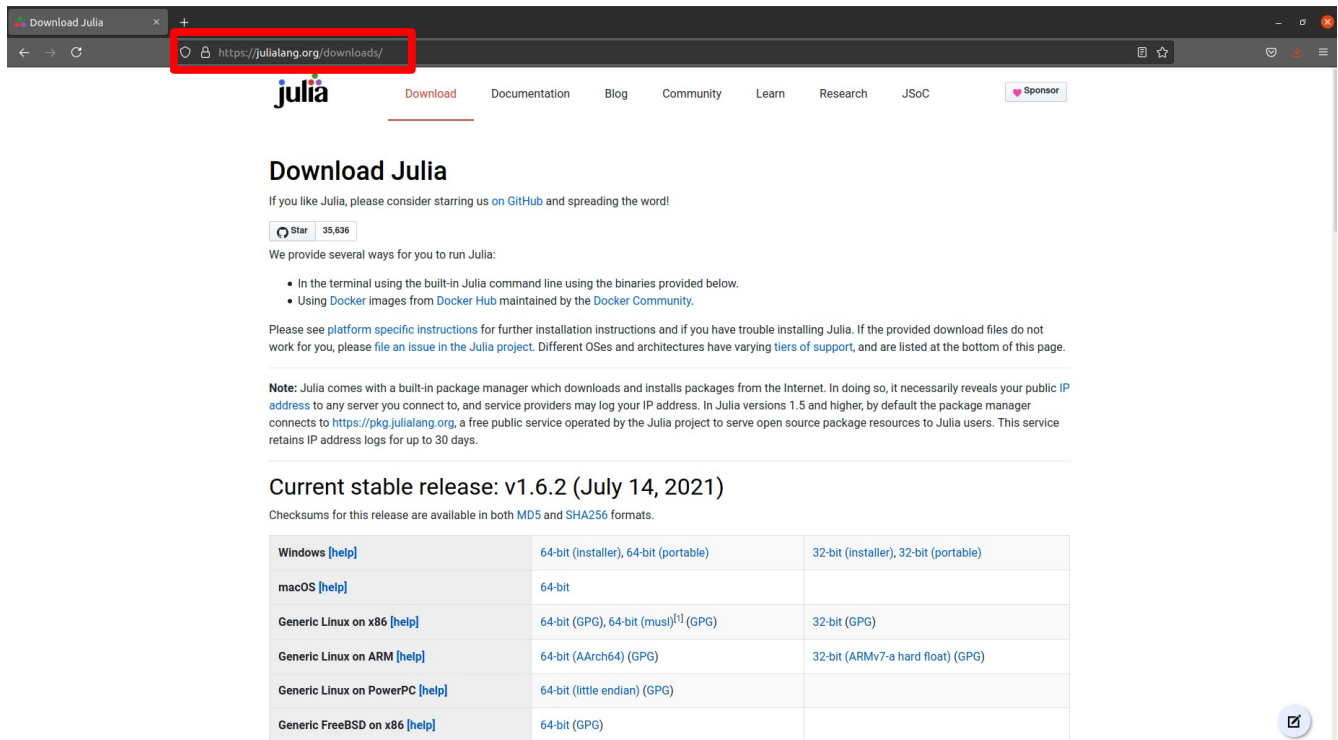


## Instalación julia

Descargar la última versión de Julia (v1.6.2 para esta ocasión): <https://julialang.org/downloads/>

A screenshot of a web browser showing the Julia download page. The address bar is highlighted with a red box, showing the URL https://julialang.org/downloads/. The page has a navigation bar with links: Download, Documentation, Blog, Community, Learn, Research, JSOC, and a Sponsor button. The main heading is "Download Julia". Below it, there's a GitHub star button showing 35,636 stars. A section titled "We provide several ways for you to run Julia:" lists two methods: using the built-in Julia command line and using Docker images. A "Note" section explains the package manager's IP address logging. A section titled "Current stable release: v1.6.2 (July 14, 2021)" mentions checksums. A table lists download links for various operating systems and architectures.

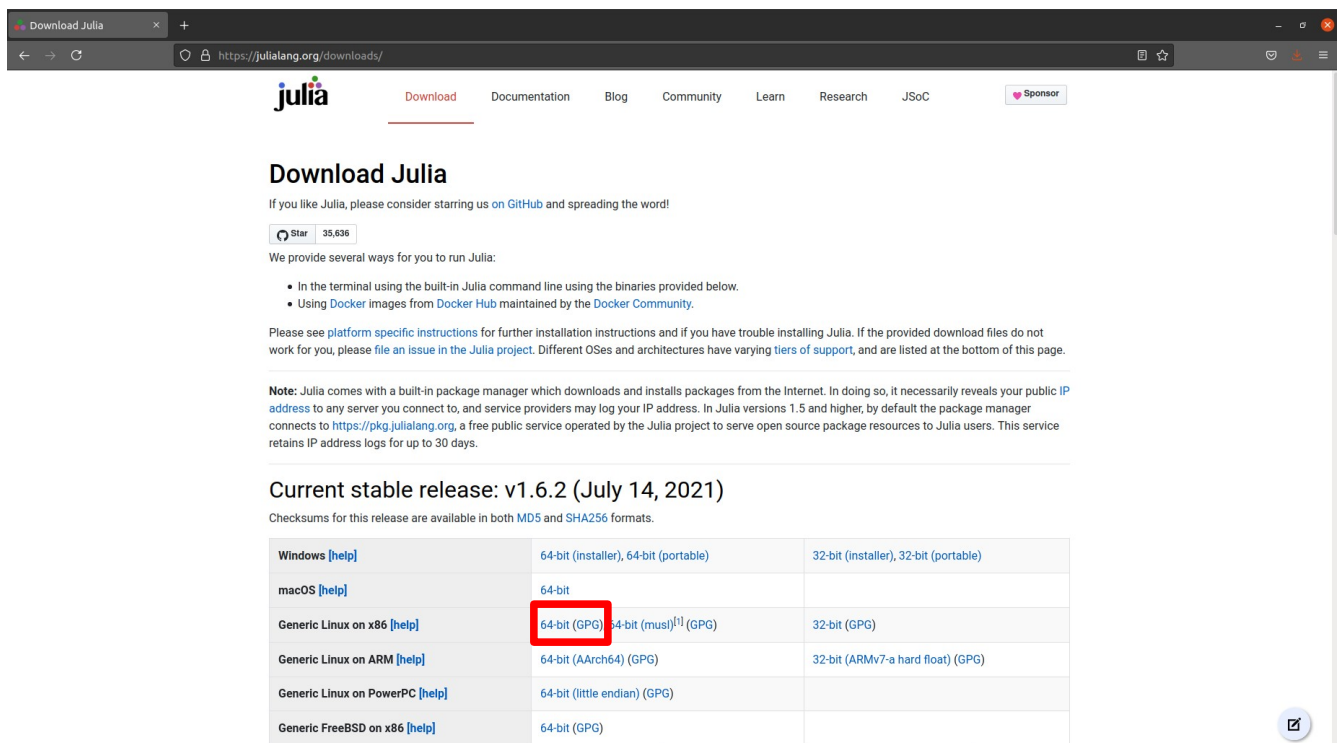
Operating System	64-bit (installer), 64-bit (portable)	32-bit (installer), 32-bit (portable)
Windows [help]	64-bit (installer), 64-bit (portable)	32-bit (installer), 32-bit (portable)
macOS [help]	64-bit	
Generic Linux on x86 [help]	64-bit (GPG), 64-bit (musl) <sup>[1]</sup> (GPG)	32-bit (GPG)
Generic Linux on ARM [help]	64-bit (AArch64) (GPG)	32-bit (ARMv7-a hard float) (GPG)
Generic Linux on PowerPC [help]	64-bit (little endian) (GPG)	
Generic FreeBSD on x86 [help]	64-bit (GPG)	

## Ubuntu:



➔ Para usar Julia desde la terminal (REPL):

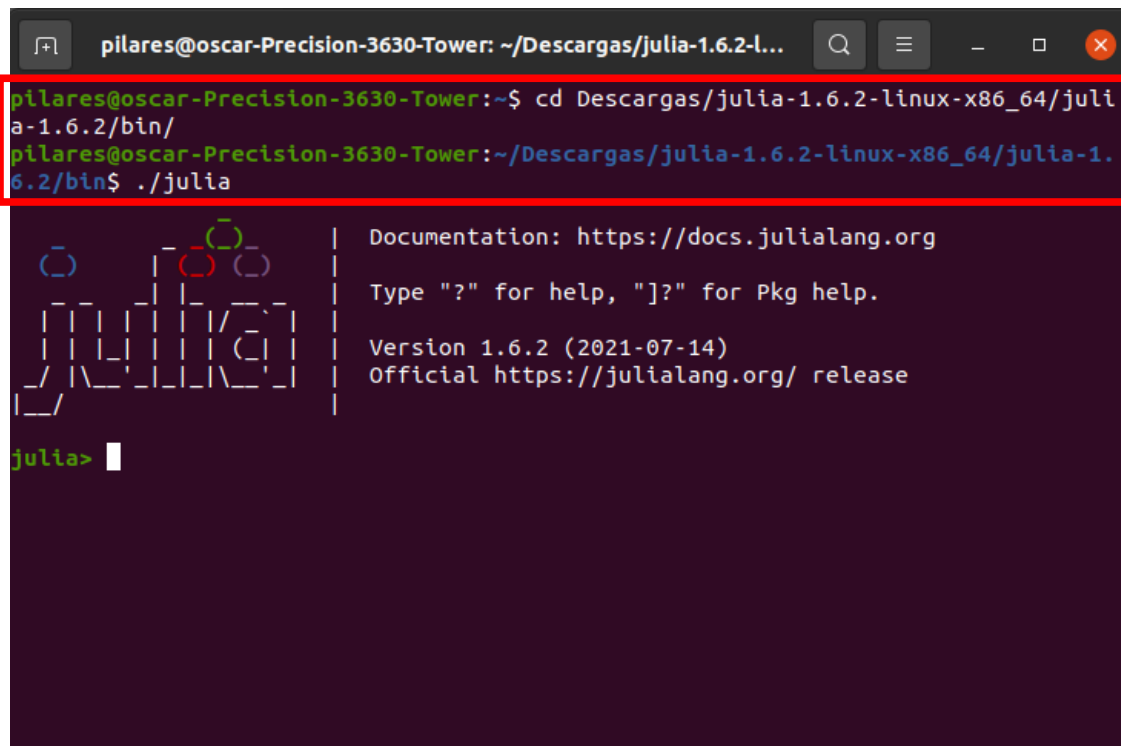
- Descargar versión de 64 bits: [https://julialang-s3.julialang.org/bin/linux/x64/1.6/julia-1.6.2-linux-x86\\_64.tar.gz](https://julialang-s3.julialang.org/bin/linux/x64/1.6/julia-1.6.2-linux-x86_64.tar.gz)



The screenshot shows the Julia download page on the official website. The page has a navigation bar with links to Download, Documentation, Blog, Community, Learn, Research, and JSoC. The main heading is "Download Julia". Below it, there is a GitHub star button showing 35,636 stars. The page lists several ways to run Julia: using the built-in command line or using Docker images. A note mentions that Julia has a built-in package manager. The current stable release is v1.6.2 (July 14, 2021). A table provides download links for various operating systems and architectures. The "64-bit (GPG)" link for Generic Linux on x86 is highlighted with a red box.

Operating System	64-bit (installer), 64-bit (portable)	32-bit (installer), 32-bit (portable)
Windows	64-bit (installer), 64-bit (portable)	32-bit (installer), 32-bit (portable)
macOS	64-bit	
Generic Linux on x86	64-bit (GPG) <b>64-bit (musl)<sup>[1]</sup> (GPG)</b>	32-bit (GPG)
Generic Linux on ARM	64-bit (AArch64) (GPG)	32-bit (ARMv7-a hard float) (GPG)
Generic Linux on PowerPC	64-bit (little endian) (GPG)	
Generic FreeBSD on x86	64-bit (GPG)	

- Extraer carpeta del archivo guardado
- En la terminal, navegar a <ruta\_de\_descarga>/julia-1.6.2-linux-x86\_64/julia-1.6.2/bin
- Ejecutar el único archivo de esta carpeta desde la terminal con el comando `./julia`



The terminal screenshot shows the user navigating to the Julia download directory and running the Julia executable. The commands and output are as follows:

```
pilares@oscar-Precision-3630-Tower: ~/Descargas/julia-1.6.2-l...  
pilares@oscar-Precision-3630-Tower:~$ cd Descargas/julia-1.6.2-linux-x86_64/julia-1.6.2/bin/  
pilares@oscar-Precision-3630-Tower:~/Descargas/julia-1.6.2-linux-x86_64/julia-1.6.2/bin$ ./julia  
  
Documentation: https://docs.julialang.org  
Type "?" for help, "]"? for Pkg help.  
Version 1.6.2 (2021-07-14)  
Official https://julialang.org/ release  
  
julia>
```

ESTO ES EL REPL

→ Para usar Julia en un Jupyter notebook:

- ◆ Agregar la paquetería "IJulia" desde el REPL con los siguientes comandos:

```
julia> using Pkg
julia> Pkg.add("IJulia")
```

```
julia> using Pkg; Pkg.add("IJulia")
Testing known registries into `~/julia`
  Added registry `General` to `~/julia/registries/General`
Resolving package versions...
Installed VersionParsing — v1.2.0
Installed SoftGlobalScope — v1.1.0
Installed Conda — v1.5.2
Installed libsodium_jll — v1.0.20+0
Installed IJulia — v1.23.2
Installed ZMQ — v1.2.1
Installed JLLWrappers — v1.3.0
Installed MbedTLS — v1.0.3
Installed ZeroMQ_jll — v4.3.4+0
Installed Parsers — v1.1.1
Installed Preferences — v1.2.2
Installed JSON — v0.21.1
Downloaded artifact: libsodium
Downloaded artifact: ZeroMQ
Updating `~/julia/environments/v1.6/Project.toml`
[7073ff75] + IJulia v1.23.2
Updating `~/julia/environments/v1.6/Manifest.toml`
[8f4d0f93] + Conda v1.5.2
[7073ff75] + IJulia v1.23.2
[692b3bcd] + JLLWrappers v1.3.0
[682c06a0] + JSON v0.21.1
[739be429] + MbedTLS v1.0.3
[69de0a69] + Parsers v1.1.1
[21216c6a] + Preferences v1.2.2
[b85f4697] + SoftGlobalScope v1.1.0
[81def892] + VersionParsing v1.2.0
[c2297ded] + ZMQ v1.2.1
[8f1865be] + ZeroMQ_jll v4.3.4+0
[a9144af2] + libsodium_jll v1.0.20+0
[0dad84c5] + ArgTools
[56f22d72] + Artifacts
[2a0f44e3] + Base64
[ade2ca70] + Dates
[f43a241f] + Downloads
[7b1f6079] + FileWatching
[b77e0a4c] + InteractiveUtils
[b27032c2] + LibCURL
[76f85450] + LibGit2
[8f399da3] + Libdl
[d6f4376e] + Markdown
[ca575930] + NetworkOptions
[44cfe95a] + Pkg
[de0858da] + Printf
[3fa0cd96] + REPL
[9a3f8284] + Random
[ea8e919c] + SHA
[9e88b42a] + Serialization
[6462fe0b] + Sockets
[fa267f1f] + TOML
[a4e569a6] + Tar
[8dfed614] + Test
[cf7118a7] + UUIDs
[4ec0a83e] + Unicode
[deac9b47] + LibCURL_jll
[29816b5a] + LibSSH2_jll
[c8ffd9c3] + MbedTLS_jll
[14a3606d] + MozillaCerts_jll
[83775a58] + Zlib_jll
[8e850ede] + nghttp2_jll
[3f19e933] + p7zip_jll
Building Conda -> `~/julia/scratchspaces/44cfe95a-1eb2-52ea-b672-e2afdf69b78f/299304989a5e6473d985212c28928899c74e9421/build.log`
Building IJulia -> `~/julia/scratchspaces/44cfe95a-1eb2-52ea-b672-e2afdf69b78f/d8b9c31196e1dd92181cd0f5760ca2d2fffb4ac0f/build.log`
Precompiling project...
11 dependencies successfully precompiled in 5 seconds (4 already precompiled)
julia> 
```

- ◆ Si ya se tiene instalado anaconda, inicializar Jupyter y crear un notebook con el kernel de julia 1.6.2



- ◆ Si no se tiene instalado anaconda, hacer lo siguiente:
  - Inicializar la paquetería IJulia con el comando  
julia> using IJulia
  - Tirar el siguiente comando para que se agregue Jupyter vía anaconda (se hace una instalación de miniconda):  
julia> notebook()

```
julia> using IJulia
julia> notebook()
install Jupyter via Conda, y/n? [y]: y
[ Info: Downloading miniconda installer ...
[ Info: Installing miniconda ...
PREFIX=/home/pilares/.julia/conda/3
Unpacking payload ...
Collecting package metadata (current_repodata.json): done
Solving environment: done

## Package Plan ##

environment location: /home/pilares/.julia/conda/3

added / updated specs:
- _libgcc_mutex==0.1=main
- _openmp_mutex==4.5=1_gnu
- brotli==0.7.0=py39h27cfd23_1003
- ca-certificates==2021.7.5=h06a4308_1
- certifi==2021.5.30=py39h06a4308_0
- cffi==1.14.6=py39h400218f_0
- chardet==4.0.0=py39h06a4308_1003
- conda-package-handling==1.7.3=py39h27cfd23_1
- conda==4.10.3=py39h06a4308_0
- cryptography==3.4.7=py39hd23ed53_0
- idna==2.10=pyhd3eb1b0_0
```

- Se abrirá la interfaz de Jupyter, abrimos un notebook nuevo:

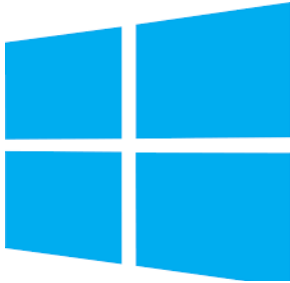


Una vez que ya se tiene instalado todo, para la siguiente vez que quieras abrir un notebook tendrás que entrar al REPL de Julia como se indicó al principio, tirar los siguientes comandos

```
julia> using IJulia  
julia> notebook()
```

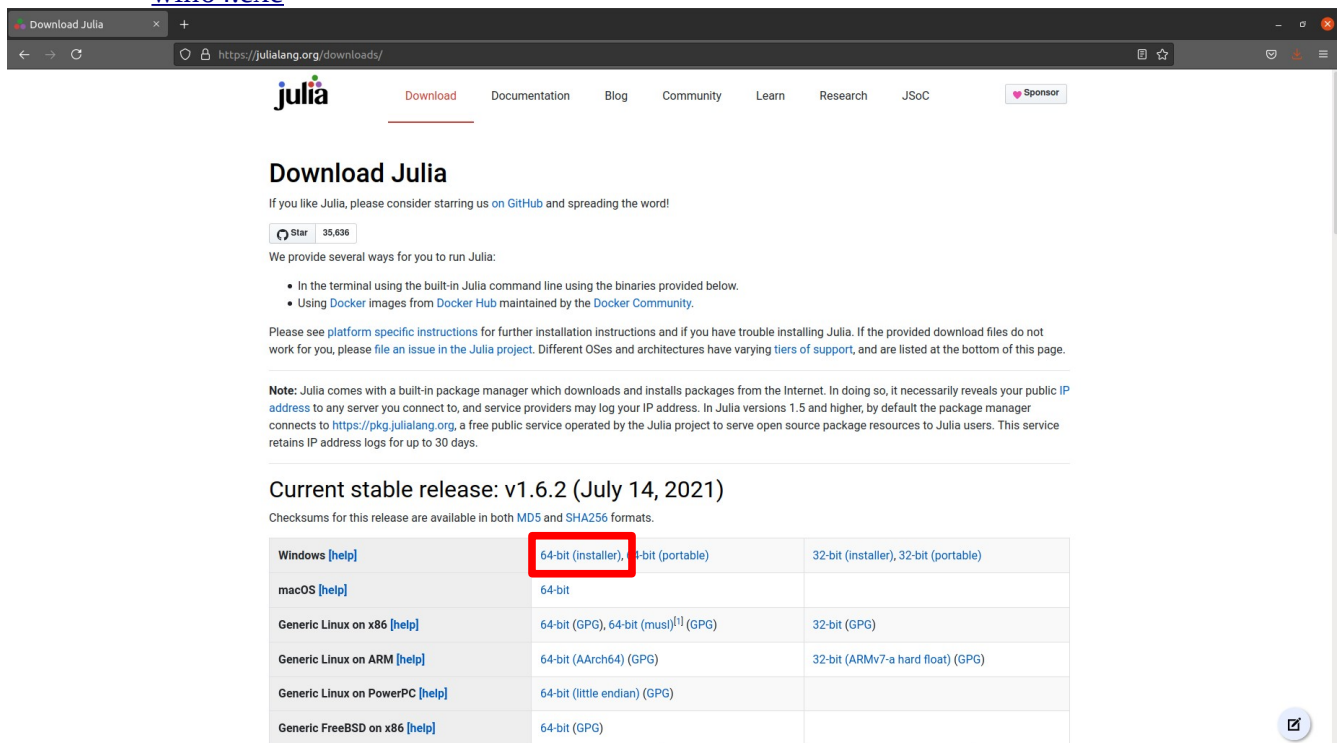
Si ya tenías anaconda previamente instalado, entra al ambiente de Jupyter como lo haces normalmente (con el comando `$ jupyter notebook`) y podrás crear un notebook con kernel de Julia tal como se hace en python siempre.

## Windows:



➔ Para usar Julia desde la terminal (REPL):

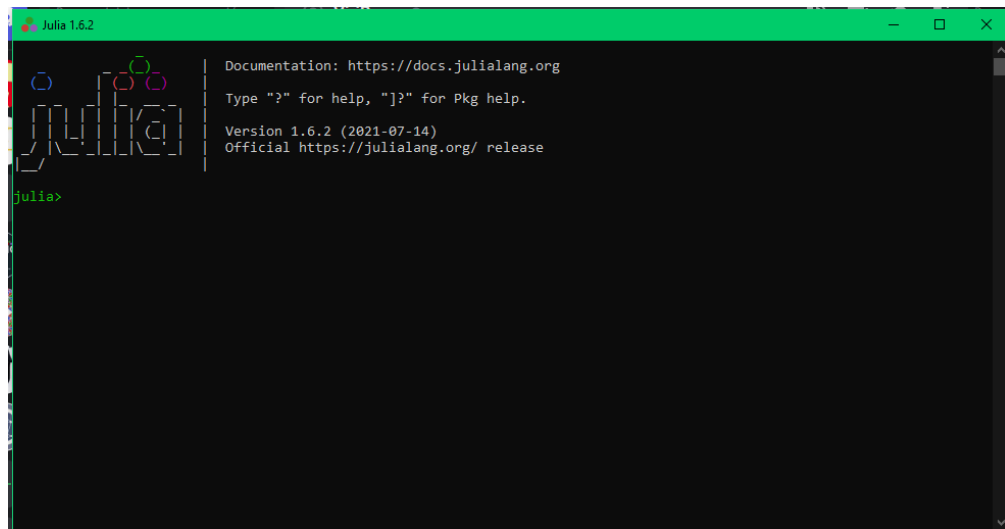
- Descargar versión de 64 bits: <https://julialang-s3.julialang.org/bin/winnt/x64/1.6/julia-1.6.2-win64.exe>

A screenshot of the Julia download page on a web browser. The page title is "Download Julia". It includes a GitHub star button showing 35,636 stars. Below, it lists ways to run Julia: in the terminal or using Docker. A note mentions that Julia's package manager reveals the user's public IP address. The current stable release is v1.6.2 (July 14, 2021). A table lists download links for various operating systems and architectures. The "64-bit (installer), 64-bit (portable)" link for Windows is highlighted with a red box.

Windows [help]	64-bit (installer), 64-bit (portable)	32-bit (installer), 32-bit (portable)
macOS [help]	64-bit	
Generic Linux on x86 [help]	64-bit (GPG), 64-bit (mus) <sup>[1]</sup> (GPG)	32-bit (GPG)
Generic Linux on ARM [help]	64-bit (AArch64) (GPG)	32-bit (ARMv7-a hard float) (GPG)
Generic Linux on PowerPC [help]	64-bit (little endian) (GPG)	
Generic FreeBSD on x86 [help]	64-bit (GPG)	

- Ejecutar el archivo descargado y seguir las instrucciones para la instalación.
- Buscar en las aplicaciones de Windows Julia y abrir





## ESTO ES EL REPL

- ➔ Para usar Julia en un Jupyter notebook:
  - ◆ Agregar la paquetería "IJulia" desde el REPL con los siguientes comandos:

```
julia> using Pkg  
julia> Pkg.add("IJulia")
```

```

julia> using Pkg; Pkg.add("IJulia")
[7073ff75] Resolving package versions...
[7073ff75] Added registry 'General' to '~/.julia/registries/General'
[7073ff75] Installing...
[7073ff75] Installed VersionParsing — v1.2.0
[7073ff75] Installed SoftGlobalScope — v1.1.0
[7073ff75] Installed Conda — v1.5.2
[7073ff75] Installed libsodium_jll — v1.0.20+0
[7073ff75] Installed IJulia — v1.23.2
[7073ff75] Installed ZMQ — v1.2.1
[7073ff75] Installed JLLWrappers — v1.3.0
[7073ff75] Installed MbedTLS — v1.0.3
[7073ff75] Installed ZeroMQ_jll — v4.3.4+0
[7073ff75] Installed Parsers — v1.1.1
[7073ff75] Installed Preferences — v1.2.2
[7073ff75] Installed JSON — v0.21.1
[7073ff75] Downloaded artifact: libsodium
[7073ff75] Downloaded artifact: ZeroMQ
[7073ff75] Updating ~/.julia/environments/v1.6/Project.toml
[7073ff75] + IJulia v1.23.2
[7073ff75] Updating ~/.julia/environments/v1.6/Manifest.toml
[7073ff75] + Conda v1.5.2
[7073ff75] + IJulia v1.23.2
[7073ff75] + JLLWrappers v1.3.0
[7073ff75] + JSON v0.21.1
[7073ff75] + MbedTLS v1.0.3
[7073ff75] + Parsers v1.1.1
[7073ff75] + Preferences v1.2.2
[7073ff75] + SoftGlobalScope v1.1.0
[7073ff75] + VersionParsing v1.2.0
[7073ff75] + ZMQ v1.2.1
[7073ff75] + ZeroMQ_jll v4.3.4+0
[7073ff75] + libsodium_jll v1.0.20+0
[7073ff75] + ArgTools
[7073ff75] + Artifacts
[7073ff75] + Base64
[7073ff75] + Dates
[7073ff75] + Downloads
[7073ff75] + FileWatching
[7073ff75] + InteractiveUtils
[7073ff75] + LibCURL
[7073ff75] + LibGit2
[7073ff75] + Libdl
[7073ff75] + Markdown
[7073ff75] + NetworkOptions
[7073ff75] + Pkg
[7073ff75] + Printf
[7073ff75] + REPL
[7073ff75] + Random
[7073ff75] + SHA
[7073ff75] + Serialization
[7073ff75] + Sockets
[7073ff75] + TOML
[7073ff75] + Tar
[7073ff75] + Test
[7073ff75] + UUIDs
[7073ff75] + Unicode
[7073ff75] + LibCURL_jll
[7073ff75] + LibSSH2_jll
[7073ff75] + MbedTLS_jll
[7073ff75] + MozillaCACerts_jll
[7073ff75] + Zlib_jll
[7073ff75] + nghttp2_jll
[7073ff75] + p7zip_jll
[7073ff75] Building Conda → ~/.julia/scratchspaces/44cfe95a-1eb2-52ea-b672-e2afdf69b78f/299304989a5e6473d985212c28928899c74e9421/build.log
[7073ff75] Building IJulia → ~/.julia/scratchspaces/44cfe95a-1eb2-52ea-b672-e2afdf69b78f/d8b9c31196e1dd92181cd0f5760ca2d2fffb4ac0f/build.log
[7073ff75] Precompiling project...
[7073ff75] 11 dependencies successfully precompiled in 5 seconds (4 already precompiled)

julia>

```



- ◆ Si ya se tiene instalado anaconda, inicializar Jupyter y crear un notebook con el kernel de julia 1.6.2



- ◆ Si no se tiene instalado anaconda, hacer lo siguiente:
  - Inicializar la paquetería IJulia con el comando  
julia> using IJulia
  - Tirar el siguiente comando para que se agregue Jupyter vía anaconda (se hace una instalación de miniconda):  
julia> notebook()

```
julia> using IJulia
julia> notebook()
install Jupyter via Conda, y/n? [y]: y
[ Info: Downloading miniconda installer ...
[ Info: Installing miniconda ...
PREFIX=/home/pilares/.julia/conda/3
Unpacking payload ...
Collecting package metadata (current_repodata.json): done
Solving environment: done

## Package Plan ##

environment location: /home/pilares/.julia/conda/3

added / updated specs:
- _libgcc_mutex==0.1=main
- _openmp_mutex==4.5=1_gnu
- brotli==0.7.0=py39h27cfd23_1003
- ca-certificates==2021.7.5=h06a4308_1
- certifi==2021.5.30=py39h06a4308_0
- cffi==1.14.6=py39h400218f_0
- chardet==4.0.0=py39h06a4308_1003
- conda-package-handling==1.7.3=py39h27cfd23_1
- conda==4.10.3=py39h06a4308_0
- cryptography==3.4.7=py39hd23ed53_0
- idna==2.10=pyhd3eb1b0_0
```

- Se abrirá la interfaz de Jupyter, abrimos un notebook nuevo:



Una vez que ya se tiene instalado todo, para la siguiente vez que quieras abrir un notebook tendrás que entrar al REPL de julia como se indicó al principio, tirar los siguientes comandos

```
julia> using IJulia  
julia> notebook()
```

Si ya tenías anaconda previamente instalado, entra al ambiente de Jupyter como lo haces normalmente y podrás crear un notebook con kernel de Julia tal como se hace con python siempre.