einschalten

- Nun nur noch im Agenten das Profiling aktivieren



# @SetHTTPHeader

- Das „Expires“-Tag im HTTP Header kann nicht nur über WebSite Dokumente gesetzt werden, sondern auch über @SetHTTPHeader

The screenshot shows the IBM WebSphere Studio Application Developer interface. In the center is a code editor window titled "blogspHERE.js - Page". The code contains a function named "gravatar" which uses the "document.write" method to insert an image tag. A red box highlights the "Computed Value" placeholder in the code.

```
//Cache control
<Computed Value>
function gravatar(hash) {
    var isgravatarenabled= '<Computed Value>';
    if(isgravatarenabled == "Yes") {
        document.write('" style="<Computed Value>: 20px">');
    }
}
```

Below the code editor is a "Properties" panel with tabs for "Objects" and "Reference". The "Objects" tab is selected, showing a tree view with nodes for "blogspHERE.js", "252.js (Page)", and "Computed Text". Under "Computed Text", there is a node named "Value". A red box highlights the "Value" node.

The "Computed Text : Value" section of the properties panel shows a formula input field. The formula is "@SetHTTPHeader("Expires";@Adjust(@Now([ServerTime]):0:0:1:0:0:0));"". This formula is also highlighted with a red box.

# JavaScript

- Anstelle von immer wiederkehrenden *Berechnungen* pro Dokument (Form, Page), wie es beispielsweise bei Übersetzungen oft der Fall ist, macht es Sinn, die Berechnung einmal in einem berechneten JavaScript File durchzuführen, und auf den Seiten lediglich durch Aufruf einer Funktion anzuzeigen.

```
<script language="JavaScript" type="text/javascript">xmllink();</script>
```

```
function xmllink() {  
    document.write(''); }
```



# DOCTYPE

- Domino Default:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
```

- DominoCompleteDoctype=1

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "  
http://www.w3.org/TR/html4/loose.dtd">
```

- DominoCompleteDoctype=2

- <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "  
<http://www.w3.org/TR/html4/strict.dtd>">

- Der notes.ini Parameter **DominoCompleteDoctype** existiert seit Version 6.5.3



# Beispiel – Quirks Mode

The screenshot shows a Microsoft Internet Explorer window displaying the "Lotus Notes and Domino Help" page. The browser's status bar indicates "view-source: - Quelltext von: http://www-12.lotus.com/ldd/doc/domino\_notes/7.0/help7\_designer.nsf>Main?OpenF...". A red box highlights the "Quirks Mode" button in the toolbar. Another red box highlights the first line of the source code, which is the DOCTYPE declaration: `<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Frameset//EN">`.

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Frameset//EN">
<html>
<head>
<script language="JavaScript" type="text/javascript">
<!--
self._domino_name = "_Main";
// -->
</script>
```

# DOCTYPE - Auswirkungen

- \* **Quirks mode** handles the older HTML, and works with and checks for unclosed tags, <br>, and all the rest. As you might expect, this slows down document parsing, and therefore, delays its browser display.
- \* **Standards mode** handles constrained HTML and XHTML, and expects the document to be well structured and organized. As a result, parsing is faster, and the page displays more quickly (and almost identically across browsers).
- Quelle: Brett McLaughlin <http://www-128.ibm.com/developerworks/library/wa-slicksite/>



# Fragen?



- Lese-Empfehlungen

<http://chris.brandlehner.at>

<http://www.openntf.org>

<http://de.selfhtml.org>

