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UniMRCP

Asterisk Modules

Administrator Guide

Revision: 80

Distribution: Red Hat / Cent OS

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1 Overview

This guide describes how to obtain and install binary packages of Asterisk and UniMRCP modules on Red Hat-based distributions. The document is intended for system administrators and developers.

1.1 Applicable Versions

Instructions provided in this guide are applicable to the following versions.

UniMRCP 1.4.0 and above

Asterisk 13 and above

1.2 Supported Distributions

UniMRCP binary packages are currently available only for x86_64 (64-bit) architecture.

Operating System	32-bit	64-bit
Red Hat / Cent OS 6		
Red Hat / Cent OS 7		

Note: packages for other distributions can be made available upon request. For more information, contact services@unimrcp.org.

1.3 Authentication

UniMRCP binary packages are available to authenticated users only. In order to register a free account with UniMRCP, please visit the following page.

https://www.unimrcp.org/profile-registration

Note: a new account needs to be verified and activated prior further proceeding.

2 Installing RPMs Using YUM

Using the Yellowdog Updater, Modifier (yum), a command-line package management utility for Red Hat-based distributions, is recommended for installation of UniMRCP binary packages.

2.1 Repository Configuration

The content of a typical yum configuration file, to be placed in etc/yum.repos.d/unimrcp.repo, is provided below.

```
[unimrcp]
name=UniMRCP Packages for Red Hat / Cent OS-$releasever $basearch
baseurl=https://username:password@unimrcp.org/repo/yum/main/rhel$releasever/$basearch/
enabled=1
sslverify=1
gpgcheck=1
gpgkey=https://unimrcp.org/keys/unimrcp-gpg-key.public

[unimrcp-asterisk-13]
name=UniMRCP Asterisk-13 Packages for Red Hat / Cent OS-$releasever $basearch
baseurl=https://username:password@unimrcp.org/repo/yum/asterisk-13/rhel$releasever/$basearch/
enabled=1
sslverify=1
gpgcheck=1
gpgkey=https://unimrcp.org/keys/unimrcp-gpg-key.public

# Do NOT use this repository on Red Hat / Cent OS 7 as the repository is currently available only for former versions.
[asterisk-current]
name=Asterisk dependencies for Red Hat / Cent OS-$releasever $basearch
baseurl=http://packages.asterisk.org/centos/$releasever/current/$basearch/
enabled=1
gpgcheck=0
gpgkey=http://packages.asterisk.org/RPM-GPG-KEY-Digium
```

The username and password fields included in the HTTPS URI must be replaced with the corresponding

account credentials.
Note that the repository *asterisk-current*, provided by Asterisk, is used to retrieve the package *asterisk-sounds-core-en-gsm*. Since this repository is currently not available for Red Hat / Cent OS 7, the Asterisk sound files need to be installed separately in this case.

2.2 Repository Verification

In order to verify that yum can properly connect and access the UniMRCP repository, the following command can be used.

```
yum repolist unimrcp
yum repolist unimrcp-asterisk-13
```

where *unimrcp* and *unimrcp-asterisk-13* are names of the sections set in the yum configuration file above.

In order to retrieve a list of packages the UniMRCP repositories provides, the following command can be used.

```
yum --disablerepo="*" --enablerepo="unimrcp, unimrcp-asterisk-13" list available
```

2.3 Installation of Applications Suite (app-unimrcp)

In order to install the *app-unimrcp* module, which provides a suite of MRCP applications for Asterisk, the following command can be used.

```
yum install asterisk-app-unimrcp
```

As a result, yum will check for and install all the required components, including the packages for Asterisk and UniMRCP client.

2.4 Installation of Speech Resource (res-speech-unimrcp)

In order to install the *res-speech-unimrcp* module, which provides an MRCP implementation of the Asterisk Speech Recognition Interface, the following command can be used.

```
yum install asterisk-res-speech-unimrcp
```

As a result, yum will check for and install all the required components, including the packages for Asterisk and UniMRCP client.

3 Installing RPMs Manually

UniMRCP RPM packages can be installed manually using the *rpm* utility. Note, however, that the system administrator should take care of package dependencies and install and install all the packages in appropriate order.

The Asterisk RPM packages have the following naming convention:

```
asterisk-$modulename--$astversion-$packageversion.el$rhelversion.$arch.rpm
```

where

- *modulename* is the name of module (either app-unimrcp or res-speech-unimrcp)
- *astversion* is the Asterisk version
- *packageversion* is the RPM release version
- *rhelversion* is the Red Hat version
- *arch* is the architecture (x86_64, i686, …)

3.1 Package List

The following is a list of RPM packages required for installation of UniMRCP modules for Asterisk, including UniMRCP dependencies.

Package Name	Component	Description
asterisk-app-unimrcp	Asterisk	A suite of MRCP applications.
asterisk-res-speech-unimrcp	Asterisk	An MRCP implementation of Generic Speech Recognition Interface of Asterisk.
asterisk	Asterisk	Compound Asterisk package.
asterisk-core	Asterisk	Asterisk core package without any "extras".
asterisk-doc	Asterisk	Documentation files for Asterisk.
asterisk-devel	Asterisk	Development files for Asterisk.
asterisk-dahdi	Asterisk	DAHDI devices support for Asterisk.
unimrcp-client	UniMRCP	Shared libraries and sample applications of the client.

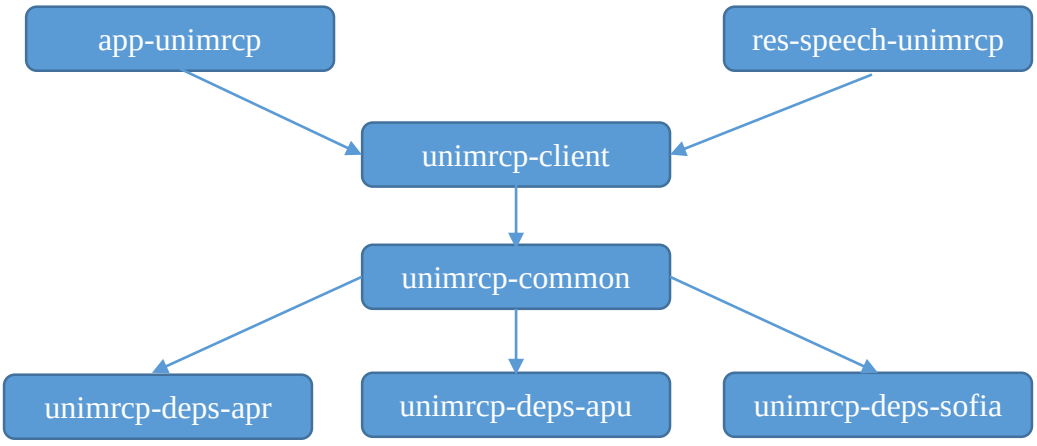
unimrcp-client-dev	UniMRCP	Development kit of the client.
unimrcp-common	UniMRCP	Data common for the client and the server.
unimrcp-common-dev	UniMRCP	Development kit of the common client and server data.
uniapr	UniMRCP	UniMRCP edition of the Apache Portable Runtime (APR) library.
uniapr-dev	UniMRCP	Development kit of the corresponding APR library.
uniapr-util	UniMRCP	UniMRCP edition of the Apache Portable Runtime Utility (APU) library.
uniapr-util-dev	UniMRCP	Development kit of the corresponding APR-Util library.
unisofia-sip	UniMRCP	UniMRCP edition of the Sofia SIP library.
unisofia-sip-dev	UniMRCP	Development kit of the corresponding Sofia SIP library.

The respective packages for each of the components can be obtained from the UniMRCP website by visiting the download area having logged in to your account.

> https://unimrcp.org/project/release-view

3.2 Package Dependency Graph

The following is a graph of package dependencies.



3.3 Package Installation Order

Note that all the RPM packages provided by UniMRCP are signed by a GNU Privacy Guard (GPG) key. Before starting the installation, you may need to import the public key in order to allow the *rpm* utility to verify the packages.

```
rpm --import https://unimrcp.org/keys/unimrcp-gpg-key.public
```

Packages for the APR, APR-Util and Sofia-SIP libraries must be installed first.

```
rpm -ivh uniapr-$universion-$packageversion.el$rhelversion.$arch.rpm
rpm -ivh uniapr-util-$universion-$packageversion.el$rhelversion.$arch.rpm
rpm -ivh unisofia-sip-$universion-$packageversion.el$rhelversion.$arch.rpm
```

Then, packages for common data and the client library should follow.

```
rpm -ivh unimrcp-common-$universion-$packageversion.el$rhelversion.$arch.rpm
rpm -ivh unimrcp-client-$universion-$packageversion.el$rhelversion.$arch.rpm
```

Then, the Asterisk packages should follow.

```
rpm -ivh asterisk-core-$astversion-$packageversion.el$rhelversion.$arch.rpm
rpm -ivh asterisk-config-$astversion-$packageversion.el$rhelversion.$arch.rpm
rpm -ivh asterisk-dahdi-$astversion-$packageversion.el$rhelversion.$arch.rpm
rpm -ivh asterisk-doc-$astversion-$packageversion.el$rhelversion.$arch.rpm
rpm -ivh asterisk-$astversion-$packageversion.el$rhelversion.$arch.rpm
```

Finally, based on your requirements, either app-unimrcp and/or res-speech-unimrcp packages can be installed.

```
rpm -ivh asterisk-app-unimrcp-$astevrsion-$packageversion.el$rhelversion.$arch.rpm
rpm -ivh asterisk-res-speech-unimrcp-$astversion-$packageversion.el$rhelversion.$arch.rpm
```

The same order should be considered for the installation of the corresponding development packages.