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- \* Managing channels

## # Managing channels#

Conda channels are the locations where packages are stored. They serve as the base for hosting and managing packages. Conda packages are downloaded from remote channels, which are URLs to directories containing conda packages. The conda command searches a default set of channels and packages are automatically downloaded and updated from the `[default channel](https://repo.anaconda.com/pkgs/)`. Read more about `[conda channels](../concepts/channels.html)` and the various terms of service for their use.

Different channels can have the same package, so conda must handle these channel collisions.

There will be no channel collisions if you use only the defaults channel.

There will also be no channel collisions if all of the channels you use only contain packages that do not exist in any of the other channels in your list.

The way conda resolves these collisions matters only when you have multiple

channels in your channel list that host the same package.

By default, conda prefers packages from a higher priority channel over any version from a lower priority channel. Therefore, you can now safely put channels at the bottom of your channel list to provide additional packages that are not in the default channels and still be confident that these channels will not override the core package set.

Conda collects all of the packages with the same name across all listed channels and processes them as follows:

1. Sorts packages from highest to lowest channel priority.
2. Sorts tied packages---packages with the same channel priority---from highest to lowest version number. For example, if channelA contains NumPy 1.12.0 and 1.13.1, NumPy 1.13.1 will be sorted higher.
3. Sorts still-tied packages---packages with the same channel priority and same version---from highest to lowest build number. For example, if channelA contains both NumPy 1.12.0 build 1 and build 2, build 2 is sorted first. Any packages in channelB would be sorted below those in channelA.
4. Installs the first package on the sorted list that satisfies the installation specifications.

Essentially, the order goes: channelA::numpy-1.13\_1 > channelA::numpy-1.12.1\_1  
> channelA::numpy-1.12.1\_0 > channelB::numpy-1.13\_1

Note

If strict channel priority is turned on then channelB::numpy-1.13\_1 isn't included in the list at all.

To make conda install the newest version of a package in any listed channel:

- \* Add `channel_priority: disabled` to your `.condarc` file.

OR

- \* Run the equivalent command:

```
conda config --set channel_priority disabled
```

Conda then sorts as follows:

1. Sorts the package list from highest to lowest version number.
2. Sorts tied packages from highest to lowest channel priority.
3. Sorts tied packages from highest to lowest build number.

Because build numbers from different channels are not comparable, build number still comes after channel priority.

The following command adds the channel "new\_channel" to the top of the channel

list, making it the highest priority:

```
conda config --add channels new_channel
```

Conda has an equivalent command:

```
conda config --prepend channels new_channel
```

Conda also has a command that adds the new channel to the bottom of the channel list, making it the lowest priority:

```
conda config --append channels new_channel
```

## Strict channel priority#

As of version 4.6.0, Conda has a strict channel priority feature. Strict channel priority can dramatically speed up conda operations and also reduce package incompatibility problems. We recommend setting channel priority to



"strict" when possible.

Details about it can be seen by typing ``conda config --describe channel_priority``.

channel\_priority (ChannelPriority)

Accepts values of 'strict', 'flexible', and 'disabled'. The default value is 'flexible'. With strict channel priority, packages in lower priority channels are not considered if a package with the same name appears in a higher priority channel. With flexible channel priority, the solver may reach into lower priority channels to fulfill dependencies, rather than raising an unsatisfiable error. With channel priority disabled, package version takes precedence, and the configured priority of channels is used only to break ties. In previous versions of conda, this parameter was configured as either True or False. True is now an alias to 'flexible'.

channel\_priority: flexible

\_\_On this page

\* Strict channel priority

[ \_\_Edit on GitHub](

guide/tasks/manage-channels.rst)

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