

# Package ‘bspm’

August 5, 2022

**Type** Package

**Title** Bridge to System Package Manager

**Version** 0.3.10

**Description** Enables binary package installations on Linux distributions. Provides functions to manage packages via the distribution's package manager. Also provides transparent integration with R's `install.packages()` and a fallback mechanism. When installed as a system package, interacts with the system's package manager without requiring administrative privileges via an integrated D-Bus service; otherwise, uses `sudo`. Currently, the following backends are supported: DNF, APT, ALPM.

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**Encoding** UTF-8

**OS\_type** unix

**SystemRequirements** systemd, dbus-python, PyGObject,  
python-(dnflaptalpm)

**Suggests** tinytest

**URL** <https://enchufa2.github.io/bspm/>

**BugReports** <https://github.com/Enchufa2/bspm/issues>

**RoxygenNote** 7.2.1

**NeedsCompilation** no

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**Repository** CRAN

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 bspm-package

**bspm**: *Bridge to System Package Manager*


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### Description

Enables binary package installations on Linux distributions. Provides functions to manage packages via the distribution's package manager. Also provides transparent integration with R's `install.packages` and a fallback mechanism. When installed as a system package, interacts with the system's package manager without requiring administrative privileges via an integrated D-Bus service; otherwise, uses `sudo`. Currently, the following backends are supported: DNF, APT, ALPM.

### Author(s)

Iñaki Ucar

### References

<https://enchufa2.github.io/bspm/>

### See Also

[manager](#), [integration](#)

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integration

*Enable/Disable Bridge to System Package Manager*


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### Description

Functions to enable or disable the integration of `install_sys` into `install.packages`. When enabled, packages are installed transparently from system repositories if available, and from the configured R repositories if not.

### Usage

```
enable()
```

```
disable()
```

### Details

To enable **bspm** system-wide by default, include the following:

```
suppressMessages(bspm::enable())
```

into the `Rprofile.site` file. To enable it just for a particular user, move that line to the user's `~/.Rprofile` instead.

By default, enabling **bspm** triggers a check of the backend, and a warning is raised if the system service is required but not available. To avoid this check, `options(bspm.backend.check=FALSE)` can be set.

## See Also

[manager](#)

## Examples

```
## Not run:
# install 'units' and all its dependencies from the system repos
bspm::enable()
install.packages("units")

# install packages again from CRAN
bspm::disable()
install.packages("errors")

## End(Not run)
```

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manager

*Manage Packages from System Repositories*

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## Description

Talk to the system package manager to install/remove... packages from system repositories (see details for further options).

## Usage

```
install_sys(pkgs)

remove_sys(pkgs)

discover()
```

## Arguments

pkgs                    character vector of names of packages.

## Details

If R runs with root privileges (e.g., in a docker container), these functions talk directly to the system package manager. Regular users are also able to install/remove packages without any administrative permission via the accompanying D-Bus service if **bspm** is installed as a system package. If not, these methods fall back on using `sudo` to elevate permissions (or `pkexec` in GUIs such as RStudio) in interactive sessions. Note that, if you want to fall back to `sudo` in a non-interactive session, you need to set `options(bspm.sudo=TRUE)`.

If `options(bspm.sudo.autodetect=TRUE)`, **bspm** tries to detect whether it is running in an environment where password-less `sudo` can be used (e.g., in a containerized environment such as a Fedora Toolbox) for every call, and then uses `sudo` accordingly.

By default, if a package is not available in the system repositories, it is installed from R's configured repositories along with all its dependencies. This behavior can be changed via `options(bspm.always.install.deps=TRUE)` which tries to install from system repositories recursive dependencies of those packages that are not available. For example, if **A** depends on **B**, and **B** is available in the system repositories but **A** is not, then only **A** will be installed from CRAN with this option enabled, and both will be installed from CRAN with this option disabled (default).

The `discover` method is only needed when e.g. a new repository is added that contains packages with different prefixes (for example, your system repositories may provide packages called `r-cran-*` and `r-bioc-*` and then you add a new repository that provides packages called `r-github-*`). Otherwise, it will not have any effect besides regenerating the internal configuration files.

### Value

Functions `install_sys` and `remove_sys` return, invisibly, a character vector of the names of packages not available in the system.

### See Also

[integration](#)

### Examples

```
## Not run:
# install 'units' and all its dependencies from the system repos
bspm::install_sys("units")

# now remove it
bspm::remove_sys("units")

## End(Not run)
```

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