Asbru Ltd.

Asbru Web Content Management System

Technical Notes

Easily & Inexpensively
Create, Publish & Manage Your Websites

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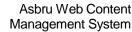
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Asbru Web Content Management System

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Introduction

The following technical notes describe basic installation and configuration of various software products for use with the Asbru Web Content Management system. These technical notes are not meant to be complete and may not be correct for your product versions and should only be considered as suggestions for basic installation and configuration for initial test purposes.

The various software products' own documentation should always be read and followed for security considerations and more advanced installation and configuration options.

If you only follow these technical notes your installation and configuration may be insecure and inefficient.

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1 Red Hat Enterprise 3.0

1.1 Aspell Spell Checking

Red Hat Enterprise 3.0 includes an old, broken version of the "aspell" spell checker software, which hangs forever when using the "-a" parameter to pipe content to the spell checker.

The "aspell" spell checker software must be upgraded to a newer version for spell checking to function with the Asbru Web Content Management system. The "aspell" spell checker software is available for free from http://aspell.net/

2 Microsoft Windows and Internet Information Services

The current version of the Asbru Web Content Management system is developed for use with Microsoft Windows 2000 and Microsoft Windows XP. However, other versions may also work with or without configuration changes.

2.1 Service Packs and Updates

Microsoft Windows 2000 should be upgraded to Service Pack 4 (or newer) and all Microsoft Windows Update security patches and other recommended updates should be installed.

Microsoft Windows XP should be upgraded to Service Pack 1a (or newer) and all Microsoft Windows Update security patches and other recommended updates should be installed.

2.2 Microsoft Data Access Components (MDAC)

Microsoft Data Access Components (MDAC) should be upgraded to version 2.8 (or newer). Please see http://msdn.microsoft.com/data/ for details.

2.3 Microsoft JET Database Engine

Microsoft JET Database Engine should be upgraded to the latest version 4.0 service pack (or newer).

2.4 Microsoft Windows Script

Microsoft Windows Script version 5.5 (or newer) should be installed. All recent versions of Microsoft Windows should include this as default. Alternatively, please see:

http://msdn.microsoft.com/scripting/default.htm?/scripting/vbscript/download/vbsdown.htm

for download details.

The Microsoft Windows Script Host Object Model must be installed and registered (which it should be as default) or the following error may occur:

```
error '8002801d'
Library not registered.
/webadmin/Text.asp, line XX
```

which may be resolved with the following command executed in the folder with the
"wshom.ocx" file (i.e. c:\windows\system32):

```
regsvr32 wshom.ocx
```

2.5   Microsoft Windows Registry ODBC Permissions

For Microsoft Windows and Internet Information Services additional permissions to access
the Microsoft Windows Registry ODBC settings may be required or you may get the
following error when you try to configure the Asbru Web Content Management database
connection:

```
[Microsoft][ODBC Microsoft Access Driver]General error Unable to open registry key 'Temporary (volatile) Jet
DSN for process 0xe60 Thread 0xe5c DBC 0x11e5024 Jet'.
```

To grant permissions to access the Microsoft Windows Registry ODBC settings:

-    Open the Microsoft Windows Registry:
     My Computer\HKEY_LOCAL_MACHINE\SOFTWARE\ODBC

-    Select the Permissions menu and Add: Everyone with Full Control permissions.
     (Alternatively, add "IUSR_XXXXX" with Full Control permissions where "XXXXX"
     must be your configured Microsoft Windows "computer name").

-    Select OK

Warning: For security reasons you may not want to simply grant full control to everyone.
Please see the Microsoft Windows documentation for details on tighter security configuration.

2.6   Website Root Folder Permissions

The Asbru Web Content Management system must have permissions to create and write files
in the website root folder and its sub-folders.

For Microsoft Windows XP "simple file sharing" must be disabled. Open a Windows
Explorer window and disable simple file sharing:

-    Select Tools / Folder Options / View / Advanced Setttings.

-    Uncheck the Files And Folders / Use Simple File Sharing setting.

-    Select OK

For Microsoft Windows and Internet Information Services create and write permissions can
be granted by setting the website root folder (i.e. C:\inetpub\wwwroot) properties:

-    Select Properties for the website root folder.

-    Select the Security tab and Add: Everyone with Full Control permissions.
     (Alternatively, add "IUSR_XXXXX" with Full Control permissions where "XXXXX"
     must be your configured Microsoft Windows "computer name").

Warning: For security reasons you may not want to simply grant full control to everyone.
Please see the Microsoft Windows and Internet Information Services documentation for
details on tighter security configuration.

2.7   Default Documents

The Asbru Web Content Management system uses index.asp, index.jsp and index.php
(depending on which version of Asbru Web Content Management system you are using) as
the default web pages.

For Microsoft Windows and Internet Information Services you should configure one of these
as your default web pages to be returned by the web server:

-    Open the Microsoft Windows – Settings – Control Panel – Administrative Tools –
     Internet Services Manager.

-    Select the Default Web Site and Properties and Documents.

-    Add "index.asp", "index.jsp" or "index.php" as the top priority Default Document.

2.8   URL Rewriting

To enable the web content management system's URL Rewriting feature, Microsoft Internet
Information Services must be extended with functionality similar to the Apache web server's
"mod_rewrite" module. A number of such extensions are available from third-party software
vendors. Please search the Internet for "windows iis mod_rewrite" for details.

2.9   CMD.EXE Permissions

To enable the web content editor's spell checking feature, Microsoft Internet Information
Services must be granted permission to execute other programs ("aspell.exe") through the
"cmd.exe" Microsoft Windows command.

-    Open a Microsoft Windows Command Prompt

-    Enter the following command where "ASBRU" must be replaced with your Microsoft
     Windows "computer name".

     cacls c:\windows\system32\cmd.exe /E /G ASBRU\IUSR_ASBRU:R

2.10   Temp Folder Permissions

To enable the web content editor's spell checking feature, Microsoft Internet Information
Services / CMD.EXE / ASPELL.EXE must be granted permission to create, write and delete
temporary files in the Microsoft Windows TEMP folder by setting the TEMP folder (i.e.
C:\windows\temp) properties:

-    Select Properties for the TEMP folder.

-    Select the Security tab and Add: Everyone with Full Control permissions.

Warning: For security reasons you may not want to simply grant full control to everyone.
Please see the Microsoft Windows and Internet Information Services documentation for
details on tighter security configuration.

2.11   Parent Path Permissions

Microsoft Windows 2003 IIS 6.0 may be configured to forbid "parent paths" resulting in a "Disallowed Parent Path" ASP error message.

To grant Microsoft Windows 2003 IIS 6.0 parent path permissions:

-   Open your IIS Manager.

-   Right click your web site.

-   Choose Properties.

-   Select Home Directory Tab

-   Click 'Configuration' button

-   Select App Options Tab

-   Check the Enable Parent Paths

-   Click OK and your new configuration will be saved

2.12   File Upload Limit

Microsoft Windows 2003 IIS 6.0 may be configured to forbid upload of files larger than ~200KB resulting in the following ASP error message:

> Request object error 'ASP 0104 : 80004005'
> Operation not Allowed
> /webadmin/ASPfileupload2.asp, line 7

To change the Microsoft Windows 2003 IIS 6.0 file upload limit:

-   Stop the IIS service

-   Edit the "C:\Windows\System32\Inetsrv\MetaBase.xml" file

-   Set "AspMaxRequestEntityAllowed" to "1073741824" (which is 1 GB or another suitable value of your choice)

-   Start the IIS service

2.13

Microsoft Windows IIS 7.0 may be configured to forbid "double escape sequences" resulting in the following web server error message when trying to login to the web content management system:

> HTTP Error 404.11 - Not Found
> The request filtering module is configured to deny a request that contains a double escape sequence.
> Module: RequestFilteringModule

Double escape sequences may be required by the web content management system for automatic redirection between different pages/functions in the web content management system. To permit double escape sequences a "requestFiltering" configuration setting should be added to the website's "web.config" configuration file or the web server's "C:\Windows\System32\inetsrv\config\applicationHost.config" configuration file:

```
<system.webServer>
  <security>
   <requestFiltering allowDoubleEscaping="true">
   </requestFiltering>
  </security>
  .....
</system.webServer>
```

Microsoft Windows IIS 7.0 may be configured to forbid changes to the "requestFiltering" in the "web.config" configuration file resulting in the following web server error message when trying to login to the web content management system:

HTTP Error 500.19 - Internal Server Error
The requested page cannot be accessed because the related configuration data for the page is invalid.
Module: RequestFilteringModule
Config Error: This configuration section cannot be used at this path. This happens when the section is locked at a parent level. Locking is either by default (overrideModeDefault="Deny"), or set explicitly by a location tag with overrideMode="Deny" or the legacy allowOverride="false".

To resolve this error the "requestFiltering" configuration setting can be moved from the website's "web.config" configuration file to the web server's "C:\Windows\System32\inetsrv\config\applicationHost.config" configuration file. Or the web server's "C:\Windows\System32\inetsrv\config\applicationHost.config" configuration file setting can be changed to:

```
<section name="requestFiltering" overrideModeDefault="Allow" />
```

3   Apache Web Server

3.1   URL Rewriting
The Apache web server "mod_rewrite" module rewrite rules may be defined in both the Apache "httpd.conf" configuration file and ".htaccess" files. However, rewrite rules defined in ".htaccess" files may not work correctly with the web content management system. If rewrite rules in ".htaccess" files does not work correctly, please try to move the rewrite rules to the Apache "httpd.conf" configuration file.

4   Microsoft SQL Server 2000

4.1   Service Packs and Updates
Microsoft SQL Server 2000 should be updated to Service Pack 3a (or newer).
Please see http://support.microsoft.com/default.aspx?scid=kb;EN-US;290211 for details.

4.2   Asbru Web Content Management system database
A Microsoft SQL Server database must be created for the web content management system, and a Microsoft SQL Server user account must be created for the web content management system database.

The Microsoft SQL Server user account must be granted database owner permissions for the web content management system database.

The user account should be created to "use SQL Server authentication using a login ID and password to login" and to "change the default database to" the web content management system database.

4.3 ODBC Data Source

ODBC Data Sources for Microsoft SQL Server 2000 and the Asbru Web Content Management system must be configured to not use ANSI quoted identifiers, nulls, paddings and warnings:

- Open the Microsoft Windows - Settings - Control Panel - Administrative Tools - Data Sources (ODBC).

- Select System DSN and Add/Configure for your Asbru Web Content Management system database ODBC Data Source.

- Name: asbru (where "asbru" must be the name of the Microsoft SQL Server web content management system database).

- Server: (local).

- Select: "With SQL Server authentication using a login ID and password to login".

- Login ID: username (where "username" must be the Microsoft SQL Server user account username).

- Password: password (where "password" must be the Microsoft SQL Server user account password).

- "Change the default database to:" should automatically display the name of the web content management system database (as configured for the Microsoft SQL Server user account).

- Unselect "Use ANSI quoted identifiers".

- Unselect "Use ANSI nulls, paddings and warnings".

- "Change the language of SQL Server system messages to: English"

- Test Data Source: "TESTS COMPLETED SUCCESSFULLY!"

5   Oracle

5.1 Apache Tomcat

Oracle may use the TCP/IP port 8080 for its XDB service. The TCP/IP port 8080 is also used by Apache Tomcat as default. Only one of the services can use port 8080.

The Oracle XDB service can be disabled by running the following SQL statements on the database:

```
call
dbms_xdb.cfg_update(updateXML(dbms_xdb.cfg_get(),'/xdbconfig/sysconfig/protocolconfig/httpconfig/http-
port/text()',0));

commit;

exec dbms_xdb.cfg_refresh;
```

Replace the "0" with a TCP/IP port number to move the Oracle XDB service to another port instead of disabling it.

Alternatively, reconfigure Apache Tomcat to use another TCP/IP port than 8080.

5.2 Microsoft Windows and ODBC

The Microsoft Windows Environment variable "ORACLE_HOME" should be set to the Oracle database home path or applications may not be able to connect to the Oracle database. For example: "C:\oracle\product\10.1.0\Db_1".

After setting the "ORACLE_HOME" environment variable you may need to reboot the computer.

5.3 Microsoft Windows and Internet Information Services

The Microsoft Windows Internet Information Services user account must be granted permissions to use the Oracle database driver:

- Open the Microsoft Windows – Settings – Control Panel – Users and Passwords.

- Select Advanced and Advanced and add the IUSR_xxxxx user to the Administrators group.

Warning: For security reasons you may not want to simply add the IUSR_xxxxx user to the Administrators group. Please see the Microsoft Windows and Internet Information Services and Oracle documentation for details on tighter security configuration.

After granting the permissions you may need to restart the Internet Information Services service through Microsoft Windows - Settings - Control Panel - Administrative Tools – Services or by rebooting the computer.

5.4 Red Hat Enterprise Linux

Both the Oracle database server and the Apache web server should be started with Linux environment variables for the database name, character set and paths defined in the start-up scripts. For example:

```
export ORACLE_SID=asbru
export ORACLE_HOME=/u01/app/oracle/product/10.1.0/db_1
export TNS_ADMIN=$ORACLE_HOME/network/admin/tnsnames.ora
export ORA_NLS33=$ORACLE_HOME/nls/data
export NLS_LANG=AMERICAN_AMERICA.WE8ISO8859P1
export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:$ORACLE_HOME/lib
export PATH=$PATH:$ORACLE_HOME/bin
```

6   IBM DB2

6.1 Microsoft Windows and Internet Information Services

The Microsoft Windows Internet Information Services user account must be granted permissions to use the IBM DB2 database driver:

- Open the Microsoft Windows – Settings – Control Panel – Users and Passwords.

- Select Advanced and Advanced and add the IUSR_xxxxx user to the Administrators group.

Warning: For security reasons you may not want to simply add the IUSR_xxxxx user to the Administrators group. Please see the Microsoft Windows and Internet Information Services and IBM DB2 documentation for details on tighter security configuration.

After granting the permissions you may need to restart the Internet Information Services service through Microsoft Windows - Settings - Control Panel - Administrative Tools – Services or by rebooting the computer.

6.2   Tablespaces

The database must be configured with 16K and/or 32K page size default user and system temporary tablespaces to support large text columns used by the web content management system. Otherwise, database import and queries may result in errors.

7   MySQL

The current version of the Asbru Web Content Management system is developed for use with MySQL 4.0 and MySQL Connector/ODBC 3.51 or MySQL Connector/J 3.0. However, other versions may also work with or without configuration changes.

MySQL 4.1 and the MySQL Connector/ODBC 3.51 database driver for Microsoft Windows may not work correctly. You may need to use other MySQL database drivers or older versions of MySQL and the MySQL Connector/ODBC database driver.

Please note that this is due to general errors in the MySQL Connector/ODBC 3.51 database drivers. Newer versions of the MySQL Connector/ODBC 3.51 database drivers should resolve these problems.

The Asbru Web Content Management system should work with MySQL 4.1 when the general errors in the MySQL Connector/ODBC 3.51 database drivers are resolved. The JSP and PHP versions of the Asbru Web Content Management system works with MySQL 4.1 using the JSP/JDBC and PHP database drivers.

Eventually, you may be able to use MYSQL 4.1 and the MySQL Connector/ODBC 3.51 database driver for Microsoft Windows with the following configuration changes.

7.1   Database Connection Catastrophic Failure

The MySQL Connector/ODBC 3.51.10 database drivers for Microsoft Windows may not work correctly with ASP causing errors ("Catastrophic failure") during database configuration. If a database connection is established, it may not store and retrieve data in the database.

The MySQL Connector/ODBC 3.51.9 database driver (or another older version) should be used instead of the MySQL Connector/ODBC 3.51.10 database drivers for Microsoft Windows:

http://ftp.up.ac.za/pub/windows/MySQL/Downloads/MyODBC3/MyODBC-standard-3.51.9-win.msi

7.2   Database Connection Authentication Protocol Error

The MySQL Connector/ODBC 3.51.9 database driver for Microsoft Windows may not work correctly with ASP causing errors ("Client does not support authentication protocol requested by server; consider upgrading MySQL client") during database configuration.

To avoid this problem you may need to use an older version of MySQL and/or the MySQL Connector/ODBC database driver. Alternatively, you may simply want to disable grant tables. For example through the Microsoft Windows "MySQL Administrator - Startup Variables - Security - Disable grant tables".
WARNING: This disables important security features for the MySQL database and should not be done on a production server without careful security considerations.

7.3   Advanced ODBC configuration options

When using MySQL with ODBC on Microsoft Windows, the ODBC data source's "Advanced" - "Don't Optimize Column Width" and "Return Matching Rows" options may need to be enabled or saving data may result in program errors:

Microsoft Cursor Engine error '80040e21'
Multiple-step operation generated errors. Check each status value.

8   PostgreSQL

The current version of the Asbru Web Content Management system is developed for use with PostgreSQL 7.4. However, other versions may also work with or without configuration changes.

8.1   Informational Notices

PostgreSQL may give various informational messages as "errors" during database configuration and import. These informational messages may simply be ignored, or PostgreSQL may be configured to not return these information messages.

For example, using PostgreSQL 8.0 for Microsoft Windows and pgAdmin III:

-    Select database properties

-    Select "variables" tab

-    Add the "client_min_messages" variable name with the value "warning" or "error".

Please see the PostgreSQL documentation for details.

8.2   Maximum Text Size

The current version of the PostgreSQL ODBC database driver for Microsoft Windows may
not work correctly (causing "-2147467259 Data provider or other service returned an E_FAIL
status." Errors during database configuration and import).

However, the PostgreSQL ODBC database driver for Microsoft Windows may eventually
work with the following configuration changes.

PostgreSQL may only allow text sizes of 8190 characters as default. Larger text sizes are
supported, but PostgreSQL may need to be configured to allow larger text sizes.

For example, using the PostgreSQL ODBC driver for Microsoft Windows:

-    Open the ODBC Data Source control panel.

-    Configure the PostgreSQL data source.

-    Select Datasource.

-    Increase "Max LongVarChar" from "8190" to "1000000"

Please see the PostgreSQL and PostgreSQL ODBC database driver documentation for details.

8.3   PostgreSQL 8.3.x

"Improvements" in PostgreSQL 8.3.x may cause database import errors because it may no
longer automatically cast/identify the correct data types in SQL expressions. (Technically,
you may no longer just be able to do something like "columnx like ? and columny like ?", but
you may have to do something like "columnx like cast (? as text) and columny like cast (? as
integer)").

Eventually, this problem may be resolved by new releases of PostgreSQL database drivers
and/or database libraries such as PHP PEAR DB used by the PHP version of the Asbru Web
Content Management system.

In the meantime, PostgreSQL 8.3.x may be "repaired" by adding automatic casts back into the
database by executing the following SQL statements (from
http://people.planetpostgresql.org/peter/index.php?/archives/18-Readding-implicit-casts-in-
PostgreSQL-8.3.html) directly on the PostgreSQL 8.3.x database using the standard
PostgreSQL database query tools such as "pgAdmin III":

```
CREATE FUNCTION pg_catalog.text(integer) RETURNS text STRICT IMMUTABLE LANGUAGE SQL AS
'SELECT textin(int4out($1));';

CREATE CAST (integer AS text) WITH FUNCTION pg_catalog.text(integer) AS IMPLICIT;

CREATE FUNCTION pg_catalog.text(smallint) RETURNS text STRICT IMMUTABLE LANGUAGE SQL
AS 'SELECT textin(int2out($1));';

CREATE CAST (smallint AS text) WITH FUNCTION pg_catalog.text(smallint) AS IMPLICIT;

CREATE FUNCTION pg_catalog.text(oid) RETURNS text STRICT IMMUTABLE LANGUAGE SQL AS
'SELECT textin(oidout($1));';

CREATE CAST (oid AS text) WITH FUNCTION pg_catalog.text(oid) AS IMPLICIT;
```

CREATE FUNCTION pg_catalog.text(date) RETURNS text STRICT IMMUTABLE LANGUAGE SQL AS
'SELECT textin(date_out($1));';

CREATE CAST (date AS text) WITH FUNCTION pg_catalog.text(date) AS IMPLICIT;

CREATE FUNCTION pg_catalog.text(double precision) RETURNS text STRICT IMMUTABLE
LANGUAGE SQL AS 'SELECT textin(float8out($1));';

CREATE CAST (double precision AS text) WITH FUNCTION pg_catalog.text(double precision) AS
IMPLICIT;

CREATE FUNCTION pg_catalog.text(real) RETURNS text STRICT IMMUTABLE LANGUAGE SQL AS
'SELECT textin(float4out($1));';

CREATE CAST (real AS text) WITH FUNCTION pg_catalog.text(real) AS IMPLICIT;

CREATE FUNCTION pg_catalog.text(time with time zone) RETURNS text STRICT IMMUTABLE
LANGUAGE SQL AS 'SELECT textin(timetz_out($1));';

CREATE CAST (time with time zone AS text) WITH FUNCTION pg_catalog.text(time with time zone) AS
IMPLICIT;

CREATE FUNCTION pg_catalog.text(time without time zone) RETURNS text STRICT IMMUTABLE
LANGUAGE SQL AS 'SELECT textin(time_out($1));';

CREATE CAST (time without time zone AS text) WITH FUNCTION pg_catalog.text(time without time zone)
AS IMPLICIT;

CREATE FUNCTION pg_catalog.text(timestamp with time zone) RETURNS text STRICT IMMUTABLE
LANGUAGE SQL AS 'SELECT textin(timestamptz_out($1));';

CREATE CAST (timestamp with time zone AS text) WITH FUNCTION pg_catalog.text(timestamp with time
zone) AS IMPLICIT;

CREATE FUNCTION pg_catalog.text(interval) RETURNS text STRICT IMMUTABLE LANGUAGE SQL
AS 'SELECT textin(interval_out($1));';

CREATE CAST (interval AS text) WITH FUNCTION pg_catalog.text(interval) AS IMPLICIT;

CREATE FUNCTION pg_catalog.text(bigint) RETURNS text STRICT IMMUTABLE LANGUAGE SQL AS
'SELECT textin(int8out($1));';

CREATE CAST (bigint AS text) WITH FUNCTION pg_catalog.text(bigint) AS IMPLICIT;

CREATE FUNCTION pg_catalog.text(numeric) RETURNS text STRICT IMMUTABLE LANGUAGE SQL
AS 'SELECT textin(numeric_out($1));';

CREATE CAST (numeric AS text) WITH FUNCTION pg_catalog.text(numeric) AS IMPLICIT;

CREATE FUNCTION pg_catalog.text(timestamp without time zone) RETURNS text STRICT IMMUTABLE
LANGUAGE SQL AS 'SELECT textin(timestamp_out($1));';

CREATE CAST (timestamp without time zone AS text) WITH FUNCTION pg_catalog.text(timestamp without
time zone) AS IMPLICIT;

9   Apache Tomcat

The current version of the Asbru Web Content Management system is developed for use with
Apache Tomcat 5.0.30 and Java J2SE 1.4.2. However, other versions may also work with or
without configuration changes.

9.1 Java

Download the Java J2SE 1.4.2_08 SDK ("j2sdk-1_4_2_08-windows-i586-p.exe") from
http://java.sun.com and install it to "C:\j2sdk1.4.2_08"

9.2 Apache Tomcat

Download Apache Tomcat 5.0.30 ("jakarta-tomcat-5.0.30.exe") from http://www.apache.org
and install it to "C:\Program Files\Apache Software Foundation\Tomcat 5.0"

9.3 Java tools.jar

The Java "tools.jar" must be installed/configured:

- **Apache Tomcat 4.1**
  Copy "tools.jar" from "C:\j2sdk1.4.2_08\lib\" to "C:\Program Files\Apache Software
  Foundation\Tomcat 5.0\common\lib\".

- **Apache Tomcat 5.0**
  Copy "tools.jar" from "C:\j2sdk1.4.2_08\lib\" to "C:\Program Files\Apache Software
  Foundation\Tomcat 5.0\common\lib\".

- **Apache Tomcat 5.5**
  Includes JSP compiler and does not require "tools.jar" from Java SDK.

9.4 Website Root Context

The Asbru Web Content Management system must be installed as/to the Apache Tomcat root
context "C:\Program Files\Apache Software Foundation\Tomcat 5.0\webapps\ROOT\".

Alternatively change the Apache Tomcat root context to your website root folder location
(where the Asbru Web Content Management system is/must be installed):

- **Apache Tomcat 4.1**
  C:\Program Files\Apache Group\Tomcat 4.1\conf\server.xml

  `<Context path="" docBase="d:\Asbru\Web Content Management" debug="1" />`

- **Apache Tomcat 5.0**
  C:\Program Files\Apache Software Foundation\Tomcat
  5.0\conf\Catalina\localhost\asbru.xml

  `<Context path="" docBase="d:/Asbru/Web Content Management" debug="1" privileged="true" />`

- **Apache Tomcat 5.5**
  C:\Program Files\Apache Software Foundation\Tomcat 5.5\conf\server.xml

  `<Context path="" docBase="d:\Asbru\Web Content Management" debug="1" />`

Alternatively, it may be installed as/to a non-root context if Apache Tomcat is used in
combination with a web server such as Microsoft Internet Information Services or the Apache
web server. The web server must be configured to map the website root folder to the Apache
Tomcat Asbru Web Content Management system context. Please see your web server
documentation for details.

9.5   Website Root Folder Permissions

Note: May only be necessary for older versions of Apache Tomcat.
The Asbru Web Content Management system must have permissions to create and write files
in the website root folder and its sub-folders.

For Apache Tomcat create and write permissions can be granted by adding the following to
the C:\Program Files\Apache Software Foundation\Tomcat 5.0\conf\catalina.policy file:

```
grant codeBase "file:${catalina.home}/webapps/ROOT/-" {
     permission java.io.FilePermission "${catalina.home}/webapps/ROOT/-", "read,write,delete";
};
```

where "${catalina.home}/webapps/ROOT/" is the folder where the Asbru Web Content
Management system is installed.

9.6   JavaMail

JavaMail must be installed/configured:

-   Download JavaMail API 1.3.1 ("javamail-1_3_1.zip") from
    http://java.sun.com/products/javamail/

-   Extract the "mail.jar" file from the "javamail-1_3_1.zip" file to "C:\Program
    Files\Apache Software Foundation\Tomcat 5.0\common\lib\"

-   Download JAF 1.0.2 ("jaf-1_0_2.zip") from
    http://java.sun.com/products/javabeans/glasgow/jaf.html

-   Extract the "activation.jar" file from the "jaf-1_0_2.zip" file to "C:\Program Files\Apache
    Software Foundation\Tomcat 5.0\common\lib\"

9.7   JavaMail Permissions

Note: May only be necessary for older versions of Apache Tomcat.
JavaMail permissions may need to be added to the C:\Program Files\Apache Software
Foundation\Tomcat 5.0\conf\catalina.policy file:

```
grant codeBase "file:${catalina.home}/webapps/ROOT/-" {
     permission java.io.FilePermission "${catalina.home}/common/lib/activation.jar", "read";
     permission java.io.FilePermission "${catalina.home}/common/lib/mail.jar", "read";
     permission java.io.FilePermission "${java.home}/jre/lib/mailcap", "read";
     permission java.io.FilePermission "${java.home}/jre/lib/javamail.address.map", "read";
     permission java.io.FilePermission "${java.home}/jre/lib/javamail.providers", "read";
     permission java.net.SocketPermission "127.0.0.1:25", "connect";
     permission java.net.SocketPermission "localhost:25", "connect";
};
```

where "${catalina.home}/webapps/ROOT/" is the folder where the Asbru Web Content
Management system is installed.

9.8   Microsoft Access and Sun JDBC-ODBC Database Driver

A direct DSN-less Sun JDBC-ODBC Database Driver connection to a Microsoft Access
database (i.e. access:sun.jdbc.odbc.JdbcOdbcDriver::@jdbc:odbc:DRIVER={Microsoft
Access Driver (*.mdb)}; DBQ=D:\Asbru\Web Content
Management\webadmin\database.mdb) may not work correctly resulting in a number of
database errors in the Apache Tomcat log files during database initialization and import. The

Apache Tomcat log files should always be checked for errors if using a direct DSN-less Sun JDBC-ODBC Database Driver connection to a Microsoft Access database.

If a direct DSN-less Sun JDBC-ODBC Database Driver connection to a Microsoft Access database does not work correctly, an ODBC Data Source Name (DSN) should be configured and used instead.

9.9   Microsoft SQL Server 2000 Driver for JDBC

The current version of the default Java sun.jdbc.odbc.JdbcOdbcDriver database driver may not work correctly with Microsoft SQL Server (causing "[Microsoft][ODBC SQL Server Driver] Connection is busy with results for another hstmt" errors).

Please use the Microsoft SQL Server 2000 Driver for JDBC:

-   Download the Microsoft SQL Server 2000 Driver for JDBC from
    http://www.microsoft.com/downloads/details.aspx?FamilyID=9f1874b6-f8e1-4bd6-947c-0fc5bf05bf71&DisplayLang=en

-   Install the Microsoft SQL Server 2000 Driver for JDBC to "C:\Program Files\Microsoft SQL Server 2000 Driver for JDBC"

-   Copy "msbase.jar" + "msutil.jar" + "mssqlserver.jar" from "C:\Program Files\Microsoft SQL Server 2000 Driver for JDBC" to "C:\Program Files\Apache Software Foundation\Tomcat 5.0\common\lib\"

or use alternative third-party JDBC database drivers:

   http://servlet.java.sun.com/products/jdbc/drivers

9.10   Oracle and Sun JDBC-ODBC Database Driver

The "ORACLE_HOME" environment must be set (as described elsewhere in this document) or Apache Tomcat may not be able to connect to the Oracle database through the default Java sun.jdbc.odbc.JdbcOdbcDriver database driver.

9.11   Oracle JDBC Driver

The current version of the default Java sun.jdbc.odbc.JdbcOdbcDriver database driver may not work correctly with Oracle (causing truncated content and database import errors).

Please use the Oracle JDBC Driver:

-   For Sun Java JDK1.2/1.3 download the "classes12.jar" file from
    http://www.oracle.com/technology/software/tech/java/sqlj_jdbc/index.html

-   For Sun Java JDK1.4/1.5 download the "ojdbc14.jar" file from
    http://www.oracle.com/technology/software/tech/java/sqlj_jdbc/index.html

-   Copy the downloaded file to "C:\Program Files\Apache Software Foundation\Tomcat 5.0\common\lib\".

Additional parameters may need to be specified for the database connection string:

oracle:oracle.jdbc.driver.OracleDriver:username:password@jdbc:oracle:thin:@localhost:1521:asbru

or, for Oracle 10g Express Edition the database name is "XE":

oracle:oracle.jdbc.driver.OracleDriver:username:password@jdbc:oracle:thin:@localhost:1521:XE

or use alternative third-party JDBC database drivers:

http://servlet.java.sun.com/products/jdbc/drivers

9.12 MySQL JDBC Driver

The current version of the default Java sun.jdbc.odbc.JdbcOdbcDriver database driver may
not work correctly with MySQL (causing database import errors).

Please use the MySQL Connector/J driver.

9.13 MySQL Connector/J

The MySQL Connector/J may need to be installed/configured:

- Copy "mysql-connector-java-3.1.6-bin.jar" from the MySQL Connector/J package to
  "C:\Program Files\Apache Software Foundation\Tomcat 5.0\common\lib\".

Additional parameters may need to be specified for the database connection string:

mysql:com.mysql.jdbc.Driver:username:password@jdbc:mysql://localhost/asbru?useUnicode=true&characterE
ncoding=UTF-8

9.14 PostgreSQL JDBC

The PostgreSQL JDBC database driver may need to be installed/configured:

- Copy the "postgresql-8.0.309.jdbc2.jar", "postgresql-8.0.309.jdbc2ee.jar" or "postgresql-
  8.0.309.jdbc3.jar" PostgreSQL JDBC package to "C:\Program Files\Apache Software
  Foundation\Tomcat 5.0\common\lib\".

9.15 Database Connection Permissions

Note: May only be necessary for older versions of Apache Tomcat.
Database connection permissions may need to be added to the C:\Program Files\Apache
Software Foundation\Tomcat 5.0\conf\catalina.policy file (Please see your Apache Tomcat
log files for errors to see if this is necessary):

```
grant codeBase "file:${catalina.home}/webapps/ROOT/-" {
    permission java.lang.RuntimePermission "getClassLoader";
    permission java.net.SocketPermission "127.0.0.1:1433", "connect,resolve";
    permission java.net.SocketPermission "localhost:1433", "connect,resolve";
    permission java.net.SocketPermission "127.0.0.1:3306", "connect,resolve";
    permission java.net.SocketPermission "localhost:3306", "connect,resolve";
};
```

where "${catalina.home}/webapps/ROOT/" is the folder where the Asbru Web Content
Management system is installed, and where "1433" and "3306" are the TCP/IP port numbers
used by the database servers:

- Microsoft SQL Server: 1433

- MySQL: 3306

9.16 Dynamic Recompilation

Some Asbru Web Content Management system configuration data are written to .jsp files, which must be recompiled and reloaded by Apache Tomcat to take effect. The configuration data written to the .jsp files includes the database connection string (from Configuration – System – Database), the super administrator username (from Configuration – System – Superadmin) and the website's default page, default template, default style sheet and default version (Configuration – System – Website).

As default Apache Tomcat is configured to check for file changes and recompile changed files every 300 seconds (5 minutes). The interval can be changed by editing the C:\Program Files\Apache Software Foundation\Tomcat 5.0\conf\web.xml file (Please see the Apache Tomcat documentation for details):

```
<servlet>
    <servlet-name>jsp</servlet-name>
    <servlet-class>org.apache.jasper.servlet.JspServlet</servlet-class>
    <init-param>
        <param-name>checkInterval</param-name>
        <param-value>1</param-value>
    </init-param>
    <init-param>
        <param-name>fork</param-name>
        <param-value>false</param-value>
    </init-param>
    <load-on-startup>3</load-on-startup>
</servlet>
```

where "1" is the number of seconds between file changes checks and eventual recompilation.

Alternatively, you may want to recompile the files and restart Apache Tomcat manually when the Asbru Web Content Management system database and website configuration is changed. Please see the Apache Tomcat documentation for details.

10   IBM WebSphere

The current version of the Asbru Web Content Management system is developed for use with IBM WebSphere. However, other versions may also work with or without configuration changes.

10.1 Website Root Context / default application

Copy the files and folders from our normal software packages to WebSphere's default application FOLDER - for example:

   C:\Program
Files\IBM\WebSphere\AppServer\profiles\AppSrv01\installedApps\win2003Node01Cell\Def
aultApplication.ear\DefaultWebApplication.war\

The Asbru Web Content Management system must be installed as/to the WebSphere Application Server default application – for example "C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv01\installedApps\win2003Node01Cell\Def aultApplication.ear\DefaultWebApplication.war\".

Eventually change the WebSphere Application Server default application to another location.

Alternatively, the Asbru Web Content Management system can be installed in another location in a website's home/root folder if WebSphere Application Server is used in combination with a web server such as Microsoft Internet Information Services or the Apache web server. The web server must be configured to map all "*.jsp" scripts in the website root folder and sub-folders to the WebSphere Application Server. Please see your WebSphere Application Server and web server documentation for details.

Please note that the Asbru Web Content Management system **must** be installed to the default/root application so that the website addresses are something like "www.yourwebsite.com/page.jsp" and "www.yourwebsite.com/webadmin/index.jsp" - **not** something like "www.yourwebsite.com/wcm/page.jsp" and "www.yourwebsite.com/wcm/webadmin/index.jsp".

10.2 Image/File Serving
On a stand-alone WebSphere installation WebSphere may need to be configured to serve image files etc. in WebSphere's "ibm-web-ext.xmi" configuration file – for example "C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv01\config\cells\win2003Node01Cell\applic ations\DefaultApplication.ear\deployments\DefaultApplication\DefaultWebApplication.war\ WEB-INF\ibm-web-ext.xmi" - by changing:

    fileServingEnabled="false"
to:
    fileServingEnabled="true"

10.3 Database Drivers
Java database drivers (for example "mysql-connector-java-3.1.12-bin.jar") must be copied to WebSphere's "lib" folder – for example "C:\Program Files\IBM\WebSphere\AppServer\lib\" - or alternatively to somewhere else in the Java CLASSPATH.

11　　　Sun Java System Application Server

The current version of the Asbru Web Content Management system is developed for use with Sun Java System Application Server Platform Edition 8. However, other versions may also work with or without configuration changes.

11.1 Website Root Context
The Asbru Web Content Management system must be installed as/to the Sun Java System Application Server docroot "C:\Sun\AppServer\domains\domain1\docroot\".

Eventually change the Sun Java System Application Server docroot to another location.

Alternatively, it may be installed as/to a non-root context if Sun Java System Application Server is used in combination with a web server such as Microsoft Internet Information

Services or the Apache web server. The web server must be configured to map the website root folder to the Sun Java System Application Server Asbru Web Content Management system context. Please see your web server documentation for details.

11.2 Website Root Folder Permissions
The Asbru Web Content Management system must have permissions to create and write files in the website root folder and its sub-folders.

For Sun Java System Application Server create and write permissions can be granted by adding the following to the C:\Sun\AppServer\domains\domain1\config\server.policy file:

```
grant {
    permission java.io.FilePermission "<<ALL FILES>>", "read,write,delete";
};
```

11.3 Dynamic Recompilation
Some Asbru Web Content Management system configuration data are written to .jsp files, which must be recompiled and reloaded by the Sun Java System Application Server to take effect. The configuration data written to the .jsp files includes the database connection string (from Configuration – System – Database), the super administrator username (from Configuration – System – Superadmin) and the website's default page, default template, default style sheet and default version (Configuration – System – Website).

As default Sun Java System Application Server is configured to check for file changes and recompile changed files every 300 seconds (5 minutes). The interval can be changed by editing the C:\Sun\AppServer\domains\domain1\config\ default-web.xml file (Please see the Sun Java System Application Server documentation for details):

```
<servlet>
    <servlet-name>jsp</servlet-name>
    <servlet-class>org.apache.jasper.servlet.JspServlet</servlet-class>
    <init-param>
        <param-name>checkInterval</param-name>
        <param-value>1</param-value>
    </init-param>
    <load-on-startup>3</load-on-startup>
</servlet>
```

where "1" is the number of seconds between file changes checks and eventual recompilation.

Alternatively, you may want to recompile the files and restart Sun Java System Application Server manually when the Asbru Web Content Management system database and website configuration is changed. Please see the Sun Java System Application Server documentation for details.

11.4 Session Timeout
The Asbru Web Content Management system uses session variables for user login details, version preferences and other data.

As default the Sun Java System Application Server session timeout is set to 30 minutes. You may want to increase this by setting the following in the C:\Sun\AppServer\domains\domain1\config\default-web.xml file:

```
<session-config>
    <session-timeout>30</session-timeout>
</session-config>
```

12   Sun One ASP

The current version of the Asbru Web Content Management system is not tested for use with Sun One ASP. However, it may work with or without configuration changes.

12.1 Enable Parent Paths
The Asbru Web Content Management system includes files from parent folders. As default Sun One ASP may have disabled access to parent folders.

12.1.1   Microsoft Windows
- Open the Microsoft Windows Registry:
  My Computer\HKEY_LOCAL_MACHINE\SOFTWARE\ChiliSoft\ChiliASP\Parameters

- Set the "EnableParentPaths" Microsoft Windows Registry key/value:
  EnableParentPaths = 1

13   PHP

The current version of the Asbru Web Content Management system is developed for use with PHP 5 or newer.

13.1 PHP
We recommend using the Microsoft Web Platform Installer to install PHP on Microsoft Windows. Alternatively, the full PHP package including "dlls" and "extensions" must be installed/configured:

- Download "php-5.x.x-Win32.zip" from http://www.php.net.

- Unpack "php-5.x.x-Win32.zip" files to "C:\PHP"

- Copy "C:\PHP\dlls*.*" to "C:\WINNT\system\"

- Copy "C:\PHP\php5.dll" to "C:\WINNT\system32\"

- Copy "C:\PHP\php.ini-recommended" to "C:\WINNT\php.ini"

13.2 PHP PEAR
The PHP PEAR components must be installed/configured:

- Run C:\PHP\go-pear.bat

- Accept all PHP PEAR default installation options

13.3 Email

For the web content management system to be able to send email "C:\WINNT\php.ini" must be configured with:

```
SMTP = localhost
sendmail_from = me@example.com
```

where "me@example.com" must be your email address.

The Internet Information Services SMTP server must also be started and configured to allow "relay".

13.4 Errors

"C:\WINNT\php.ini" must be configured to not display warnings:

```
display_errors = Off
```

or

```
error_reporting = E_ALL & ~E_NOTICE & ~E_WARNING
```

Eventually enable error logging:

```
log_errors = On
error_log = /var/log/httpd/php
```

13.5 Limits

"C:\WINNT\php.ini" must be configured to enable file uploads:

```
file_uploads = On
```

Eventually change other limits:

```
upload_max_filesize = 2M
post_max_size = 8M
memory_limit = 8M
```

13.6 Oracle

The current version of the PHP ODBC database driver (oracle:odbc://username:password@asbru) may not work correctly with Oracle (causing database errors due to 4000 char limit on CLOB database fields).

The native PHP Oracle database driver (oracle:oci8://username:password@asbru) should be used instead.

Some versions of PHP (such as the default version of PHP in Red Hat Enterprise Linux) may not include support for the "oci8" PHP Oracle database driver. For use with Oracle, PHP must be configured and built with the "—with-oci8" PHP configuration parameter. Please see the operating system and PHP documentation for details on how to obtain or build a version of PHP with the "—with-oci8" PHP configuration parameter.

To enable the native PHP Oracle database driver "C:\WINNT\php.ini" must be configured
with:

    extension_dir = "C:\PHP\extensions"
    extension=php_oci8.dll
    extension=php_oracle.dll

13.7 MySQL

Most versions of PHP include and enable MySQL support as default, but some versions of
PHP did not include MySQL support as default due to license restrictions. If MySQL support
is not included and enabled as default MySQL client libraries for PHP must be downloaded,
installed and configured. Please see the PHP and MySQL documentation for details.

13.8 PostgreSQL

13.8.1 Database Driver
The current version of the PostgreSQL ODBC database driver for Microsoft Windows may
not work correctly (causing errors during database configuration and import).

The native PHP PostgreSQL database driver
(pgsql:pgsql://username:password@localhost/asbru) should be used instead.

Most versions of PHP include PostgreSQL support as default, but PHP may need to be
configured to load the included PostgreSQL extension (pgsql) to enable PostgreSQL support.
Please see the PHP documentation for details.

To enable the native PHP PostgreSQL database driver "C:\WINNT\php.ini" must be
configured with:

    extension_dir = "C:\PHP\extensions"
    extension=php_pgsql.dll

13.8.2 Database Encoding
During database configuration and import "[nativecode=ERROR: invalid byte sequence for
encoding "UNICODE": 0xe66774] " error messages may be displayed for some content items.

To resolve this problem, you may need to create/configure your PostgreSQL database to use
"Encoding: LATIN1" or similar instead of "Encoding: UNICODE".

Alternatively, you may be able to change your web server and PHP configuration to handle
Unicode encoding instead. Please see your web server and PHP documentation for details.

13.9 Internet Information Services
Please note that these instructions apply to older versions of PHP and Microsoft Internet Information Services.
Please refer to the general, current PHP and Microsoft Internet Information Services documentation for details.
We recommend using the Microsoft Web Platform Installer to install PHP on Microsoft Windows.

Internet Information Services must be configured to use PHP:

- Open the Microsoft Windows - Settings - Control Panel - Administrative Tools - Internet Services Manager - Default Web Site - Properties - ISAPI Filters:

    o Filter name: PHP

    o Executable: C:\PHP\sapi\php4isapi.dll

- Open the Microsoft Windows - Settings - Control Panel - Administrative Tools - Internet Services Manager - Default Web Site - Properties - Documents:

    o Enable Default Document: index.php

- Open the Microsoft Windows - Settings - Control Panel - Administrative Tools - Internet Services Manager - Default Web Site - Properties - Home Directory - Configuration:

    o Executable: C:\PHP\sapi\php4isapi.dll

    o Extension: .php

13.10 safe_mode

The web content management system also works with PHP "safe_mode" with some restrictions/requirements:

PHP (php.ini) must be configured with:

    safe_mode_include_dir = /usr/share/pear/

where "/usr/share/pear/" is the location where PHP PEAR is installed.

PHP (php.ini) must also be configured with:

    max_execution_time = 300

(or the database import may not have enough time to run).

The website root folder and sub-folders and files must be owned by the same user and that user must have folder and file read and write permissions.

The website root folder and sub-folders and files must have the web server process as "group" and the web server process must have folder and file read and write permissions (to be able to write configuration data and to create content pages, files and images).

14   Asbru Web Content Management System

14.1 Microsoft Windows + Microsoft Access + JSP

For Microsoft Windows with Microsoft Access and the JSP version of the Asbru Web Content Management system the Database Connection string should be:

    access:sun.jdbc.odbc.JdbcOdbcDriver:username:password@jdbc:odbc:asbru

where "username" and "password" must be the Microsoft Access user account username and password (if required - otherwise leave as "username" and "password").

14.2 Microsoft Windows + Microsoft SQL Server + JSP

For Microsoft Windows with Microsoft SQL Server and the JSP version of the Asbru Web Content Management system the Database Connection string should be:

mssql:com.microsoft.jdbc.sqlserver.SQLServerDriver:username:password@jdbc:microsoft:sqlserver://localhost

where "username" and "password" must be the Microsoft SQL Server user account username and password.

14.3 Microsoft Windows + Microsoft SQL Server + PHP

For Microsoft Windows with Microsoft SQL Server and the PHP version of the Asbru Web Content Management system the Database Connection string should be:

mssql:odbc://username:pasword@localhost/asbru

where "username" and "password" must be the Microsoft SQL Server user account username and password and "asbru" must be the Microsoft SQL Server web content management system database name.

The Microsoft SQL Server user account must have database owner permissions etc.

14.4 Microsoft Windows + Oracle + JSP

14.4.1 Oracle JDBC Driver

For Microsoft Windows with Oracle and the JSP version of the Asbru Web Content Management system the Database Connection string should be:

oracle:sun.jdbc.odbc.JdbcOdbcDriver:username:password@jdbc:odbc:asbru

for the default Java sun.jdbc.odbc.JdbcOdbcDriver database driver, or

oracle:oracle.jdbc.driver.OracleDriver:username:password@jdbc:oracle:thin:@localhost:1521:asbru

for the Oracle JDBC database driver

where "username" and "password" must be the Oracle user account username and password and "asbru" must be the Oracle web content management system database name.

The Oracle user account must have database owner permissions etc.

14.4.2 Oracle open_cursors

Oracle may run out of resources (causing "maximum open cursors exceeded" errors in the Apache Tomcat console/stdout log file during the database import. To avoid this the Oracle "open_cursors" configuration setting may be increased - for example from the default "300" to "3000".

The "open_cursors" configuration setting may by changed in the Oracle "init.ora"
configuration file or through the Oracle Enterprise Manager application (Oracle Enterprise
Manager 10g / Database Control / Administration / All Initialization Parameters / SPFile /
Filter: open_cursors). Please see the Oracle documentation for details.

14.5 Microsoft Windows + Oracle + PHP

For Microsoft Windows with Oracle and the PHP version of the Asbru Web Content
Management system the Database Connection string should be:

    oracle:oci8://username:password@asbru

where "username" and "password" must be the Oracle user account username and password
and "asbru" must be the Oracle web content management system database name.

The Oracle user account must have database owner permissions etc.