



WYDE Software Installation Guide

(version 3.1)

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For the most current versions of documentation, go to the WYDE support Web site:

<http://docs.wydevoice.com/>

June 22, 2012

Symbols and Notations in this Manual

The following notations and symbols can be found in this manual.



Denotes any item that requires special attention or care. Damage to the equipment or the operator may result from failure to take note of the noted instructions

Figure	Denotes any illustration
Table	Denotes any table
Text	Denotes any text output
<i>Folder/File</i>	Denotes any folders (paths) or files names
commands	Denotes any commands, attributes and parameters

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Chapter 1: Introduction

The installation package for WYDE Voice conferencing bridge software is distributed as DVD disk. Installation media (DVD) contains all necessary files to install WYDE Voice conferencing bridge software. Installation DVD also contains any additional components required for the installation, thereby internet connection is not required for the installation. However internet connection is recommended; while installing WYDE software installer can download the latest version of prerequisite components from official CentOS repository.

Storing the Installation Files

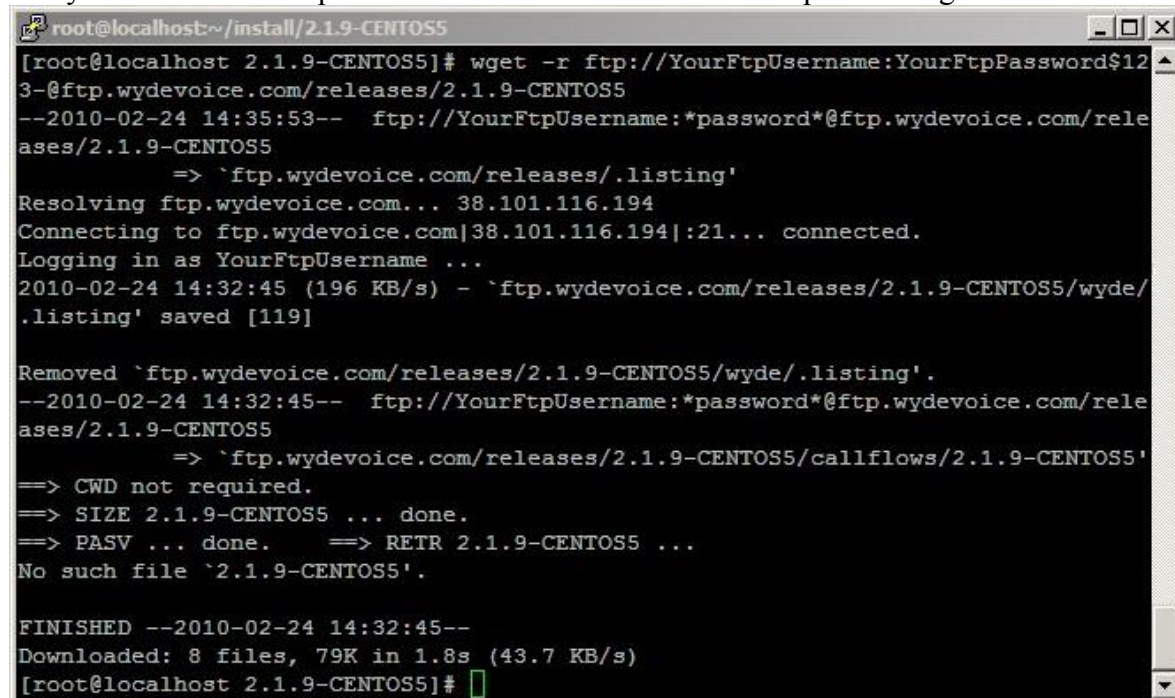
We recommend in any case that you make and keep copies of the \installation DVD contents on your PC's local hard drive – preferably in a dedicated “installer folder” – and that you use these local files when installing. This will ensure immediate access to the installation files in case of subsequent installation upgrades or set-up changes.

Downloading the Installation Files from Internet

The installation files also can be downloaded from Internet using your FTP username and password. You can create the installation folder on your PC's local hard drive, go to this installation folder, and download the files from FTP using `wget` command:

```
wget -r ftp://YourFtpUsername:YourFtpPassword$123-  
@ftp.wydevoice.com/releases/2.1.9-CENTOS5
```

Use your username and password instead of shown in the sample. See Figure 1 for details.



```
root@localhost:~/install/2.1.9-CENTOS5
[root@localhost 2.1.9-CENTOS5]# wget -r ftp://YourFtpUsername:YourFtpPassword$123-  
3-@ftp.wydevoice.com/releases/2.1.9-CENTOS5  
--2010-02-24 14:35:53-- ftp://YourFtpUsername:*password*@ftp.wydevoice.com/rele  
ases/2.1.9-CENTOS5  
=> `ftp.wydevoice.com/releases/.listing'  
Resolving ftp.wydevoice.com... 38.101.116.194  
Connecting to ftp.wydevoice.com|38.101.116.194|:21... connected.  
Logging in as YourFtpUsername ...  
2010-02-24 14:32:45 (196 KB/s) - `ftp.wydevoice.com/releases/2.1.9-CENTOS5/wyde/  
.listing' saved [119]  
  
Removed `ftp.wydevoice.com/releases/2.1.9-CENTOS5/wyde/.listing'.  
--2010-02-24 14:32:45-- ftp://YourFtpUsername:*password*@ftp.wydevoice.com/rele  
ases/2.1.9-CENTOS5  
=> `ftp.wydevoice.com/releases/2.1.9-CENTOS5/callflows/2.1.9-CENTOS5'  
=> CWD not required.  
=> SIZE 2.1.9-CENTOS5 ... done.  
=> PASV ... done.      => RETR 2.1.9-CENTOS5 ...  
No such file `2.1.9-CENTOS5'.  
  
FINISHED --2010-02-24 14:32:45--  
Downloaded: 8 files, 79K in 1.8s (43.7 KB/s)  
[root@localhost 2.1.9-CENTOS5]#
```

Figure 1: Downloading the Installation Files from Internet

This sample and screenshot show download process of the WYDE Voice conferencing bridge software version 2.1.9 for CentOS 5. The actual version may be different for you.



Right after you have downloaded the installation files to your local computer you should go to installation folder where you downloaded the WYDE installation software, for instance (actual folder could be different), type:

```
cd /root/install/2.1.9-CENTOS5/
```

After that you should add the permission to execute all installation script `*.sh` files using the command:

```
chmod +x *.sh
```

Permissions



You must have administrator (root) permissions to install the WYDE conferencing bridge software.

Domain Name System (DNS)



The computer where you are installing the WYDE conferencing bridge software must have DNS configured to resolve ``hostname`` to real computer IP address (not to `127.0.0.1`); i.e. `ping `hostname`` must return real computer IP address (such as `192.168.1.30`).

In the simplest case you may need to edit `/etc/hosts` file. Read Linux and/or CentOS documentation if you need information how to configure DNS.

Supported Languages

The WYDE conferencing bridge software standard installation contains audio prompt files in US English only. You can also obtain additional audio prompts for the following languages:

- Arabic (AR)
- Australian English (AUS)
- British English (UK)
- Czech (CS)
- Dutch (NL)
- French (FR)
- German (DE)
- Italian (IT)
- Japanese (JA)
- Korean (HE)
- Portuguese (PT)
- Brazilian Portuguese (BR)
- Romanian (RO)
- Spanish (ES)

If you would like to get audio prompts for any of these languages please contact WYDE Voice technical support for detail instructions and assistance.

System Requirements

Please note that the following is required to run WYDE conferencing bridge software:

- **Operating system** – CentOS 5.6 or later 5.x (32-bit only), minimum configuration, no additional components installed
- **Ethernet (network) adapter**
- **DVD/CD-ROM drive** – to access the installation files
- **CPU** – Intel® Xeon® X5550 or later
- **RAM** – 4GB RAM
- **HDD space** – 20GB minimum available

This configuration is recommended for 1000 simultaneous calls using default CONF call flow. Please contact WYDE Voice technical support to find which configuration is right for you.

In addition please make sure that the mail server is configured and started (you may need to run: “`service sendmail start`” for these purposes). This is needed to send notification emails (for example about any system crashes or reporting) within the WYDE conferencing bridge software.

Chapter 2: Software Installation

The WYDE conferencing bridge software consists of the following components:

- core components – *dnca* database, *mp* and *mf* services;
- frontend components – Asterisk service, *WYDE* and *WYDE-asterisk* packages;
- backend components – Media Processor (*mpw*) service, *WYDE* and *WYDE-mpw* packages;
- web components – Web Services, Web Administration Interface, etc., *WYDE*, *WYDE-webapp*, *WYDE-webapp_wyde* packages;
- frontend load balancer and dial out proxy components – Kamailio (OpenSER) SIP proxy server and call router that is responsible for calls routing (redirect) to specific frontend (Asterisk) and for end-users registration, *WYDE-kamailio* package;
- web moderator console components – Flash version of Moderator Console (also known as Web Control Console – WCC), *WYDE*, *WYDE-storage*, *WYDE-supportmodule*, *WYDE-wydevoice* packages;
- web operator console components – Flash version of Operator Console, *WYDE*, *WYDE-operator_flash* packages;
- FreeSee Server components – media-proxy that is necessary to maintain free screen sharing meetings etc., *WYDE-freesee* package.

There are two possible approaches to install WYDE conferencing bridge software:

- install all components of the product on one single computer – to do that in the installation program you should select (check) all WYDE software components and install them on single computer, see Figure 2;
- perform distributed installation and install the WYDE components on different computers, in this case
 - core components (*dnca* database, *mp* and *mf* services) are being installed on separate Linux cluster computers – one Linux computer or two Linux computers that are joined together in the cluster, *CORE* installation option is being used to do that;
 - frontend components (*asterisk* service) are being installed on separate computers (one or many), *FRONEND* installation option is being used to do that;
 - back-end components (Media Processor – *mpw* service) are being installed on another separate computers (one or many), *BACKEND* installation option is being used to do that;
 - web components of the WYDE software (Web Services, Web Administration Interface, etc.) are being installed on another computer; *WEB* installation option is being used to do that;
 - frontend load balancer and dial out proxy components (*kamailio* service) are being installed on the computer where core components are installed; *SER* installation option is being used to do that;
 - web Moderator Console components of the WYDE software (Web Control Console) are being installed on the computer where web components are installed; *MODERATOR* installation option is being used to do that;

- web Operator Console components of the WYDE software (Web Operator Console) are being installed on the computer where web components are installed; OPERATOR installation option is being used to do that
- FreeSee server components of the WYDE software (*mediaproxy* service) are being installed on the computer where core components are installed; FREESEE installation option is being used to do that.

Note that you can combine and install some set of the components on one computer, and some on another, i.e. you can check and select any options to install them on the single computer.

Let's assume that you have copied the contents of the installation DVD disk to the `/root/install/3.1.26-CENTOS5/` folder prior to the installation. To start WYDE conferencing bridge software installation you should perform the following steps:

1. Go to the installation folder of the software, for instance, type:
`cd /root/install/3.1.26-CENTOS5/`
 if you have copied installation files into this folder.
2. Type `./setup.sh` to start the installation process.
3. Select the WYDE components to install question will appear next, see Figure 2.

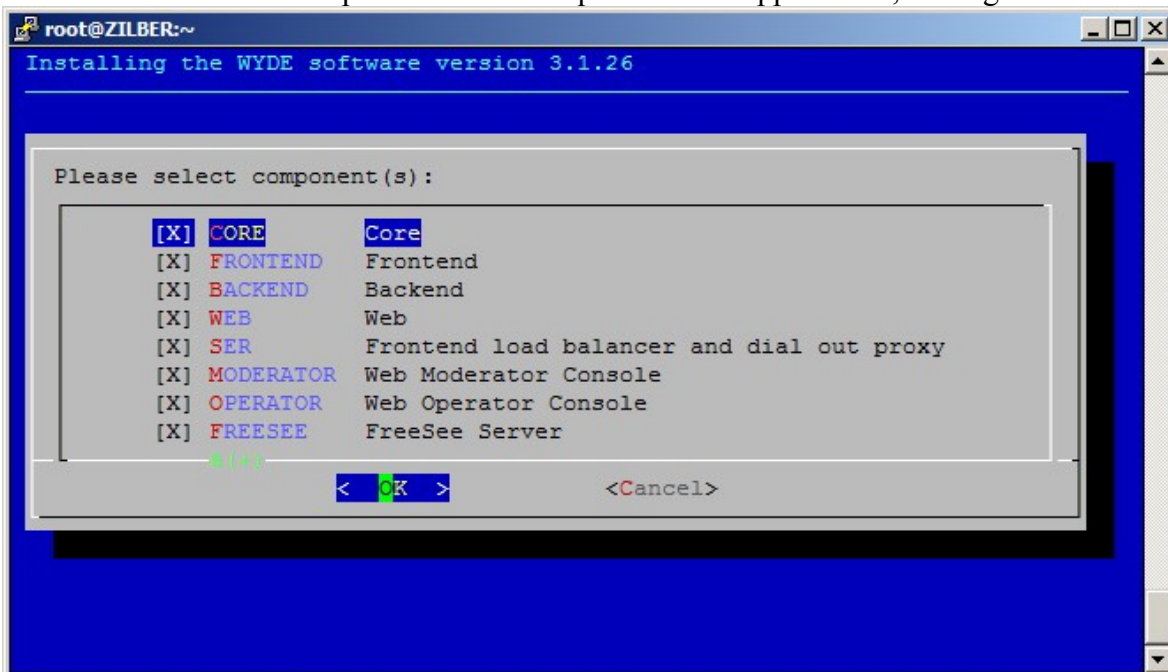


Figure 2: Installation “select components” Question

To perform full installation of all components on one single computer you should select all components on this screen as shown on the figure above. Otherwise if you would like to perform distributed installation and install any WYDE component on separate computer, you should select (check) this component only and unselect (uncheck) all other components. Note that by default core, frontend, backend, web, ser components are checked, but Web Moderator Console, Web Operator Console and FreeSee Server components are unchecked.

2.1: Full Installation

The WYDE conferencing bridge software contains the following packages:

- WYDE-3.1.mmm-o
- WYDE-agiserver-3.1.mmm-o
- WYDE-asd-3.1.mmm-o
- WYDE-asterisk-3.1.mmm-o
- WYDE-asterisk-perl-3.1.mmm-o
- WYDE-core_callflow-3.1.mmm-o
- WYDE-freesee-3.1.mmm-o
- WYDE-kamailio-3.1.mmm-o
- WYDE-mf-3.1.mmm-o
- WYDE-mps-3.1.mmm-o
- WYDE-mpw-3.1.mmm-o
- WYDE-transcoder-3.1.mmm-o
- WYDE-webapp_wyde-3.1.mmm-o
- WYDE-webapp-3.1.mmm-o

The following call flows packages are being installed in the installation:

- WYDE-conf_callflow-3.1.mmm-o
- WYDE-intercall_callflow-3.1.mmm-o
- WYDE-operator_callflow-3.1.mmm-o
- WYDE-playback_callflow-3.1.mmm-o
- WYDE-spectel_callflow-3.1.mmm-o
- WYDE-startmeeting_callflow-3.1.mmm-o

The following moderator console packages are being installed in the installation:

- WYDE-storage-3.1.mmm-o
- WYDE-supportmodule-3.1.mmm-o
- WYDE-wydevoice-3.1.mmm-o

The following operator console package is being installed in the installation:

- WYDE-operator_flash-3.1.mmm-o

The following services are being installed during full installation:

- postgresql
- agiserver
- sipserve
- mps
- mpw
- asterisk
- mf
- asd
- jetty
- nginx
- mediaproxy
- kamailio

To perform the full installation of the WYDE conferencing bridge software on a single computer you should start the installation as it was described in the beginning of this chapter and perform the steps from 1 till 3. After that the following steps should be implemented:

4. In the select installation components question to perform full installation on the single computer you should select all components as shown on Figure 2. All selected components (core, frontend, backend, web, ser, Web Moderator Console, Web Operator Console, FreeSee server) will be installed in this case.
5. Next the installation program will ask to enter (confirm) your host IP, see Figure 3.

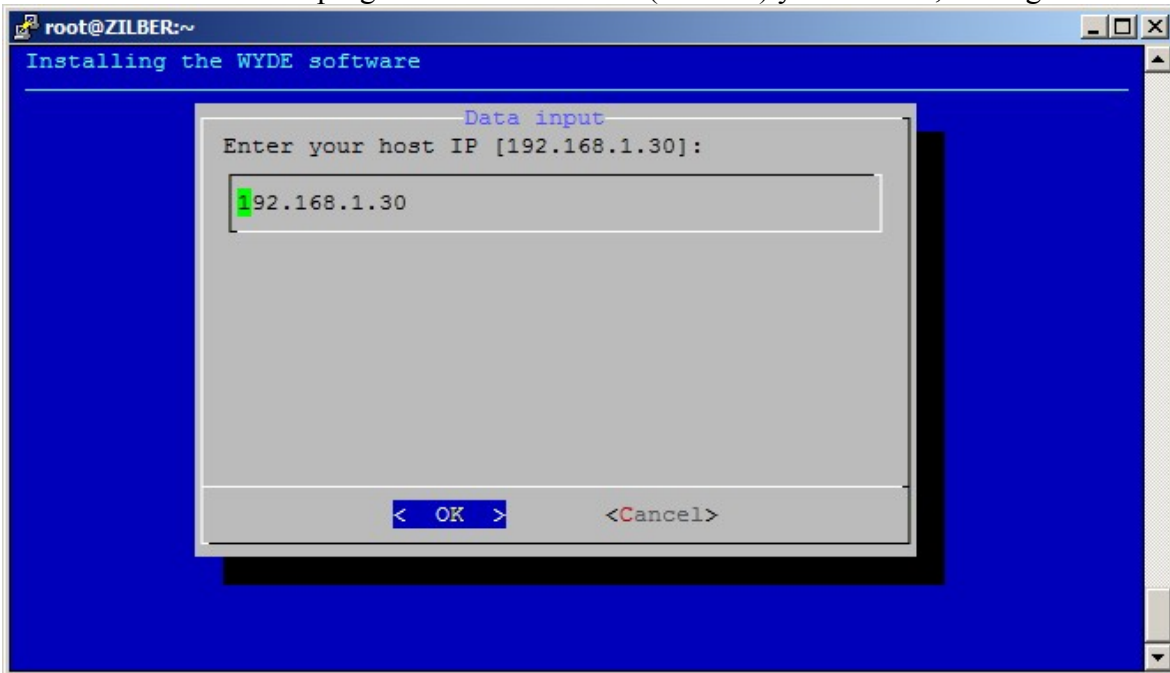


Figure 3: Full Installation “enter host IP” Question

6. Next the installation program will ask to enter the email address for notifications about any crashes as shown on Figure 4.

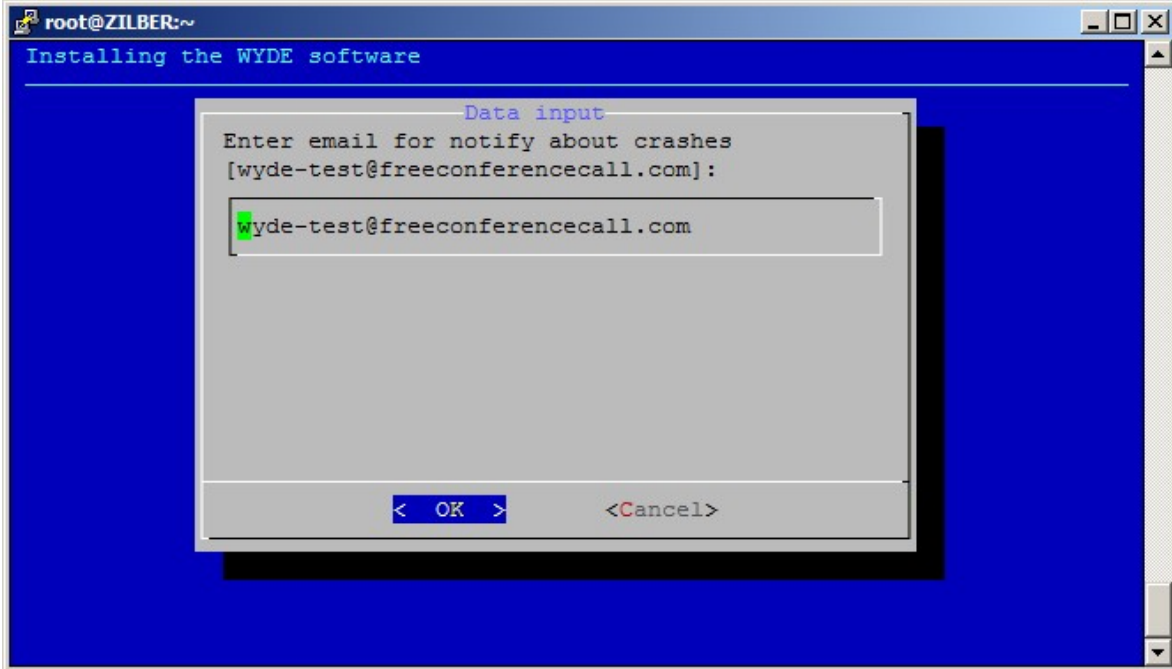


Figure 4: Full Installation “notification email” Question

7. Next the installation program will ask to enter your listen IP address as shown on Figure 5. That is the real IP address where *nginx* service is listening (typically on the port 443); by default your bridge IP address is used.

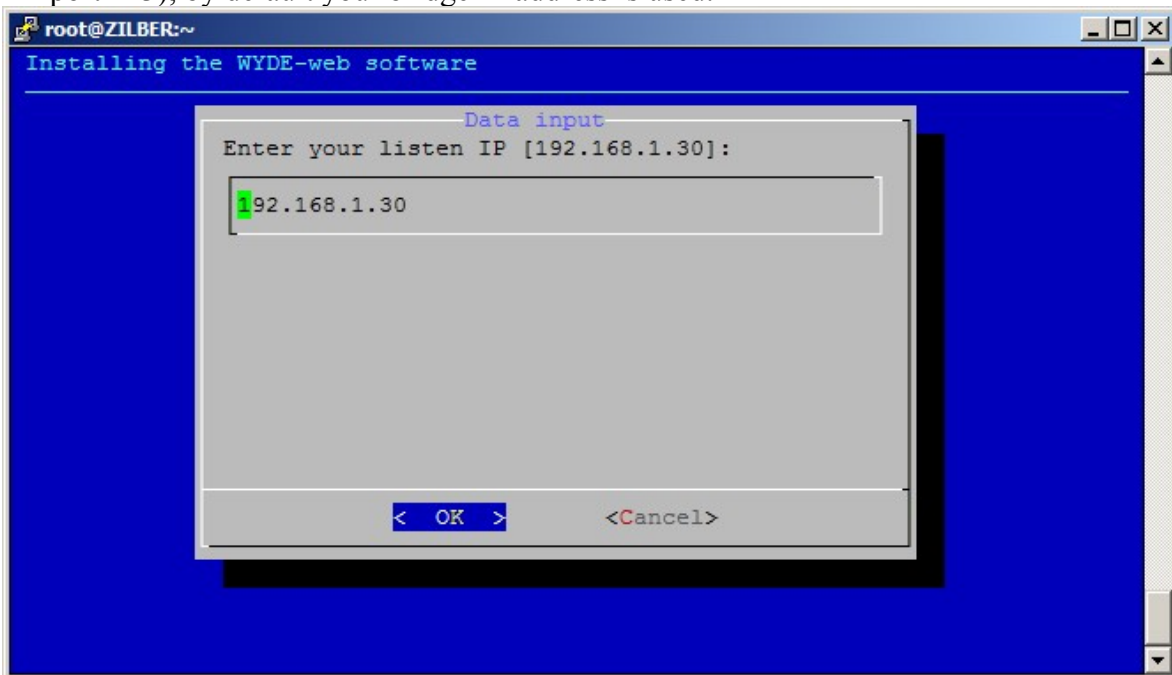


Figure 5: Full Installation “listen IP” Question

8. Next the installation program will ask to enter your external host name as shown on Figure 6. This is the virtual host domain name required for secure (https) connection; the secured certificates should be issued/signed for this host domain name.

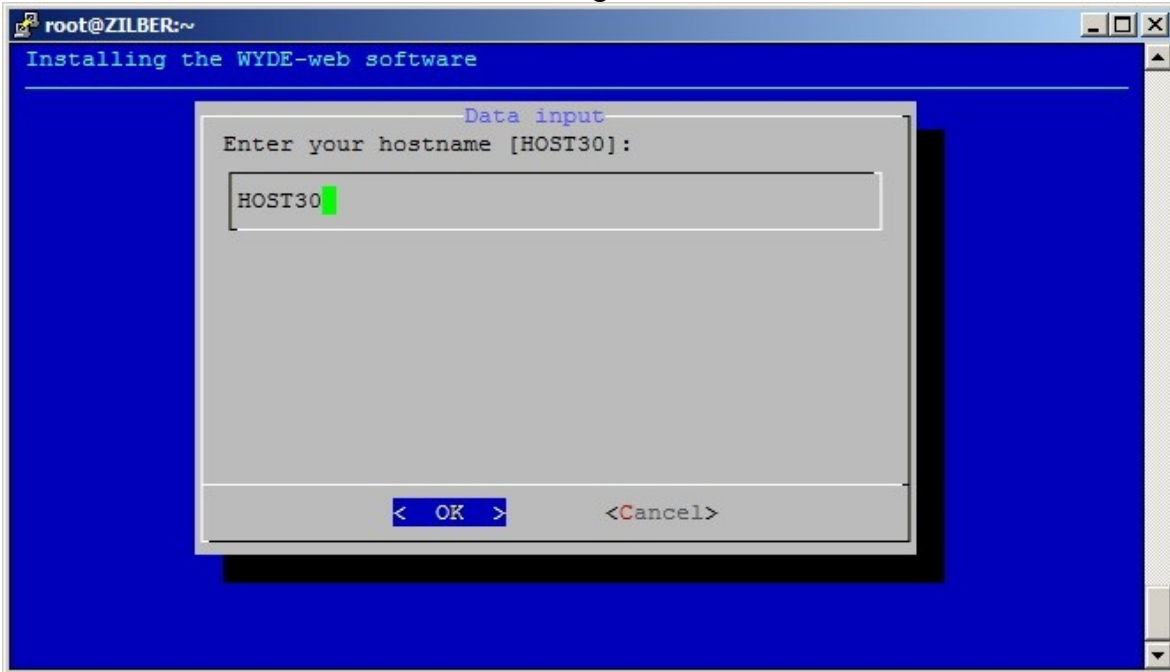


Figure 6: Full Installation “hostname” Question

Your *nginx* listen IP address and hostname bound to this address that you entered on the previous two screens are stored in the file: `/usr/local/DNCA/etc/wyde_nginx.conf`. The folder `/usr/local/DNCA/etc/` contains the following two self-signed files: *cert.key* (the private-key file of a specific certificate) and *cert.pem* (the public-key file of a specific certificate). You should replace these two files with your certificate files registered/signed for your hostname, however you can use them for testing purposes.

Thus your WYDE bridge web applications, such as Web Administration Interface, Web Moderator Console and Web Operator Console are being run from the computer which IP was entered as “*your listen IP*” and which domain name was entered as “*your hostname*” (secure certificates are registered to this name). The connection to these WYDE bridge web applications is secured (https).

9. When the installation process is completed the screen similar to shown on Figure 7 will appear.

```

root@ZILBER:~
DONE.
*****
*****
*****
*
* To run Web Control Console you should use URL: https://192.168.1.30/moderator/
*
*****
*****
*****
*****
*****
*****
*
* To run Web Operator Console you should use URL: https://192.168.1.30/operator/
*
*****
*****
*****
*****
*****
*****
*
* At the moment the bridge can process only 10 simultaneous calls.
*   To increase this amount you should visit
*   http://licserver.wydevoice.com using
*   your credentials and the unique hardware signature
*   (/usr/local/DNCA/etc/hws.bin)
*   which was built during the installation.
*****
*****
*****
*
* To start the WYDE bridge services now you should use the command:
*   service wyde start
*
* These services are being started automatically
*   once your computer restarted.
*****
*****
*****
[root@ZILBER ~]#

```

Figure 7: Full Installation Completed Screen

Note that after installation you may need to perform some additional actions to use Web Moderator Console and Web Operator Console. The following WYDE system settings are responsible for Web Components, Web Moderator Console and Web Operator Console:

- `webServicesUrl` – denotes URL to the WYDE web services WSDL, the default value is `http://127.0.0.1/dnca/jAdmin` and usually it should not be changed;
- `webServicesLogin` – denotes web services user login, default: `admin`;
- `webServicesPassword` – denotes web services user password, default: `admin`;

- `conferencePN` – denotes user conference DNIS number (call flow: SPECTEL), default: *12*;
- `playbackPN` – denotes playback conference DNIS number (call flow: PLAYBACK), default: *16*;
- `operatorPN` – denotes operator conference DNIS number (call flow: OPERATOR), default: *20*;
- `mailerHost` – denotes your SMTP outgoing mail server address, e.g. usually your host name or IP address, for example *localhost.localdomain*;
- `mailerFormsTo` – denotes to-address where service emails should be sent, default: *support@wydevoice.com*;
- `mailerFrom` – denotes your mailer from (reply) address, for example *no-reply@localhost.localdomain*;
- `mailerSupportmoduleImgUrl` – denotes the URL to web folder that contains image-files that could be used in support emails, for example *https://192.168.1.30/supportmodule*;
- `ss_ip_addr` – denotes the screen sharing media proxy IP address, default is IP address of the computer where WYDE software FreeSee Server components are installed, for example *192.168.1.30*.

You can see these settings using *wyde* command with *settings-show* option and update them using *wyde* command with *settings-edit* option. For detail information about how to see and update system settings parameters see “*Command Line Administration Interface – User Guide*”.

To use Web Moderator Console you may need to perform the following steps:

- Register conference DNIS number (call flow: SPECTEL); in this call flow set “*Realtime protocol*” attribute value equal “on”, “*Callers database*” attribute value equal “on”, and “*Playback number*” attribute value equal to playback conference DNIS number;
- Register playback conference DNIS number (call flow: PLAYBACK) and in this call flow set “*Reffered DNIS number*” attribute value equal to the DNIS number registered in the previous step;
- Update the WYDE system settings using *wyde* command with *settings-edit* option, the following system settings parameters should be changed:
 - `conferencePN` – should be equal to number registered in the step *i*);
 - `playbackPN` – should be equal to number registered in the step *ii*).

For example to set necessary conference and playback DNIS numbers, update their properties and to set necessary settings you may use the following commands:

```
wyde did-add number 8665080012 callflow SPECTEL description "FLASH SPECTEL"
wyde did-add number 8665080016 callflow PLAYBACK description "FLASH PLAYBACK"

wyde did-attr-set number 8665080012 name conference_realtime value on
wyde did-attr-set number 8665080012 name conference_callerdb value on
wyde did-attr-set number 8665080012 name dnis_playbacknumber value 8665080016
wyde did-attr-set number 8665080016 name dnis_number value 8665080012

wyde settings-edit name conferencePN value 8665080012
wyde settings-edit name playbackPN value 8665080016
```

After this configuration has made you should restart *jetty* service using the command:
`service jetty restart`

However if you are going to configure Operator Console next, you can restart *jetty* service just once, after you complete Operator Console configuration.

To use Web Operator Console you may need to perform the following steps:

- i) Register operator conference DNIS number (call flow: OPERATOR);
- ii) Update the WYDE system settings using *wyde* command with *settings-edit* option, the following system settings parameter should be changed:
operatorPN – should be equal to number registered in the step i).

For example to set necessary operator DNIS number, update its properties and to set necessary settings you may use the following commands:

```
wyde did-add number 8665080020 callflow OPERATOR description "FLASH OPERATOR"

wyde did-attr-set number 8665080020 name conference_realtime value on
wyde did-attr-set number 8665080020 name conference_callerdb value on

wyde settings-edit name operatorPN value 8665080020

wyde confuser-add subscriber operator did 8665080020 role Host
```

After this configuration has made you should restart *jetty* service using the command:
`service jetty restart`

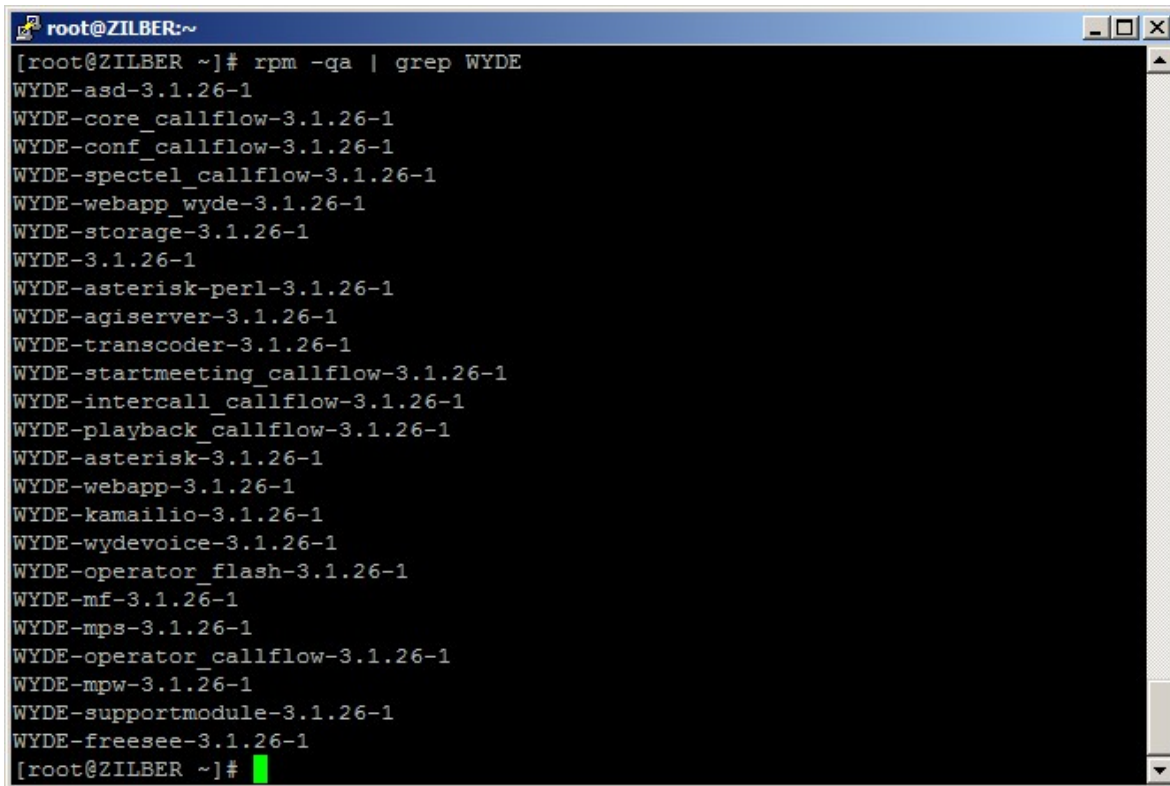
Note that the *http* connection on port 80 is not supported by WYDE bridge, only secure *https* connection is supported. To open Web Administration Interface you should use the IP address of the computer where you have made WYDE software full installation, i.e. you should type the URL *https://<your bridge IP>/* (*https://192.168.1.30/* in our sample). To run Web Moderator Console you should use the IP address of the computer where you have made WYDE software full installation, i.e. you should type *https://<your bridge IP>/moderator/* (for instance *https://192.168.1.30/moderator/*) in your browser URL bar. To run Web Operator Console you should use URL *https://<your bridge IP>/operator/* (for instance *https://192.168.1.30/operator/*). See Chapter 4: Verify Software Installation for details.

When the WYDE conferencing bridge software installation is completed the installation folder (*/root/install/3.1.26-CENTOS5/* in our sample) will contain the following files: *install_error.log*, *install_core_error.log*, *install_frontend_error.log*, *install_backend_error.log*, *install_web_error.log*, *install_kamailio_error.log*, *install_moderator_error.log*, *install_operator_error.log*, *install_freeseet_error.log*. If there were not errors during installation these files should be empty, otherwise they contain the errors occurred during installation.

You can check the installed core packages using the command:

```
rpm -qa | grep WYDE
```

It should return the screen similar to shown on Figure 8.

A terminal window titled 'root@ZILBER:~' showing the output of the command 'rpm -qa | grep WYDE'. The output lists 22 installed packages, all with version 3.1.26-1. The packages are: WYDE-asd, WYDE-core_callflow, WYDE-conf_callflow, WYDE-spectel_callflow, WYDE-webapp_wyde, WYDE-storage, WYDE, WYDE-asterisk-perl, WYDE-agiserver, WYDE-transcoder, WYDE-startmeeting_callflow, WYDE-intercall_callflow, WYDE-playback_callflow, WYDE-asterisk, WYDE-webapp, WYDE-kamailio, WYDE-wydevoice, WYDE-operator_flash, WYDE-mf, WYDE-mps, WYDE-operator_callflow, WYDE-mpw, WYDE-supportmodule, and WYDE-freesee. The prompt '[root@ZILBER ~]#' is visible at the bottom.

```
[root@ZILBER ~]# rpm -qa | grep WYDE
WYDE-asd-3.1.26-1
WYDE-core_callflow-3.1.26-1
WYDE-conf_callflow-3.1.26-1
WYDE-spectel_callflow-3.1.26-1
WYDE-webapp_wyde-3.1.26-1
WYDE-storage-3.1.26-1
WYDE-3.1.26-1
WYDE-asterisk-perl-3.1.26-1
WYDE-agiserver-3.1.26-1
WYDE-transcoder-3.1.26-1
WYDE-startmeeting_callflow-3.1.26-1
WYDE-intercall_callflow-3.1.26-1
WYDE-playback_callflow-3.1.26-1
WYDE-asterisk-3.1.26-1
WYDE-webapp-3.1.26-1
WYDE-kamailio-3.1.26-1
WYDE-wydevoice-3.1.26-1
WYDE-operator_flash-3.1.26-1
WYDE-mf-3.1.26-1
WYDE-mps-3.1.26-1
WYDE-operator_callflow-3.1.26-1
WYDE-mpw-3.1.26-1
WYDE-supportmodule-3.1.26-1
WYDE-freesee-3.1.26-1
[root@ZILBER ~]#
```

Figure 8: The WYDE Conferencing Bridge Software Installed Packages

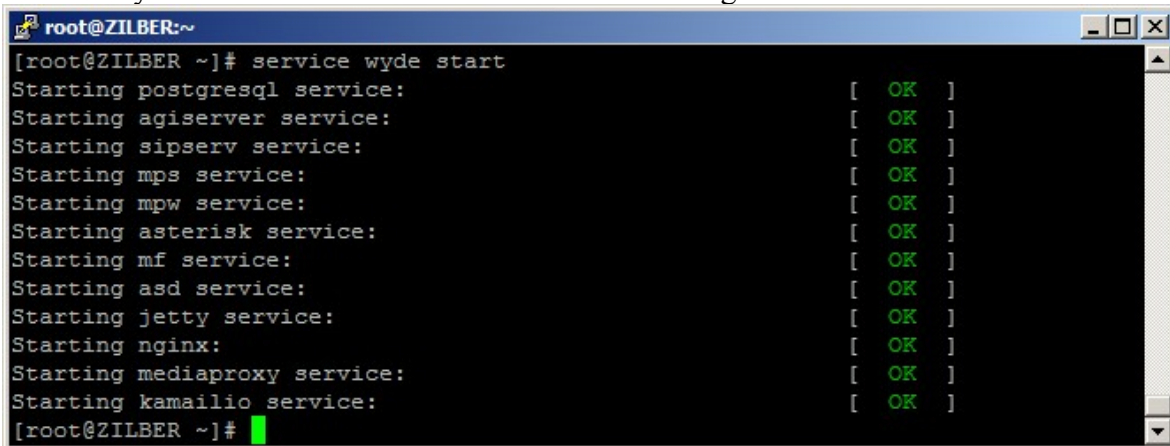
After full installation completed you should start *postgresql*, *agiserver*, *sipserv*, *mps*, *mpw*, *asterisk*, *mf*, *asd*, *jetty*, *nginx*, *mediaproxy*, *kamailio* services using the following commands:

```
service postgresql start
service agiserver start
service sipserv start
service mps start
service mpw start
service asterisk start
service mf start
service asd start
service jetty start
service nginx start
service mediaproxy start
service kamailio start
```

Or for the same purposes you can use the command:

```
service wyde start
```

After that you will see the screen similar to shown on Figure 9.



```
root@ZILBER:~  
[root@ZILBER ~]# service wyde start  
Starting postgresql service: [ OK ]  
Starting agiserver service: [ OK ]  
Starting sip serv service: [ OK ]  
Starting mps service: [ OK ]  
Starting mpw service: [ OK ]  
Starting asterisk service: [ OK ]  
Starting mf service: [ OK ]  
Starting asd service: [ OK ]  
Starting jetty service: [ OK ]  
Starting nginx: [ OK ]  
Starting mediaproxy service: [ OK ]  
Starting kamailio service: [ OK ]  
[root@ZILBER ~]#
```

Figure 9: Starting All WYDE Services after Full Installation Completed

Note these WYDE services are being started automatically once your computer restarted.

After full installation the bridge can process 10 simultaneous calls only. To increase this amount you should visit <http://licserver.wydevoice.com> using your credentials and the unique hardware signature (`/usr/local/DNCA/etc/hws.bin`) which was built during the installation. See Chapter 3: Licensing of this guide for detail information.

Once you have installed the WYDE conferencing bridge software you can make the calls on the bridge on this computer. See Chapter 4: Verify Software Installation for details how to test the WYDE conferencing bridge software installation.

2.2: Core Installation

Core components contain the following packages:

- WYDE-3.1.mmm-o
- WYDE-agiserver-3.1.mmm-o
- WYDE-asd-3.1.mmm-o
- WYDE-asterisk-perl-3.1.mmm-o
- WYDE-core_callflow-3.1.mmm-o
- WYDE-mf-3.1.mmm-o
- WYDE-mps-3.1.mmm-o
- WYDE-transcoder-3.1.mmm-o

The following call flows packages are being installed in the core components installation:

- WYDE-conf_callflow-3.1.mmm-o
- WYDE-intercall_callflow-3.1.mmm-o
- WYDE-operator_callflow-3.1.mmm-o
- WYDE-playback_callflow-3.1.mmm-o
- WYDE-spectel_callflow-3.1.mmm-o
- WYDE-startmeeting_callflow-3.1.mmm-o

The following services are being installed during core installation:

- postgresql
- agiserver
- sip serv
- mps
- mf
- asd

To install WYDE conferencing bridge software core components on separate computer you should start the installation as it was described in the beginning of this chapter and perform the steps from 1 till 3. After that the following steps should be implemented:

4. In the select installation components question to perform core components installation on the separate computer you should select CORE component only and unselect all other components, see Figure 10.

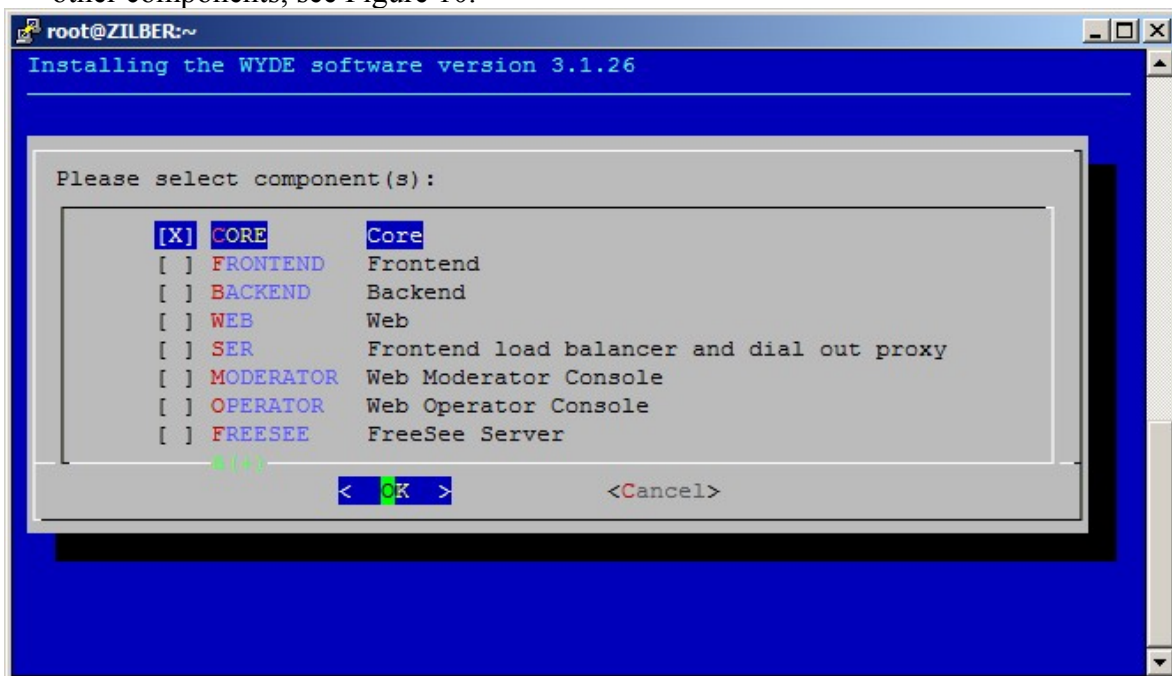


Figure 10: Installation “select components” Question, Core Installation Selected

5. Next the installation program will ask to enter (confirm) your host IP, see Figure 11.

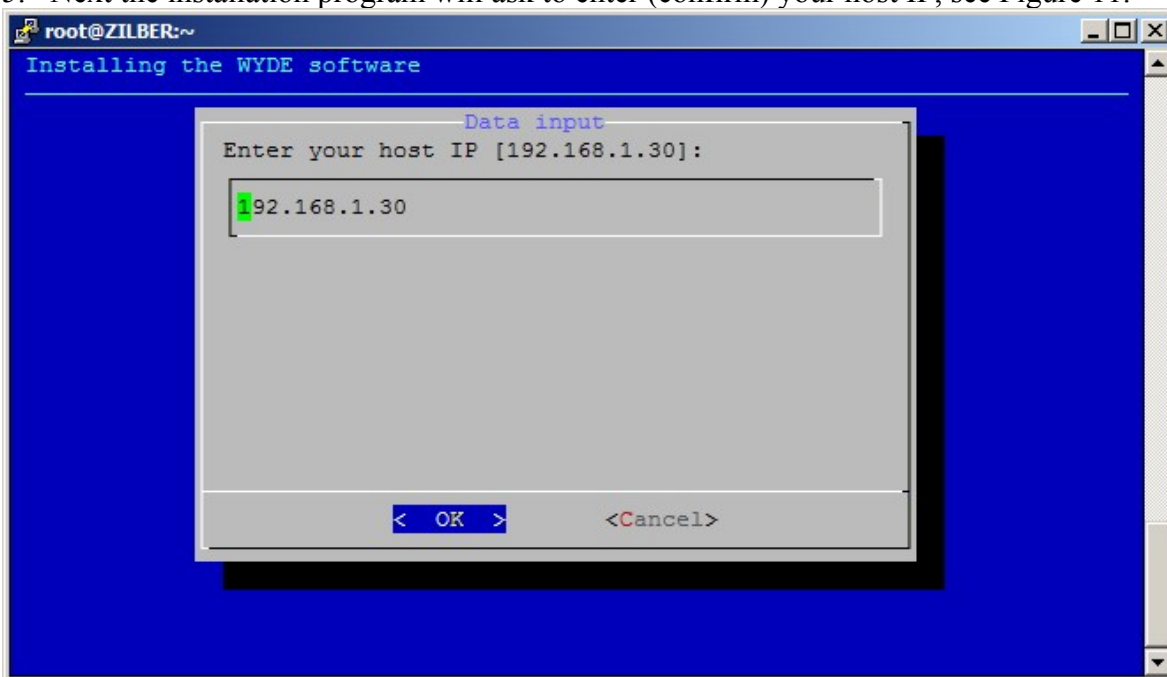


Figure 11: Core Installation “enter host IP” Question

6. Next the installation program will ask to enter the email address for notifications about any crashes as shown on Figure 12.

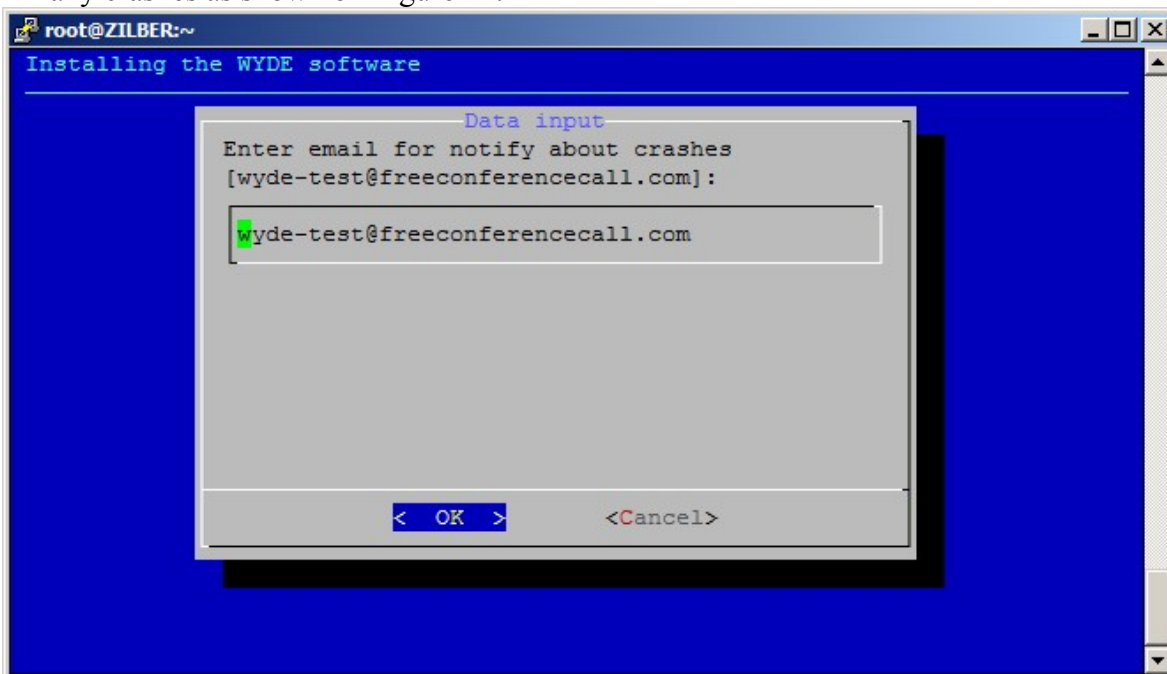


Figure 12: Core Installation “notification email” Question

7. After core installation has been completed you will see the screen similar to shown on Figure 13.

```

root@ZILBER:~
DONE install core.
DONE.
*****
*****
*****
*   At the moment the bridge can process only 10 simultaneous calls.
*   To increase this amount you should visit
*   http://licserver.wydevoice.com using
*   your credentials and the unique hardware signature
*   (/usr/local/DNCA/etc/hws.bin)
*   which was built during the installation.
*****
*****
*****
* To start the WYDE bridge services now you should use the command:
*   service wyde start
*   These services are being started automatically
*   once your computer restarted.
*****
*****
*****
[root@ZILBER ~]#

```

Figure 13: Core Installation Completed Screen

You can check the installed core packages using the command:

```
rpm -qa | grep WYDE
```

It should return the screen similar to shown on Figure 14.

```

root@ZILBER:~
[root@ZILBER ~]# rpm -qa | grep WYDE
WYDE-asd-3.1.26-1
WYDE-core_callflow-3.1.26-1
WYDE-conf_callflow-3.1.26-1
WYDE-spectel_callflow-3.1.26-1
WYDE-3.1.26-1
WYDE-asterisk-perl-3.1.26-1
WYDE-agiserver-3.1.26-1
WYDE-transcoder-3.1.26-1
WYDE-startmeeting_callflow-3.1.26-1
WYDE-intercall_callflow-3.1.26-1
WYDE-playback_callflow-3.1.26-1
WYDE-mf-3.1.26-1
WYDE-mps-3.1.26-1
WYDE-operator_callflow-3.1.26-1
[root@ZILBER ~]#

```

Figure 14: Core Installed Packages

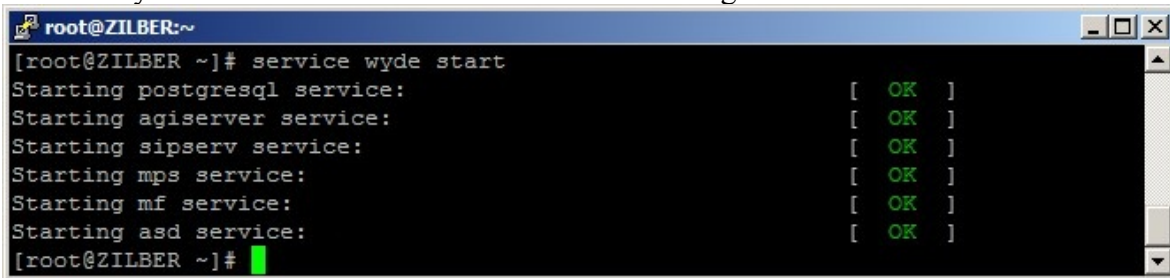
After core installation completed you should start *postgresql*, *agiserver*, *sipserv*, *mps*, *mf*, and *asd* services using the following commands:

```
service postgresql start
service agiserver start
service sipserv start
service mps start
service mf start
service asd start
```

Or for the same purposes you can use the command:

```
service wyde start
```

After that you will see the screen similar to shown on Figure 15.



```
root@ZILBER:~
[root@ZILBER ~]# service wyde start
Starting postgresql service:      [ OK ]
Starting agiserver service:      [ OK ]
Starting sipserv service:        [ OK ]
Starting mps service:            [ OK ]
Starting mf service:             [ OK ]
Starting asd service:            [ OK ]
[root@ZILBER ~]#
```

Figure 15: Starting *postgresql*, *agiserver*, *sipserv*, *mps*, *mf*, and *asd* Services after Core Installation Completed

Note these services are being started automatically once your computer restarted.

After core components installation the bridge can process 10 simultaneous calls only. To increase this amount you should visit <http://licserver.wydevoice.com> using your credentials and the unique hardware signature (*/usr/local/DNCA/etc/hws.bin*) which was built during the installation. See Chapter 3: Licensing of this guide for detail information.

Once you have installed the core components and all other necessary components you can make the calls on the bridge on this computer. See Chapter 4: Verify Software Installation for details how to test the WYDE conferencing bridge software installation.

2.3: Frontend Installation

Frontend components contain the following packages:

- WYDE-3.1.mmm-o
- WYDE-asterisk-3.1.mmm-o
- WYDE-transcoder-3.1.mmm-o

The *asterisk* service is being installed during frontend installation.

To install WYDE conferencing bridge software frontend components on separate computer you should start the installation as it was described in the beginning of this chapter and perform the steps from 1 till 3. After that the following steps should be implemented:

4. In the select installation components question to perform frontend components installation on the separate computer you should select FRONTEND component only and unselect all other components, see Figure 16.

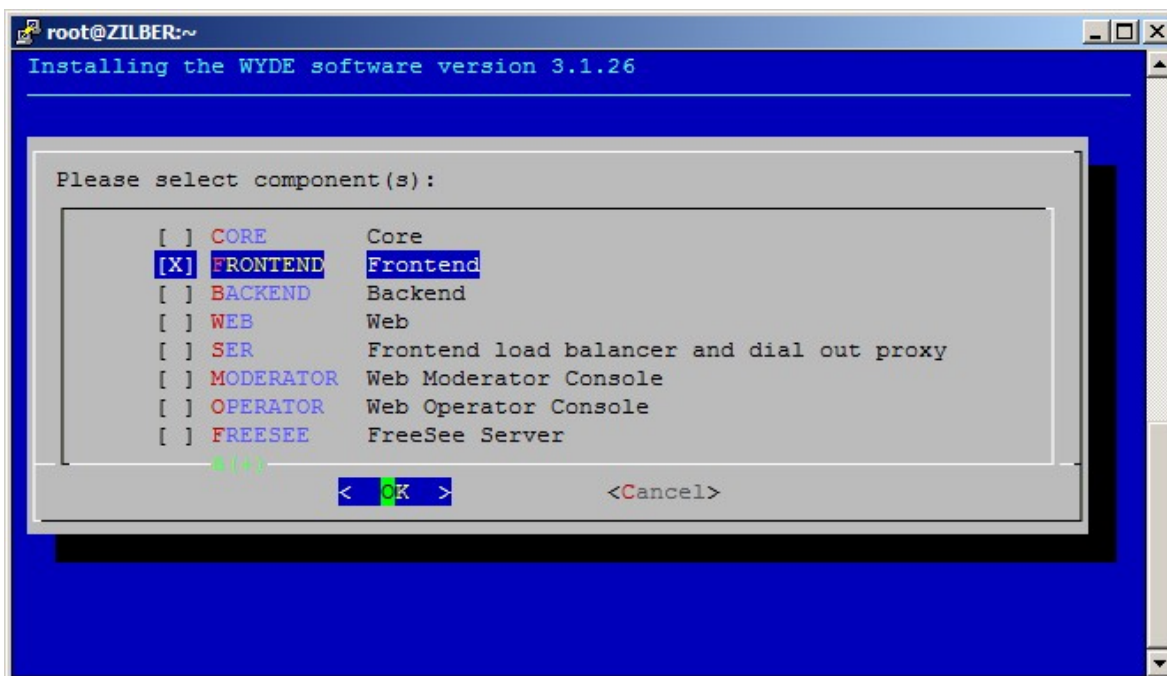


Figure 16: Installation “select components” Question, Frontend Installation Selected

5. No additional questions are being asked during frontend components installation. After frontend installation has been completed you will see the screen similar to shown on Figure 17.

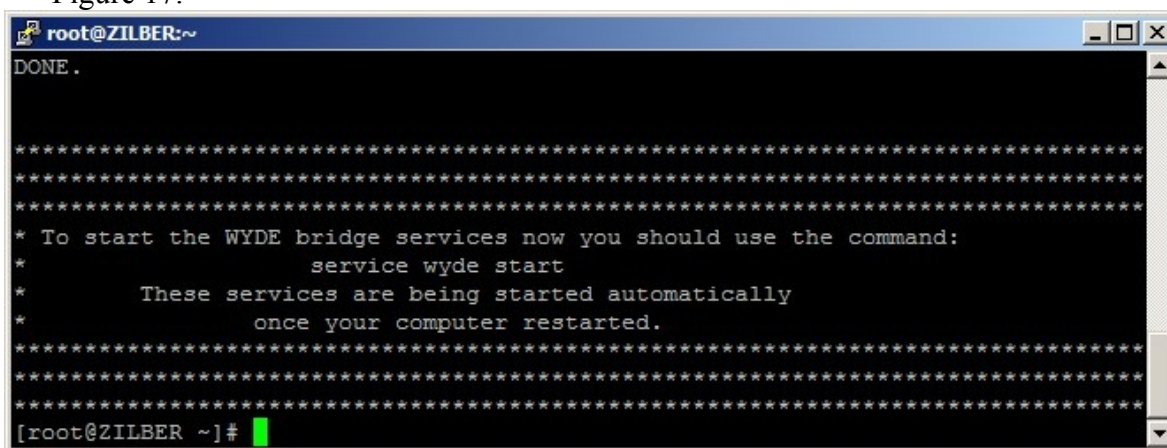


Figure 17: Frontend Installation Completed Screen

You can check the installed frontend packages using the command:

```
rpm -qa | grep WYDE
```

It should return the screen similar to shown on Figure 18.

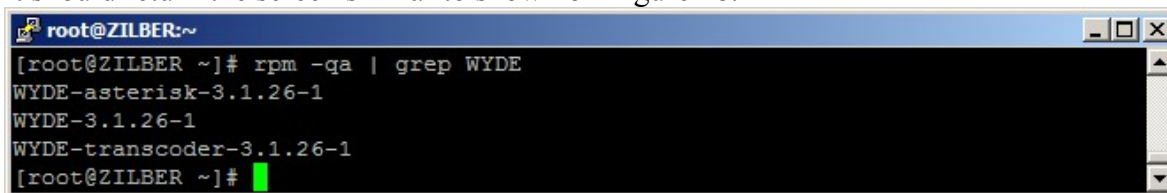


Figure 18: Frontend Installed Packages

After frontend installation complete you should start *asterisk* service using the following command:

```
service asterisk start
```

Or for the same purposes you can use the command:

```
service wyde start
```

After that you will see the screen similar to shown on Figure 19.

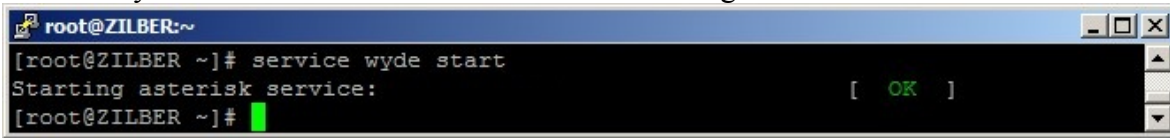


Figure 19: Starting *asterisk* Service after Frontend Installation Completed

Note this service is being started automatically once your computer restarted.

2.4: Backend Installation

Backend components contain the following packages:

- WYDE-3.1.mmm-o
- WYDE-mpw-3.1.mmm-o

The *mpw* service is being installed during backend installation.

To install WYDE conferencing bridge software backend components on separate computer you should start the installation as it was described in the beginning of this chapter and perform the steps from 1 till 3. After that the following steps should be implemented:

4. In select installation components question to perform backend components installation on the separate computer you should select BACKEND component only and unselect all other components, see Figure 20.

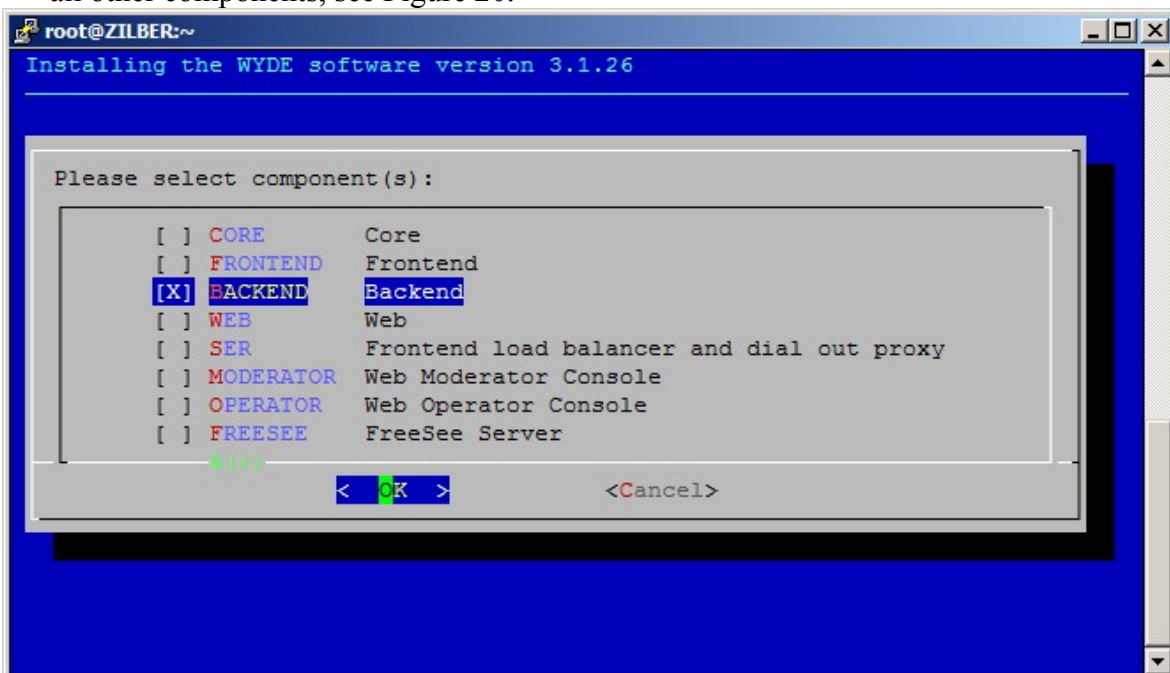


Figure 20: Installation “select components” Question, Backend Installation Selected

5. Next the installation program will ask you to enter your *dnca* core IP, see Figure 21. Here you should enter the IP of the computer where core components (*dnca* database, *mp* and *mf* services) have been installed.

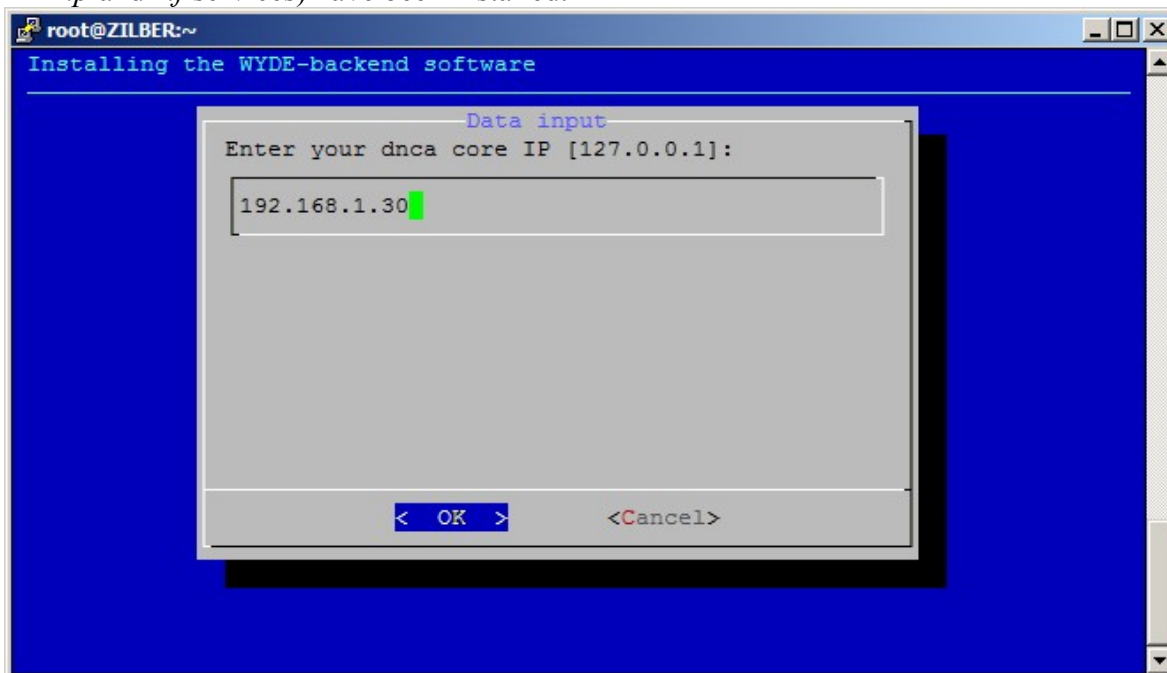


Figure 21: Backend Installation “dnca core IP” Question

6. After installation has been completed you will see the screen similar to shown on Figure 22.

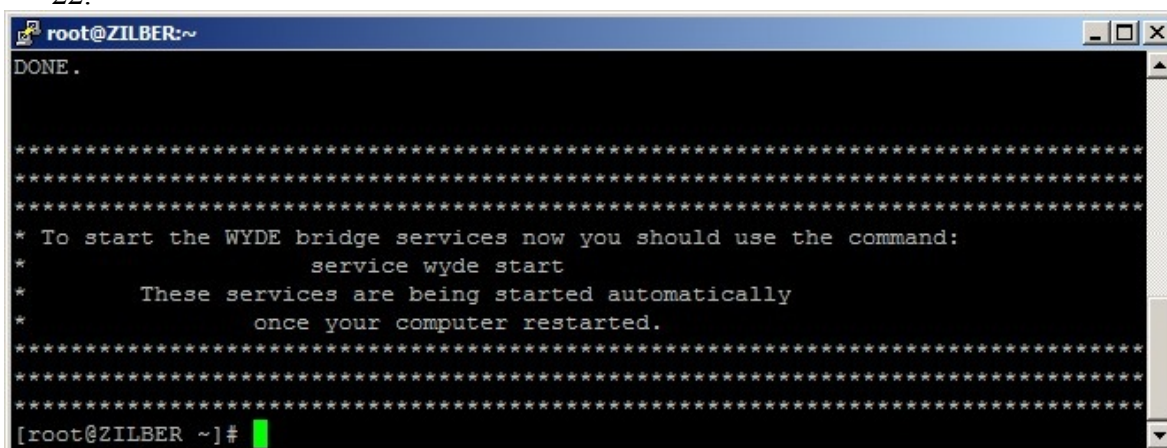
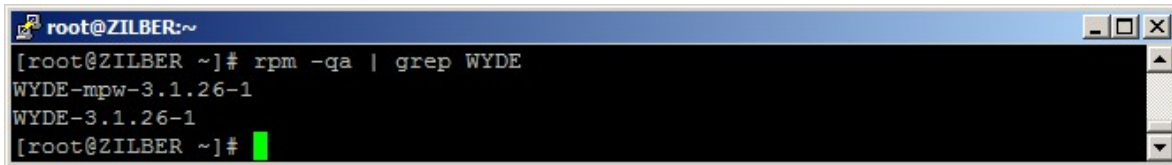


Figure 22: Backend Installation Completed Screen

You can check the installed backend packages using the command:

```
rpm -qa | grep WYDE
```

It should return the screen similar to shown on Figure 23.

A terminal window titled 'root@ZILBER:~' showing the command 'rpm -qa | grep WYDE' and its output. The output lists two packages: 'WYDE-mpw-3.1.26-1' and 'WYDE-3.1.26-1'. The prompt is '[root@ZILBER ~]# ' with a green cursor.

```
root@ZILBER:~  
[root@ZILBER ~]# rpm -qa | grep WYDE  
WYDE-mpw-3.1.26-1  
WYDE-3.1.26-1  
[root@ZILBER ~]#
```

Figure 23: Backend Installed Packages

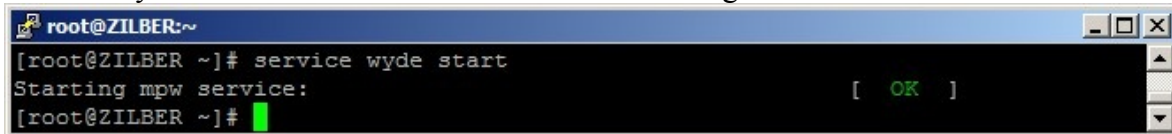
After backend installation complete you should start *mpw* service using the following command:

```
service mpw start
```

Or for the same purposes you can use the command:

```
service wyde start
```

After that you will see the screen similar to shown on Figure 24.

A terminal window titled 'root@ZILBER:~' showing the command 'service wyde start'. The output is 'Starting mpw service:' followed by '[OK]' in green. The prompt is '[root@ZILBER ~]# ' with a green cursor.

```
root@ZILBER:~  
[root@ZILBER ~]# service wyde start  
Starting mpw service: [ OK ]  
[root@ZILBER ~]#
```

Figure 24: Starting *mpw* Service after Backend Installation Completed

Note this service is being started automatically once your computer restarted.

2.5: Web Installation

Web components contain the following packages:

- WYDE-3.1.mmm-o
- WYDE-transcoder-3.1.mmm-o
- WYDE-webapp_wyde-3.1.mmm-o
- WYDE-webapp-3.1.mmm-o

The *jetty* and *nginx* services are being installed and configured during web installation.

To install WYDE conferencing bridge software Web components on separate computer you should start the installation as it was described in the beginning of this chapter and perform the steps from 1 till 3. After that the following steps should be implemented:

4. In select installation components question to perform web components installation on the separate computer you should select WEB component only and unselect all other components, see Figure 25.

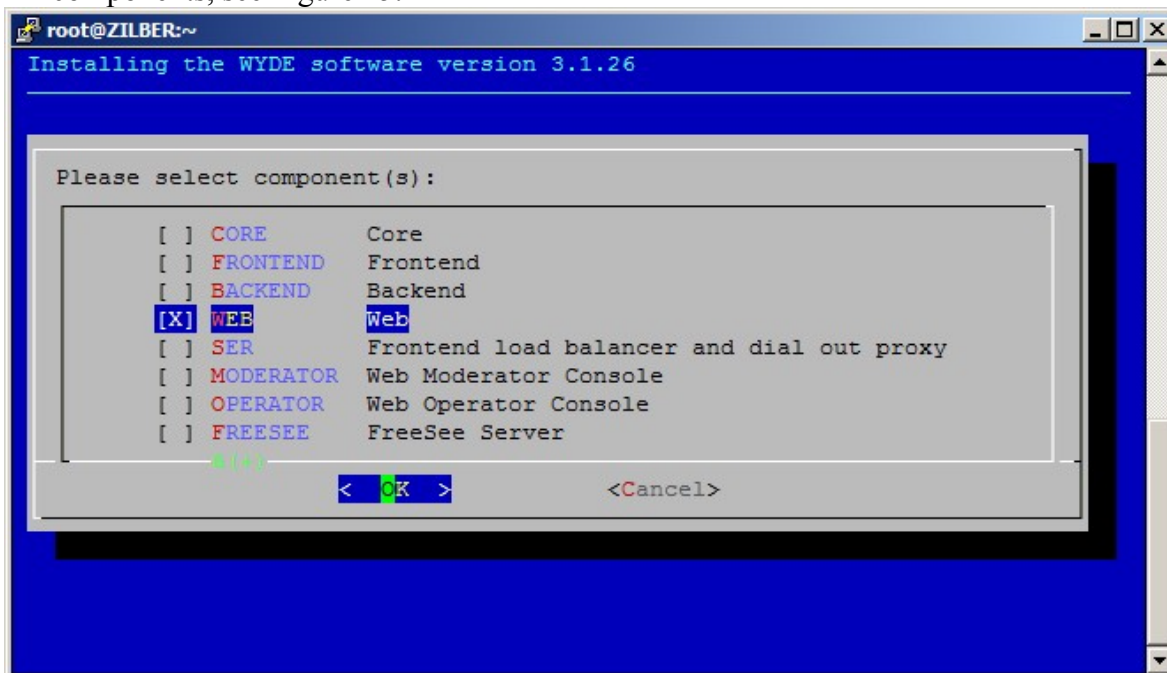


Figure 25: Installation “select components” Question, Web Installation Selected

5. Next the installation program will ask to enter your *dnca* database (db) IP, see Figure 26. Here you should enter the IP of the computer where *dnca* database has been installed (192.168.1.30 in our sample, see section 2.2: Core Installation).

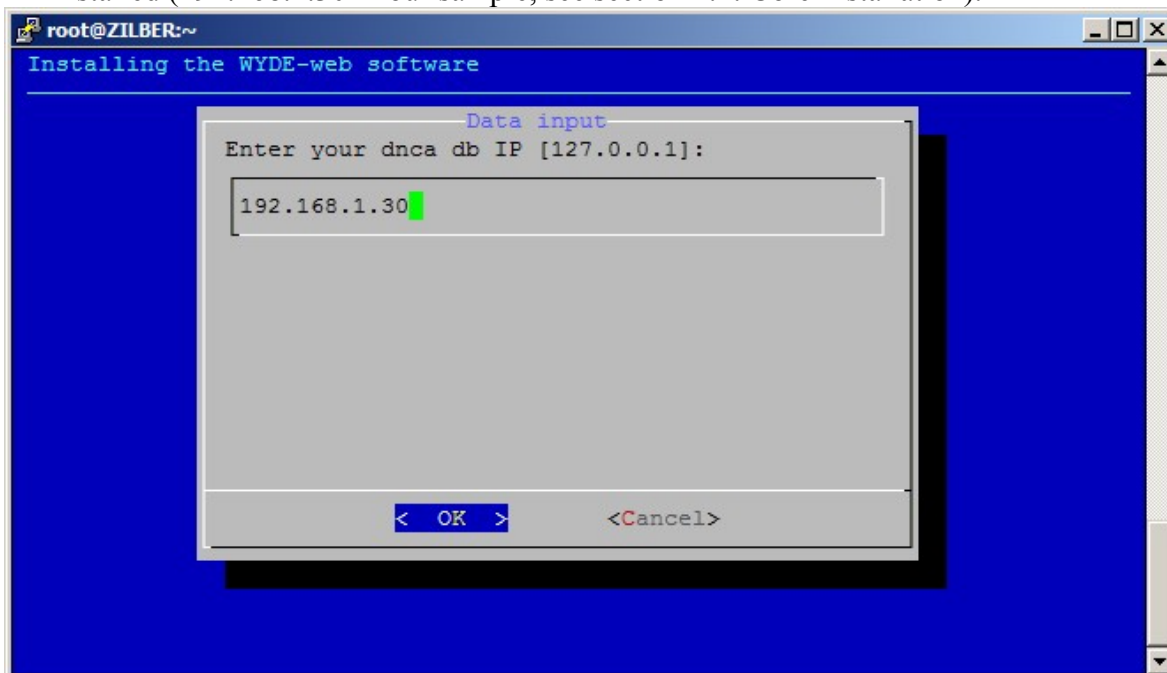


Figure 26: Web Installation “dnca db IP” Question

6. Next the installation program will ask to enter your username for *dnca* database, see Figure 27. The default username is *dnca*.

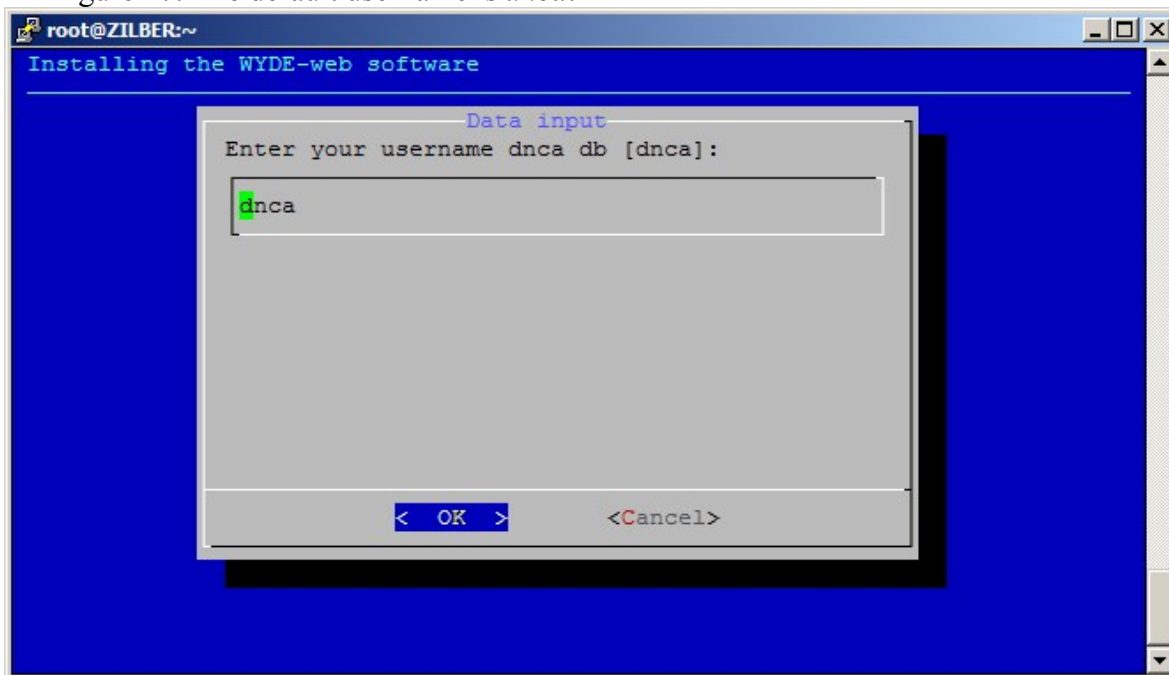


Figure 27: Web Installation “username dnca db” Question

7. Next the installation program will ask to enter your user password for *dnca* database, see Figure 28. The default password is *Qwerty*.

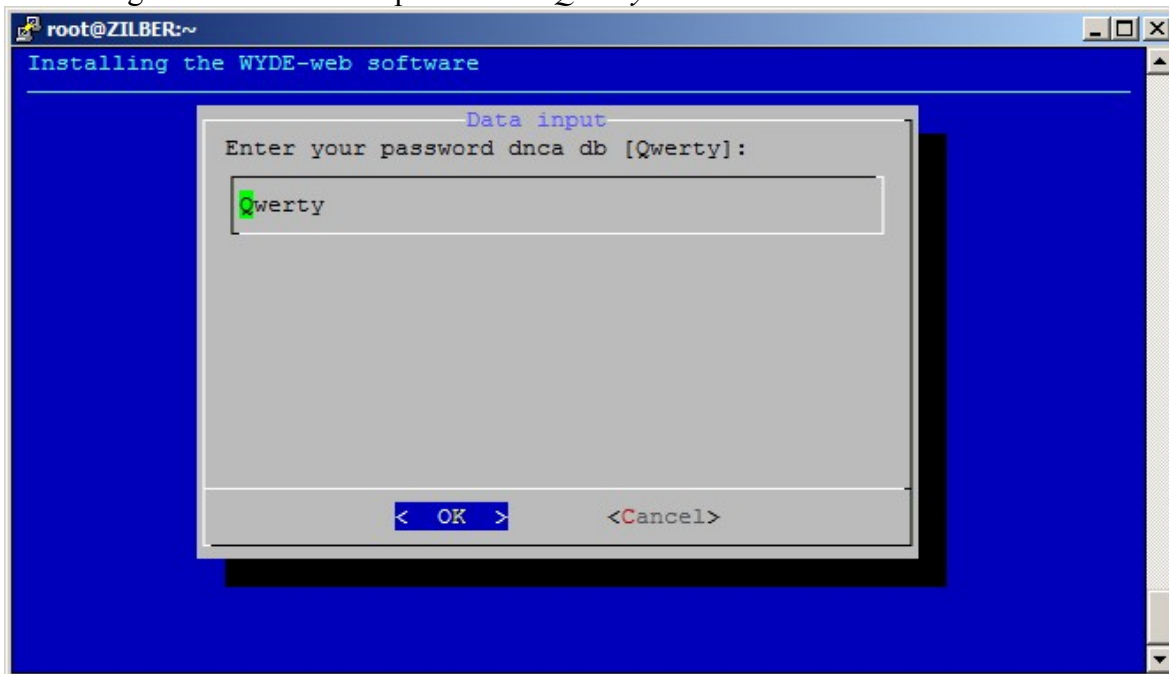


Figure 28: Web Installation “password dnca db” Question

8. Next the installation program will ask to enter your listen IP address as shown on Figure 29. That is the real IP address where *nginx* service is listening (typically on the port 443); by default your bridge IP address is used.

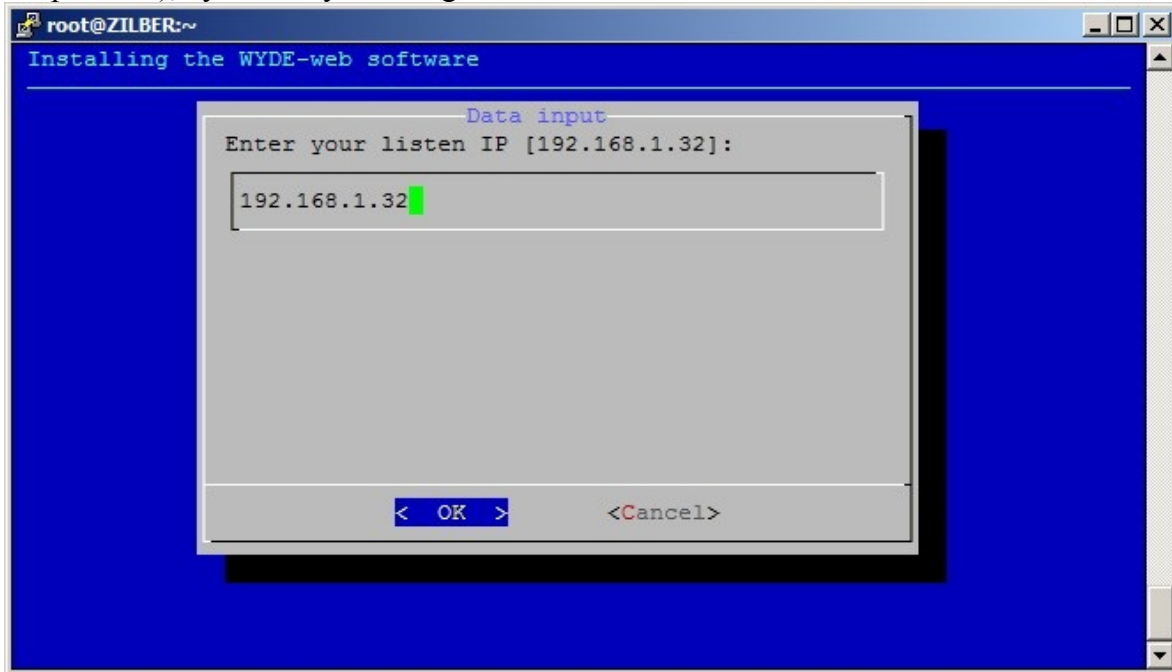


Figure 29: Web Installation “listen IP” Question

9. Next the installation program will ask to enter your external host name as shown on Figure 30. This is the virtual host domain name required for secure (https) connection; the secured certificates should be signed for this host domain name. See section 2.1: Full Installation for details.

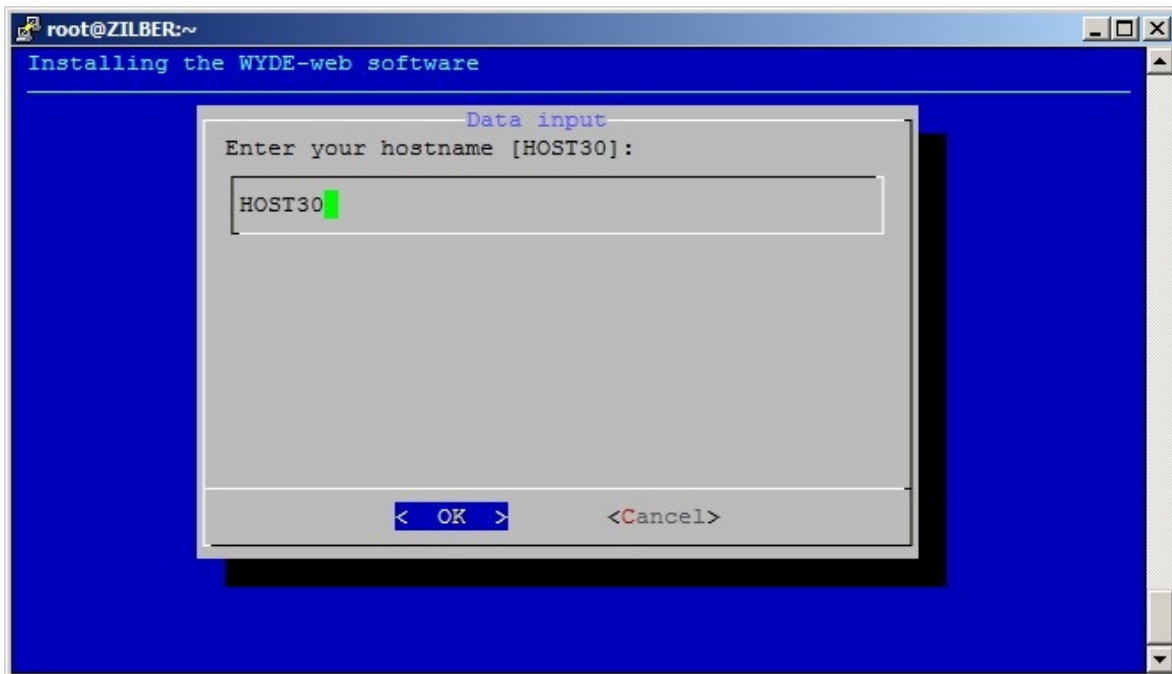
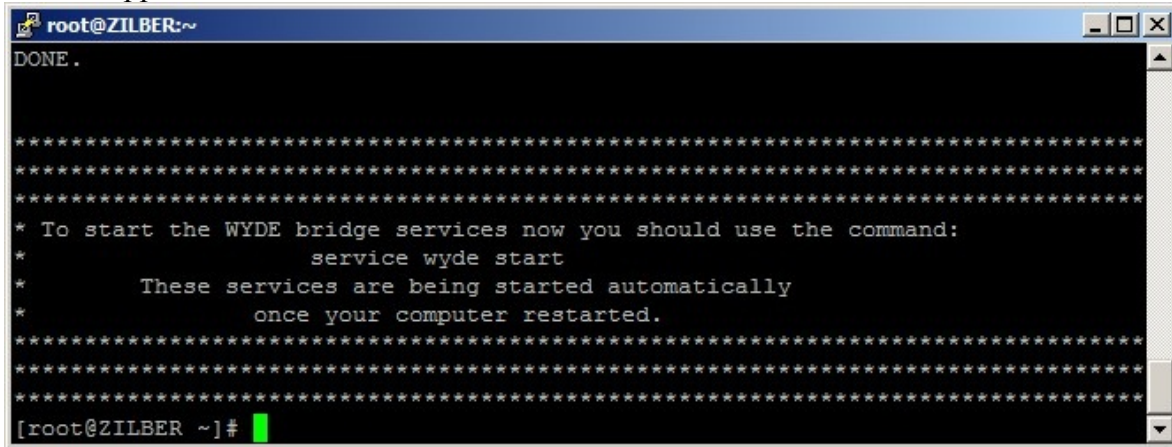


Figure 30: Web Installation “hostname” Question

10. When the installation process is completed the screen similar to shown on Figure 31 will appear.



```

root@ZILBER:~
DONE.

*****
*****
*****
* To start the WYDE bridge services now you should use the command:
*           service wyde start
*
*   These services are being started automatically
*           once your computer restarted.
*****
*****
*****
[root@ZILBER ~]#

```

Figure 31: Web Installation Completed Screen

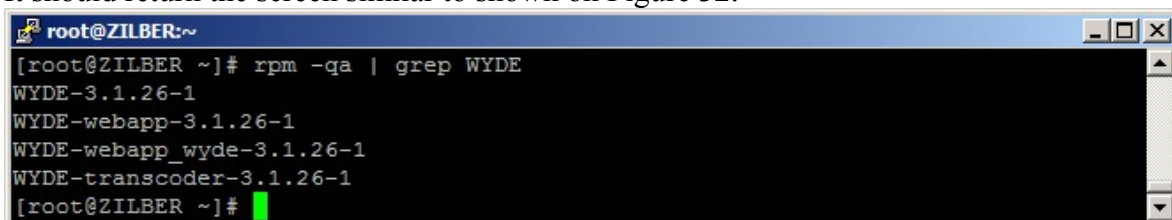
Note that to access the database you should make additional changes on the computer that has *dnca* database (in our sample 192.168.1.30):

- you should change */var/lib/pgsql/data/postgresql.conf* file, this file should contain the following line:
`listen_addresses = '*'`
 if this file does not have this line you should add to this file or you should modify the existing line. This parameter determines what IP addresses to listen on; '*' means all addresses.
- you should change */var/lib/pgsql/data/pg_hba.conf* file and to this file similar line:
`host all all <THIS COMPUTER IP> 255.255.255.0 trust`
 where <THIS COMPUTER IP> is the IP of the computer where you are installing WYDE Web components. In our sample it is 192.168.1.32, so this line should be the following:
`host all all 192.168.1.32 255.255.255.0 trust`
- After you have changed these files you should restart *postgres* using the command:
`service postgresql restart`

You can check the installed web packages using the command:

```
rpm -qa | grep WYDE
```

It should return the screen similar to shown on Figure 32.



```

root@ZILBER:~
[root@ZILBER ~]# rpm -qa | grep WYDE
WYDE-3.1.26-1
WYDE-webapp-3.1.26-1
WYDE-webapp_wyde-3.1.26-1
WYDE-transcoder-3.1.26-1
[root@ZILBER ~]#

```

Figure 32: WYDE Web Installed Packages

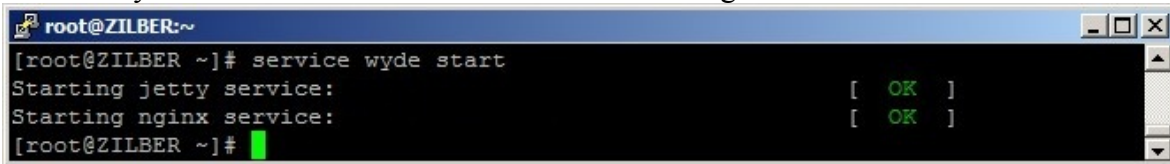
After you have made the changes on the computer that has *dnca* database (in our sample 192.168.1.30) described in item 8 you should start *jetty* and *nginx* services using the following commands:

```
service jetty start  
service nginx start
```

Or for the same purposes you can use the command:

```
service wyde start
```

After that you will see the screen similar to shown on Figure 33.

A terminal window titled 'root@ZILBER:~' with a blue header bar. The terminal shows the command '[root@ZILBER ~]# service wyde start' and its output: 'Starting jetty service: [OK]' and 'Starting nginx service: [OK]'. The prompt '[root@ZILBER ~]#' is followed by a green cursor bar.

```
root@ZILBER:~  
[root@ZILBER ~]# service wyde start  
Starting jetty service: [ OK ]  
Starting nginx service: [ OK ]  
[root@ZILBER ~]#
```

Figure 33: Starting *jetty* and *nginx* Services after Web Installation Completed

Note this service is being started automatically once your computer restarted.

Once this has been done you are able to use Web Administration Interface from this computer using URL <https://<this computer IP>/> (<https://192.168.1.32/> in our sample). See Chapter 4: Verify Software Installation for details.

2.6: Frontend Load Balancer and Dial Out Proxy Installation

Frontend load balancer and dial out proxy components contain the following packages:

- WYDE-3.1.mmm-o
- WYDE-kamailio-3.1.mmm-o

Because these components installation is being performed on the computer where core components are installed, it is assumed that the following services are already installed on this computer prior to the installation:

- postgresql
- agiserver
- sipserve
- mps
- mf
- asd

and additionally the *kamailio* service is being installed on this computer during this installation.

As it was previously mentioned frontend load balancer and dial out proxy components could be installed only on the computer where core components were installed. If you try to install frontend load balancer and dial out proxy components on a separate computer without WYDE core components you receive the error message: “*To install Frontend load balancer and dial out proxy components you should also install Core components on this computer.*”.

Let’s assume that you already installed core components on your computer and in addition you are going to install the frontend load balancer and dial out proxy components on the same computer. To install WYDE conferencing bridge software frontend load balancer and

dial out proxy components on the computer where the core components were previously installed you should start the installation as it was described in the beginning of this chapter and perform the steps from 1 till 3. After that the following steps should be implemented:

4. In select installation components question to perform frontend load balancer and dial out proxy components installation on the computer with core components installed you should select SER component in addition to CORE component and unselect all other components, see Figure 34. As you can see on the figure, in our sample core components are already installed on this computer. If core components were not previously installed on the computer you should select CORE and SER components both to perform the installation.

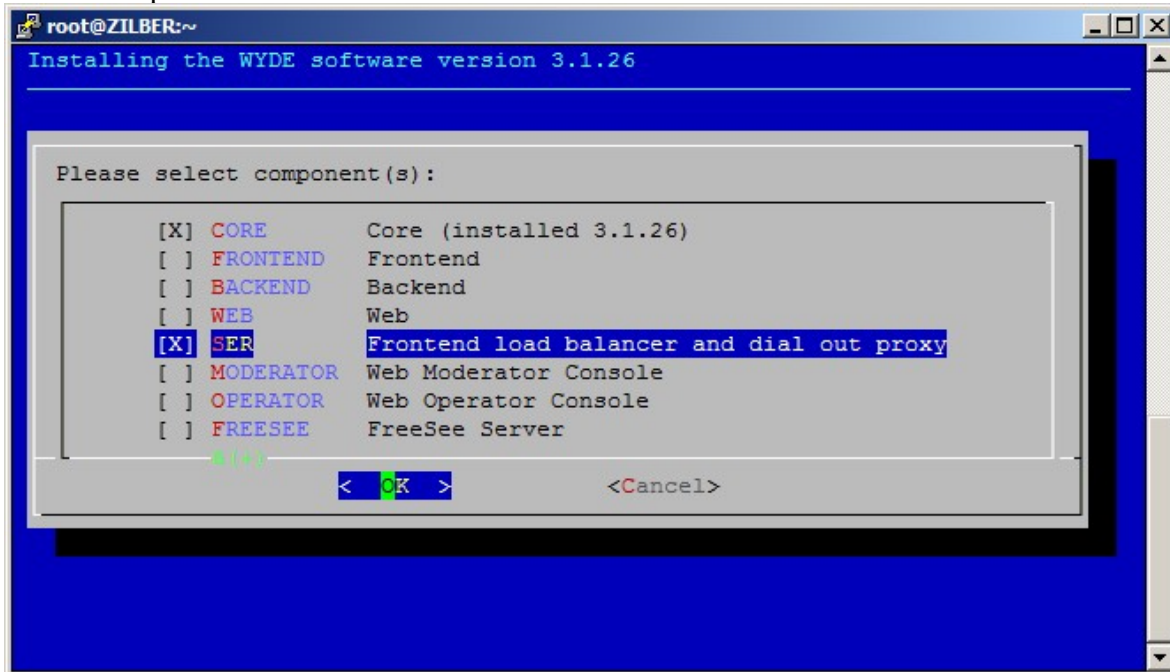
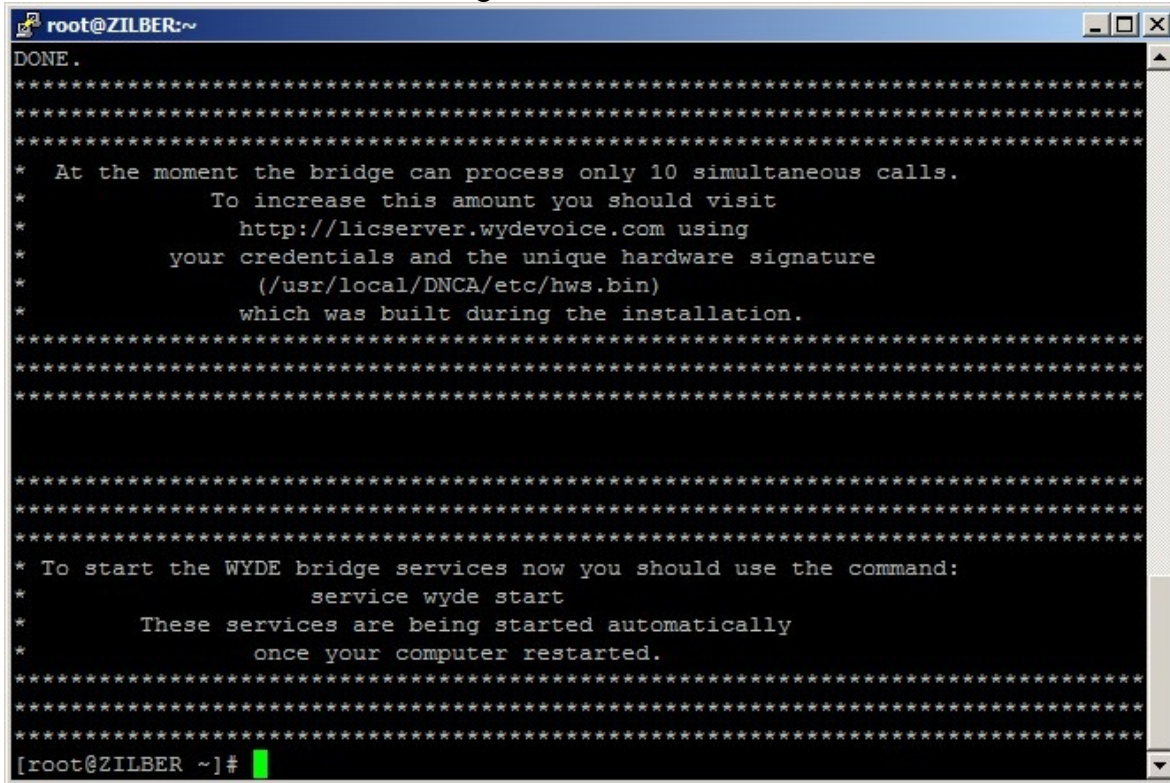


Figure 34: Installation “select components” Question, Frontend Load Balancer and Dial Out Proxy Installation Selected

5. No additional questions are being asked during frontend load balancer and dial out proxy components installation. After the installation has been completed you will see the screen similar to shown on Figure 35.



```

root@ZILBER:~
DONE.
*****
*****
*   At the moment the bridge can process only 10 simultaneous calls.
*       To increase this amount you should visit
*       http://licserver.wydevoice.com using
*       your credentials and the unique hardware signature
*       (/usr/local/DNCA/etc/hws.bin)
*       which was built during the installation.
*****
*****
*   To start the WYDE bridge services now you should use the command:
*       service wyde start
*   These services are being started automatically
*       once your computer restarted.
*****
*****
[root@ZILBER ~]#

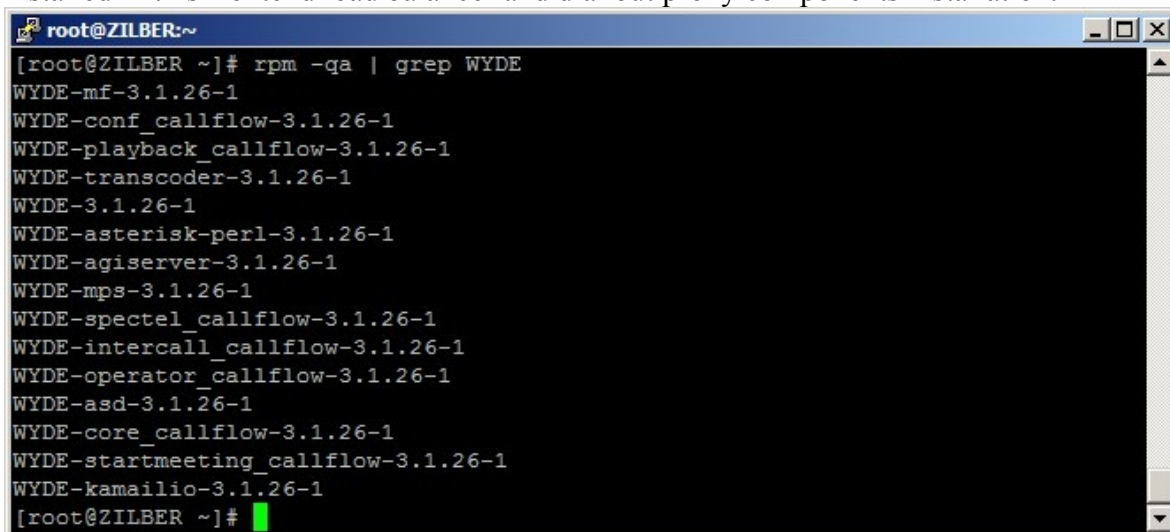
```

Figure 35: Frontend Load Balancer and Dial Out Proxy Installation Completed Screen

You can check the installed packages using the command:

```
rpm -qa | grep WYDE
```

It should return the screen similar to shown on Figure 36. Note that this list includes both the services previously installed during core components installation and the services installed in this frontend load balancer and dial out proxy components installation.



```

root@ZILBER:~
[root@ZILBER ~]# rpm -qa | grep WYDE
WYDE-mf-3.1.26-1
WYDE-conf_callflow-3.1.26-1
WYDE-playback_callflow-3.1.26-1
WYDE-transcoder-3.1.26-1
WYDE-3.1.26-1
WYDE-asterisk-perl-3.1.26-1
WYDE-agiserver-3.1.26-1
WYDE-mps-3.1.26-1
WYDE-spectel_callflow-3.1.26-1
WYDE-intercall_callflow-3.1.26-1
WYDE-operator_callflow-3.1.26-1
WYDE-asd-3.1.26-1
WYDE-core_callflow-3.1.26-1
WYDE-startmeeting_callflow-3.1.26-1
WYDE-kamailio-3.1.26-1
[root@ZILBER ~]#

```

Figure 36: WYDE Core and Frontend Load Balancer and Dial Out Proxy Installed Packages

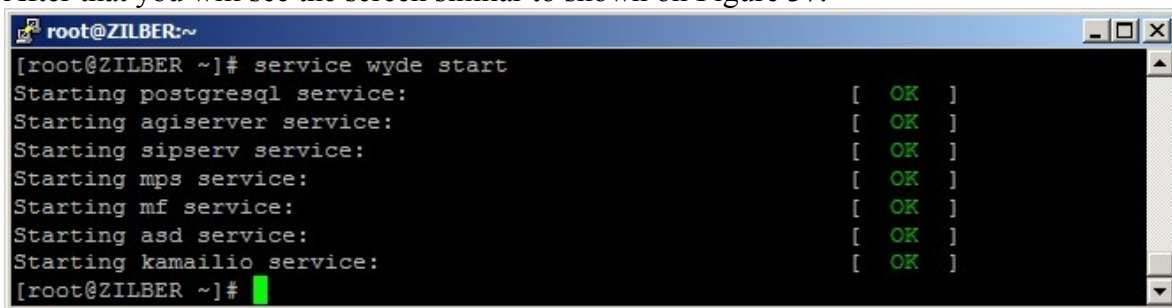
After frontend load balancer and dial out proxy components installation completed you should start *postgresql*, *agiserver*, *sipserv*, *mps*, *mf*, *asd*, and *kamailio* services using the following commands:

```
service postgresql start
service agiserver start
service sipserv start
service mps start
service mf start
service asd start
service kamailio start
```

Or for the same purposes you can use the command:

```
service wyde start
```

After that you will see the screen similar to shown on Figure 37.



```
root@ZILBER:~
[root@ZILBER ~]# service wyde start
Starting postgresql service:      [ OK ]
Starting agiserver service:      [ OK ]
Starting sipserv service:        [ OK ]
Starting mps service:            [ OK ]
Starting mf service:              [ OK ]
Starting asd service:            [ OK ]
Starting kamailio service:       [ OK ]
[root@ZILBER ~]#
```

Figure 37: Starting *postgresql*, *agiserver*, *sipserv*, *mps*, *mf*, *asd*, and *kamailio* Services after Frontend Load Balancer and Dial Out Proxy Installation Completed

Note these services are being started automatically once your computer restarted.

Once you have installed the frontend load balancer and dial out proxy components and all other necessary components you can make the calls on the bridge on this computer. See Chapter 4: Verify Software Installation for details how to test the WYDE conferencing bridge software installation.

2.7: Web Moderator Console Installation

Web moderator console components contain the following packages:

- WYDE-3.1.mmm-o
- WYDE-storage-3.1.mmm-o
- WYDE-supportmodule-3.1.mmm-o
- WYDE-wydevoice-3.1.mmm-o

Because web moderator console installation is being performed on the computer where web components are installed, the *jetty* and *nginx* services are being installed on this computer.

As it was previously mentioned moderator console components could be installed only on the computer where web components were installed. If you try to install moderator console on a separate computer you receive the error message: “To install Moderator Console you should also install Web components on this computer.”.

Let's assume that you already installed web components on your computer and in addition you are going to install the moderator console on the same computer. To install WYDE conferencing bridge software Web Moderator Console components on the computer where the Web components were previously installed you should start the installation as it was described in the beginning of this chapter and perform the steps from 1 till 3. After that the following steps should be implemented:

4. In select installation components question to perform web Moderator Console components installation on the computer with installed web components you should select MODERATOR component in addition to WEB component and unselect all other components, see Figure 38. As you can see on the figure, in our sample web components are already installed on this computer. If web components were not previously installed on the computer you should select WEB and MODERATOR components both to perform the installation.

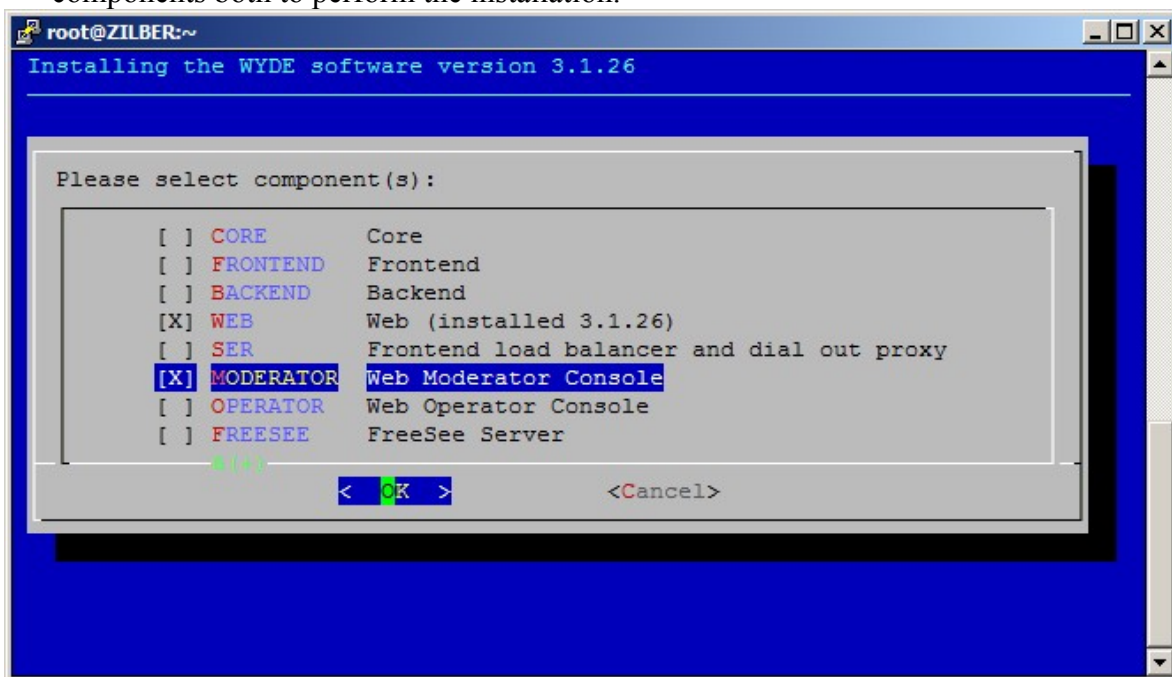
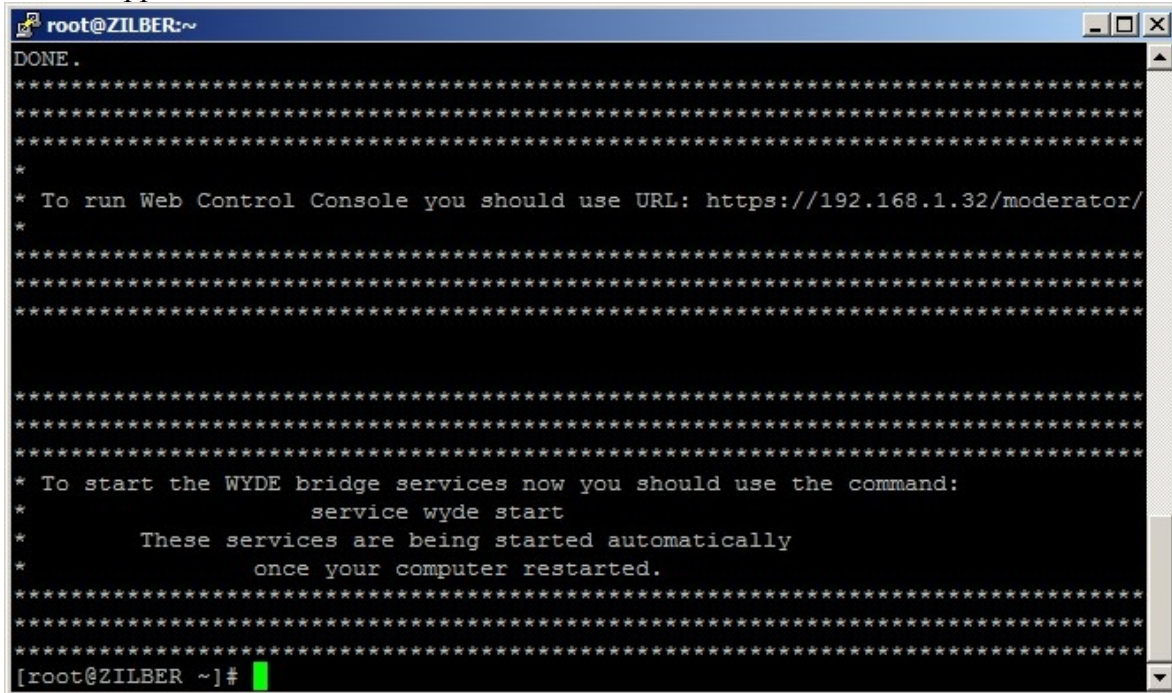


Figure 38: Installation “select components” Question, Web Moderator Console Installation Selected

5. When the installation process is completed the screen similar to shown on Figure 39 will appear.



```

root@ZILBER:~
DONE.
*****
*****
*****
*
* To run Web Control Console you should use URL: https://192.168.1.32/moderator/
*
*****
*****
*****
*****
* To start the WYDE bridge services now you should use the command:
*       service wyde start
*       These services are being started automatically
*       once your computer restarted.
*****
*****
[root@ZILBER ~]#

```

Figure 39: Web Moderator Console Installation Completed Screen

Note that after this installation some additional actions may be needed to use Web Moderator Console. To use it you may need to perform the following steps:

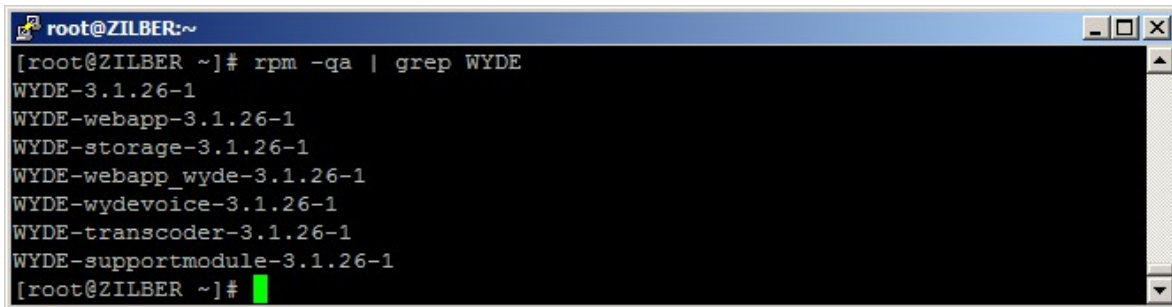
- i) Register conference DNIS number (call flow: SPECTEL); in this call flow set “*Realtime protocol*” attribute value equal “on”, “*Callers database*” attribute value equal “on”, and “*Playback number*” attribute value equal to playback conference DNIS number;
- ii) Register playback conference DNIS number (call flow: PLAYBACK) and in this call flow set “*Reffered DNIS number*” attribute value equal to the DNIS number registered in the previous step;
- iii) Update the WYDE system settings using *wyde* command with *settings-edit* option, the following system settings parameters should be changed:
 - conferencePN – should be equal to number registered in the step i);
 - playbackPN – should be equal to number registered in the step ii).

After this configuration has made you should restart *jetty* service using the command:
`service jetty restart`

You can check the installed web packages using the command:

```
rpm -qa | grep WYDE
```

It should return the screen similar to shown on Figure 40.

A terminal window titled 'root@ZILBER:~' showing the output of the command 'rpm -qa | grep WYDE'. The output lists several WYDE-related packages installed on the system.

```
root@ZILBER:~# rpm -qa | grep WYDE
WYDE-3.1.26-1
WYDE-webapp-3.1.26-1
WYDE-storage-3.1.26-1
WYDE-webapp_wyde-3.1.26-1
WYDE-wydevoice-3.1.26-1
WYDE-transcoder-3.1.26-1
WYDE-supportmodule-3.1.26-1
root@ZILBER:~#
```

Figure 40: WYDE Web and Moderator Console Installed Packages

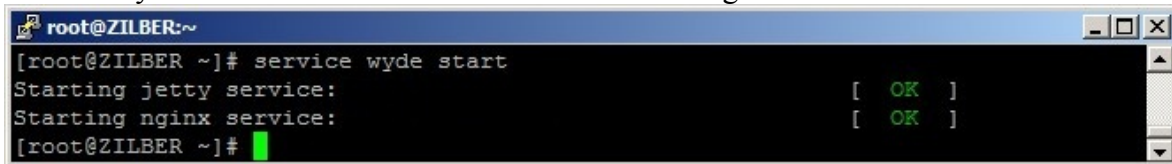
After you have made necessary changes in the configuration described in item 5 you should start *jetty* service using the following commands:

```
service jetty start
service nginx start
```

Or for the same purposes you can use the command:

```
service wyde start
```

After that you will see the screen similar to shown on Figure 41.

A terminal window titled 'root@ZILBER:~' showing the output of the command 'service wyde start'. The output indicates that both the jetty and nginx services were started successfully.

```
root@ZILBER:~# service wyde start
Starting jetty service:           [ OK ]
Starting nginx service:         [ OK ]
root@ZILBER:~#
```

Figure 41: Starting *jetty* and *nginx* Services after Web Moderator Console Installation Completed

Note this service is being started automatically once your computer restarted.

Once this has been done you are able to use Moderator Console from this computer using URL <https://<this computer IP>/moderator/> (for example <https://192.168.1.32/moderator/>). See Chapter 4: Verify Software Installation for details.

2.8: Web Operator Console Installation

Web operator console components contain the following packages:

- WYDE-3.1.mmm-o
- WYDE-operator_flash-3.1.mmm-o

Because web operator console installation is being performed on the computer where web components are installed, the *jetty* and *nginx* services are being installed on this computer.

As it was previously mentioned operator console components could be installed only on the computer where web components were installed. If you try to install operator console on a separate computer you receive the error message: “*To install Operator Console you should also install Web components on this computer.*”.

Let’s assume that you already installed web components on your computer and in addition you are going to install the operator console on the same computer. To install WYDE conferencing bridge software Web Operator Console components on the computer where the Web components were previously installed you should start the installation as it was

described in the beginning of this chapter and perform the steps from 1 till 3. After that the following steps should be implemented:

4. In select installation components question to perform web Operator Console components installation on the computer with installed web components you should select OPERATOR component in addition to WEB component and unselect all other components, see Figure 42. As you can see on the figure, in our sample web components are already installed on this computer. If web components were not previously installed on the computer you should select WEB and OPERATOR components both to perform the installation.

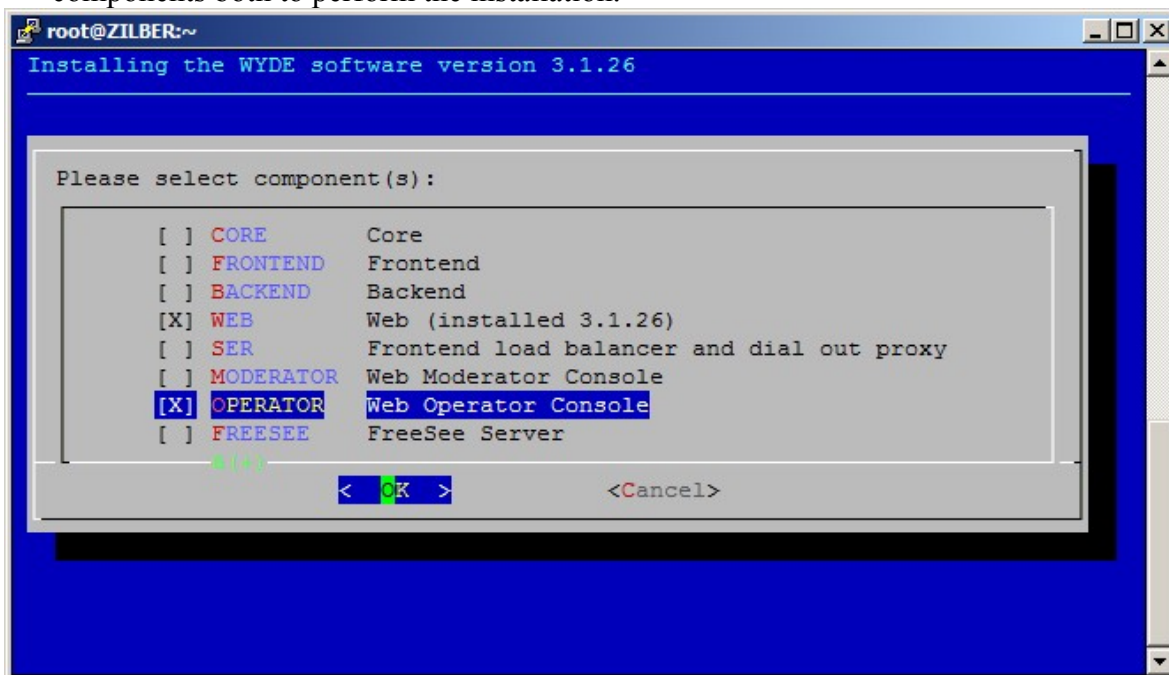
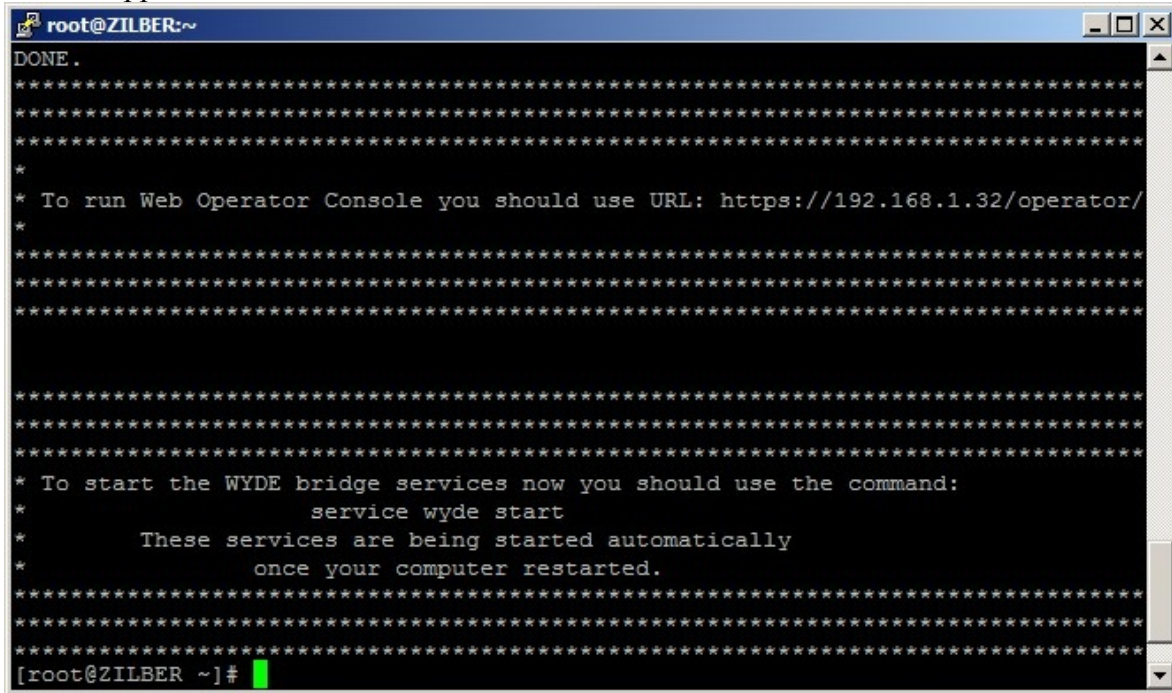


Figure 42: Installation “select components” Question, Web Operator Console Installation Selected

5. When the installation process is completed the screen similar to shown on Figure 43 will appear.



```

root@ZILBER:~
DONE.
*****
*****
*****
*
* To run Web Operator Console you should use URL: https://192.168.1.32/operator/
*
*****
*****
*****
*****
* To start the WYDE bridge services now you should use the command:
*
*       service wyde start
*
*       These services are being started automatically
*       once your computer restarted.
*****
*****
[root@ZILBER ~]#

```

Figure 43: Web Operator Console Installation Completed Screen

Note that after this installation some additional actions may be needed to use Web Operator Console. To use it you may need to perform the following steps:

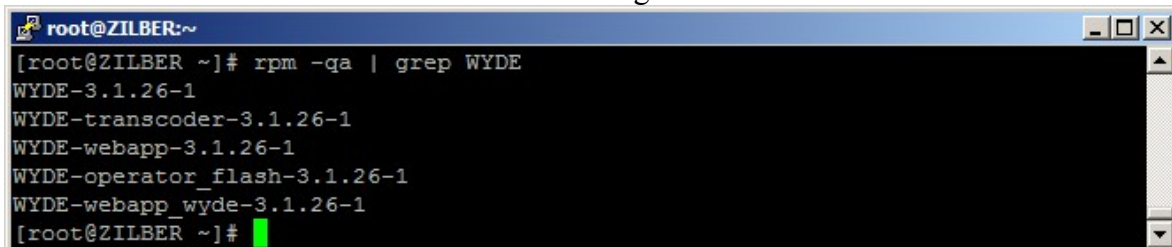
- i) Register conference DNIS number (call flow: OPERATOR);
- ii) Update the WYDE system settings using *wyde* command with *settings-edit* option, the following system settings parameter should be changed:
operatorPN – should be equal to number registered in the step i).

After this configuration has made you should restart *jetty* service using the command:
service jetty restart

You can check the installed web packages using the command:

```
rpm -qa | grep WYDE
```

It should return the screen similar to shown on Figure 44.



```

root@ZILBER:~
[root@ZILBER ~]# rpm -qa | grep WYDE
WYDE-3.1.26-1
WYDE-transcoder-3.1.26-1
WYDE-webapp-3.1.26-1
WYDE-operator_flash-3.1.26-1
WYDE-webapp_wyde-3.1.26-1
[root@ZILBER ~]#

```

Figure 44: WYDE Web and Operator Console Installed Packages

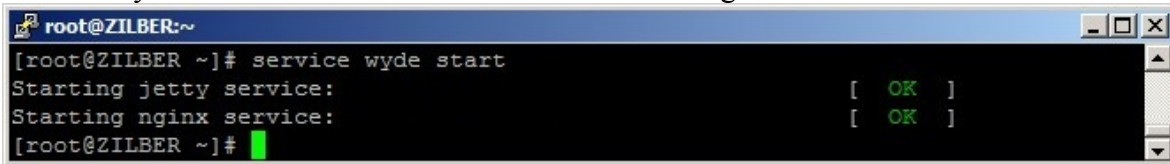
After you have made necessary changes in the configuration described in item 5 you should start *jetty* service using the following commands:

```
service jetty start  
service nginx start
```

Or for the same purposes you can use the command:

```
service wyde start
```

After that you will see the screen similar to shown on Figure 45.

A terminal window titled 'root@ZILBER:~' with standard window controls. The terminal shows the command '[root@ZILBER ~]# service wyde start' and its output: 'Starting jetty service: [OK]' and 'Starting nginx service: [OK]'. The prompt '[root@ZILBER ~]#' is followed by a green cursor bar.

```
root@ZILBER:~  
[root@ZILBER ~]# service wyde start  
Starting jetty service: [ OK ]  
Starting nginx service: [ OK ]  
[root@ZILBER ~]#
```

Figure 45: Starting *jetty* and *nginx* Services after Web Operator Console Installation Completed

Note this service is being started automatically once your computer restarted.

Once this has been done you are able to use Operator Console (Web Control Console – WCC) from this computer using URL <https://<this computer IP>/operator/> (for example <https://192.168.1.32/operator/>). See Chapter 4: Verify Software Installation for details.

2.9: FreeSee Server Installation

FreeSee Server components contain the following packages:

- WYDE-3.1.mmm-o
- WYDE-freesee-3.1.mmm-o

Because these components installation is being performed on the computer where core components are installed, it is assumed that the following services are already installed on this computer prior to the installation:

- postgresql
- agiserver
- sipserv
- mps
- mf
- asd

and additionally *mediaproxy* service is being installed on this computer during FreeSee Server installation.

As it was previously mentioned FreeSee server components could be installed only on the computer where core components were installed. If you try to install FreeSee server components on a separate computer without WYDE core components you receive the error message: “*To install FreeSee server components you should also install Core components on this computer.*”.

Let’s assume that you already installed core components on your computer and in addition you are going to install the FreeSee server components on the same computer. To install WYDE conferencing bridge software FreeSee server components on the computer where the core components were previously installed you should start the installation as it was

described in the beginning of this chapter and perform the steps from 1 till 3. After that the following steps should be implemented:

4. In select installation components question to perform FreeSee server components installation on the computer with core components installed you should select FREESEE component in addition to CORE component and unselect all other components, see Figure 46. As you can see on the figure, in our sample core components are already installed on this computer. If core components were not previously installed on the computer you should select CORE and FREESEE components both to perform the installation.

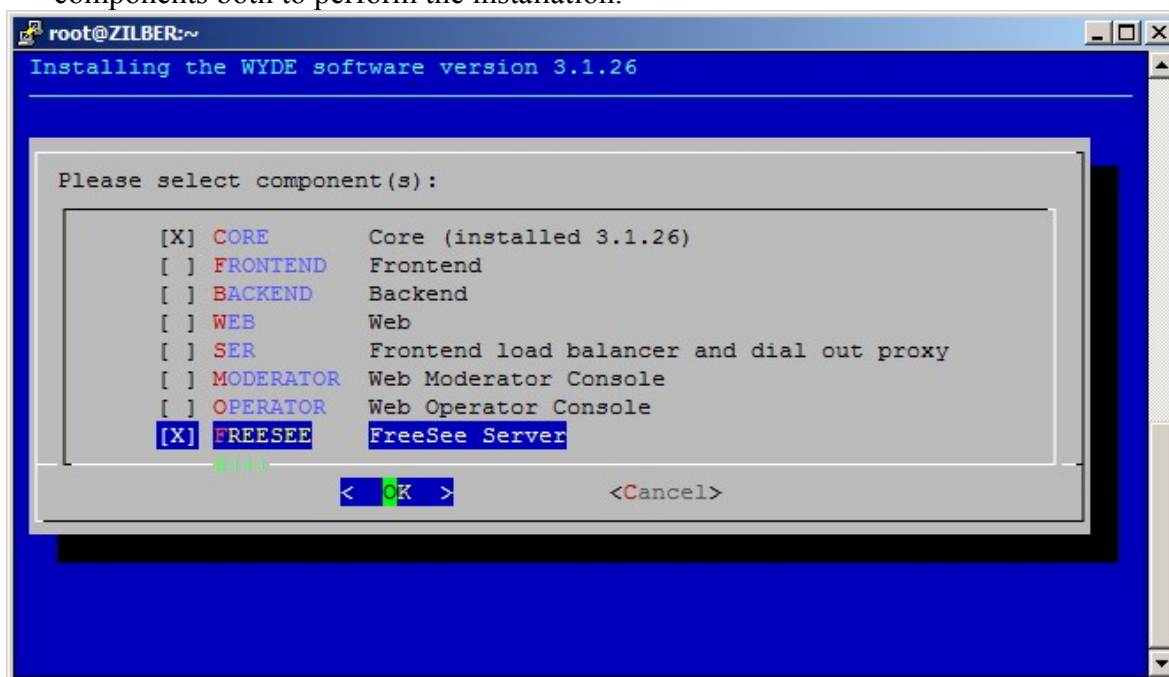


Figure 46: Installation “select components” Question, FreeSee Server Installation Selected

5. No additional questions are being asked during FreeSee server components installation. After the installation has been completed you will see the screen similar to shown on Figure 47.

```

root@ZILBER:~
DONE.
*****
*****
*****
*   At the moment the bridge can process only 10 simultaneous calls.
*       To increase this amount you should visit
*       http://licserver.wydevoice.com using
*       your credentials and the unique hardware signature
*       (/usr/local/DNCA/etc/hws.bin)
*       which was built during the installation.
*****
*****
*****
*   To start the WYDE bridge services now you should use the command:
*       service wyde start
*       These services are being started automatically
*       once your computer restarted.
*****
*****
*****
[root@ZILBER ~]#

```

Figure 47: FreeSee Server Installation Completed Screen

You can check the installed packages using the command:

```
rpm -qa | grep WYDE
```

It should return the screen similar to shown on Figure 48. Note that this list includes both the services previously installed during core components installation and the services installed in this FreeSee server components installation.

```

root@ZILBER:~
[root@ZILBER ~]# rpm -qa | grep WYDE
WYDE-mf-3.1.26-1
WYDE-conf_callflow-3.1.26-1
WYDE-playback_callflow-3.1.26-1
WYDE-transcoder-3.1.26-1
WYDE-3.1.26-1
WYDE-asterisk-perl-3.1.26-1
WYDE-agiserver-3.1.26-1
WYDE-mps-3.1.26-1
WYDE-spectel_callflow-3.1.26-1
WYDE-intercall_callflow-3.1.26-1
WYDE-operator_callflow-3.1.26-1
WYDE-asd-3.1.26-1
WYDE-core_callflow-3.1.26-1
WYDE-startmeeting_callflow-3.1.26-1
WYDE-freesee-3.1.26-1
[root@ZILBER ~]#

```

Figure 48: WYDE Core and FreeSee Server Installed Packages

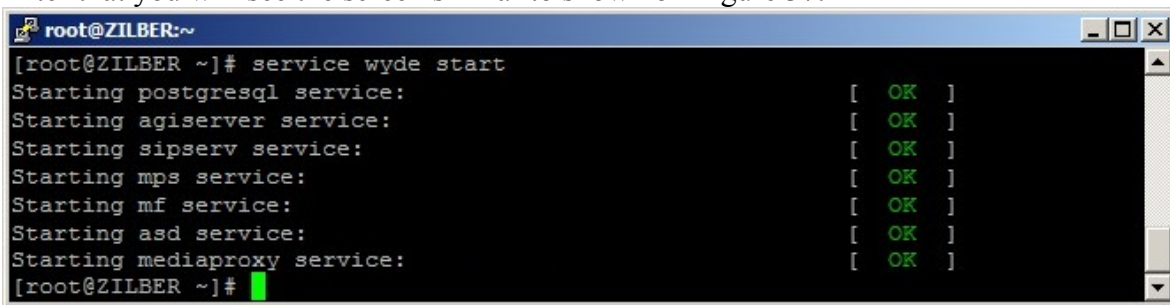
After FreeSee server components installation completed you should start *postgresql*, *agiserver*, *sipserv*, *mps*, *mf*, *asd*, and *mediaproxy* services using the following commands:

```
service postgresql start
service agiserver start
service sipserv start
service mps start
service mf start
service asd start
service mediaproxy start
```

Or for the same purposes you can use the command:

```
service wyde start
```

After that you will see the screen similar to shown on Figure 37.



```
root@ZILBER:~
[root@ZILBER ~]# service wyde start
Starting postgresql service:      [ OK ]
Starting agiserver service:      [ OK ]
Starting sipserv service:        [ OK ]
Starting mps service:            [ OK ]
Starting mf service:              [ OK ]
Starting asd service:            [ OK ]
Starting mediaproxy service:     [ OK ]
[root@ZILBER ~]#
```

Figure 49: Starting *postgresql*, *agiserver*, *sipserv*, *mps*, *mf*, *asd*, and *mediaproxy* Services after FreeSee Server Installation Completed

Note these services are being started automatically once your computer restarted.

Once you have installed the FreeSee server components and all other necessary components you can make the calls on the bridge on this computer. See Chapter 4: Verify Software Installation for details how to test the WYDE conferencing bridge software installation.

2.10: Cluster Installation

If you are going to use large bridges that process large amount of simultaneous calls, you may need to consider cluster installation of the WYDE software. WYDE software core components (dnca database, mp and mf services) can be installed on two Linux computers that are joined together in the cluster. In cluster installation the core components are being installed on two or more computers.

Cluster installation depends on specific client's needs; entirely different installation procedures could be used for this installation type.

Cluster installation is quite difficult. If you need cluster installation please contact WYDE Voice technical support for detail instructions and assistance in cluster installation of the WYDE Voice conferencing bridge software.

2.11: Upgrade Installation

If it is necessary you can always upgrade the WYDE conferencing bridge software to newer version. To do that you should perform the following steps:

1. Go to the installation folder of the software, for instance, type:
`cd /root/install/3.1.28-CENTOS5/`
 if you have copied new installation files into this folder.
2. Type `./setup.sh` to start the installation process.
3. Select the WYDE components question will appear next as shown on Figure 50.

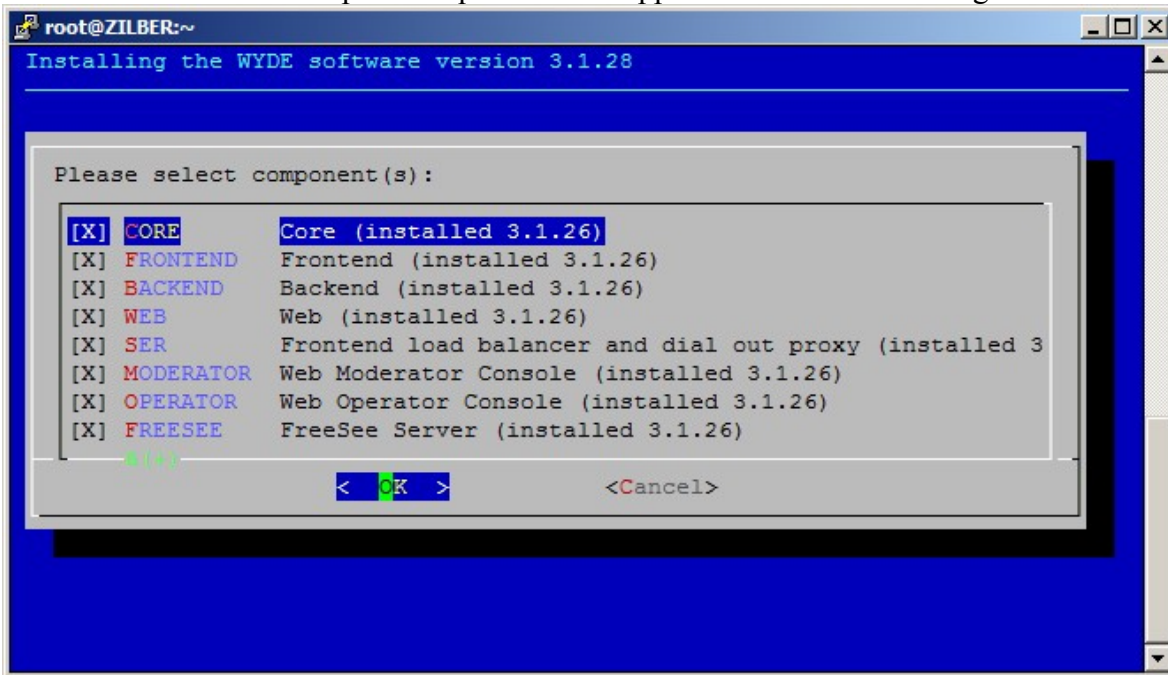


Figure 50: Update Installation “select components” Question

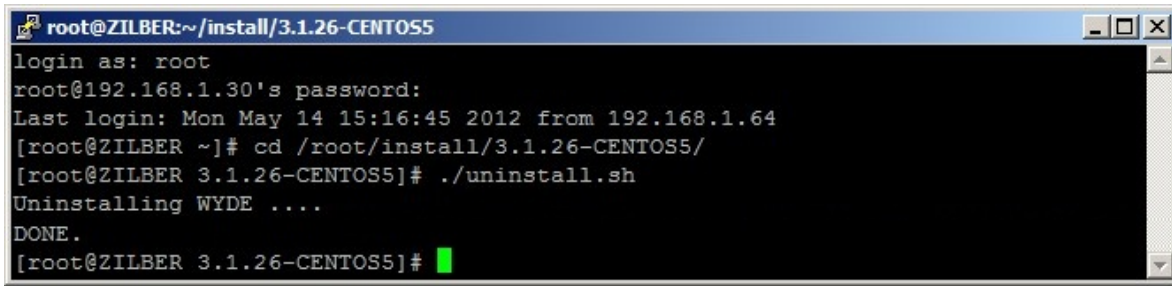
On this screen you will see the version of the already installed components. If the component was not installed there will be not any version near the component description. You should select the components you would like to upgrade. If you select the components that were not installed, the new installation will be performed for such components.

4. After that the selected components will be upgraded using the same configuration parameters that you are already using in the previous version,

2.12: Un-installation

If for some reasons you would like to uninstall the product you should perform the following steps:

1. Go to the installation folder of the software, for instance, type:
`cd /root/install/3.1.26-CENTOS5/`
 if you have copied installation files into this folder.
2. Type `./uninstall.sh` to start the installation process.
3. After that un-installation process begins and all WYDE Voice software installed components will be removed. See Figure 51 for details.

A terminal window titled 'root@ZILBER:~/install/3.1.26-CENTOS5' showing the process of uninstalling WYDE Voice Software. The user logs in as root, enters the password, and then runs the command './uninstall.sh'. The output shows 'Uninstalling WYDE' followed by 'DONE.' and a green cursor at the prompt '[root@ZILBER 3.1.26-CENTOS5]#'.

```
root@ZILBER:~/install/3.1.26-CENTOS5
login as: root
root@192.168.1.30's password:
Last login: Mon May 14 15:16:45 2012 from 192.168.1.64
[root@ZILBER ~]# cd /root/install/3.1.26-CENTOS5/
[root@ZILBER 3.1.26-CENTOS5]# ./uninstall.sh
Uninstalling WYDE ....
DONE.
[root@ZILBER 3.1.26-CENTOS5]#
```

Figure 51: Uninstall WYDE Voice Software

Note the un-installation process removes all installed WYDE components. You can not select the specific component to uninstall.

Chapter 3: Licensing

By default the WYDE Voice conferencing bridge software has the maximum number of the simultaneous calls on the bridge equal to 10. To support larger number of calls you should obtain the additional licenses.

To obtain additional licenses you should perform the following steps:

1. Generate hardware profile.

Additional licenses are tied to the hardware that you are using. The installation program (core components) creates the file with hardware profile *hws.bin* in the folder */usr/local/DNCA/etc/*. Also this file can be generated at any time manually using the command:

```
/usr/local/DNCA/bin/hwsgen.x
```

This command generates hardware profile file *hws.bin* in the current folder.

2. After that you should go to the WYDE Voice Licensing Server site at <http://licserver.wydevoice.com/>, see Figure 52.



Figure 52: WYDE Voice Licensing Server Login Screen

You should login to the Licensing Server using login/password provided to you. The screen similar to shown on Figure 53 appears next.

WYDE VOICE Licensing Server

Request a Quote
866-508-9020

Account Details

Personal

First Name: Michael
Last Name: Zilber
E-mail: wyde@enols.com

Ports

Total Ports: 1000 ports
Ports Remained: 200 ports

[Logout](#)

Enter Details for New License

Choose License Type: ☒ Standard ☐ Cluster

HW Signature: [Browse...](#)

Ports Amount: ports

Comments:

[Get License](#)

Create Time	Expire Time ▲	Type	Ports	Status	Link	Comments
2010-06-29 04:21:40	2010-06-30 04:21:40	Standard	800	OK	Download	192.168.1.5 server license updated edit

Total 1 license(s) for 800 ports
(0 license(s) suspended)

Wydevoice.com 2009

Figure 53: WYDE Voice Licensing Server Main Screen

3. Generate license files.

License files are being generated based on hardware profiles – *hws.bin* files. To get additional licenses you should populate data in the “*Enter Details for New License*” section:

- Choose License Type – you should select one of the following types:
 - Standard – if you are installing the system on single machine (in this case you will need one hardware profile file and one license file will be generated);
 - Cluster – if you are installing the system on cluster of two machines (in this case you will need two hardware profile files (from each cluster computer) and two license files will be generated);
- HW Signature – the file or files on your local disk with the hardware profile;
- Ports Amount – the number of simultaneous calls that should be provided by the license, the number of requested ports will be decreased from the total number of ports available for you (i.e. ports remained will be decreased);
- Comments – your comment for the generated license.

For instance if you would like to get the single server license for 200 simultaneous calls you should populate the form as shown on Figure 54. If you would like to get the cluster servers licenses for 200 simultaneous calls you should populate the form as shown on Figure 55. Once you populated the form you should press “*Get License*” button and new license will be generated, *license.bin* file with license information will be downloaded.

Enter Details for New License

Choose License Type: ☒ Standard ☐ Cluster

HW Signature: [Browse...](#)

Ports Amount: ports

Comments:

[Get License](#)

Figure 54: Enter Details for New Standard License

Enter Details for New License

Choose License Type: ☐ Standard ☒ Cluster

HW Signature #1: [Browse...](#)

HW Signature #2: [Browse...](#)

Ports Amount: ports

Comments:

[Get License](#)

Figure 55: Enter Details for New Cluster License

Recently generated licenses can be seen in the Licensing Server “Recent Licenses” section, see Figure 56. You can download generated license file (*license.bin*) if you press “*Download*” button.

Recent Licenses						
Create Time	Expire Time ▲	Type	Ports	Status	Link	Comments
2010-06-29 04:21:40	2010-06-30 04:21:40	Standard	800	OK	Download	192.168.1.5 server license updated edit
Total 1 license(s) for 800 ports (0 license(s) suspended)						

Figure 56: WYDE Voice Licensing Server – Recent Licenses



Each license file has expiration time; once the license file is expired the maximum number of simultaneous calls will be reset to 10. After that the WYDE bridge software will try to renew and register the license via internet (http) automatically. If for some reason the license file could not be renewed automatically the notification email would be sent to you to the address that is registered in WYDE Voice Licensing Server as your login (see Figure 53, “Account Details” section, “E-mail” field). After that you should go to the licensing server and update the expired license manually. See Figure 57 for details. Press “Update” button to generated renewed license. After that the screen changes as shown on Figure 56, i.e. “Update” button will be replaced with “Download” button and you will be able to download new valid *license.bin* file.

Recent Licenses						
Create Time	Expire Time	Type	Ports	Status	Link	Comments
2010-06-30 08:06:42	2010-07-01 08:06:42	Standard	800	Expired	Update	192.168.1.5 server license updated edit
Total 1 license(s) for 800 ports (0 license(s) suspended)						

Figure 57: Update Expired Licenses

4. Generated license file *license.bin* (either if it is new license of renewed license) should be placed on the bridge into */usr/local/DNCA/etc* folder. After that you should register new license using the following command:

```
wyde register-license
```

The screen similar to shown on Figure 58 appears next.

```

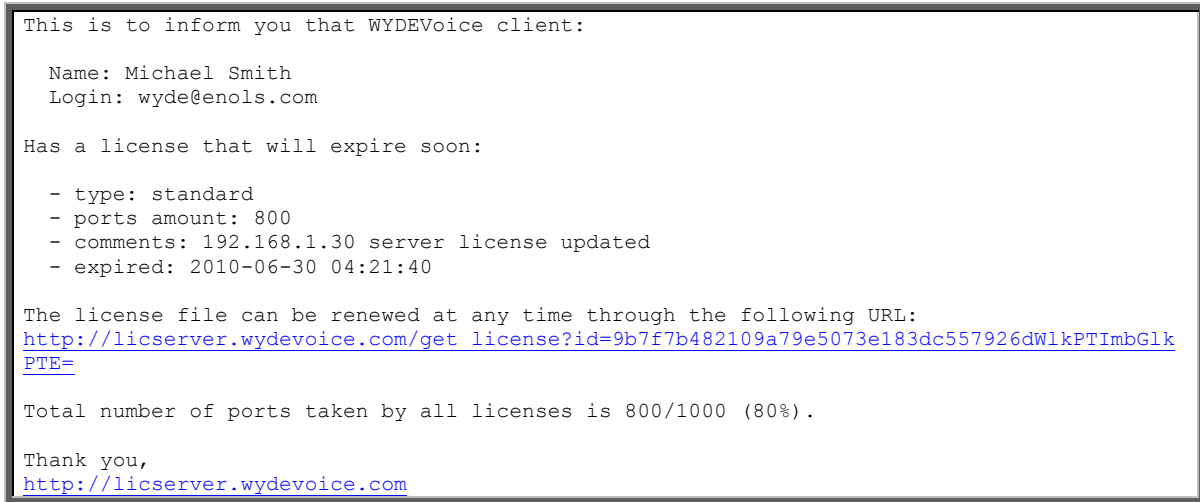
root@localhost:~
[root@localhost ~]# wyde register-license
License has been registered successfully.
Now the amount of simultaneous calls is 200.
Please restart wyde service to update the latest changes.
[root@localhost ~]#

```

Figure 58: Register New/Updated Licenses on the Bridge

After that the amount of allowed simultaneous calls for the WYDE Voice conferencing bridge software will be set equal to the amount specified by your license file.

Note when your license is going to be expired within the next 5 days you will receive notification email “Alert: License will expire soon” about that as shown below. This email contains the information about your current license and the URL to renew it.

Alert: License will expire soon

If you click the URL from this email your license will be renewed and you will be prompted to download the updated *license.bin* file as shown on Figure 59. The license will be extended, and new license expiration date will be equal to the current date plus user's license duration.

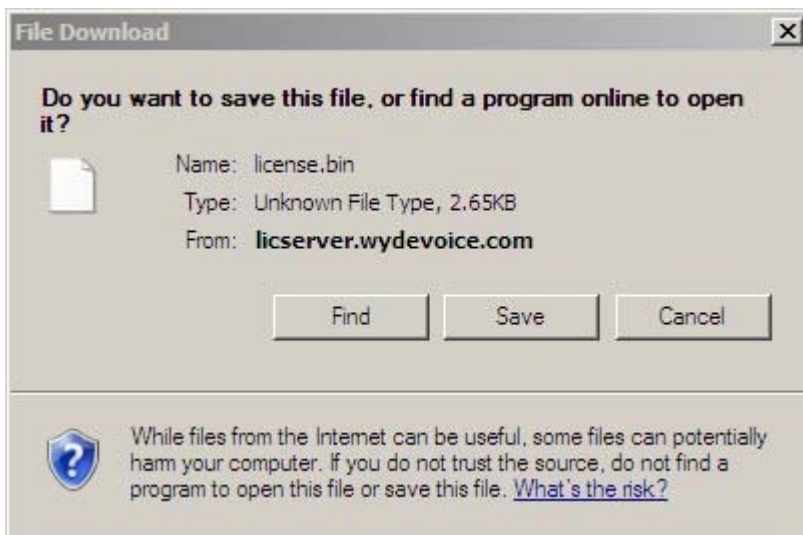


Figure 59: Download Renewed *license.bin* File

Once your license is renewed you will receive another notification email “*Update License Notice*” about that as shown below. This email contains updated information about your current license, i.e. it contains new expiration date of your license.

Update License Notice

```
This is to inform you that WYDEVoice client:

Name: Michael Smith
Login: wyde@enols.com

Has successfully renewed license file:

- type: standard
- ports amount: 800
- comments: 192.168.1.30 server license updated
- expired: 2010-07-01 07:17:59

The license file can be renewed at any time through the following URL:
http://licserver.wydevoice.com/get\_license?id=9b7f7b482109a79e5073e183dc557926dWlkPTImbGlkPTE=

Total number of ports taken by all licenses is 800/1000 (80%).

Thank you,
http://licserver.wydevoice.com
```

In addition if your license is expired you will also receive alert email “*Alert: Expired license has been found*” about that as shown below with the information about your current license status.

Alert: Expired license has been found

```
This is to inform you that WYDEVoice client:

Name: Michael Smith
Login: wyde@enols.com

Has an expired license:

- type: standard
- ports amount: 800
- comments: 192.168.1.30 server license
- expired: 2009-12-10 09:54:11

The license file can be renewed at any time through the following URL:
http://licserver.wydevoice.com/get\_license?id=9b7f7b482109a79e5073e183dc557926dWlkPTImbGlkPTE=

Total number of ports taken by all licenses is 800/1000 (80%).

Thank you,
http://licserver.wydevoice.com
```


Chapter 4: Verify Software Installation

SIP Calls to and from the Bridge

After WYDE software full installation Asterisk is processing the calls using the port 5065; Kamailio (OpenSER) is processing the calls using the port 5060. If you installed frontend load balancer and dial out proxy components you can make the calls to the port 5060, for instance to *10@<your bridge IP>:5060*, where your bridge IP address is actually the IP of the computer where Kamailio components were installed (*10@192.168.1.30:5060* in our sample); Kamailio takes such call and routes it to Asterisk on the port 5065. If you did not install frontend load balancer and dial out proxy components or do not want to call to OpenSER, you should make the calls directly to Asterisk (frontend) to the port 5065, for instance to *10@<your bridge IP>:5065*, where your bridge IP address is actually the IP of the computer where frontend components were installed (*10@192.168.1.30:5065* in our sample). If you make your calls and do not specify the port, by default the calls are being made to the port 5060 (Kamailio components).

If the installation was successful you should be able to call on your bridge. You can use [X-Lite](#) or [SJphone](#) softphones to make VOIP call on your bridge using the IP address that was entered during installation as your host IP (see Figure 3).

Let's register the VoIP phone number for your default *admin* WYDE bridge user; this number could be used to dial-in to this subscriber. To do you should run the following *wyde* command:

```
wyde subscriber-set login admin sip_phone 7007
```

In this sample *admin* user's phone number is *7007*.

If you use X-Lite software you should configure it as shown on Figure 60. Run X-Lite, select menu "Softphone", then sub-menu "*Account Settings*", and enter account properties as shown on this figure.

Your user ID and authorization name should be equal to SIP phone number registered for the subscriber (*7007* in our sample); the default *admin* user password is *admin* as well. In addition you should enter *<your bridge IP>* into domain field and into proxy address field (the proxy option should be selected). If you would like to be able to receive the calls from your bridge you should also check the checkbox "Register with domain and receive calls".

SIP Account

Account Voicemail Topology Presence Transport Advanced

Account name:

Protocol:

Allow this account for

☒ Call

☐ IM / Presence

User Details

* User ID:

* Domain:

Password:

Display name:

Authorization name:

Domain Proxy

☒ Register with domain and receive calls

Send outbound via:

☐ Domain

☒ Proxy Address:

Dial plan:

OK Cancel

Figure 60: X-Lite SIP Account Settings

After that you will be able to make SIP calls to the IP address of your bridge that you used during installation. For instance you can call to number 10 as shown on Figure 61.

If you are using SJphone software you do not need any additional configuration. You can just make the call to *10@<your bridge IP>* (*10@192.168.1.30* in our sample) as shown on Figure 62.



Figure 61: X-Lite SIP Call to the Bridge

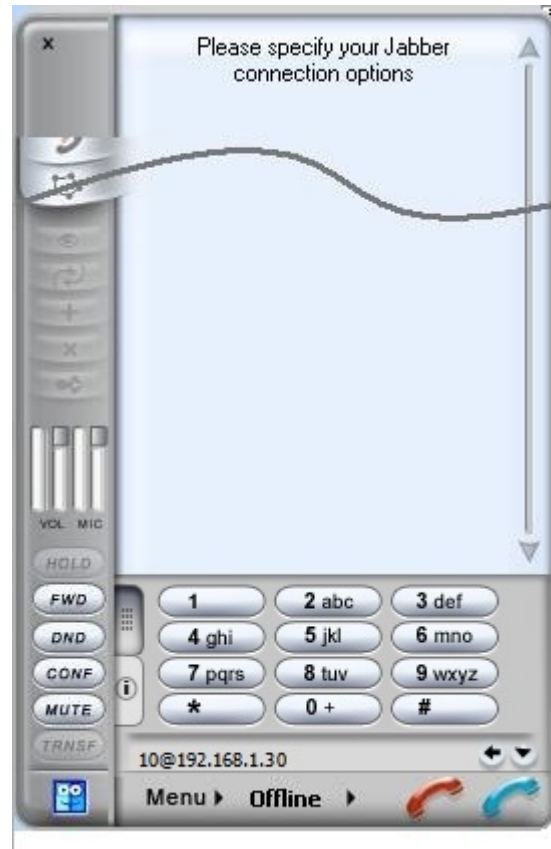


Figure 62: SJphone SIP Call to the Bridge

When you call to number *10* you can enter any access code when prompted. All calls with the same access code will join into the same conference.

Now let's configure the installed bridge to be able to make the calls from the bridge to the users registered their VoIP phone numbers. To do so you should run the following commands:

```
wyde settings-edit name ivr_gw_addr value 192.168.1.30
wyde settings-reload
```

Next you can start *mf* console (use *mf* command for that) and make dial-out to your registered number using the command:

```
dialout 7007 10 999001
```

See Figure 63 for details.

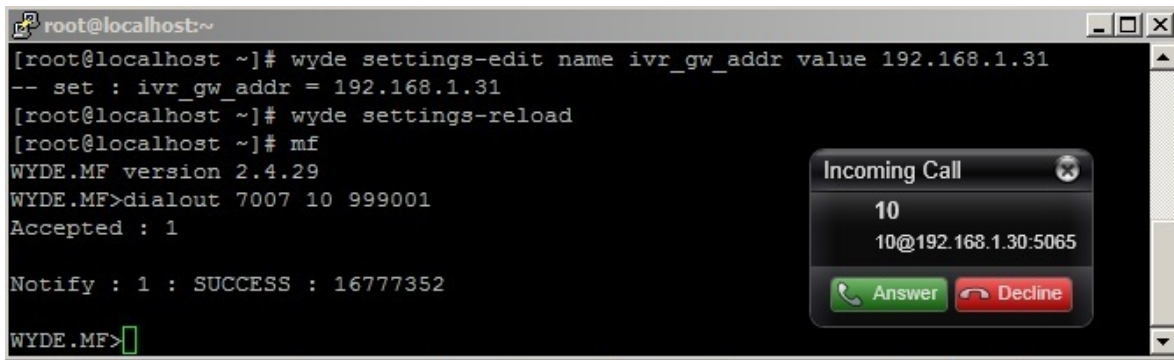


Figure 63: WYDE Bridge Configuration and Dialing-out to the User's Phone Number

For detail information about how to configure dialout settings on the bridge and how to make the calls from the bridge to the subscriber's phone numbers please see "*Command Line Administration Interface – User Guide*".

Web Administration Interface

In addition you should be able to open Web Administration Interface in your browser from the computer where you installed web components (or from the computer where full installation has been made). You should use the IP address of this computer to do that, i.e. you should type *https://<your bridge Web IP>/* (*https://192.168.1.30/* in our sample) in your browser URL bar. You should see a screen similar to the shown on Figure 64. Use PIN: *admin* and password: *admin* to login to the installed system.

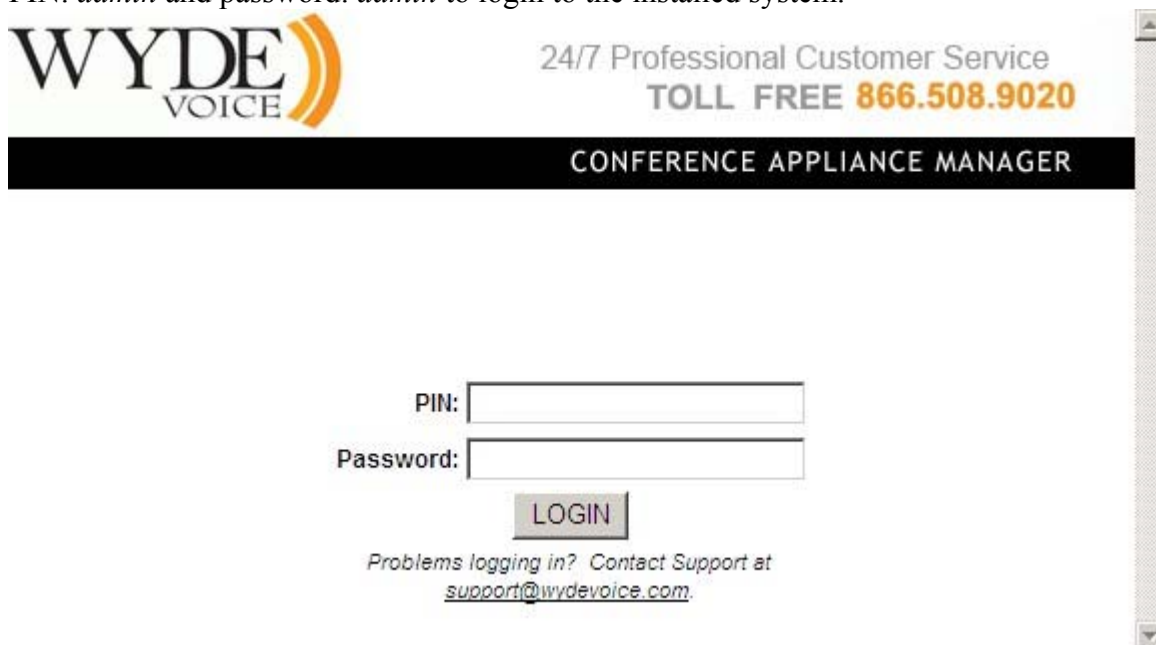


Figure 64: Initial Web Administration Login Screen

Note *<your bridge IP>* and *<your bridge Web IP>* could be different:
<your bridge IP> – the IP of the computer where you have installed core components;
<your bridge Web IP> – the IP of the computer where you have installed web components.

When the calls are made on the bridge you should be able to see the conferences and the calls using Web Administration Interface; you will see the screen similar to shown on Figure 65.

24/7 Professional Customer Service
TOLL FREE 866.508.9020

Subscribers | Conferences | **Calls** | Reports | DNIS | Preferences | Logout | CONFERENCE APPLIANCE MANAGER

Conference # 999001 secure : OFF | hold : OFF | ASN : OFF | recording : OFF

Keyword: First Name: Number of calls: 2 Set refresh:

List records: 1/2 << Previous | 1 | Next >>

Calling Number	Called Number	User Name	Access Code	Call Begin	Duration	Status	Role	Mute	Hold	Q&A
<input type="button" value="X"/>	10	testing	999001	15:39:28	01m:25s	conference	participant	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="button" value="X"/>	10	unknown	999001	15:37:42	03m:11s	conference	participant	<input type="checkbox"/>	<input type="checkbox"/>	

Figure 65: Conference Calls Screen when the First Two Calls made on the Bridge

You can see “*Web Administration Interface – User Guide*” for detail information how to use web administration interface.

Moderator Console

If you have installed web Moderator Console component (also known as Web Control Console – WCC) you should be able to use it from the computer where you installed it. You should use the IP address of the computer where you have installed web moderator console component (the same where web components were installed), i.e. you should type *https://<your bridge Web IP>/moderator/* (for instance *https://192.168.1.30/moderator/*) in your browser URL bar. You should see a screen similar to the shown on Figure 66.

WYDE VOICE

Account Sign Up

First Name: *

Last Name: *

Email: *

Password: *

☐ I agree to the Terms and Conditions

Account Login

Email: *

Password: *

Display Name:

☐ Remember me on this computer.

[Forgot Password?](#)

FAQs

[What is this?](#)

[How does it work?](#)

[What is Conference View?](#)

[What are Preferences?](#)

[Can I set conference preferences during my live conference calls?](#)

[What are host web controls?](#)

[When should I use host web controls?](#)

[What is Q&A queue and how does it work?](#)

[How many callers can be on a single conference call?](#)

[What are the costs involved in a Free Conferencing account?](#)

[What is Conference History and Recording?](#)

[What is Active Speaker?](#)

[Is there a limit on the length of a conference call?](#)

[Is there a limit to how many conference calls I can make?](#)

[Do I get a report of my conference call?](#)

[Can I record my conference calls?](#)

[How do I access my recorded conference calls?](#)

[Is this a VoIP service or an Internet service using my computer?](#)

[Can international callers participate?](#)

Version: 1.2.54 (fs: 0.56.3)

Figure 66: Initial Web Moderator Console Login Screen

Operator Console

If you have installed web Operator Console component you should be able to use it from the computer where you installed it. You should use the IP address of the computer where you have installed web operator console component (the same where web components were installed), i.e. you should type *https://<your bridge Web IP>/operator/* (for instance *https://192.168.1.30/operator/*) in your browser URL bar. You should see a screen similar to the shown on Figure 67.

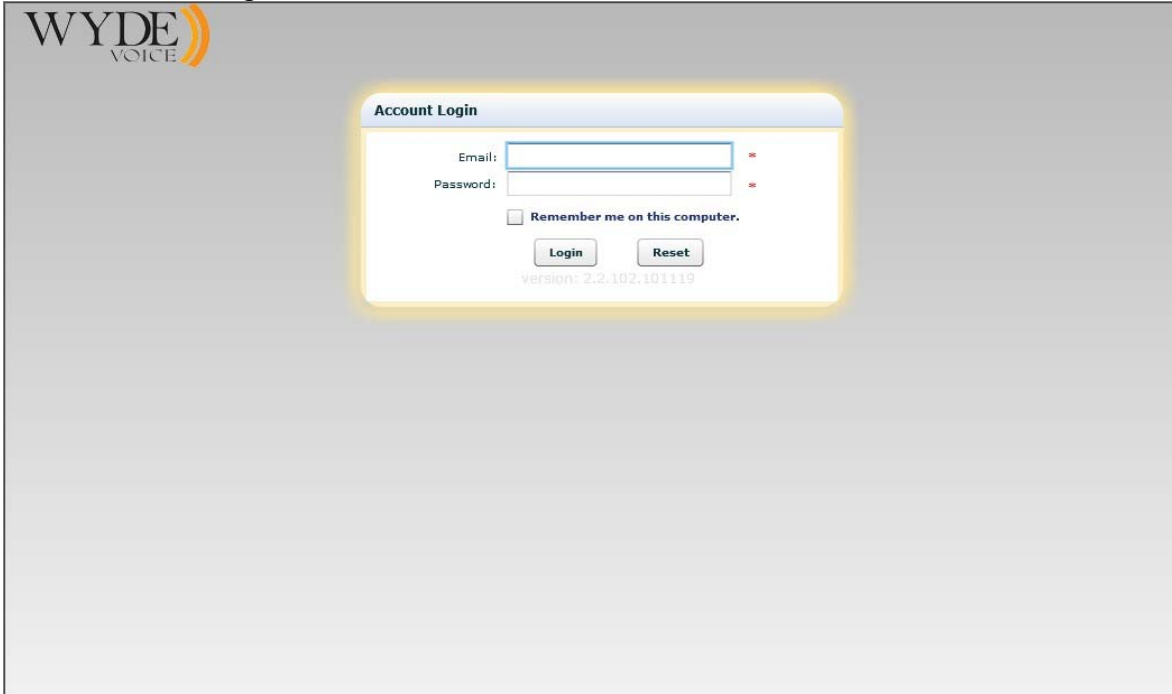


Figure 67: Initial Web Operator Console Login Screen

See “*Operator Console – User Guide*” for detail information how to use operator console.

Appendix A: Support Resources

If you have difficulty with this guide and any of the procedures listed herein, please contact us using the following support resources.

Support Documentation

In addition to this Guide, you may obtain other WYDE Voice documentation from WYDE Voice or from the WYDE Voice documentation Web site: <http://docs.wydevoice.com/>.

Web Support

Our support website is available 24 hours a day, 7 days a week, and 365 days a year at <http://www.wydevoice.com>. You may download patches, support documentation and other technical support information.

Telephone Support

For difficulties with any procedures described in this Guide, please contact us at 866-508-9020 during our normal phone support hours of 7:00 am to 6:00 pm Pacific Standard Time (PST). An engineer will respond to your inquiry within 24 hours.

Email Support

You may also email us your questions at support@wydevoice.com. We will respond to your question within 24 hours.