

WYDE Software Installation Guide

(version 2.3)

Disclaimer

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For the most current versions of documentation, go to the WYDE support Web site: http://docs.wydevoice.com/

January 28, 2011

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

TableDenotes any table

Text Denotes any text output

Folder/File 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-CENTOS
[root@localhost 2.1.9-CENTOS5]# wget -r ftp://YourFtpUsername:YourFtpPassword$12 📥
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.



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Right after you have downloaded the installation files to you 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 192.168.1.5).

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 English only. You can also obtain additional audio prompts for the following languages:

- Czech (CZ)
- Dutch (NL)
- French (FR)
- German (DE)
- Italian (IT)
- Japanese (JP)
- Portuguese (PT)
- Brazilian Portuguese (BR)
- Romanian (RO)
- Spanish (SP)

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 (32-bit <u>only</u>), 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;
- front-end components Asterisk service, WYDE and WYDE-asterisk packages;
- back-end 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;
- 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, WYDE-operator ws packages.

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
 - o 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;
 - o front-end components (*asterisk* service) are being installed on separate computers (one or many), *FRONEND* installation option is being used to do that:
 - o 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;
 - 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.

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/2.2.290.10-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/2.2.290.10-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 components are checked, but Web Moderator Console and Web Operator Console components are unchecked.

2.1: Full Installation

The WYDE conferencing bridge software contains the following packages:

- WYDE-2.2.mmm.nn-o
- WYDE-agiserver-2.2.mmm.nn-o
- WYDE-asd-2.2.mmm.nn-o
- WYDE-asterisk-2.2.mmm.nn-o
- WYDE-asterisk-perl-2.2.mmm.nn-o
- WYDE-core callflow-2.2.mmm.nn-o
- WYDE-mf-2.2.mmm.nn-o

- WYDE-mps-2.2.mmm.nn-o
- WYDE-mpw-2.2.mmm.nn-o
- WYDE-transcoder-2.2.mmm,nn-o
- WYDE-webapp wyde-2.2.mmm.nn-o
- WYDE-webapp-2.2.mmm.nn-o

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

- WYDE-conf callflow-2.2.mmm.nn-o
- WYDE-operator callflow-2.2.mmm.nn-o
- WYDE-playback callflow-2.2.mmm.nn-o
- WYDE-spectel callflow-2.2.mmm.nn-o

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

- WYDE-storage-2.2.mmm.nn-o
- WYDE-supportmodule-2.2.mmm.nn-o
- WYDE-wydevoice-2.2.mmm.nn-o

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

- WYDE-operator flash-2.2.mmm.nn-o
- WYDE-operator ws-2.2.mmm.nn-o

The following services are being installed during full installation:

- postgresql
- agiserver
- sipserv
- mps
- mpw
- asterisk
- mf
- asd
- jetty

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, Web Control Console, Operator Console) will be installed in this case.

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5. Next the installation program will ask to enter (confirm) your host IP, see Figure 3.

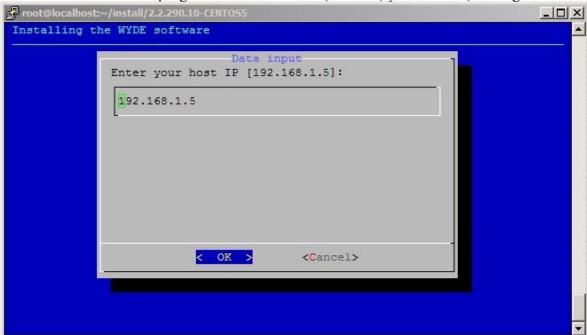


Figure 3: Full Installation "enter host IP" Question

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

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7. When the installation process is completed the system informs you about web Moderator Console components installation status as shown on Figure 5, about web Operator Console components installation status as shown on Figure 6, and after that the screen similar to shown on Figure 7 will appear.

```
Proot@localhost:~/install/2.2.290.10-CENTOS
                                                                          - | U X
  *****************
  Installation completed.
 To use Moderator Console component you should perform the following steps:
  1. Register conference DNIS number (call flow: SPECTEL); in this callflow
 set 'Realtime protocol' attribute value equal 'on',
  'Callers database' attribute value equal 'on', and 'Playback number'
 attribute value equal to playback conference phone number.
 2. Register playback phone number (call flow: PLAYBACK) and
 set 'Reffered DNIS number' attribute value equal to the DNIS number
 registered in the previous step in this call flow.
 3. Update configuration file settings.xml:
 in folder: /opt/jetty/etc
 The following parameters should be changed:
    conferencePN - should be equal to number registered in the step 1
    playbackPN - should be equal to number registered in the step 2
 After configuration you should restart jetty service using the command:
 service jetty restart
 To run Web Control Console you should use URL: http://192.168.1.5/moderator/
```

Figure 5: Full Installation - Moderator Console Components Installation Completed Screen

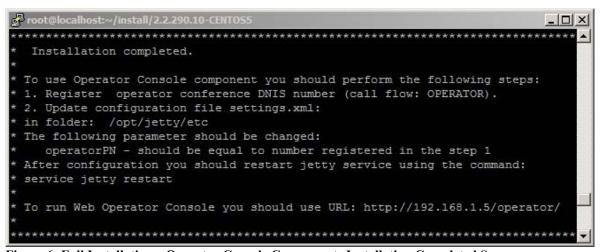


Figure 6: Full Installation – Operator Console Components Installation Completed Screen

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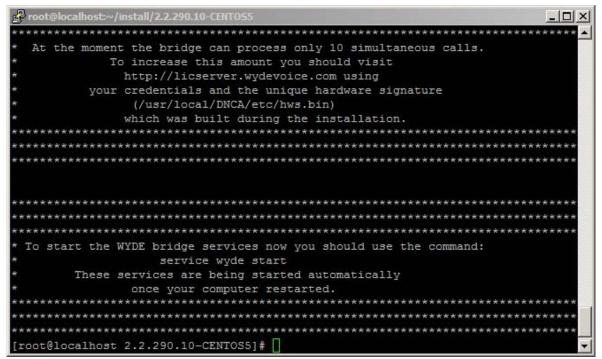


Figure 7: Full Installation Completed Screen

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The screen shown on Figure 5 informs you what additional changes you have to make to use installed Moderator Console. You should 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 configuration file *settings.xml* in folder: /opt/jetty/etc

 The following 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

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

The screen shown on Figure 6 informs you what additional changes you have to make to use installed Operator Console. You should perform the following steps:

- i) Register conference DNIS number (call flow: OPERATOR);
- ii) Update the configuration file *settings.xml* in folder: /opt/jetty/etc
 The following 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

When the WYDE conferencing bridge software installation is completed the installation folder (/root/install/2.2.290.10-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_moderator_error.log, install_operator_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.

```
root@localhost:~/install/2.2.290.10-CENTO
                                                                              _ | U X
[root@localhost 2.2.290.10-CENTOS5] # rpm -qa | grep WYDE
WYDE-asterisk-perl-2.2.290.10-1
WYDE-transcoder-2.2.290.10-1
WYDE-operator callflow-2.2.290.10-1
WYDE-webapp-2.2.290.10-1
WYDE-storage-2.2.290.10-1
WYDE-asd-2.2.290.10-1
WYDE-mf-2.2.290.10-1
WYDE-core callflow-2.2.290.10-1
WYDE-mps-2.2.290.10-1
WYDE-conf callflow-2.2.290.10-1
WYDE-playback callflow-2.2.290.10-1
WYDE-mpw-2.2.290.10-1
WYDE-webapp wyde-2.2.290.10-1
WYDE-wydevoice-2.2.290.10-1
WYDE-operator flash-2.2.290.10-1
WYDE-2.2.290.10-1
WYDE-agiserver-2.2.290.10-1
WYDE-spectel callflow-2.2.290.10-1
WYDE-asterisk-2.2.290.10-1
WYDE-supportmodule-2.2.290.10-1
WYDE-operator ws-2.2.290.10-1
[root@localhost 2.2.290.10-CENTOS5]#
```

Figure 8: The WYDE Conferencing Bridge Software Installed Packages

After full installation completed you should start *postgresql*, *agiserver*, *sipserv*, *mps*, *mpw*, *asterisk*, *mf*, *asd*, and *jetty* 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
```

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@localhost~/install/2.2.290.10-CENTOS5| # service wyde start

Starting postgresql service: [ OK ]

Starting agiserver service: [ OK ]

Starting sipserv service: [ OK ]

Starting mps service: [ OK ]

Starting mps service: [ OK ]

Starting mpw service: [ OK ]

Starting mpw service: [ OK ]

Starting asterisk service: [ OK ]

Starting asterisk service: [ OK ]

Starting mf service: [ OK ]

Starting jetty service: [ OK ]

Starting jetty service: [ OK ]

[root@localhost 2.2.290.10-CENTOS5] # □
```

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-2.2.mmm.nn-o
- WYDE-agiserver-2.2.mmm.nn-o
- WYDE-asd-2.2.mmm.nn-o
- WYDE-asterisk-perl-2.2.mmm.nn-o
- WYDE-core callflow-2.2.mmm.nn-o
- WYDE-mf-2.2.mmm.nn-o
- WYDE-mps-2.2.mmm.nn-o
- WYDE-transcoder-2.2.mmm.nn-o

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

- WYDE-conf callflow-2.2.mmm.nn-o
- WYDE-operator callflow-2.2.mmm.nn-o
- WYDE-playback callflow-2.2.mmm.nn-o
- WYDE-spectel callflow-2.2.mmm.nn-o

The following services are being installed during core installation:

- postgresql
- agiserver
- sipserv
- 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.

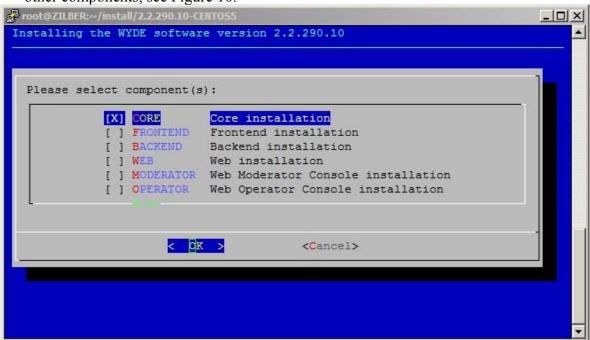


Figure 10: Installation "select components" Question, Core Installation Selected

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

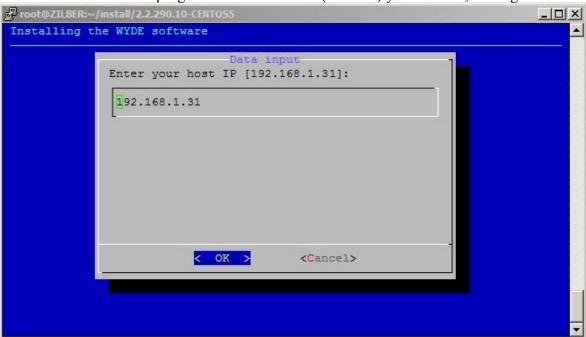


Figure 11: Core Installation "enter host IP" Question

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:~/install/2.2.290.10-CENTOS5
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 2.2.290.10-CENTOS5]# [
```

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.

```
Proot@ZILBER:~/install/2.2.290.10-CENTOS5
                                                                              _ U X
[root@ZILBER 2.2.290.10-CENTOS5]# rpm -qa | grep WYDE
WYDE-asd-2.2.290.10-1
WYDE-core callflow-2.2.290.10-1
WYDE-conf_callflow-2.2.290.10-1
WYDE-2.2.290.10-1
WYDE-asterisk-perl-2.2.290.10-1
WYDE-agiserver-2.2.290.10-1
WYDE-transcoder-2.2.290.10-1
WYDE-spectel callflow-2.2.290.10-1
WYDE-operator_callflow-2.2.290.10-1
WYDE-mf-2.2.290.10-1
WYDE-mps-2.2.290.10-1
WYDE-playback callflow-2.2.290.10-1
[root@ZILBER 2.2.290.10-CENTOS5]#
```

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
```

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```
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:~/install/2.2.290.10-CENTOS5

[root@ZILBER 2.2.290.10-CENTOS5] # service wyde start

Starting postgresql service:

Starting agiserver service:

Starting sipserv service:

Starting mps service:

Starting mps service:

Starting mps service:

Starting mf service:

Starting asd service:

[ OK ]

Starting asd service:

[ OK ]

Starting asd service:

[ OK ]
```

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-2.2.mmm.nn-o
- WYDE-asterisk-2.2.mmm,nn-o
- WYDE-transcoder-2.2.mmm.nn-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.

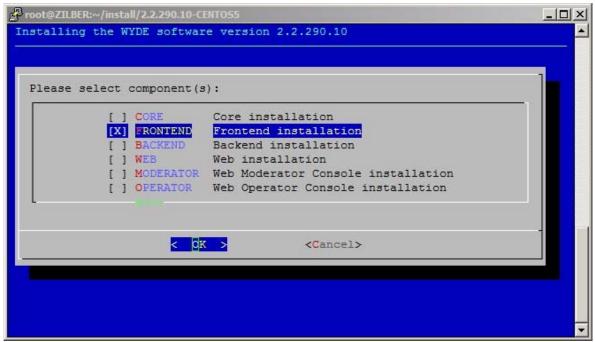


Figure 16: Installation "select components" Question, Frontend Installation Selected

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-2.2.mmm.nn-o
- WYDE-mpw-2.2.mmm.nn-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.

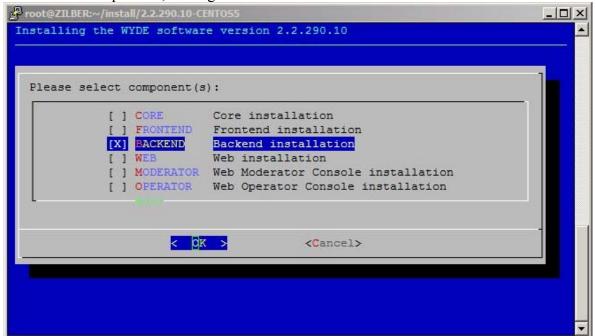


Figure 20: Installation "select components" Question, Backend Installation Selected

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.

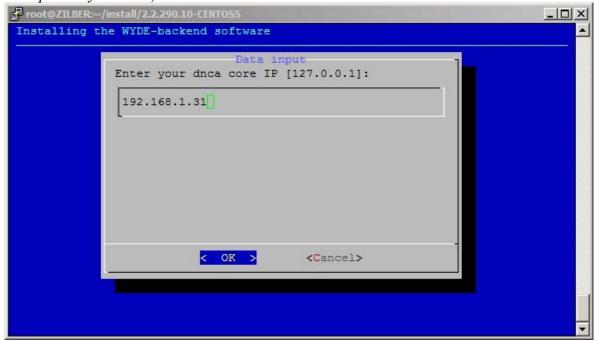


Figure 21: Backend Installation "dnca core IP" Question

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

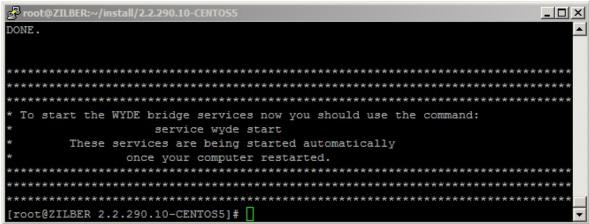


Figure 22: Backend Installation Completed Screen

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.

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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.

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-2.2.mmm.nn-o
- WYDE-transcoder-2.2.mmm.nn-o
- WYDE-webapp wyde-2.2.mmm.nn-o
- WYDE-webapp-2.2.mmm.nn-o

The *jetty* service is 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.

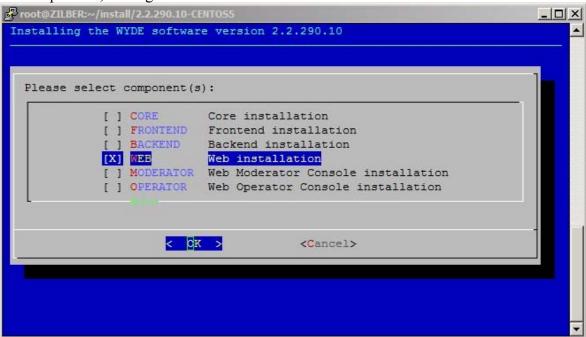


Figure 25: Installation "select components" Question, Web Installation Selected

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 (192.168.1.31 in our sample, see section 2.2: Core Installation).

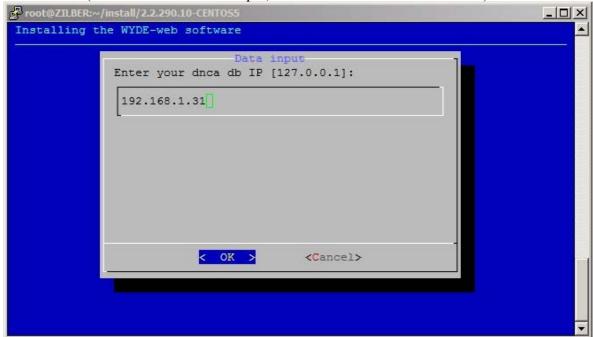


Figure 26: Web Installation "dnca db IP" Question

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

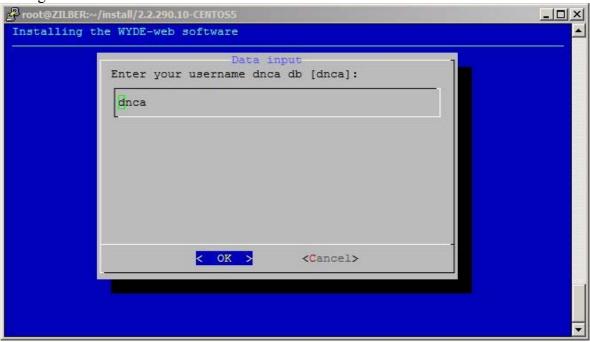


Figure 27: Web Installation "username dnca db" Question

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. When the installation process is completed the screen similar to shown on Figure 29 will appear.

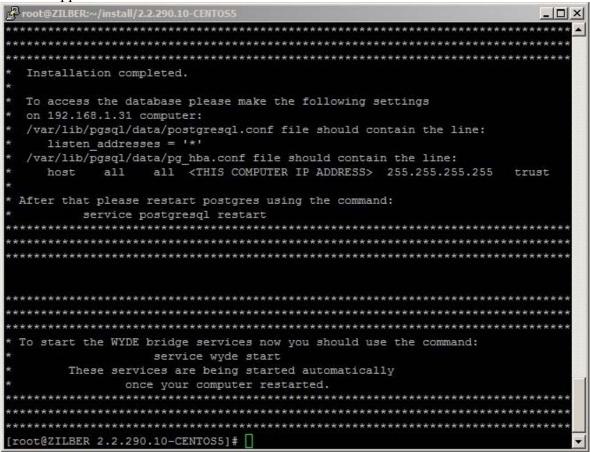


Figure 29: Web Installation Completed Screen

This screen informs you that you have to make additional changes on the computer that has *dnca* database (in our sample 192.168.1.31):

- 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 30.

Figure 30: WYDE Web Installed Packages

After you have made the changes on the computer that has *dnca* database (in our sample 192.168.1.31) described in item 8 you should start *jetty* service using the following command:

```
service jetty 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 31.

Figure 31: Starting *jetty* Service 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 *http://<this computer IP*>/(*http://192.168.1.32*/ in our sample). See Chapter 4: Verify Software Installation for details.

2.6: Web Moderator Console Installation

Web moderator console components contain the following packages:

- WYDE-2.2.mmm.nn-o
- WYDE-storage-2.2.mmm.nn-o
- WYDE-supportmodule-2.2.mmm.nn-o
- WYDE-wydevoice-2.2.mmm.nn-o

Because web moderator console installation is being performed on the computer where web components are installed, the *jetty* service is 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 32. 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.

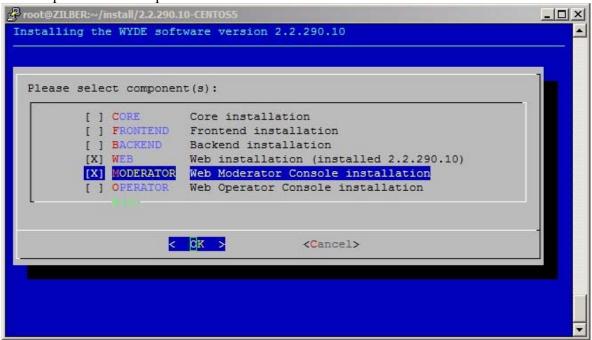


Figure 32: Installation "select components" Question, Web Moderator Console Installation Selected

5. When the installation process is completed the screen similar to shown on Figure 33 will appear.



Figure 33: Web Moderator Console Installation Completed Screen

This screen informs you that you have to make additional changes to use installed Moderator Console component:

- 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 configuration file settings.xml

in folder: /opt/jetty/etc

The following parameters should be changed:

conference PN – should be equal to number registered in the step i); playback PN – 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 34.

Figure 34: 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 command:

```
service jetty 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 35.

```
root@ZILBER:~/install/2.2.290.10-CENTOS5

[root@ZILBER 2.2.290.10-CENTOS5]# service wyde start

Starting jetty service:
[root@ZILBER 2.2.290.10-CENTOS5]# □

▼
```

Figure 35: Starting jetty Service 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 (Web Control Console – WCC) from this computer using URL *http://<this computer IP>/moderator/* (for example *http://192.168.1.32/moderator/*). See Chapter 4: Verify Software Installation for details.

2.7: Web Operator Console Installation

Web operator console components contain the following packages:

- WYDE-2.2.mmm.nn-o
- WYDE-operator flash-2.2.mmm.nn-o
- WYDE-operator ws-2.2.mmm.nn-o

Because web operator console installation is being performed on the computer where web components are installed, the *jetty* service is 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 36. 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.

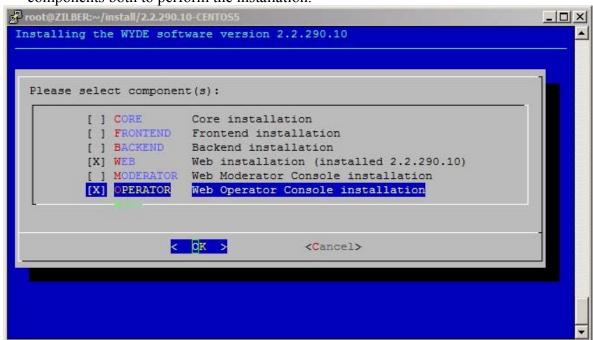


Figure 36: Installation "select components" Question, Web Operator Console Installation Selected

5. When the installation process is completed the screen similar to shown on Figure 37 will appear.

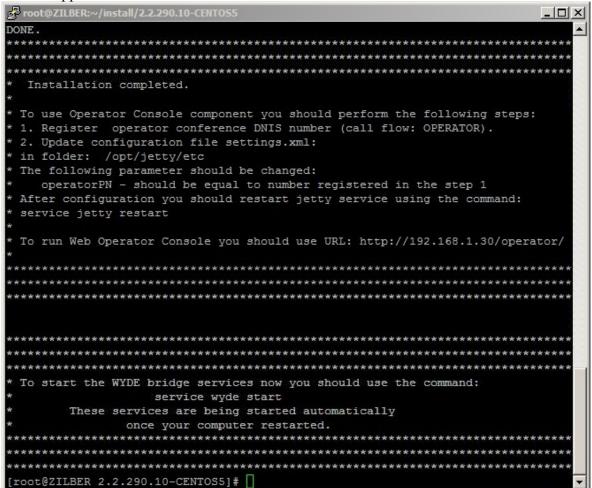


Figure 37: Web Operator Console Installation Completed Screen

This screen informs you that you have to make additional changes to use installed Operator Console component:

- i) Register conference DNIS number (call flow: OPERATOR);
- ii) Update the configuration file *settings.xml*

in folder: /opt/jetty/etc

The following 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 38.

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Figure 38: 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 command:

```
service jetty 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 39.

Figure 39: Starting jetty Service 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 *http://<this computer IP>/operator/* (for example *http://192.168.1.32/operator/*). See Chapter 4: Verify Software Installation for details.

2.8: 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.

2.9: 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/2.2.290.12-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 40.

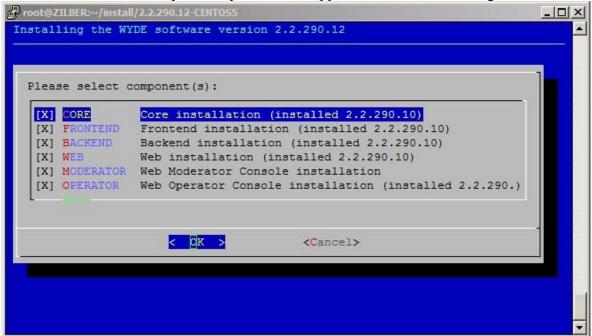


Figure 40: Update Installation "select components" Question

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,

2.10: 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/2.2.290.10-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 41 for details.

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```
root@ZILBER:~/install/2.2.290.10-CENTOS5

login as: root
root@192.168.1.30's password:

Last login: Fri Nov 19 01:39:59 2010 from 192.168.1.64
[root@ZILBER ~] # cd /root/install/2.2.290.10-CENTOS5/
[root@ZILBER 2.2.290.10-CENTOS5] # ./uninstall.sh
Uninstalling WYDE ....
DONE.
[root@ZILBER 2.2.290.10-CENTOS5] # [
```

Figure 41: 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 42.



Figure 42: 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 43 appears next.



Figure 43: 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 44. If you would like to get the cluster servers licenses for 200 simultaneous calls you should populate the form as shown on Figure 45. 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.



Figure 44: Enter Details for New Standard License



Figure 45: Enter Details for New Cluster License

Recently generated licenses can be seen in the Licensing Server "Recent Licenses" section, see Figure 46. You can download generated license file (*license.bin*) if you press "*Download*" button.

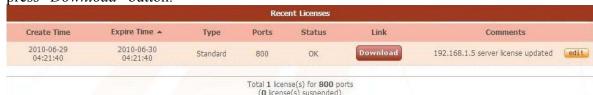


Figure 46: WYDE Voice Licensing Server – Recent Licenses



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 43, "Account Details" section, "E-mail" field). After that you should go to the licensing server and update the expired license manually. See Figure 47 for details. Press "Update" button to generated renewed license. After that the screen changes as shown on Figure 46, 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	Туре	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 edi	
			Total 1 lic (0 licer	ense(s) for 800 ponse(s) suspended)	orts		

Figure 47: 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 48 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 48: 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

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

Name: Michael Smith
Login: wyde@enols.com

Has a license that will expire soon:

- type: standard
- ports amount: 800
- comments: 192.168.1.5 server license updated
- expired: 2010-06-30 04:21:40

The license file can be renewed at any time through the following URL:
http://licserver.wydevoice.com/get license?id=9b7f7b482109a79e5073e183dc557926dWlkPTImbGlk
PTE=

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

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

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 49. The license will be extended, and new license expiration date will be equal to the current date plus user's license duration.

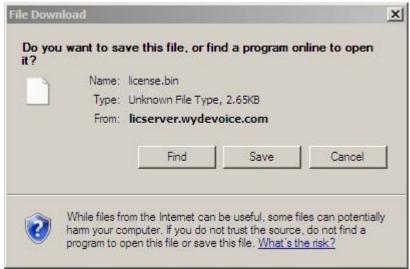


Figure 49: Download Renewed license.bin File

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.

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Update License Notice

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```
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: 192.168.1.5 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=9b7f7b482109a79e5073e183dc557926dWlkPTImbGlk
PTE=

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: 192.168.1.5 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=9b7f7b482109a79e5073e183dc557926dWlkPTImbGlk
PTE=

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

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

Chapter 4: Verify Software Installation

If the installation was successful you should be able to call on your bridge. You can use \underline{X} Lite or $\underline{SJphone}$ softphones to make VOIP call on your bridge using the IP address that was entered during installation as your host IP (see Figure 3). For instance you can make the call to 10@<your bridge IP> (10@.192.168.1.5) in our sample) via SJphone.

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 <a href="http://<your bridge Web IP>/">http://<your bridge Web IP>/ (http://192.168.1.5/ in our sample) in your browser URL bar. You should see a screen similar to the shown on Figure 50. Use PIN: <a href="https://admin.ncbi.nlm.ncbi.n



Figure 50: 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 51.



Figure 51: 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.

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 /moderator/">http://eyour bridge Web IP>/moderator/ (for instance http://eyour bridge Web IP>/moderator/ (for instance http://192.168.1.5/moderator/) in your browser URL bar. You should see a screen similar to the shown on Figure 52.



Figure 52: Initial Web Moderator Console Login Screen

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 *http://<your bridge Web IP>/operator/* (for instance *http://192.168.1.5/operator/*) in your browser URL bar. You should see a screen similar to the shown on Figure 53. See "*Operator Console – User Guide*" for detail information how to use operator console.

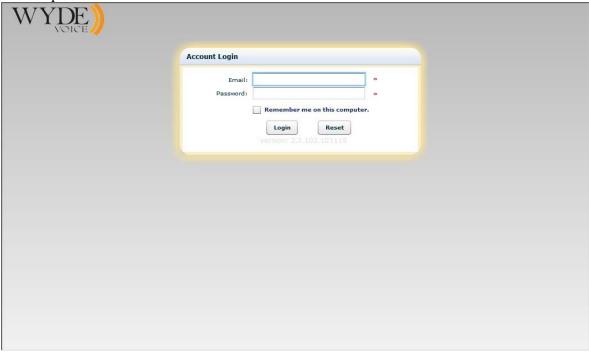


Figure 53: Initial Web Operator Console Login Screen

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 <u>support@wydevoice.com</u>. We will respond to your question within 24 hours.