

Powered by Universal Speech Solutions LLC



Asterisk Modules

Administrator Guide

Revision: 64

Distribution: Debian / Ubuntu

Created: February 7, 2015

Last updated: November 4, 2019

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1 Overview

This guide describes how to obtain and install binary packages of Asterisk and UniMRCP modules on Debian-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 1.6.0 and above
Asterisk 16 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
Ubuntu 16.04 LTS (xenial)		
Ubuntu 18.04 LTS (bionic)		

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 Deb Packages Using Apt-Get

Using the APT package handling utility (`apt-get`) is recommended for installation of UniMRCP binary packages.

2.1 Repository Configuration

The content of a typical configuration file of the APT repository, to be placed in `/etc/apt/sources.list.d/unimrcp.list`, is provided below.

```
deb [arch=amd64] https://username:password@unimrcp.org/repo/apt/ distr main asterisk-16
```

The *username* and *password* fields included in the HTTPS URI must be replaced with the corresponding account credentials.

The *distr* field must be replaced with the corresponding distribution code name such as *bionic*.

The repository provides the following components:

- main – packages containing UniMRCP and its dependencies
- asterisk-16 – packages containing Asterisk 16 and corresponding UniMRCP modules

2.2 GnuPG Key

For verification of binary packages, UniMRCP provides a public GnuPG key, which can be retrieved and installed as follows.

```
wget -O - - https://unimrcp.org/keys/unimrcp-gpg-key.public | sudo apt-key add -
```

2.3 Repository Update

In order to check for updates and apply the changes in the APT configuration, use the following command.

```
sudo apt-get update
```

2.4 Installation of Asterisk

In order to install Asterisk and related modules, the following commands can be used.

```
sudo apt-get install asterisk
```

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

2.5 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.

```
sudo apt-get install asterisk-app-unimrcp
```

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

2.6 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.

```
sudo apt-get install asterisk-res-speech-unimrcp
```

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

3 Installing Deb Packages Manually

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

The deb packages have the following naming convention:

```
$package_name_$universion~$astversion-$distr_$arch.deb
```

where

- *package_name* is the name of a package
- *universion* is the UniMRCP version
- *astversion* is the Asterisk version
- *distr* is the distribution code name (trusty, xenial, ...)
- *arch* is the architecture (amd64, i386, all, ...)

3.1 Package List

The following is a list of deb 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-config	Asterisk	Configuration files for Asterisk.
asterisk-doc	Asterisk	Source code documentation for Asterisk.
asterisk-dev	Asterisk	Development files for Asterisk.
asterisk-dahdi	Asterisk	DAHDI devices support for Asterisk.
asterisk-modules	Asterisk	Loadable modules for Asterisk.
unimrcp-client	UniMRCP	Shared libraries and sample applications of the client.

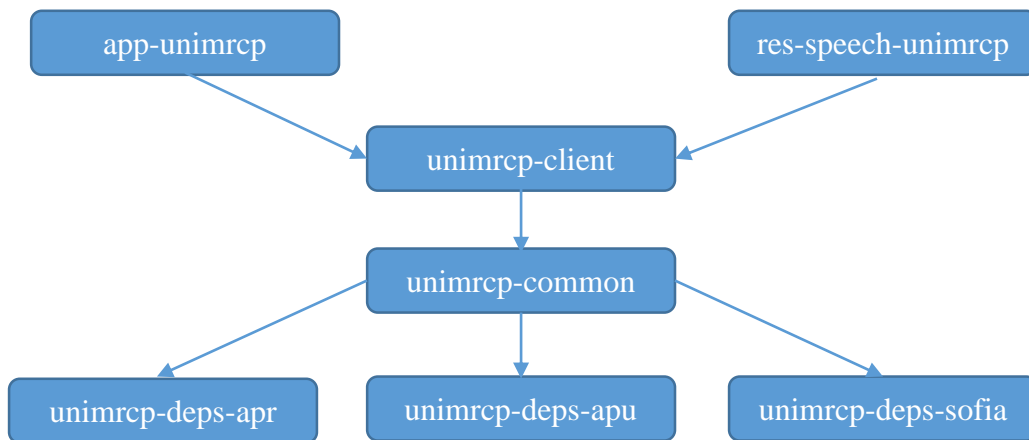
unimrcp-client-dev	UniMRCP	Development kit of the client.
unimrcp-common	UniMRCP	Data common for the client and the server.
unimrcp-common-dev	UniMRCP	Development kit of the common client and server data.
uniapr	UniMRCP	UniMRCP edition of the Apache Portable Runtime (APR) library.
uniapr-dev	UniMRCP	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

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

```
sudo dpkg --install uniapr_${universion}-${distr}_${arch}.deb
sudo dpkg --install uniapr-util_${universion}-${distr}_${arch}.deb
sudo dpkg --install unisofia-sip_${universion}-${distr}_${arch}.deb
```

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

```
sudo dpkg --install unimrcp-common_${universion}-${distr}_${arch}.deb
sudo dpkg --install unimrcp-client_${universion}-${distr}_${arch}.deb
```

Then, the Asterisk packages should follow.

```
sudo dpkg --install asterisk-modules_${astversion}-${distr}_${arch}.deb
sudo dpkg --install asterisk-config_${astversion}-${distr}_${arch}.deb
sudo dpkg --install asterisk_${astversion}-${distr}_${arch}.deb
```

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

```
sudo dpkg --install asterisk-app-unimrcp_${universion}~${astversion}-${distr}_${arch}.deb
sudo dpkg --install asterisk-res-speech-unimrcp_${universion}~${astversion}_${distr}.${arch}.deb
```

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