# Uni MRCP

# Asterisk Modules

## Administrator Guide

Revision: 65

Distribution: Debian / Ubuntu

Created: February 7, 2015

Last updated: May 7, 2021

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# Table of Contents

# 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 | Released | End of Support |
|---|---|---|
| Ubuntu 16.04 LTS (xenial) | February 2017 | March 2021 |
| Ubuntu 18.04 LTS (bionic) | May 2019 | TBA |
| Ubuntu 20.04 LTS (focal) | May 2021 | TBA |

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:

> $packagename_$universion~$astversion-$distr_$arch.deb

where

- *packagename* 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.

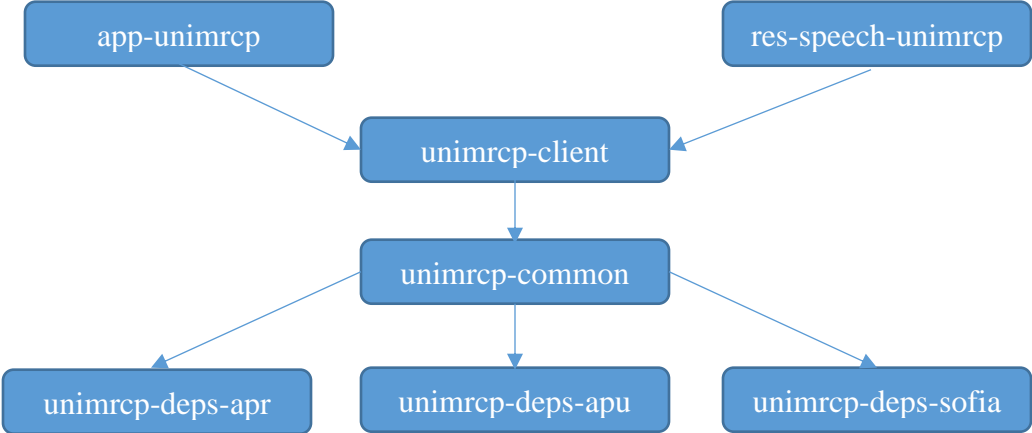| Package Name | Component | Description |
|---|---|---|
| **asterisk-app-unimrcp** | Asterisk | A suite of MRCP applications. |
| **asterisk-res-speech-unimrcp** | Asterisk | An MRCP implementation of Generic Speech Recognition Interface of Asterisk. |
| **asterisk** | Asterisk | Compound Asterisk package. |
| **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.