

SKYRIX® Software AG

SKYRIX Web Groupware

Administration Manual

Version 4.1

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1. Introduction

1.1. Abstract

This manual was written to help you to adapt SKYRIX to the needs of your enterprise. In the subsequent chapters you will find all necessary explanations.

If there are some difficulties in administration that you can't solve, please contact us. We try together to let your SKYRIX installation work.

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SKYRIX - We organise Teams!

1.2. Conventions

To ease the orientation, you can find in this manual sections with special hints. Examples will help you, to orientate in this manual quickly. These paragraphs are marked by this icon.



Something in this manual is of importance and need to be emphasised. Useful hints marked by this icon.





Not all has to be said twice. If we find it useful we refer to a section in the manual which provides additional information about the current topic.

2. SKYRiX architecture

2.1. SKYRiX Web Operating System - Overview

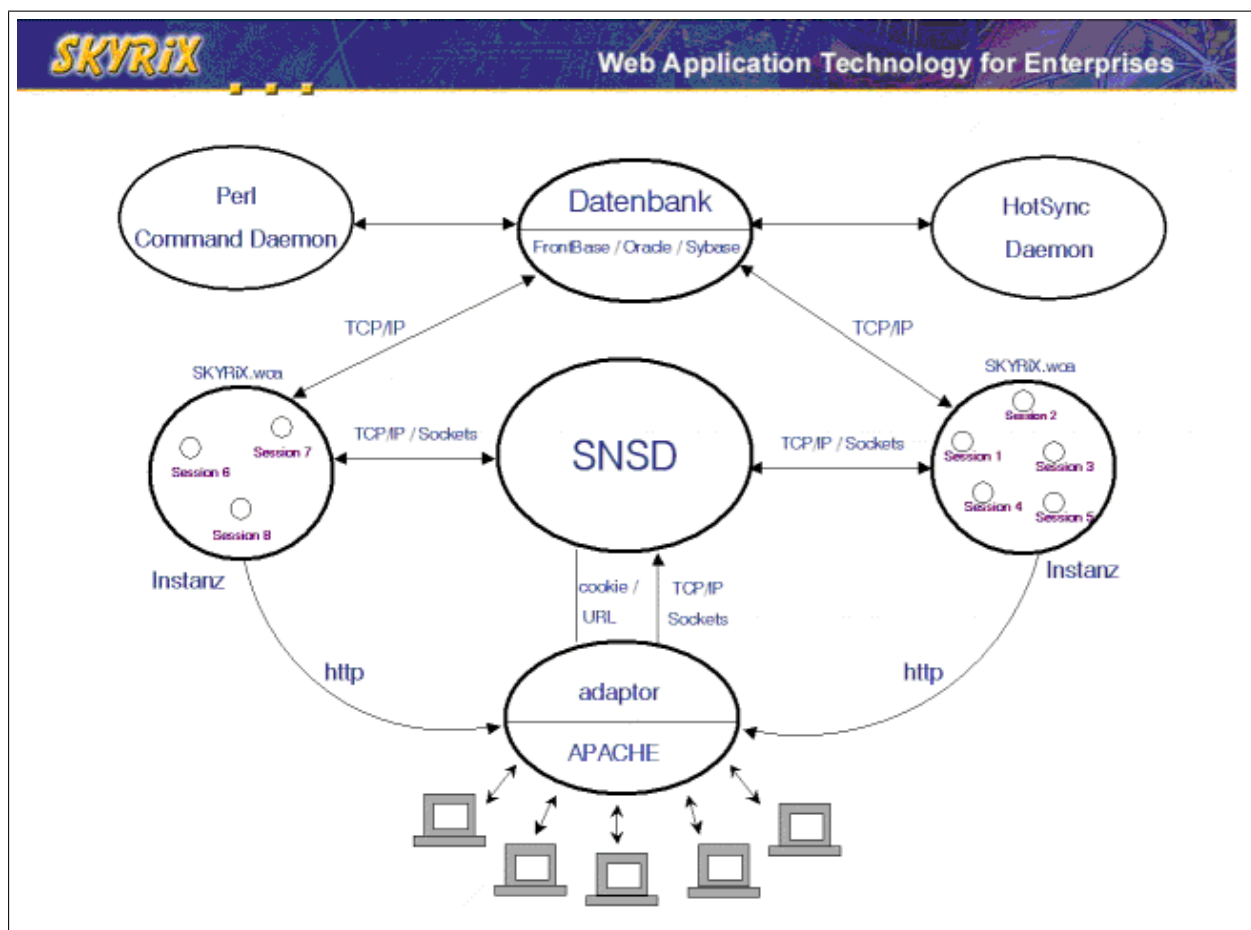


Figure 2.1.: SKYRiX instance and SKYRiX sessions

2.2. SKYRiX instance and SKYRiX sessions

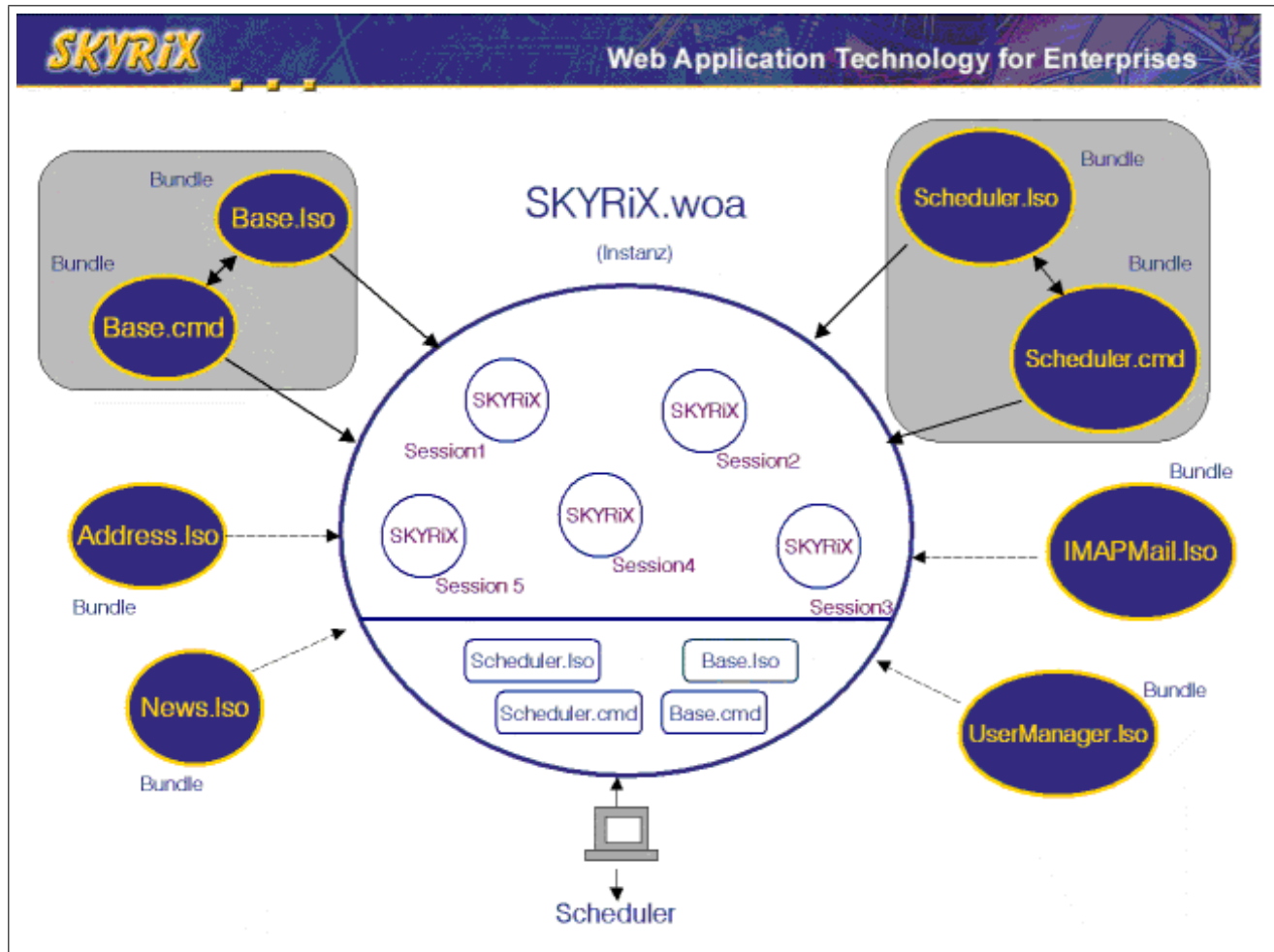


Figure 2.2.: SKYRiX instance and SKYRiX sessions

2.3. SKYRiX bundles and SKYRiX components

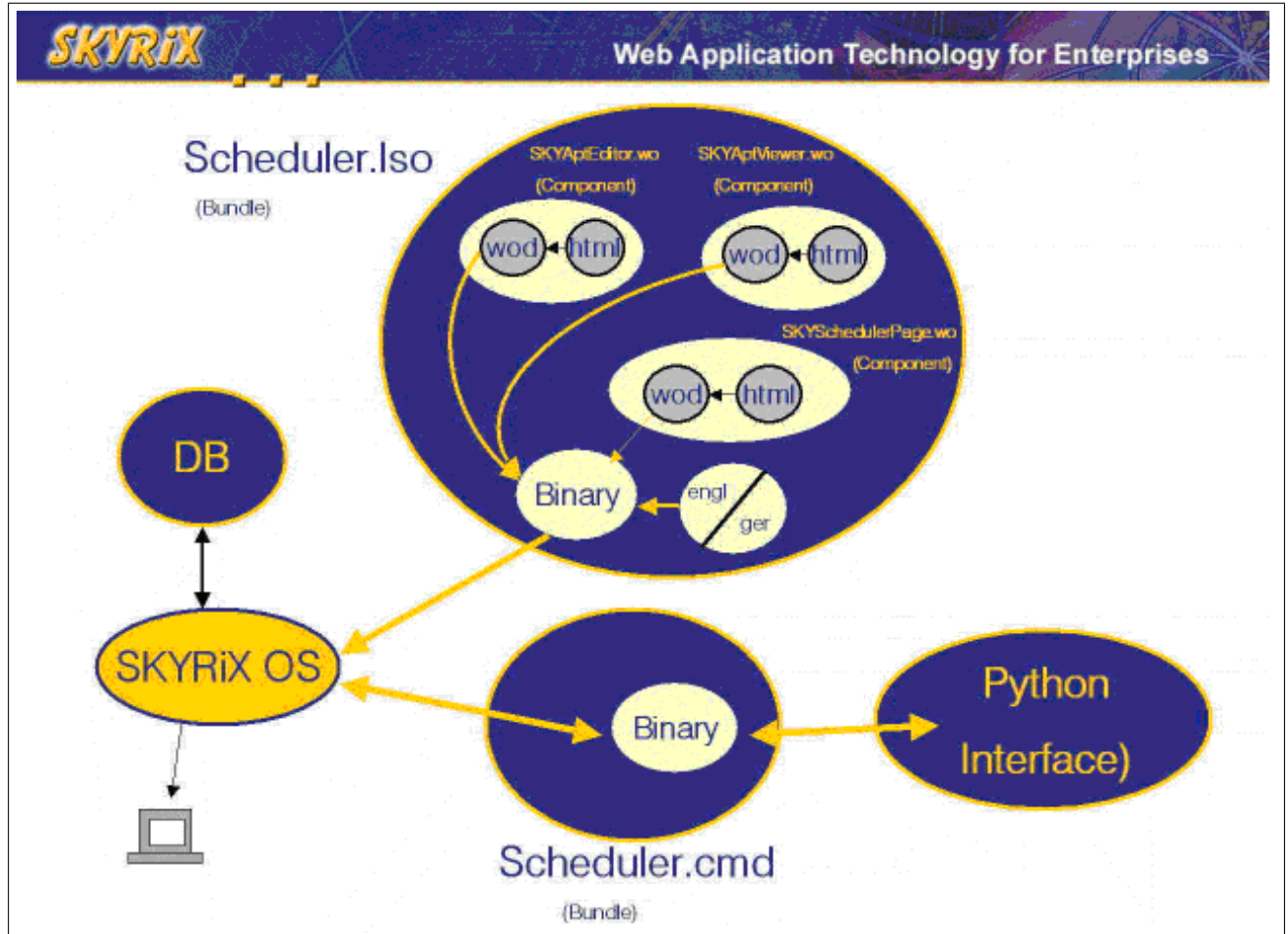


Figure 2.3.: SKYRiX bundles and SKYRiX components

3. System preconditions

3.1. Hardware

The hardware resources must be measured according to the amount of users working with SKYRIX. The hardware requirements listed below will suffice a 50 user installation.

Minimum Hardware preconditions

Processor Intel Pentium or compatible, 500 MHz
512 MB RAM
40 MB free disk space plus additional space for data

recommended

double-processor Intel Pentium or compatible, 700 MHz
1024 MB RAM
40 MB free disk space plus additional space for data

3.2. Software

System

SuSE Linux Release 6.2 and above or
RedHat Linux Release 6.1 and above or
Mandrake Linux Release 7.2 and above

Extern

WebServer: Apache Release 1.3.9 and above
Data bases: Frontbase Release 2.20 and above

Sybase ASE Release 11.0.3 and above
Oracle Release 8.1.5 and above.

4. Components of a typical SKYRiX Installation

All necessary components for a regular SKYRiX installation are supplied within the term components of RPM-Modules.

RPM is the central tool to manage software of SuSE's Linux distribution. By means of RPM software will be installed and deinstalled. All tasks will be stored in a database to get an overview of installed packages at any time.

4.1. Apache

SKYRiX starts its own instance of apache – the default web server of the LINUX distribution.

The configuration file *httpd.conf* can be found in `/opt/skyrix/skyrix41/Library/WebServer/`.

4.2. FrontBase

You need one of the following databases to use SKYRiX. A standard installation is delivered with FrontBase. FrontBase is offered with an SKYRiX-RPM package too. You start an installation with:

```
skyrix:~ # rpm -Uvh FrontBase*.rpm
```

The package is installed into the directory `/opt/FrontBase`. The necessary database daemon `/opt/FrontBase/bin/FBExec` is started and stopped using the following script:

```
skyrix:~ # /etc/rc.d/init.d/FrontBase
Usage: /etc/rc.d/init.d/FrontBase {start|stop|reload|restart}
```

The original SKYRiX database is part of the SKYRiX RPM packages and will be installed with them.

4.3. SKYRIX

This software package is available as RPM.

4.3.1. Package Information

The most important features of a SKYRIX RPM package can be viewed by typing the following command:

```
skyrix: # rpm -qip Skyrix40-pl*.rpm
```

You get information as you see below:

```
Name       : Skyrix40                Relocations: /opt/skyrix/skyrix41
Version    : 4.0                    Vendor: SKYRIX Software AG
Release    : pl14                   Build Date: Wed Feb 7 07:07:22 2001
Install date: Wed Feb 21 15:24:50 2001 Build Host: inster.in.skyrix.com
Group      : Applications/Intranet Source RPM: Skyrix40-4.0-pl14.src.rpm
Size       : 39696275                License: commercial
URL        : http://www.skyrix.com
Summary    : SKYRIX Web Application System
Description:
This package contains the SKYRIX application server environment. SKYRIX
is a powerful groupware application providing appointment scheduling,
project and document management, messaging and much more.
```

4.3.2. Installation

For SKYRIX standard installation `apache`, `bash`, `binutils` and `FrontBase` must exist or has previously be installed. The installation will be aimed by default to `/opt/skyrix/skyrix41`:

```
skyrix: # rpm -Uvh Skyrix40-pl*.rpm
```

If you don't want to install SKYRIX into the default directory you can adapt the related parameter:

```
skyrix:~ # rpm -Uvh Skyrix40-pl*.rpm --prefix=/usr/local/skyrix/skyrix41trial
```



Attention!:

If SKYRIX Web Groupware is running on SuSE Linux Version 7.1 and above in `/etc/rc.d` a symbolic link to `/etc/init.d` has to be set (for further details see appendix [A](#)).

4.3.3. Uninstallation

If you want to uninstall SKYRIX (e.g. you want to remove an older version), the following command has to be used:

```
skyrix:~ # rpm -e Skyrix40
```


4.3.4. Directory structure

directory	content
.libFoundation/	SKYRiX App Server Defaults
Library/	SKYRiX App Server Libraries
Libraries/	SKYRiX databaseadaptor
Makefiles/	Tools to create SKYRiX environment
SkyPerlClient/	SKYRiX Perl Interface Module
Tools/	SKYRiX App Server Tools (Defaults, sns, nh, skycmdd, python)
WOApps/	SKYRiX Application
config/	SKYRiX App Server Configuration (German specific vacation times)
database/	build/drop/update schemas of FrontBase, FrontBase-Databasefile (other Database systems at request)
documents/	SKYRiX document blobs, SKYRiX user defaults
logs/	SKYRiX App Server Logfiles
/WebServerResources	SKYRiX App Icons
/Resources	Labels for SKYRiX bundles
news/	images appeared in SKYRiX News (*.jpg, *.gif)
palm/	SKYRiX PalmSync Configuration and Palm/SKYRiX mapping

Along with SKYRiX a script is installed that gives you the ability to start, stop or restart all necessary SKYRiX-services.

In addition the status of services running at your machine can be requested:

```
skyrx:~ # /etc/rc.d/init.d/skyrix41
usage: /etc/rc.d/init.d/skyrix41 {start|stop|restart|status}
```

The script “/etc/rc.d/init.d/skyrix41” starts the following four services:

1. WebServer

Standard Apache “/usr/sbin/httpd”

2. Database

SuSE: FrontBase database “/opt/FrontBase/bin/FrontBase”

RedHat: FrontBase database “/usr/local/FrontBase/bin/FrontBase”

Mandrake: FrontBase database “/usr/local/FrontBase/bin/FrontBase”

3. SessionServer

SKYRiX SessionServer

“/opt/skyrix/skyrix41/Tools/ix86/linux-gnu/gnu-fd-gnu-nil/sns”

4. NetworkHotsyncDaemon

SKYRiX /Palm HotsyncDaemon

“/opt/skyrix/skyrix41/Tools/ix86/linux-gnu/gnu-fd-gnu-nil/nhsd”

4.3.5. License

To install SKYRIX you do not need a *'licenseKey'*. The installation of a SKYRIX *'licenseKey'* is executed by creating a file `/opt/skyrix/skyrix41/license.key` which contains the necessary *'LicenseString'*. This SKYRIX *'LicenseString'* contains the following information:

item	description
company	enterprise taking the license
contact	contact person of the enterprise
host	IP-address of the server (the license is valid for exactly one server)
expiration	expiration date of the license (usually only trial licenses containing an expiration time stamp)
nu	named user (with 'named user' a SKYRIX authorized person is meant. Even the person is not working with SKYRIX no other person has the possibility to use this application.)
modules	licensed application modules (News, Scheduler, Project, Jobs, Enterprises, Persons, Mail)

4.4. IMAP

The SKYRIX mail client supports solely the IMAP-protocol. To use the *e-Mail* module an IMAP-server must be reachable from SKYRIX.

Supported IMAP-servers:

SuSE IMAP Server Version 1 and above

Cyrus IMAP4 v1.6.22

5. Configuration

This chapter shows the Configuration facilities of a typical SKYRIX installation. Please notice that all changes will be applied to a new instance of SKYRIX. A running instance is not affected. To increase the spreading of changes a maximum number of sessions holding one instance can be configured. After expiration of an instance the changes automatically spreaded of. A restart is not necessary.

5.1. Webserver

A precondition to install SKYRIX is a running Apache-webserver. This webserver must contain the modules 'core', 'alias', 'access' and 'so'. All SKYRIX related configuration options are stored in `/opt/skyrix/skyrix41/Library/WebServer/httpd.conf`:

Mappings between URL and file system path of *WebServerResources* and *NewsArticleImages*

```
Alias /Skyrix.woa/WebServerResources /opt/skyrix/skyrix41/WebServerResources/  
Alias /ArticleImages /opt/skyrix/news
```

Include of *WebObjectAdaptors*

```
LoadModule ngobjweb_module  
/opt/skyrix/skyrix41/Library/WOAdaptors/Apache/ngobjweb_1.3.14.so
```

During installation the related WOAdaptor will be recognised and included automatically.

Mapping between URL and WOAdaptor

```
<LocationMatch '^/Skyrix*'>  
SetSNSPort /opt/skyrix/skyrix41/logs/.skyrix.snsd  
SetHandler ngobjweb-adaptor  
</LocationMatch>
```

If you want to use TCP/IP instead of Unix-domain-sockets for communication between Session-Server and SKYRIX sessions, the following line is needed.

```
SetSNSPort 127.0.0.1:17740
```

(see also the system configuration file *snsd.plist*) Usually the webserver is configured to reach SKYRiX via port 8041. If there is no additional webserver running at the same hardware you can use the standard port 80. It can be adapted in the related directive.

Port 80

It often happens that the same SKYRiXServer has different server names for internal an external use. In this case the following line has to be included.

```
NameVirtualHost internalIPAddress
<VirtualHost internalIPAddress>
    ServerName internalServerName
</VirtualHost>
<VirtualHost internalIPAddress>
    ServerName externalServerName
</VirtualHost>
```

5.2. Configuration of *aptnotify.py*

To enable the SKYRiX scheduler to mail notifications of appointments a valid configuration of the file *aptnotify.py* is necessary. You will find this file in */opt/skyrix/skyrix41/Tools*.

Following variables may be changed:

```
beVerbose           =0
skyrixuser          ='root'
skyrixpwd           ='<SKYRiX root password>'
fromadress          ='<valid E-mail-address>'
smtphost            ='<valid smtp-host>'
sentResourcesFile   =' /opt/skyrix/skyrix41/logs/sent-resources'
checkprefix         = 600#minutes
deftimezone         ='MET'
calFmt              ='%Y-%m-%d %H:%M (%Z)'
```

5.3. Configuration of *crontab*

During installation of SKYRiX an entry is added in *crontab*. It enables the execution of a script named *aptnotify* which sends notification mails. The default is:

```
* /10****/bin/bash /opt/skyrix/skyrix41/Tools/aptnotify.sh \
>>/opt/skyrix/skyrix41/logs/aptnotify.log 2>&1
```

which invokes every 10 minutes the *aptnotify*-shell script. If you have problems getting appointment notification mails, please verify that this parameter is correctly set. If not so add this entry.

5.4. SKYRiX

5.4.1. Structure of SKYRiX configuration files

During start SKYRiX initialises the configuration files by reading `"/opt/skyrix/skyrix41/.libFoundation/Defaults/*.plist"` and use these parameters. While SKYRiX gets executed it holds all configuration data in RAM.

To activate changes in system configuration you need to reboot your SKYRiX. At start up SKYRiX checks the syntax of configuration files, reports any errors in the corresponding log-file and terminates after that.

All configuration parameters – even those that listed in other files – have to be stored in so called property-lists. These lists define data structures assigning names to values. In every property list a value is assigned using the following syntax:

```
name = value;
```

Each type of assignment is followed by a semi colon. Valid values may be strings, dictionaries (lists of name-value-relations) or arrays (lists of values).

String

A valid string is enclosed by „“ and contains a combination of 'a' - 'z', 'A' - 'Z', '0' - '9' and '_'.

Example for a valid string:

```
'This is a string'
```

Quotation marks in strings may be escaped by a preceding '\'

Example: „The word \"and\" consists of three characters”



Dictionary

A dictionary is a set of name-value-pairs enclosed in braces „{” „}”.

```
LSConnectionDictionary = {  
    databaseName = "/opt/skyrix/skyrix41/database/Skyrix.fb";  
    hostName = skyrix;  
    lockingDiscipline = optimistic;  
    transactionIsolationLevel = "read committed";  
    userName = skyrix;  
};
```

Note:

The value of such a pair in a dictionary-entry could be a string, an array or again a dictionary.



Array



An *array* is a list of strings, dictionaries or arrays enclosed in braces. Each element is separated by a colon.

Example:

```
name1 = (An, array, with, "five", elements);
name2 = ((An, array), with, (three, elements));
name3 = (
    {
        name1 = An;
        name2 = array;
    },
    {
        name3 = with;
        name4 = (two, Dictionaries);
    }
);
```

Comments

Property lists may contain comments. A comment is opened by two slashes for one line.

Comments, which contain data must start with „/*” and end with „*/”.

```
// This is a comment
/* This is a comment, too. */
```



Note: Syntactical errors in a configuration file may cause a misinterpretation by SKYRIX.

Configuration files in `/opt/skyrix/skyrix41/.libFoundation/Defaults/` apply to the respective executable programs (snsd, nhsd, Skyrix, python) resp. global to all programs (NSGlobalDomain) and may be processed by the tool “Defaults”:

read:

```
skyrix41@skyrix:~ > Defaults read <Programm>/NSGlobalDomain name
```

Example:



```
skyrix41@skyrix:~ > Defaults read NSGlobalDomain LSAdaptor
FrontBase2
skyrix41@skyrix:~ >
```

write:

```
skyrix41@skyrix:~ > Defaults write <Programm>/NSGlobalDomain name wert
```

Example:

```
skyrix41@skyrix:~ > Defaults write NSGlobalDomain LSAdaptor FrontBase2
```

**5.4.2. Data set entry in system config**

The following table 5.1 shows some system config parameters (partly with dummy values) which SKYRiX is loading at Startup from

/opt/skyrix/skyrix41/.libFoundation/Defaults/*.plist¹.

Table 5.1.: system configuration

configuration option	Explanation
NSGlobalDomain.plist (global entries)	
"skyrix_id = <id>;"	unique string to identify different SKYRiX installations (Default: hostname.domainname)
LSAttachmentPath = <documentsPath>;	directory containing SKYRiX documents (Default: "/opt/skyrix/skyrix41/documents")
LSConnectionDictionary = { hostName = <hostName>; userName = <userName>; password = <password>; };	database configuration (Default: ref. database connection)
LSAdaptor = <databaseAdaptor>;	used database adaptor (Default: ref. database connection)
LSModelName = <modelName>;	used database model (Default: ref. database connection)
LSMaxSearchCount = 150;	Number of max. Research results (Default: 150)
LSNewsImagesPath = <newsImagePath>;	directory containing SKYRiXNews-Images (Default: "/opt/skyrix/skyrix41/news")
LSNewsImagesUrl = <newsImagesUrl>;	URL under which the webserver delivers SKYRiX News-Images (Default: "/ArticleImages") mandatory: alias in '/opt/skyrix/skyrix41/Library/WebServer/httpd.conf'
NGBundlePath = <bundlePath>;	directory searching for SKYRiX Bundles (Default: "/opt/skyrix/skyrix41/Library/Skyrix")
TimeZoneName = GMT;	SKYRiX time zone (Default: GMT)
Skyrix.plist (SKYRiX Parameters)	
LSPluginEnabledUserAgents = ("Mozilla/4.0 (compatible; MSIE");	Inline/PluginViewer compliant user agents (Default: "Mozilla/4.0 (compatible; MSIE")

¹Arguments in '<'>' insinuate placeholders

LSPuginViewerEnabled = YES;	defines whether SKYRIX documents be displayed in Inline/PluginViewern or not (Default: YES)
WOCachingEnabled = YES;	defines whether SKYRIX WOTemplates caching is enabled (Default: YES)
WODefaultSessionTimeout = 3800;	defines expiration time for inactive SKYRIX sessions. Timeout starts with closing the browser window. (Default: 3800) in sec
WOResourcePrefix = "";	URL under which the Webserver delivers SKYRIX-UI Images (Default: "") If you want to use SKYRIX via https, UI- Images may be delivered via http from a second WebServer. So some browsers achieve better performance.
SkyLanguages = ("English_blue", "German_blue");	defines which languages/designs of SKYRIX-UI are available in 'Preferences' dialog. (Default: "English_blue","German_blue")
snsd.plist (Parameters of SessionDaemon)	
NGBaseSocketPath = <socketPath>;	directory containing Unix-Domain-Sockets (Default: "/opt/skyrix/skyrix41/logs/.skyrix.sockets") — only valid, if UseIP = NO;
port = "*:17740";	Port of SessionServer communication with discrete SKYRIX sessions (Default: "*:17740") — only valid, if UseIP = YES;
pidfile = <pidfile>;	pidfile of the SessionServer (Default: "/opt/skyrix/skyrix41/logs/snsd.pid")
UseIP = YES;	defines whether the SessionServer communicates with SKYRIX sessions via Unix-Domain-Sockets (NO) or TCP/IP (YES). (Default: YES) If you use TCP/IP further setting are necessary in /opt/skyrix/skyrix41/Library/WebServer/httpd.conf, ref. WebServer configuration
verbose = NO;	defines logging sensitivity level of the SessionServer (Default: NO)
nhdsd.plist (Parameters for HotSyncDaemon)	
PalmMappingsDirectory = <mappingsDirectory>;	directory containing Palm/SKYRIX mapping files (Default: "/opt/skyrix/skyrix41/palm")
PalmUserConfig = <palmConfigFile>;	SKYRIX PalmSync configuration file (Default: "/opt/skyrix/skyrix41/palm/PalmUsers.plist")
python.plist (Parameters for python interface)	
The python interface gets configuration data from NSGlobalDomain.plist	

5.5. Database connectivity

Depending on the platform SKYRiX is running it supports different databases (ref. SKYRiX system requirements). The database options will be explained in the following sections.

5.5.1. FrontBase

Preconditions:

SKYRiX needs following configurations:

- database adaptor
- database model
- FrontBase-Server's hostname
- user name SKYRiX uses to connect to FrontBase-database server
- password SKYRiX uses to authenticate to FrontBase-database server

These settings have to be edited in `/opt/skyrix/skyrix41/libFoundation/Defaults/NSGlobalDomain.plist` using "Defaults write NSGlobalDomain <name> <value>".

```
LSModelName = 'fb_sky41';
LSAdaptor = FrontBase2;
LSConnectionDictionary = {
    databaseName = '/opt/skyrix/skyrix41/database/Skyrix.fb'; // SKYRiX DB file
    lockingDiscipline = optimistic; // Locking Discipline
    transactionIsolationLevel = 'read committed'; // Isolation Level
    hostName = skyrix; // Host FrontBaseDB Server is running
    password = skyrix41; // FrontBase password
    userName = skyrix41; // FrontBase user
};
```

Speeding up database access

To activate FrontBase's table caching the script "fb-conf-cache.sql⁹²" must be executed. This script is stored in `/opt/skyrix/skyrix41/database/`. Table Caching is only supported by FrontBase E-Business license.

5.5.2. Sybase

To work with a Sybase-database following preconditions must be fulfilled:

- Sybase database server version 11.0.3 or above with configured 'interfaces'-File

- Sybase database client with configured 'interfaces'-File

SKYRiX itself needs following settings:

- database adaptor
- database model
- name of the Sybase-Server
- user name SKYRiX uses to connect to the Sybase-database server
- password SKYRiX uses to authenticate to Sybase-database server
- name of the SKYRiX database
- max. size of Sybase-text-blobs

These settings have to be edited in */opt/skyrix/skyrix41/libFoundation/Defaults/NSGlobalDomain.plist* using "Defaults write NSGlobalDomain <name> <value>".

```
LSModelName = 'sybase_sky41';
LSAdaptor = Sybase10;
LSConnectionDictionary = {
    databaseName = skyrix;
    hostName = skyrix; // Sybase Server name
    password = skyrix41; // Sybase skyrixdb password
    userName = skyrix41; // Sybase skyrixdb user
    textSize = 2000000000; // max. size of Sybase text blobs in byte
};
```

Speeding up Sybase database access

Particularly with large databases the supplied script "sybase-update-statistics.isql" has to run to increase system performance.

The script can be found in */opt/skyrix/skyrix41/database/*. We recommend to run the script daily.

5.5.3. Oracle

To run SKYRiX with ORACLE Database the following preconditions must be fulfilled.

- Oracle database server version 8.1.5 or above with `listener.ora`-configuration
- appropriate configured SKYRiX database (SKYRiX-DB-schema) at the Oracle-database server
- well configured Oracle Net8 Client at the SKYRiX Server with `tnsnames.ora`-configuration

SKYRiX needs the following settings:

- database adaptor
- database model
- Service-ID (SID)
- user name SKYRiX uses to connect to the Oracle-database server
- password SKYRiX uses to authenticate to Oracle-database server

These settings have to be edited in

/opt/skyrix/skyrix41/libFoundation/Defaults/NSGlobalDomain.plist using “Defaults write NSGlobalDomain <name> <value>”.

```
LSModelName = 'oracle_sky41';
LSAdaptor = Oracle7;
LSConnectionDictionary = {
    hostname = skyrix41; // Oracle Service ID (SID)
    password = skyrix41; // Oracle skyrixdb password
    username = skyrix41; // Oracle skyrixdb user
};
```

5.6. SKYRiX Configuration/Extensions

The following settings have to apply in */opt/skyrix/skyrix41/libFoundation/Defaults/NSGlobal Domain.plist*.

5.6.1. Extended attributes

In addition to standard attributes in the SKYRiX applications 'Contact' resp. 'Enterprises' and 'Projects' extended attributes may be defined.

We distinguish between public and private attributes.

public attributes:

Once a value is assigned to an attribute it is visible to all SKYRiX-users and may be changed if the user has the corresponding access rights.

```
SkyPublicExtendedPersonAttributes
SkyPublicExtendedEnterpriseAttributes
SkyPublicExtendedProjectAttributes
```

private attributes:

Every SKYRiX user may assign a private value to this attribute. This value is not visible to other users.

```

SkyPrivateExtendedPersonAttributes
SkyPrivateExtendedEnterpriseAttributes
SkyPrivateExtendedProjectAttributes

```

Types of attributes:

Email-addresses

```
key = "<attribute_name>"; type = 3;
```

Strings

```
key = "<attribute_name>"; type = 1;
```

Checkboxes

```
key = "<attribute_name>"; type = 2;
```

Pulldown-Menues

```

{ key = '<attribute_name>';
  values = {
    '<item01>' = '<value01>';
    '<item02>' = '<value02>';
    '<item03>' = '<value03>';
  };
}

```

Default configuration:

```

SkyPublicExtendedPersonAttributes = (
  { key = 'email1'; type = 3; }, // email
  { key = 'email2'; type = 3; }, // email
  { key = 'job_title'; }, // string
  { key = 'other_title1'; }, // string
  { key = 'other_title2'; }, // string
);
SkyPrivateExtendedPersonAttributes = (
  { key = 'palmSync'; type = 2; localizeValue = YES; }, // BOOL
  { key = 'palmCategory'; } // string
);
SkyPublicExtendedEnterpriseAttributes = (
);
SkyPrivateExtendedEnterpriseAttributes = (
  { key = 'palmSync'; type = 2; }, // BOOL
  { key = 'palmCategory'; } // string
);
SkyPublicExtendedProjectAttributes = (
);
SkyPrivateExtendedProjectAttributes = (
);

```

Note:

Every key must be unique to the appropriate configuration (contact, enterprise, project attributes), i.e. it may only appear once in public and private attributes.



5.6.2. Addresses

Different types of addresses may be added to contact or enterprise views. All configured addresses are listed under tab "Addresses" resp. may be selected under tab "Attributes".

Types of addresses

bill address

bill

location

location

postal address

mailing

private

private

shipping address

ship

Other types of Addresses may be defined, too. These has to localized in */local/skyrix/skyrix41/Library/Skyrix/LSWAddress.Iso/Resources/*.lproj/LSWAddress.strings*

Default configuration:

```
LSAddressType = {  
    Enterprise = ( ''ship'', ''bill'' );  
    Person     = ( ''private'', ''mailing'', ''location'' );  
};
```

5.6.3. Telephone numbers

Different types of telephone numbers may be added to contact resp. enterprise views. All configured telephone numbers may be selected under tab "Attributes".

Telephone types:

telephone 1

01_tel

telephone 2

02_tel

mobile

03_tel_mobile

```
telephone private
05_tel_private
```

```
Fax
10_fax
```

```
Fax private
15_fax_private
```

Other telephone types may be defined. These types has to localise in */local/skyrix/skyrix41/Library/Skyrix/LSWAddress.Iso/Resources/*.lproj/LSWAddress.strings*.

Default configuration:

```
LSTeleType = {
    Enterprise = (
        ''01_tel'',
        ''02_tel'',
        ''10_fax''
    );
    Person = (
        ''01_tel'',
        ''02_tel'',
        ''05_tel_private'',
        ''10_fax'',
        ''15_fax_private'',
    );
};
```

5.6.4. Form letter export

Data sets of contact and enterprise application may be exported in three different ways.

Other formats are configurable. The user may select configured formats using enterprise/contact preferences.

Configuration of export formats:

Default export format:

```
formletter_kind = "winword";
```

Configuration of selectable export formats (Default configuration)

```
formletter_kinds = ("winword", "framemaker", "excel");
```

Editing of attributes used in export formats (Default configuration)

```
RequiredAttributes = {
    Person      = (''degree'', ''firstname'', ''name'', ''salutation'', ''sex'',
                  ''email1'');
    Enterprise = (''description'', ''bank'', ''bank_code'', ''account'');
    Address     = (''name1'', ''name2'', ''name3'', ''street'', ''zip'', ''city'')
    ;
    Telephone   = (''number'', ''type'', ''info'');
};
```

Definition of 3 different contact export formats (Default configuration)

```
LSPersonFormLetter = {
  framemaker = (
    { key = ''toAddress.name1''; suffix = ''\n''; },
    { key = ''toAddress.name2''; suffix = ''\n''; },
    { key = ''toAddress.name3''; suffix = ''\n''; },
    { key = ''degree''; suffix = '' '' },
    { key = ''firstname''; suffix = '' '' },
    { key = ''name''; suffix = ''\n\n'' },
    { key = ''toAddress.street''; suffix = ''\n'' },
    { key = ''toAddress.zip''; suffix = '' '' },
    { key = ''toAddress.city''; suffix = ''\n\n\n\n\n'' },
    { key = ''salutation''; suffix = '' '' },
    { key = ''name''; suffix = ''\n\n'' }
  );
  winword = (
    { key = ''salutation''; suffix = '';''; },
    { key = ''gender''; suffix = '';''; },
    { key = ''degree''; suffix = '';''; },
    { key = ''firstname''; suffix = '';''; },
    { key = ''name''; suffix = '';''; },
    { key = ''toAddress.name1''; suffix = '';''; },
    { key = ''toAddress.name2''; suffix = '';''; },
    { key = ''toAddress.name3''; suffix = '';''; },
    { key = ''toAddress.street''; suffix = '';''; },
    { key = ''toAddress.zip''; suffix = '';''; },
    { key = ''toAddress.city''; suffix = '';''; },
    { key = ''tell.number''; suffix = '';''; },
    { key = ''email1''; suffix = ''\n'' }
  );
  excel = (
    { key = ''salutation''; suffix = ''\t'' },
    { key = ''gender''; suffix = ''\t'' },
    { key = ''degree''; suffix = ''\t'' },
    { key = ''firstname''; suffix = ''\t'' },
    { key = ''name''; suffix = ''\t'' },
    { key = ''toAddress.name1''; suffix = ''\t'' },
    { key = ''toAddress.name2''; suffix = ''\t'' },
    { key = ''toAddress.name3''; suffix = ''\t'' },
    { key = ''toAddress.street''; suffix = ''\t'' },
    { key = ''toAddress.zip''; suffix = ''\t'' },
    { key = ''toAddress.city''; suffix = ''\t'' },
    { key = ''tell.number''; suffix = ''\t'' },
    { key = ''email1''; suffix = ''\n'' }
  );
};
```

Definition of an enterprise export format (user defined)

```
LSEnterpriseFormLetter = {
  custom = (
```

```
{ key = ''toAddress.name1'';  suffix = ''\n'';           },
{ key = ''toAddress.name2'';  suffix = ''\n'';           },
{ key = ''toAddress.name3'';  suffix = ''\n'';           },
{ key = ''toAddress.street'';  suffix = ''\n'';           },
{ key = ''toAddress.zip'';     suffix = '' '' ;           },
{ key = ''toAddress.city'';    suffix = ''\n\n\n\n\n\n''; },
);
};
```


6. Scalability, availability

The SKYRiX Application Server is highly scalable at various levels. On the one hand it scales over different computer platforms, i. e., there exist implementations for 'small' platforms like Intel/Linux for Unix server like SPARC/Solaris and SPARC+RS6000/Linux up to IBM Mainframe systems (Linux/S390). These implementations are tested and are available.

On the other hand SKYRiX scales on multiple physical machines (such as cluster environments). For this purpose the 'Session-Daemon' is used to distribute SKYRiX-processes to different servers. This increases performance and availability of the system.

7. User administration

7.1. User manager and SKYRIX web interface

Inside of the SKYRIX user manager users and teams may be defined and configured. To get further details we refer to the [SKYRIX user manual](#).



7.2. LDAP connectivity

The SKYRIX server supports LDAP-Server account database connection. The user's password is used and the account data will be displayed in a separate register of contact view. Further SKYRIX is able to create an account data set automatically if the user isn't known in LDAP directory.

Independent from direct access of LDAP SKYRIX may synchronise with the LDAP server periodically. Thereto the development of mapping synch-scripts is necessary. The synchronisation may be bidirectional, i.e. SKYRIX is able to get data from LDAP and exports data to the LDAP directory.

If you want to authorise SKYRIX-users via LDAP you need to set the following parameters in `"/opt/skyrix/skyrix41/.libFoundation/Defaults/NSGlobalDomain.plist"`:

```
LSAuthLDAPServer = "<hostname of the LDAP server>";  
LSAuthLDAPServerRoot = "ou=people, o=company.com";
```


8. SKYRiX Interfaces

8.1. Python

Skyrix contains — independent from a former installed Python environment — an own Python. This is for exclusive usage of the user 'skyrix41':

```
skyrix41@skyrix:~ > python
Python 1.5.2 (#
    0, Feb 7 2001, 06:41:28) [GCC 2.95.2 19991024 (release)] on unknown
Copyright 1991-1995 Stichting Mathematisch Centrum, Amsterdam
```

Load SKYRiX-modules

To activate SKYRiX-functionalities in Python-scripts or at the Python-Prompt you must load in addition to the Python-modules the following SKYRiX-modules:

```
>>> import Foundation
>>> import eoaccess
>>> import LSOffice
```

Start a SKYRiX-session

```
>>> sky = LSOffice.LSOffice(user="<skyrixuser>", password="<skyrixpassword>")
```

Launch SKYRiX-functions

```
>>> sky.runMany('enterprise::get', description="skyrix")
(
    <EOGenericRecord: description Enterprise attributes={
        "bank_code" = <null>;
        account = <null>;
        bank = <null>;
        companyId = 20357;
        contactId = <null>;
        dbStatus = updated;
        description = "SKYRiX Software AG";
        email = "info@skyrix.com";
        isCustomer = <null>;
        isEnterprise = 1;
```

```

    isPrivate = 0;
    isReadOnly = 0;
    keywords = Debitoren;
    login = SKY20357;
    number = SKY20357;
    objectVersion = 5;
    ownerId = 10111;
    priority = <null>;
    url = "http://www.skyrix.com";
}>
)

```

8.2. Perl

Server

The “SkyCmdServer” is a TCP-server which supports HTTP. It provides all functionalities to SKYRiX to create, delete and change accounts, teams and appointments. The server starts at the default-address localhost:11099 by invoking:

```

skyrix41@skyrix:~ > skycmd
Mar 08 12:53:26 skycmd [15514]: starting on <InetAddress: skyrix
:11099> ..

```

As follows the server may be started at a different address:

```

skyrix41@skyrix:~ > skycmd -skycmd_port skyrix:12345
Mar 08 12:48:06 skycmd [604]: starting on <InetAddress: skyrix:12345> ..

```

This parameter may be changed in

/opt/skyrix/skyrix41/.libFoundation/Defaults/skycmd.plist.

A typical Client-Server looks like this:

```

C: GET /person?sky_login=j&sky_pwd=&login=test&only_accounts=YES
C: accept-type: text/skyplain
C:
S: HTTP/0.9 200
S: content-length: 193
S: content-type: text/skyplain
S:
S: login      : test_1_login
S: name       : test_1_name
S: firstname  : test_1_firstname
S: nickname   : test_1_nickname
S: email      : test_1_email
S: company_id: 84347
S: is_account: YES
S: is_locked  : NO
S: teams      :

```

“sky_login” and “sky_pwd” are login and password in SKYRiX.

9. Mobile User support

9.1. Synchronisation

9.1.1. Synchronisation of appointments

Synchronisation of Palm PDA and SKYRiX

Dates provided for synchronisation basically marked as 'private'. This means that other accounts may not see any details of the existing appointment. Cyclic appointments will not sync to SKYRiX; appointments without fixed time-definitions represented as jobs in SKYRiX, too.

Synchronisation from SKYRiX to Palm

Dates which have been synced from SKYRiX to Palm are displayed in your scheduler without assigning a category. All notes will be transferred. Cyclic appointments will be moved into single appointments including all notes. Dates with a duration of more than one day are ignored.

9.1.2. Synchronisation of jobs

Jobs will be basically synced as "own Jobs". The status of the job will be adapted.

9.1.3. Synchronisation of contacts and enterprises

Synchronisation from Palm to SKYRiX

All transferred contacts and enterprises are marked as 'public', i.e. everyone may see these data.

The precondition is an assigning of all data-sets to category 'SKYRiX'.

Synchronisation from SKYRiX to Palm

During synchronisation all selected contacts and enterprises will be transferred to the Palm. You can find contacts and enterprises data on Palm under 'addresses/category'.

Configurations in SKYRiX

First you must activate the checkbox 'Palm Sync' of the contact resp. enterprise in your editor's register card 'Details'. In the field below the possibility is given to define a category. This category is of your own choice and must also be defined in the Palm.

Changes in the Palm



As mentioned above you have the choice of create free definitions of categories.

Note:

Please verify that all SKYRiX categories also exist in your Palm Application 'Addresses'.

Additional category

In addition to all defined categories we suggest to define a category 'Removed' in 'contacts' and 'enterprises'.

9.2. Configuration of HotSyncDaemon

The HotSyncDaemon gets its configuration from `/opt/skyrix/skyrix41/palm/PalmUsers.plist`. The following settings may be assigned:

Global

TimeZone

Choice of data base to be synced

```
conduits = ( SyncPersons, SyncEnterprises, SyncToDoDB, SyncDatebook );
```

Person

Subject of e-mail notification

```
palm_email_notification = {  
    subject = "Person changed on Palm: %(firstname)s %(name)s";  
};
```

Synchronisation criteria of Palm data base

```
query = "(firstName != nil OR lastName != nil) AND category='SKYRIX'";
```

Palm category of removed data sets in SKYRiX

```
deletedCategory = "removed";
```

Action in SKYRiX if a data set is deleted on Palm

```
onDeleteInPalm = "unmarkForSync";
```


options:

```
unmarkForSync (the data set will be marked in SKYRiX and will be excluded
               from all future syncs)
delete (the Data set will be deleted in SKYRiX)
```

List of synchronisable Palm phone numbers

```
showPhone = (
  phoneEmail,
  phoneWork,
  phoneHome,
  phoneMobile,
  phoneFax
);
```

Mapping of phone numbers Palm → SKYRiX

```
phone_p2s = {
  "phoneWork" = "01_tel";
  "phoneHome" = "05_tel_private";
  "phoneMobile" = "02_tel";
  "phoneEmail" = "email1";
  "phoneFax" = "10_fax";
};
```

Mapping of phone numbers SKYRiX → Palm

```
phone_s2p = {
  "01_tel" = "phoneWork";
  "05_tel_private" = "phoneHome";
  "02_tel" = "phoneMobile";
  "10_fax" = "phoneFax";
  "email1" = "phoneEmail";
};
```

Enterprise

Subject of e-mail notification

```
palm_email_notification = {
  subject = "Enterprise changed on Palm: %(description)s";
};
```

Sync criteria on Palm data base

```
query = "isPrivate=0 AND firstName=nil AND lastName=nil AND
category='SKYRiX'";
```

Palm category of deleted data sets in SKYRiX

```
deletedCategory = "removed";
```

action taken in SKYRiX if a data set is deleted on Palm

```
onDeleteInPalm = "unmarkForSync";
```

options:

```
resync (the Palm data set will be assigned again during next sync)
unmarkForSync (the data set will be marked in SKYRiX and will be excluded
    from all future syncs)
delete (the Data set will be deleted in SKYRiX)
```

List of synchronisable Palm phone numbers

```
showPhone = (
    phoneEmail,
    phoneWork,
    phoneHome,
    phoneMobile,
    phoneFax
);
```

Mapping of phone numbers Palm → SKYRiX

```
phone_p2s = {
    "phoneWork" = "01_tel";
    "phoneMobile" = "02_tel";
    "phoneEmail" = "email";
    "phoneFax" = "10_fax";
};
```

Mapping of phone numbers SKYRiX → Palm

```
phone_s2p = {
    "01_tel" = "phoneWork";
    "02_tel" = "phoneMobile";
    "10_fax" = "phoneFax";
    "email" = "phoneEmail";
};
```

Dates

Subject of e-mail notification and Palm conflicts

```
palm_email_notification = {
    subject = "Appointment changed on Palm: %(title)s %(startDate)s";
    conflict = "Palm-Conflict: Appointment %(title)s %(startDate)s";
};
```

Sync criteria on Palm data base

```
query = "isPrivate=0 AND cycleType=0 AND isEvent=0";
```

Period past appointments will be synced

```
ignoreIfOlderThan = 14; // days
```

Palm category of SKYRiX appointments

```
palmCategory    = "SKYRIX";
```

Action taken on Palm if an appointment is deleted

```
onDeleteInSkyrix = "delete";
```

options:

```
delete (delete data set on Palm)
private (the data set will be marked as 'private' and will be excluded from
all future syncs)
```

Aktion in SKYRiX if an appointment is deleted on Palm

```
onDeleteInPalm = "deleteIfCreator"; // delete, deleteIfCreator, stay
```

options:

```
delete (data set will be deleted in SKYRiX)
deleteIfCreator (the data set will be deleted in SKYRiX if Palm user has
set the appointment in SKYRiX)
stay (data set stays in SKYRiX and will not be synced)
```

Jobs

subject for job conflict notification via e-mail

```
palm_email_notification = {
  conflict = "Palm-Conflict: Job %(title)s";
};
```

Sync criteria on Palm

```
query          = "isPrivate=0";
```

Project assignment in SKYRiX (if exist)

```
project        = "Palm";
```

Action taken in SKYRiX if an appointment is deleted on Palm

```
onDeleteInPalm = "archive"; // archive, resync, comment
```

options:

```
resync (the SKYRiX data set will be assigned again during next sync)
comment
archive (data set will be archived in SKYRiX)
```

9.3. Data set mapping

The HotSyncDaemon writes and reads during synchronisation the following Palm/SKYRiX mapping files in `/opt/skyrix/skyrix41/palm/`:

Palm/SKYRiX data set mapping

```
DatebookDB.<SkyrixUser>.p2s
EnterpriseDB.<SkyrixUser>.p2s
PersonDB.<SkyrixUser>.p2s
ToDoDB.<SkyrixUser>.p2s
```

This section defines all Palm-SKYRiX data set mappings. These files also hold data of newly synced data sets.

Important:

Any loss of these files leads to double definitions in SKYRiX!



Important:

If you completely 'Reset' your Palm or you use an new device you should pay attention to delete these mapping files. If one fail to do so all data sets in these files assumed as deleted on Palm (ref. 'Configuration of HotSyncDaemon' at page 40).

SKYRiX/Palm User-Mapping

users.s2p

All entries will taken automatically. You may change these if you use the following syntax:

```
{
  <SkyrixUser1> = <PalmUser1>;
  <SkyrixUser2> = <PalmUser2>;
}
```

These entries must be unique because you may only assign one Palm to a SKYRiX user.

10. Customising SKYRiX User Interface

10.1. Language

The SKYRiX user interface is localised by default in German and English. We distinguish between plain text and images containing text elements.

Text

Every bundle contains directories like `English.lproj` and `German.lproj` holding the appropriate **.strings* files.

Content of an english **.strings* File of the scheduler bundle:

```
resourceName = "Name"
resources    = "Resources"
save         = "save"
searchAccounts = "Search Accounts";
secondAdvent = "Second Advent"
short_Friday  = "Fr";
short_Monday  = "Mo";
short_Saturday = "Sa";
short_Sunday  = "Su";
short_Thursday = "Th";
short_Tuesday = "Tu";
short_Wednesday = "We";
showButtonLabel = "show"
shrovetide     = "Shrovetide"
startDate      = "Start"
```

To add a new language to SKYRiX you only have to create a new file called

`/opt/skyrix/skyrix41/Library/Skyrix/<Bundle>.lso/resources/<Language>.lproj/<Bundle>.strings`¹

¹all parameters quoted by '<>' are place holders

Graphics

Every component gets all images from `/opt/skyrix/skyrix41/WOApps/Skyrix.woa/WebServerResources/<Language>.lproj/` To add a new language a new subdirectory `<Language>.lproj` must be created containing the new images. To enable the user to select the new language in 'Prefs' it must be defined in *Skyrix.plist*.

```
SkyLanguages = (  
    "English_blue",  
    "German_blue",  
    "<newLanguage>"  
);
```

10.2. Design

The SKYRIX user interface is delivered by default with two different designs. If you want to create a new design you have to differentiate between color and images.

Colors

The components get their color definitions from `/opt/skyrix/skyrix41/WOApps/Skyrix.woa/Resources/<Design>.lproj/components.cfg`.

```
colors_tableHeaderRow    = "#FFDAAA";  
colors_textColor         = "black";  
colors_title             = "white";  
colors_valueCell         = "#E0E0E0";  
colors_vlinkColor        = "#C97138";  
colors_windowContent     = "#D0D0D0";  
colors_panelContent      = "#D0D0D0";
```

Some bundle have their own color definitions. You can find these configurations files **.ccfg* in the corresponding subdirectory of resources.

This is a part of a **.ccfg* file of a scheduler bundle. Color codes are arranged by components:

```
SkyInlineMonthOverview = {  
    colors_weekdayHeaderCell = "#FFDAAA";  
    colors_weekCell          = "#FFDAAA";  
    colors_currentWeekCell   = "#FFFFFF0";  
    colors_monthDayCell      = "#FAE8B8";  
    colors_todayCell         = "#FFFFFF0";  
    colors_noMonthDayCell    = "#FFDAAA";  
    colors_titleColor        = "blue";  
}; // SkyInlineMonthOverview  
  
SkyInlineYearOverview = {  
    colors_weekdayHeaderCell = "#FFDAAA";  
    colors_weekCell          = "#FFDAAA";  
    colors_currentWeekCell   = "#FFFFFF0";
```

```
colors_monthDayCell    = "#FAE8B8";
colors_todayCell       = "#FFFFFF0";
colors_noMonthDayCell  = "#FFDAAA";
}; // SkyInlineYearOverview
```

To add a new language you only have to create a new file called `/opt/skyrix/skyrix41/Library/Skyrix/<Bundle>.lso/Resources/<Design>.lproj/<Bundle>.ccfg` which contains the new color configuration.²

Graphics

Every component gets all graphics from `/opt/skyrix/skyrix41/WOApps/Skyrix.woa/WebServerResources/<Design>.lproj/`. If you want to add a new design you have create a subdirectory called `<Design>.lproj`.

HTML Structure

The structure of the HTML components may slightly be modified. You have to create a subdirectory `<Design>.lproj/` in the directory of the component `/opt/skyrix/skyrix41/Library/Skyrix/<Bundle>.lso/<component>.wo/` which contains the HTML-template of the component `<Component>.html`.

The WebObject definitions `<Komponente>.wod` provide functionality and haven't to be changed. In `/opt/skyrix/skyrix41/WOApps/Skyrix.woa/` you can find the component `Main.wo` which is responsible for the login page. The component `LSWLogoutPage.wo` – stored in the same directory – is responsible for the logout page.

To enable the user to select the new defined design in 'Prefs' it must be delivered. You have to add the following entry in `Skyrix.plist`:

```
SkyLanguages = (
    "English_blue",
    "German_blue",
    "<Design>"
);
```

10.2.1. Company Logo

If you want to include a logo e.g. `company-logo.gif` rightmost of the docking panel it must be copied to `/opt/skyrix/skyrix41/WebServerResources/English.lproj`

Options:

Definition of the logo

```
SkyDockLogo = "company-logo.gif"
```

Definition of the Hyper Link

²all parameters quoted by '<>' are place holders

```
SkyDockLogoLink = "http://www.company.com"
```

This hyper link will be executed if someone clicks the logo.

Alignment

```
SkyDockLogoMenuAlignment = right
```

Here you can define the alignment of the labels – 'bottom' or 'right' are available.

10.2.2. Welcome page

The welcome page `/opt/skyrix/skyrix41/Library/WebServer/Documents/index.html` is a static HTML web page which may be changed. All contained images have to be stored in the following directory:

```
/opt/skyrix/skyrix41/WebServerResources/<Design>.lproj
```

10.2.3. Login page

The configuration of the login page is set in the file `/opt/skyrix/skyrix41/WOApps/Skyrix.woa/Main.wo/Main.wod`.

In line

```
Body:
WOBody {
    filename = "background.jpg";
```

the value 'background.jpg' has to be replaced by a corresponding background image file. The foreground of the picture may be changed in

```
Image: WOImage {
    filename = "homepage.jpg";
```



Note!:

Be careful with changes. Every change of parameters in other files than described above may cause instable operation of the SKYRIX system!

10.2.4. Logout page

In the file `/opt/skyrix/skyrix41/WOApps/Skyrix.woa/LSWLogoutPage.wo/LSWLogoutPage.wod` the logout page may be customised.

The setting

```
Body: WOBody {
    COLOR = config.colors_textColor;
    LINK = config.colors_linkColor;
    VLINK = config.colors_vlinkColor;
    BGCOLOR = config.colors_bgColor;
```



```
    filename = "background.jpg";  
}
```

in *background.jpg* has to be replaced by the new background image file.

The setting

```
Image: WOHyperlink {  
    href = restartUrl;  
    filename = "homepage.jpg";  
    BORDER = "0";  
}
```

in *homepage.jpg* has to be replaced by the name of the new image.

Note!:

Be careful with changes too. Every change of parameters in other files than described above may cause unstable operation of the SKYRIX system!



A. Appendix

A.1. Trouble Shooting

A.1.1. FrontBase Installation

Problem:

SKYRIX-installation fails

```
Running SKYRIX pre installation in root /opt/skyrix/skyrix41
..Warning: couldn't find an appropriate database !
execution of Skyrix40-4.0-pl4 script failed,
exit status 10
```

FrontBase tries to save the start script in `/etc/rc.d/init.d`. In the SuSE 7.1 distribution this path is not present.

Solution:

Set a symbolic link in `/etc/rc.d` by typing `ln -s /etc/init.d`.

Problem:

The SKYRIX application server could not connect to the database server!

Solution:

One has to test if the FBExec-process is started by typing the command `ps axw | grep FBExec`. In the Logfile `.skyrix-fb.log` in directory `/opt/skyrix/skyrix41/logs/` you can see further details. If the FBExec-process isn't running the FrontBase data base was not able to start.

It is important to repeat executing the command `killall FrontBase` until no processes exist. After that one can stop SKYRIX, FrontBase in the correct order and start SKYRIX again. After a period of 2 month the license of a FrontBase data base expires if no *LicenseString* is present. The process FBExec still exists nevertheless the error message occurs. If this happens a analysis at sql level will be necessary. Run `sql92` in `/opt/FrontBase/bin/` and type the following commands:

```
start database /opt/skyrix/skyrix41/database/Skyrix.fb;
connect to /opt/skyrix/skyrix41/database/Skyrix.fb user skyrix;
```

Note: Don't forget the terminating semi-colon `;` on typing the command.

A.1.2. Licenses

Problem:

The following message appears:

```
This database can no longer be used without a license. Cannot create session user
```

Solution:

The FrontBase license is expired and a new 'LicenseString' has to be downloaded from the FrontBase Web server. You have to stop SKYRIX and FrontBase and kill all processes of FrontBase. After transferring the 'LicenseString' file, the SKYRIX server has to be restarted.

Note:

The syntax of the FrontBase license string is

```
<LicenseString>:<LicenseCheck>
```

During the copy operation of the 'LicenseString' and of the SKYRIX-key special Characters or control characters may cause an impracticality of the keys.

Die IP-address of the SKYRIX server must be mapped to eth0. You have to pay attention to correct typing of the IP-address because this IP is part of the License key. The output of the command "hostname" has to be identical to the entry in */etc/hosts* and *hostname* in */opt/skyrix/skyrix41/.LibFoundation/Defaults/NSGlobalDomain.plist*.