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# UMN MapServer

## *Day 4*

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*ข้าราชการบำนาญ*

The logo for MapServer, featuring the text "Powered by MapServer" in a stylized font, with a small globe icon to the right of the word "Map".

Powered by  
**Map**  
Server

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# Install Linux Server with MapServer

## Software Requirements

- Fedora Core 6
  - PostgreSQL Source Version 8.1.9
  - PostgreSQL Development Version 8.1.9
  - PostGIS Version 1.2.1
  - GDAL Version 1.4.2
  - PROJ4 Version 4.5.0
  - MapServer Version 4.10.0
  - PHP 5.1.6
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# Prepare for MapServer Installation

- gdal-1.4.2.tar.gz
  - proj-4.5.0.tar.gz
  - postgresql-8.1.9.tar.bz2
  - postgresql-devel-8.1.9-1.fc6.i386.rpm
  - postgis-1.2.1.tar.gz
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# GDAL

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```
# cd /usr/local/src  
# tar -xzvf gdal-1.4.2.tar.gz  
# cd gdal-1.4.2  
# ./configure  
# make  
# make install
```

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# PROJ4

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```
# cd /usr/local/src  
# tar -xzvf proj-4.5.0.tar.gz  
# cd proj-4.5.0  
# ./configure  
# make  
# make install
```

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# PostgreSQL

## PostGIS

```
# cd /usr/local/src
# tar -jxvf postgresql-8.1.9.tar.bz2
# cd postgresql-8.1.9
# ./configure
# make
# make install
# cd contrib
# tar -xzvf postgis-1.2.1.tar.gz
# cd postgis-1.2.1
# ./configure
# make
# make install
```

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# PostgreSQL

## PostGIS

```
# mkdir pgis  
# cp *.sql /pgis  
→ lwpostgis.sql  
→ spatial_ref_sys.sql  
→ lwpostgis-update.sql
```

### Note:

Required SQL to add Spatial Features to  
PostgreSQL Database

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# How to create PostGIS Database

```
# service postgresql status
```

```
# service postgresql start
```

```
➔ Initialize Database
```

```
# su postgres
```

```
$ createdb -E win874 pgis
```

```
$ createlang plpgsql pgis
```

```
$ psql pgis < /pgis/lwpostgis.sql
```

```
$ psql pgis < /pgis/spatial_ref_sys.sql
```

```
$ psql pgis
```

```
pgis=# \d
```

```
pgis=# \q
```

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# How to create PostGIS Database

```
$ cd /ms4/shp
```

```
$ shp2pgsql province.shp province | psql pgis
```

```
$ psql pgis
```

```
pgis=# \d
```

```
pgis=# \d province
```

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# Use CONNECTIONTYPE POSTGIS in Map File

**E-Book :**

การติดตั้ง **MapServer** และ **PostGIS**

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# Install MapServer 4.10.0

```
# cd /usr/local/src
# tar -xzvf mapserver-4.10.0.tar.gz
# cd mapserver-4.10.0
# ./configure --with-zlib --with-png --with-jpeg
- --with-freetype --with-gd --with-proj=/usr/local
- --with-ogr=/usr/local/bin/gdal-config
- --with-gdal=/usr/local/bin/gdal-config
- --with-postgis=/usr/bin/pg_config --with-wfs
- --with-wmsclient --with-wfsclient --with-curl-config
# make
No need to make install
# cp mapserv /var/www/cgi-bin
```

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# Test /cgi-bin/mapserv

Open browser :

**http://host.ip.address/cgi-bin/mapserv**

Nothing happened

**Why ??**

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# Finding the ERROR

Look at /var/log/httpd/error.log

```
# tail -f /var/log/httpd/error_log
```

→ /var/www/cgi-bin/mapserv : error while loading shared libraries :libproj.so.0 No such file or directory cannot find

## Where is libproj.so.0 ??

```
# updatedb
```

```
# locate libproj.so.0
```

```
→ /usr/local/lib/libproj.so.0
```

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# Solution:

**Add LIBRARY SEARCH PATH**

```
# nano /etc/ld.so.conf
```

```
.....
```

```
/usr/local/lib
```

**Save and then RUN**

```
# ldconfig
```

**Open Browser and go to URL**

**<http://host.ip.address/cgi-bin/mapserv>**

**→ No query information to decode. QUERY\_STRING is set, but empty.**

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# PHP Mapscript

## 1 Get PHP Source Package

```
# rpm -q php
```

```
→php-5.1.6-3
```

```
o Download php-5.1.6-3.src.rpm
```

```
# rpm -ivh php-5.1.6-3.src.rpm
```

```
# cd /usr/src/redhat/SOURCES
```

```
# cp php-5.1.6.tar.gz /opt
```

```
# cd /usr/local/src
```

```
# tar -xzvf /opt/php-5.1.6.tar.gz
```

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# PHP Mapscript

## 2 Hardened PHP with suhosin

- o URL : <http://www.hardened-php.net/suhosin>
- o Download suhosin-patch-5.1.6-0.9.6.patch.gz and copy to /opt
- o Check for Signature

```
# cd /opt
# md5sum suhosin-patch-5.1.6-0.9.6.patch.gz
40533ea76767dacbcc8e67522db8ef50 /opt/suhosin-patch-5.1.6-0.9.6.patch.gz
```
- o Unzip the patch

```
# gunzip suhosin-patch-5.1.6-0.9.6.patch.gz
```
- o Apply the patch to php source

```
# cd /usr/local/src
# patch -p0 < /opt/suhosin-patch-5.1.6-0.9.6.patch
```

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# PHP Mapscript

## **3 Compile php with postgresql and suhosin patch**

```
# cd /usr/local/src/php-5.1.6/
```

```
# ./configure --with-pgsql=/usr/include/pgsql
```

```
# make
```

```
# make install
```

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# PHP Mapscript

## 4 Check if new php replaces old php or not → phpInfo()

```
# nano /var/www/cgi-bin/test.php
```

```
<?php
```

```
phpInfo();
```

```
?>
```

o Open Browser → <http://host.ip.address/cgi-bin/test.php>

o Look at configure → same as Step 3 ?

--with-pgsql=/usr/include/pgsql

o Check if suhosin patch is installed ?

This server is protected with the Suhosin Patch 0.9.6  
Copyright (c) 2006 Hardened-PHP Project

# PHP Mapscript

## 5 Tell apache to use php as CGI script

- o Copy php executable to /var/www/cgi-bin

```
# cd /usr/local/src/php-5.1.6/sapi/cgi  
# cp php /var/www/cgi-bin
```

- o Edit httpd.conf

```
# nano /etc/httpd/conf/httpd.conf
```

```
.....
```

```
AddHandler php-script .php  
Action php-script /cgi-bin/php
```

```
.....
```

```
# service httpd restart
```

- o Open Browser → http://host.ip.address/cgi-bin/test.php

- o Look at configure → same as Step 3 ?

--with-pgsql=/usr/include/pgsql → should work now !!

- o Notice where **php.ini** is → **/usr/local/lib**

# PHP Mapscript

## 6 Recompile MapServer with additional

**--with-php=/usr/local/src/php-5.1.6**

o Look for **php\_mapscript.so**

```
# cd /usr/local/src/mapserver-4.10.0
```

```
# cd mapscript/php3
```

```
# ls php_mapscript*
```

```
    php_mapscript.c  php_mapscript_util.c  php_mapscript.h
```

```
    php_mapscript_util.h
```

**→ No php\_mapscript.so**

```
# make clean
```

```
# ./configure --with-zlib --with-png --with-jpeg --with-freetype --with-gd \
```

```
>--with-proj=/usr/local --with-ogr=/usr/local/bin/gdal-config \
```

```
>--with-gdal=/usr/local/bin/gdal-config --with-postgis=/usr/bin/pg_config \
```

```
>--with-wfs --with-wmsclient --with-wfsclient --with-curl-config \
```

```
>--with-php=/usr/local/src/php-5.1.6
```

```
# make
```

```
# cp mapserv /var/www/cgi-bin
```

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# PHP Mapscript

o Look for php\_mapscript.so again

```
# cd mapscript/php3
```

```
# ls php_mapscript*
```

```
php_mapscript.c  php_mapscript.o  php_mapscript_util.c  
  php_mapscript_util.o
```

```
php_mapscript.h  php_mapscript.so  php_mapscript_util.h
```

→ [php\\_mapscript.so](#)

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# PHP Mapscript

## 7. Prepare to use *php\_mapscript.so* as extensions for php

### o Create extensions directory

```
# mkdir /usr/lib/php/extensions → or use any other place
```

```
# cp php_mapscript.so /usr/lib/php/extensions
```

### o Create *php.ini* in folder from Step 5 using php.ini template

```
# cd /usr/local/src/php-5.1.6
```

```
# ls php.ini*
```

```
php.ini-dist  php.ini-recommended
```

### o From Step 5 *php.ini* should be in → /usr/local/lib

```
# cp php.ini-recommended /usr/local/lib/php.ini
```

# PHP Mapscript

- o Edit php.ini to know where to load php\_mapscript.so

```
# nano /usr/local/lib/php.ini
```

```
.....
```

```
; Directory in which the loadable extensions (modules) reside.
```

```
extension_dir = "/usr/lib/php/extensions"
```

```
; Dynamic Extensions ;
```

```
extension=php_mapscript.so
```

```
.....
```

- o Save and restart httpd

```
# service httpd restart
```

- o Open Browser → <http://host.ip.address/cgi-bin/test.php>

- o Look for mapscript

→ Done if mapscript found!!

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No Question

Thank You !

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