LANDSCAPE Startup Manual

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Contents

Chapter 1

Overview

1.1   Abstract and Goal

This document explains LANDSCAPE server installation for ver.B.b10 or later, followed by the use of LANDSCAPE server.

1.2   Human Requirements

To read this manual, it is prerequisite to have, an experience on using COSMOS GLOBALBASE VIEWER [UNDEF REF (cosmos)]and some knowleges on GLOBALBASE. If you need to customize a server, knowledges on xl scripts [UNDEF REF (xl)]as well as xl server [UNDEF REF (xlsv)]are required. It is also assumed that you have basic understanding on GLOBALBASE's searching of coordinate systems, as well as basics on overlaying functions. For these technical understanding, refer GLOBALBASE technical documents [UNDEF REF (GLOBALBASE-tech)].

Installation requires a root authority, obtain a root authority of a server.

1.3   System Requirements

Recommended operating environments are Linux, Solaris, FreeBSD, and MacOSX.

"netpbm" should be installed to make data conversion.

1.4   work flow

First install LANDSCAPE, then setup working einvironments for each user. Each step is described at section 2section 3.

Chapter 2

LANDSCAPE default install

2.1 Abstract

LANDSCAPE default installation is described here.

2.2 System Requirements

Recommended operating environments are Linux, Solaris, FreeBSD, MacOSX.

2.3 checking points on network environments

As LANDSCAPE server conducts backtracking, there are several requirements on network environments. First, prepare a computer with the recommended operating environments and a global IP. A computer with a private address, which enables port-forwarding from outside, can be configurated as a server, under several settings including DNS. In this case, it is prompted to make a section 2.4check.

In this mannual, it is assumed to establish a server with a global IP. Check the followings, to meet the requirements.

1. Does this computer have a name registered by a DNS?

   (a) **If negative,** hereafter, we assign the IP address, as the name of this server.
   (b) **If affirmative,** hereafter, we assign the registered name by a DNS, for example, gbs.domainname, as the name of this server.

   Note that a computer registered only at /etc/hosts can not be used.

2. The network configration enables TCP-connection from the whole Internet to 8080port of the server.

3. The netowork configuration enables TCP-connection from the server to the whole Internet.

All above requirements should be met, and if confirmed, go to section 2.7.

2.4 checking points on a server using portfowarding

The followings should be checked before a server using the portfowarding with a private address is setup.

1. If this computer has a name registered by a DNS?

   Let's say the registered name of this computer as "gbs.domainname". Unfortunately, one not registered by a DNS can not be operative. Also, note that a name only registered at /etc/hosts is also un-usable.

2. If DNS is set as followed.

   When gbs.domainname is name resolved from the external Internet, it will be converted to a global IP address of a portfowarding origin. When the same name is name resolved from the private address's LAN, it will be converted to the private address.

   Thus, the name of gbs.domainname is valid as an identical computer wherever internal or external through the network.

3. Portfowarding should be taken place from the external global IP address's 8080to the private IP address's 8080of the computer. The port number should not be changed.

4. Similarly, the network configration enables TCP connection from the whole Internet to 8080port of the computer.

5. The network enables TCP connection from the computer to the whole Internet, by such as the NAT conversion.

   All above should be met.

2.5   download

First of all, login in a user-mode, make a working directory where codes are extracted, and move to that directory. Let's say the directory as "~/dir".

```
% mkdir ~/dir
% cd ~/dir
```

Next from download mirror sites (http://www.globalbase.org/globalbase/release/)or sourceforge.jp GLOBALBASE download site (http://sourceforge.jp/projects/globalbase/), download a corresponding computer's release, an installer of gbs-server-COMPUTER TYPE ver.B.b10 or later. The manual on download methods is [UNDEF REF (dawnload)].

[**ATTENTION**]
Note that this manual is not applicable to an earlier installer than ver.B.b10.

[**MEMO**]
As recent installers are large in size, there are many cases, not able to download from the sourceforge.jp site. Downloading from download mirror sites (http://www.globalbase.org/globalbase/release/)is recommended.

Download a file named "lss.ver.XX.XX.tar.gz" to this directory (~/dir). For example, for ver.B.b10, file name should be "lss.ver.B.b10.tar.gz".

2.6   file extraction

```
% gzip -d landscape.tar.gz
% tar xvf landscape.tar
```

If the ver.B.b10 is downloaded, a directory of ~/dir/lss.ver.B.b10 will be made. Move to this directry and become a root.

```
% cd lss.B.XX.XX
% su root
passwd: XXXX
#
```

2.7   confirmation on install methods

Next, an installation method, should be confirmed. Installation varies depending upon the current and intended system to use. Confirm one of the followings.

1. **No installation has not been made yet, the first time LANDSCAPE installation will be made on this computer.**

   section 2.8Go to.

2. **Although LANDSCAPE is not currently installed at all, there are some ver.A. contents exist. I would like to utilize these contents.**

   section 2.10Go to.

3. **I would like to install ver.B. onto a server which is running LANDSCAPE ver.A., and keep the current contents browsable.**

   section 2.10Go to.

4. **I would like to version-up a server currently running ver.B. LANDSCAPE to ver.B.b10 or later.**

   section 2.12Go to.

2.8   new installation

Use an install script "./install.sh". # ./install.sh As a default, all necessary scpripts will be installed in the directory "/usr/local/xl-gbs". The location of disseminating geographic information data will be under "/usr/local/xl-gbs/xldocs". And the driving script at the booting will be set.

[CHECK]
Check if directory of "/usr/local/xl-gbs" has been made.
Check if in that directory the following directories have been made.

```
# cd /usr/local/xl-gbs
# ls
xlconf          xllog          xlsamples      xlsys
xldocs          xlopt          xlscript       xlwork
#
```

The installation is successful if above directories are confirmed.

2.9   new−modification on a configration file

Add one line either of the followings, in the file "agent.xl" found in the directory "/usr/local/xl-gbs/xlscript/conf". If a name is registered by a DNS,

```
<SetLocalHostName> gbs.domainname </SetLocalHostName>
```

If only a private IP address exists,

```
<SetLocalHostName> ^"XX.YY.ZZ.WW" </SetLocalHostName>
```

XX.YY.ZZ.WW is a IP address of the computer. For example, the line can be added at an immediate after the commencement tag of the Sequence script as shownn in the following.

```
<Sequence> ^Env1

    <SetLocalHostName> gbs.domainname </SetLocalHostName>

    <Define> ^ServerPort ++SERVERPORT++ </Define>
    <Define> ^LockPort 9101 </Define>
    <Define> ^MPPort 9200 </Define>
    <Define> ^LockHostName localhost </Define>

    <Define> ^DatabaseRoot /usr/local/xl-gbs/  </Define>

    <Define> ^docs-root (+ DatabaseRoot "xldocs") </Define>
    <Define> ^sys-root (+ DatabaseRoot "xlsys") </Define>
    <SetDatabasePath>
        ^docs-root ^sys-root
    </SetDatabasePath>
    <Define> ^MaxSilentTime 10sec </Define>
    <Define> ^MaxConnectionTime 1min </Define>

    <Define> ^LogSize 1000000 </Define>
    <Define> ^LogFileNo 5 </Define>
</Sequence>
```

Next, start the server, section 2.13go to.

2.10   an update from ver.A.

An update from ver.A. or an install as if no server under oeperation currently, but only ver.A. contents exist and need to utilize these resources usefully.

A shellscript can be used by editing update.sh. Open this file by an editor.

```
setenv TARGET /hogehoge/foofoo
```

this line can be found. Change this directory as one you used in ver.A. For example, if you used a directory /export/home/gbs/public,

```
setenv TARGET /export/home/gbs/public
```

change as this.

[**ATTENTION**]
Do not use "/" at the end of a directory name.

---

then, execute update.sh script.

```
# ./update.sh
```

As a default, all necessary scpripts will be installed in the directory /usr/local/xl-gbs. The location of disseminating geographic information data will be the directory used by ver.A, as for the above example, the data will be under /export/home/gbs/public/xldocs. And running script at the booting will be set.

[CHECK]
confirm that a directory /usr/local/xl-gbs is made.
confirm also that the following directories are made.

```
# cd /usr/local/xl-gbs
# ls
xlconf        xllog         xlsamples      xlsys
xldocs        xlopt         xlscript       xlwork
#
```

In the content of /usr/local/xl-gbs/xlconf/agent.xl as following,

```
<Sequence> ^Env1

    <SetLocalHostName> gbs.domainname </SetLocalHostName>

    <Define> ^ServerPort ++SERVERPORT++ </Define>
    <Define> ^LockPort 9101 </Define>
    <Define> ^MPPort 9200 </Define>
    <Define> ^LockHostName localhost </Define>

    <Define> ^DatabaseRoot /export/home/gbs/public/  </Define>

    <Define> ^docs-root (+ DatabaseRoot "xldocs") </Define>
    <Define> ^sys-root (+ DatabaseRoot "xlsys") </Define>
    <SetDatabasePath>
        ^docs-root ^sys-root
    </SetDatabasePath>
    <Define> ^MaxSilentTime 10sec </Define>
    <Define> ^MaxConnectionTime 1min </Define>

    <Define> ^LogSize 1000000 </Define>
    <Define> ^LogFileNo 5 </Define>
</Sequence>
```

hence,

```
    <Define> ^DatabaseRoot /export/home/gbs/public/  </Define>
```

like this example, if the "DatabaseRoot" has the directory which has been assigned at "setenv TARGET", the installation is successful.

2.11 update from ver.A.- handling of the old public directory

When the above update is conducted, the GLOBALBASE server continues to use the old public directory which is assigned by the TARGET variable. However, unless a root is not permitted to read from the old public directory, GLOBALBASE ver.B. server, which runs under a root user, can not read the public direcctory, hence no normal dissemination will be taken place. Therefore, it is essential to permit a root to read from the old public directory. For example, the following process can be conducted.

```
% su gbs
First, become an owner of the old public directory.
% cd /export/home
% chmod 0644 gbs
% cd gbs/public
% find . -name '*' -exec chmod 0755 {} \;
```

by these processes, all files and directories under the old public directory can be seen by a root user, hence a normal publication will be taken place.

after above confirmation, go to section 2.13

2.12 update from ver.B.

An installation to update from an old ver.B. version. This is however, only valid to ver.B.b11 or later version. Not valid to the ver.B.b10 or earlier one.

Use the same shell-script of updateB.sh.

```
# ./updateB.sh
```

Alter and overwrite necessary files. For these files, refer the content of updateB.sh. We recommend you to backup /usr/local/xl-gbs, if you made various changes in server's various scripts.

2.13 server launch

Finally, launch the server. The location of the launching scripts varies server by server. Start/stop should be conducted under a root.

- If OS is one of Solaris / Linux / FreeBSD,
    - launch

        ```
        # /etc/init.d/launch-xl start
        ```

    - stop

        ```
        # /etc/init.d/launch-xl stop
        ```

- If OS is MacOSX,
    - launch

        ```
        # /Library/StartupItems/XLServer/XLServer start
        ```

    - stop

        ```
        # /Library/StartupItems/XLServer/XLServer stop
        ```

2.14 final check

Check the process as shown in the following. As the option of ps is either ”-aux” or ”-fA”, depending upon OS, it should be checked by such as ”man”.

```
# ps -aux | egrep xl
root      3622   0.0  0.0    32420    520  p2  S     12:26AM   0:00.01 xlsv xlscr
root      3623   0.0  0.0    32412    528  p2  S     12:26AM   0:00.01 xllock xls
root      3626   0.0  0.0    32992    532  p2  S     12:26AM   0:00.01 gbmp xlscr
root      3627   0.0  0.1    33804   1616  p2  S     12:26AM   0:00.35 xlsv xlscr
root      3628   0.0  0.1    34000   1508  p2  S     12:26AM   0:00.17 xllock xls
root      3629   0.0  0.1    35052   1932  p2  S     12:26AM   0:00.49 gbmp xlscr
#
```

like above, xlsv [UNDEF REF (xlsv)], xllock [UNDEF REF (xllock)], and gbmp [UNDEF REF (gbmp)], if these three kind processes each in a pair, are running, the server's operation is normal. These are important agents of GLOBALBASE. For each agent, refer respective manual.

Chapter 3

User configuration after LANDSCAPE installation

3.1 Abstract

Although the new server operates under a root mode, the actural data management can be executed under a user mode. To enable this, it is essential to configure paths to the executive scripts. This configuration is to be explained.

3.2 System Requirements

Recommended working environments are Linux, Solaris, FreeBSD and MacOSX.

3.3 Checks on basic matters

It is assumed that the path for executive files (path) and the path for xl scripts (XLPATH) are set already by ver.A.,

1. for "PATH", re-set a path to "/usr/local/xl-gbs/xlscript/bin". In this directory, verious GB scripts are saved.

2. For "XLPATH", delete this. The scripts of ver.B. are designed to refer "/.xlrc".

when aboves are set, the geographical information dissemination processes conducted under ver.A., will be also conductable under ver.B.

3.4 in case of csh

Become a corresponding user mode.
In ".cshrc" and ".login",

```
setenv PATH /usr/local/xl-gbs/xlscript/bin:$PATH
```

such a line exists? Or, does a "setenv PATH", which includes "/usr/local/xl-gbs/xlscript/bin" exist? If not, add the path. And

```
setenv XLPATH ....
```

if such a line is found, delete it.
Finally,

```
% source ~/.cshrc
% source ~/.login
```

execute above to make shell changes effective.

3.5   in case of bash

Become a corresponding user mode.
    In ".bash_profile",

```
PATH=/usr/local/xl-gbs/xlscript/bin:$PATH
export PATH
```

are there above two lines present? Or, "PATH=" with "/usr/local/xl-gbs/xlscript/bin" exists? If not, add these. And,

```
XLPATH=.....
export XLPATH
```

if above a line exists, delete this.
Finally,

```
$ source ~/.cshrc
$ source ~/.login
```

execute above to make shell changes effective.

3.6   Last check

In either shell, when the "xl" command is executed as a final check, and the following result comes out, the shell is correctly modified.

```
$ xl
too few arguments
$
```

Bibliography

History

1. **Date:**   2007-11-04
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2. **Date:**   2006-07-20
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