

Site Analytics in IBM WebSphere Portal

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This is a work-in-progress. It represents my own ever-increasing understanding and experience in this area.

In brief, this shows how Site Analytics may be set up using IBM WebSphere Portal in order that usage and error logs can be analysed using tools such as AWStats, Nihuo and WebTrends (other tools are available)

The term "portal analytics" describes a process that can help you understand how your portal is used. IBM WebSphere Portal writes usage records to a dedicated log file. Because the format of the log follows industry standards ("NCSA Combined"), you can integrate portal usage data with your preferred reporting and analytics tools.

There are a number of options in terms of logging activity, including the performance of the Java processes within the underlying WebSphere Application Server

Tivoli Performance Viewer

Tivoli Performance Viewer > WebSphere_Portal

Use this page to view and refresh performance data for the selected server, change user and log settings, and view summary reports and information on specific performance modules.

[Refresh](#) [View Module\(s\)](#)

WebSphere_Portal

- Advisor
- Settings
- Summary Reports
- Performance Modules

[Deselect all items](#)

Servlets Summary Report

[More information about this page](#)

[Start Logging](#)

Name	Application	Total Requests	Avg Resp Time	Total Time	Time
LoginView.jsp	login.war	3	99	297	12:52:45
/about.jsp	ISCAAdminPortlet.war	2	179.5	359	12:52:45
pagingLayout.jsp	isclite#isclite.war	4	0	0	12:52:45
erversCollectionLayout.jsp	isclite#isclite.war	1	203	203	12:52:45
xmlRegisterData.jsp	isclite#isclite.war	1	0	0	12:52:45
defaulterror.jsp	PA_WPF#WPF01.war	3	47	141	12:52:45
ColumnContainer.jsp	isclite#isclite.war	2	828	1,656	12:52:45
Content.jsp	isclite#isclite.war	4	344	1,376	12:52:45
RowContainer.jsp	isclite#isclite.war	2	851.5	1,703	12:52:45
/index.jsp	isclite#isclite.war	2	617	1,234	12:52:45
FeedReaderPortletView.jsp	wp.bp.feedreader.war	2	281.5	563	12:52:45
feeds_introduction.jsp	PA_Blurb#Blurb.war	1	0	0	12:52:45
gadgets_introduction.jsp	PA_Blurb#Blurb.war	1	16	16	12:52:45
tarted_gettingStarted.jsp	PA_Blurb#Blurb.war	2	343.5	687	12:52:45
/logon.jsp	isclite#isclite.war	2	1,866.5	3,733	12:52:45
ErrorSessionTimeout.jsp	wps#wps.war	1	0	0	12:52:45
/screens/html/Home.jsp	wps#wps.war	10	4,792	47,920	12:52:45
banner.jsp	isclite#isclite.war	2	7.5	15	12:52:45
bannerframe.jsp	isclite#isclite.war	2	94	188	12:52:45

Or more specific portal/portlet-focused metrics: -

Performance Monitoring Infrastructure (PMI)

[Performance Monitoring Infrastructure \(PMI\)](#) > [WebSphere Portal](#) > Custom monitoring level

Use this page to configure Performance Monitoring Infrastructure (PMI)

Runtime Configuration

WebSphere Portal

- Alarm Manager
- Enterprise Beans
- Dynamic Caching
- JDBC Connection Pools
- DCS Statistics
- HAManager
- JVM Runtime
- JCA Connection Pools
- Object Pool
- ORB
- Schedulers
- Servlet Session Manager
- SIB Service
- SipContainerModule
- System Data
- Thread Pools
- Transaction Manager
- Web Applications
- Portlet Application
- Web services
- Workload Management
- Web services Gateway

Enable Disable

Select	Counter	Type	Description	Status
☐	Number of concurrent portlet requests	RangeStatistic	Total number of concurrent requests served	Disabled
☐	Number of loaded portlets	CountStatistic	Total number of loaded portlets	Disabled
☐	Number of portlet errors	CountStatistic	Total number of portlet errors that occurred	Disabled
☐	Number of portlet requests	CountStatistic	Total number of requests served	Disabled
☐	Response time of a portlet processEvent request	TimeStatistic	Average time (ms) to serve a processEvent request	Disabled
☐	Response time of a portlet serveResource request	TimeStatistic	Average time (ms) to serve a serveResource request	Disabled
☐	Response time of portlet action	TimeStatistic	Average time (ms) to serve an action request	Disabled
☐	Response time of portlet render	TimeStatistic	Average time (ms) to serve a render request	Disabled
Total 8				

Or via a built-in service within WebSphere Portal, which can generate the NCSA log files for further external analysis

Resource environment providers

[Resource environment providers](#) > [WP SiteAnalyzerLogService](#) > Custom properties

Use this page to specify custom properties that your enterprise information system (EIS) requires for the resource providers and resource factories that you configure. For example, most database vendors require additional custom properties for data sources that access the database.

⊞ Preferences

New Delete



Select	Name	Value	Description	Required
☐	SiteAnalyzerFileHandler.fileName	logs/\$APPSERVER_NAME/sa.log	Default: logs/\$APPSERVER_NAME/sa.log	false
☐	SiteAnalyzerPageLogger.isLogging	true	Default: false	false
☐	SiteAnalyzerPortletLogger.isLogging	true	Default: false	false
☐	SiteAnalyzerSessionLogger.isLogging	true	Default: false	false

Total 4

SiteAnalyzerSessionLogger.isLogging=true
SiteAnalyzerUserManagementLogger.isLogging=true
SiteAnalyzerPageLogger.isLogging=true
SiteAnalyzerPortletLogger.isLogging=true
SiteAnalyzerPortletActionLogger.isLogging=true
SiteAnalyzerApplicationActionLogger.isLogging=true
SiteAnalyzerErrorLogger.isLogging=true

Some sample reports from AWStats

Statistics for:	dmht60p	
Last Update:	17 Dec 2008 - 13:22	
Reported period:	Month Dec 2008	
When:	Monthly history Days of month Days of week Hours	
Who:	Countries Full list Hosts Full list Last visit Unresolved IP Address Robots/Spiders visitors Full list Last visit	
Navigation:	Visits duration File type Viewed Full list Entry Exit Operating Systems Versions Unknown Browsers Versions Unknown	
Referrers:	Origin Referring search engines Referring sites Search Search Keyphrases Search Keywords	
Others:	Miscellaneous HTTP Status codes Pages not found	
Summary		
Reported period	Month Dec 2008	
First visit	17 Dec 2008 - 11:33	
Last visit	17 Dec 2008 - 12:33	
	Unique visitors	Number of
Viewed traffic *	2	2 (1 visits/vis
Not viewed traffic *		

Month	Unique visitors	Number of
Jan 2008	0	

	Jan 2008	Feb 2008	Mar 2008	Apr 2008	May 2008	Jun 2008	Jul 2008	Aug 2008	Sep 2008	Oct 2008	Nov 2008	Dec 2008
Month												
Unique visitors	0	0	0	0	0	0	0	0	0	0	0	0
Number of visits	0	0	0	0	0	0	0	0	0	0	0	0
Pages	0	0	0	0	0	0	0	0	0	0	0	0
Hits	0	0	0	0	0	0	0	0	0	0	0	0
Bandwidth	0	0	0	0	0	0	0	0	0	0	0	0

Pages-URL (Top 10) - Full list - Entry - Exit			
14 different pages-url			
	Viewed	Average size	Entr
/Page/6_CG AH47L000DQ C02F 24OKIS0003/null	3	0	
/Portlet/5_CG AH47L000DQ C02F 24OKIS0003/Quickr_REST_Portlet	3	0	
/Page/6_CG AH47L0082M302B566VO 730M6/null	2	0	1
/Command/Login	2	92 Bytes	
/Portlet/5_CG AH47L0082M302B566VO 730E4/Login_Portlet	2	0	
/Page/6_CG AH47L0009JD02B5MH2L10G Q6/null	2		
/Portlet/5_CG AH47L0009JD02B5MH2L10G 60/Information_Portlet	2		
/Page/6_CG AH47L0009JD02B5MH2L10G 67/null	1		
/Command/Logout	1		
/Portlet/5_CG AH47L0009JD02B5MH2L10G U4/Information_Portlet	1		
Others	4		

Direct address / Bookmark / Link in email...

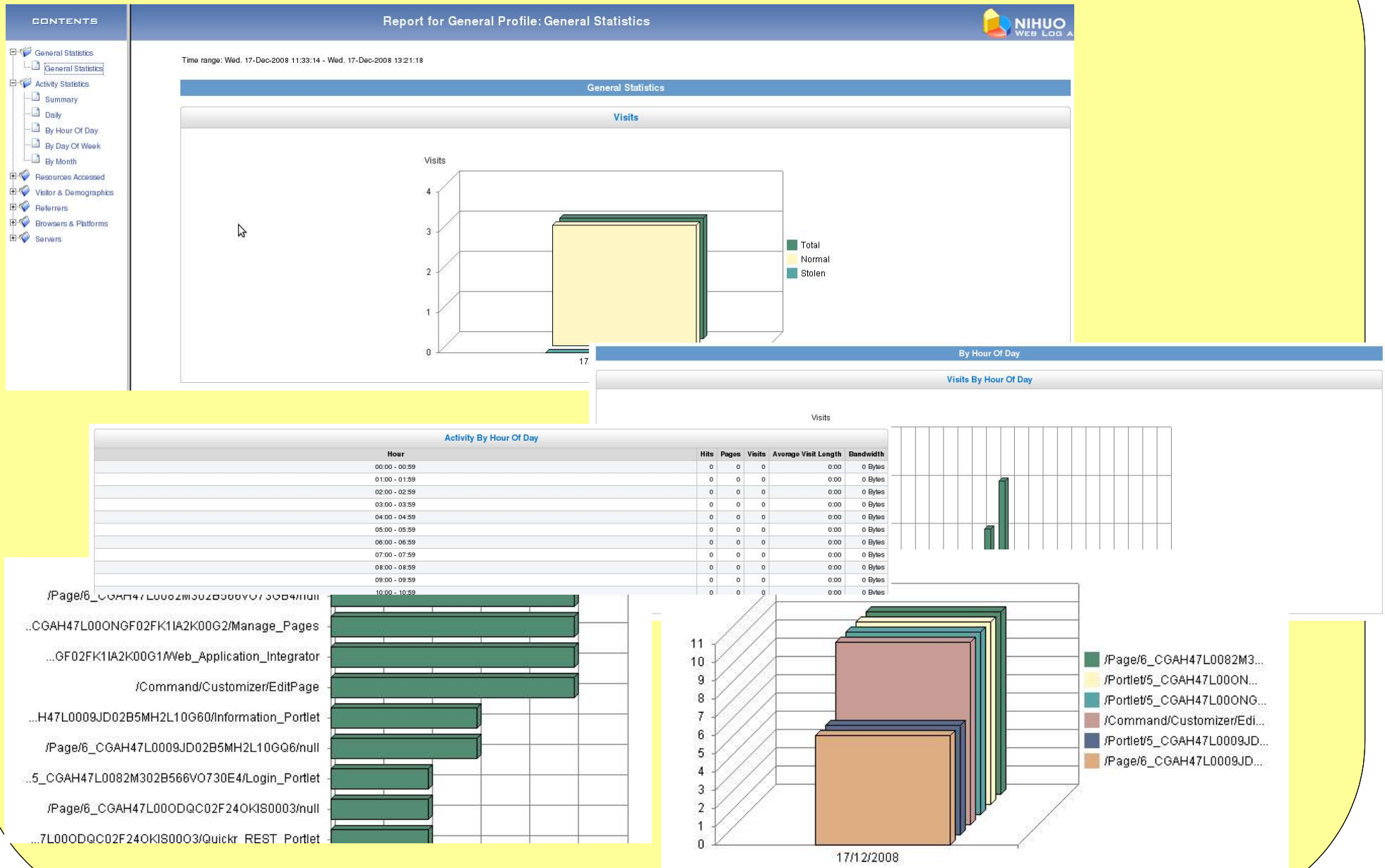
Links from an Internet Search Engine - Full list

Links from an external page (other web sites except search engines) - Full list

- http://stargate.uk.ibm.com/Page/6_CG AH47L000DQ C02F 24OKIS0003/nul... 3 3
- http://stargate.uk.ibm.com/Page/6_CG AH47L0009JD02B5MH2L10G 67/nul... 3 3
- http://stargate.uk.ibm.com/Page/6_CG AH47L0082M302B566VO 730M6/nul... 2 2
- http://stargate.uk.ibm.com/Page/6_CG AH47L0009JD02B5MH2L10G Q6/nul... 2 2
- http://stargate.uk.ibm.com/Page/6_CG AH47L0009JD02B5MH2L10G E1/nul... 1 1

Unknown Origin

Some sample reports from Nihuo



More to consider ... Personalisation, Feedback and Likeminds

Feedback and analytics

Personalization provides a complete logging framework for collecting data on how visitors are using your Web site. If Feedback is enabled, data is automatically collected about each Personalization rule that is fired. In addition, development tools enable Web sites to collect a variety of data related to visitors' actions and behavior. By default this data is logged to a standard database schema for later analysis and reporting. The framework is also extensible, allowing Web sites to customize and supplement the way data is collected and stored to more fully meet their needs.

http://publib.boulder.ibm.com/infocenter/wpdoc/v6r1m0/topic/com.ibm.wp.ent.doc/pzn/pzn_feedbackanalytics.html

An introduction to LikeMinds

Personalization contains a dynamic recommendation system based on LikeMinds. LikeMinds is software that is used with your e-commerce applications. LikeMinds analyzes user interactions that occur on your Web site and generates real time predictions and recommendations to your Web site users.

Real time predictions are generated by three LikeMinds engines using recommendation rules within Personalization. These rules, called recommend content, base their predictions on transactions logged through Personalization's rating and action beans.

When a user visits your Web site, rating and action beans log captured transactional data. If your e-commerce Web site is set up so that users can rate content (or products), you use Rating beans to capture rating data. Similarly, if you use shopping cart technology, you use action logging beans to capture content affinity behavior to capture shopping activity. Both rating and action data is stored in your database.

http://publib.boulder.ibm.com/infocenter/wpdoc/v6r1m0/topic/com.ibm.wp.ent.doc/pzn/pzn_intro_likeminds.html

Further reading

Configuring WebSphere Portal for site analysis logging

http://publib.boulder.ibm.com/infocenter/wpdoc/v6r1m0/topic/com.ibm.wp.ent.doc_v6101/trouble/adsaconf.html

Understanding the site analysis log

http://publib.boulder.ibm.com/infocenter/wpdoc/v6r1m0/topic/com.ibm.wp.ent.doc_v6101/trouble/adsaundr.html

IBM WebSphere Developer Technical Journal: Using portal analytics with open-source reporting tools - Stefan Liesche and Steffen Uhlig

http://www.ibm.com/developerworks/websphere/techjournal/0609_liesche/0609_liesche.html

AWStats - Free real-time logfile analyzer to get advanced statistics (GNU GPL)

<http://awstats.sourceforge.net>

Nihuo Web Log Analyzer

<http://www.loganalyzer.net/>

WebTrends

<http://www.webtrends.com/>

NCSA Combined Log Format

<http://httpd.apache.org/docs/2.2/logs.html#combined>

Setting up AWStats on Ubuntu

Install Apache2 web server (using Synaptic Package Manager)

Apache automatically starts (runs as root) - can be stopped/started using **apache2ctl stop/start/restart** (again need to run as root so I used **sudo bash** to get a root shell)

Download AWStats (<http://prdownloads.sourceforge.net/awstats/awstats-6.8.tar.gz>)

Expand **awstats-6.8.tar.gz** into **/usr/local/awstats** (will need to rename expanded directory **awstats-6.8** or use **ln**)

Change directory to **/usr/local/awstats/tools**

Run the AWStats initial configuration process: -

```
perl /awstats_configure.pl
```

and enter the default Apache2 configuration filename e.g. **/etc/apache2/httpd.conf** when prompted

Choose to create a new configuration file and enter a suitable name e.g. the hostname of your machine and accept the other defaults.

This will generate a configuration file, **/etc/awstats/awstats.dmht60p.conf**, within which you'll see a reference to the log file that AWStats will be analysing e.g. **/var/log/httpd/mylog.log**.

Make a directory entitled **/var/log/httpd** and place the the **sa.log** file (generated by WebSphere Portal's SiteAnalytics service) into it as **mylog.log**

Run the following process to create the initial statistics database: -

```
perl /usr/local/awstats/wwwroot/cgi-bin/awstats.pl -config=dmht60p -update
```

Run the AWStats overview report generation process: -

```
perl /usr/local/awstats/wwwroot/cgi-bin/awstats.pl -config=dmht60p -output -staticlinks > awstats.dmht60p.html
```

Open the newly created/updated **awstats.dmht60p.html** in a web browser