



nuts, the Java Package Manager



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<https://thevpc.github.io/nuts>

<https://github.com/thevpc/nuts> (git repo)

<https://thevpc.github.io/nuts> (website)

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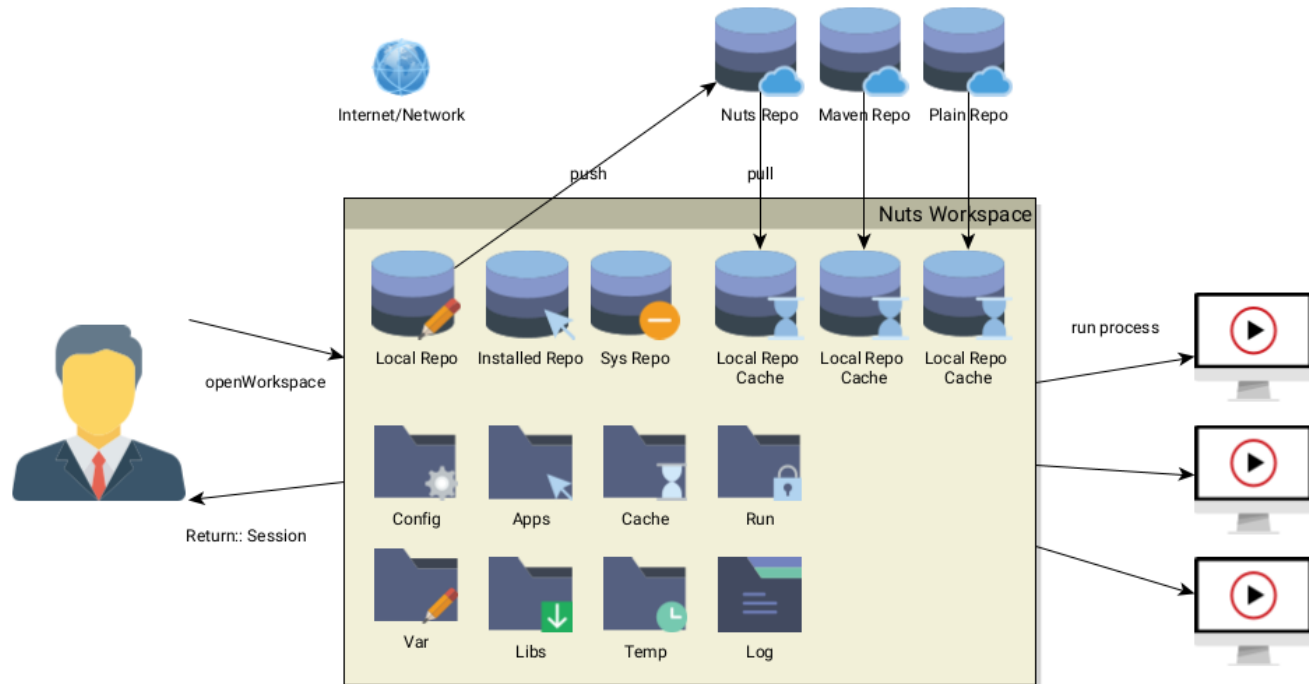


## Plan

1. Architecture
2. API
3. Demo



# 1. Architecture





## 2. Nuts Commandline

- SYNOPSIS

```
nuts [options]
```

- Options can be long or short

```
nuts -S  
nuts --standalone
```

- Options order is (generally) irrelevant
- Most relevant option :)

```
nuts --help
```



### 3. Nuts Commandline Values

- Options can be valued

```
nuts -w=my-name  
nuts -w my-name  
nuts --workspace my-name  
nuts --workspace=my-name
```

```
nuts -S  
nuts -S=true
```

```
nuts -!S  
nuts -~S  
nuts -S=false  
nuts -S=no
```



## 4. Selecting workspace

- User Workspace defaults to ~/.config/nuts/default-workspace

```
nuts
```

- System workspace defaults to /etc/opt/nuts/default-workspace

```
nuts -g
```

- You can customize it

```
nuts --workspace <workspace-location>
```



## 5. Creating Workspaces

- Workspace created on the first use
- Open existing workspace or fail if not already existing

```
nuts --open
```



## 6. Creating Workspaces

- Defining the default repositories with 'archetypes'

```
nuts --archetype=default  
nuts --archetype=server  
nuts --archetype=minimal
```





## 7. Folders

- Each (installed) App has distinct folders
  - app : app (executable) binaries
  - lib : lib (non executable) binaries
  - config : config files
  - var : variable data files
  - log : log files
  - temp : temp files
  - cache : cache files
  - run : run files (locks)



## 8. Folders

- Mainly folder are following two layout families
  - Linux,Unix,MacOS (XDG)
  - Windows (AppData)



## 9. Folders in Linux (user)

- config : "`$HOME/.config/nuts`"
- apps : "`$HOME/.local/share/nuts/apps`"
- lib : "`$HOME/.local/share/nuts/lib`"
- var : "`$HOME/.local/share/nuts/var`"
- log : "`$HOME/.local/log/nuts`"
- cache : "`$HOME/.cache/nuts`"
- temp : "`$java.io.tmpdir/$username/nuts`"
- run : "`/run/user/$USER_ID/nuts`"



## 10. Folders in Linux (global/system)

- apps : `"/opt/nuts/apps"`
- lib : `"/opt/nuts/lib"`
- config : `"/etc/opt/nuts"`
- var : `"/var/opt/nuts"`
- log : `"/var/log/nuts"`
- temp : `"/tmp/nuts/global"`
- cache : `"/var/cache/nuts"`
- run : `"/tmp/run/nuts/global"`



## 11. Folders in Windows

- apps : "\$HOME/AppData/Roaming/nuts/apps"
- lib : "\$HOME/AppData/Roaming/nuts/lib"
- config : "\$HOME/AppData/Roaming/nuts/config"
- var : "\$HOME/AppData/Roaming/nuts/var"
- log : "\$HOME/AppData/Roaming/nuts/log"
- temp : "\$HOME/AppData/Local/nuts/temp"
- cache : "\$HOME/AppData/Local/nuts/cache"
- run : "\$HOME/AppData/Local/nuts/run"



## 12. Customize Folder Layout

- Mimic another OS

```
nuts --store-layout=system  
nuts --store-layout=windows  
nuts --store-layout=linux
```

- Exploded vs standalone

```
nuts --standalone  
nuts --exploded
```



## 13. Destroying a workspace

- Need to erase config (--reset, -Z) and skip boot (--skip-boot, -Q)

```
nuts -ZQ
```



## 14. Working with Cache

- Invalidate only used files (New only)

```
nuts -N
```

- Invalidate All cache

```
nuts -z
```





## 15. Running an Application

- Supported executables
  - artifact (ex: `org.jedit:jedit#5.0,jedit`)
  - local jar (ex: `./jedit.jar`)
  - accessible jar (ex: `http://jedit.org/jedit.jar`)
  - accessible jar (ex: `ssh://vpc@my-server/jedit.jar`)
  - native applications (ex: `ls`, `cp` etc on Linux and `cmd.exe` on Windows)
  - any alias command to another supported executable (ex: `nll=nsh -c ls -l`)

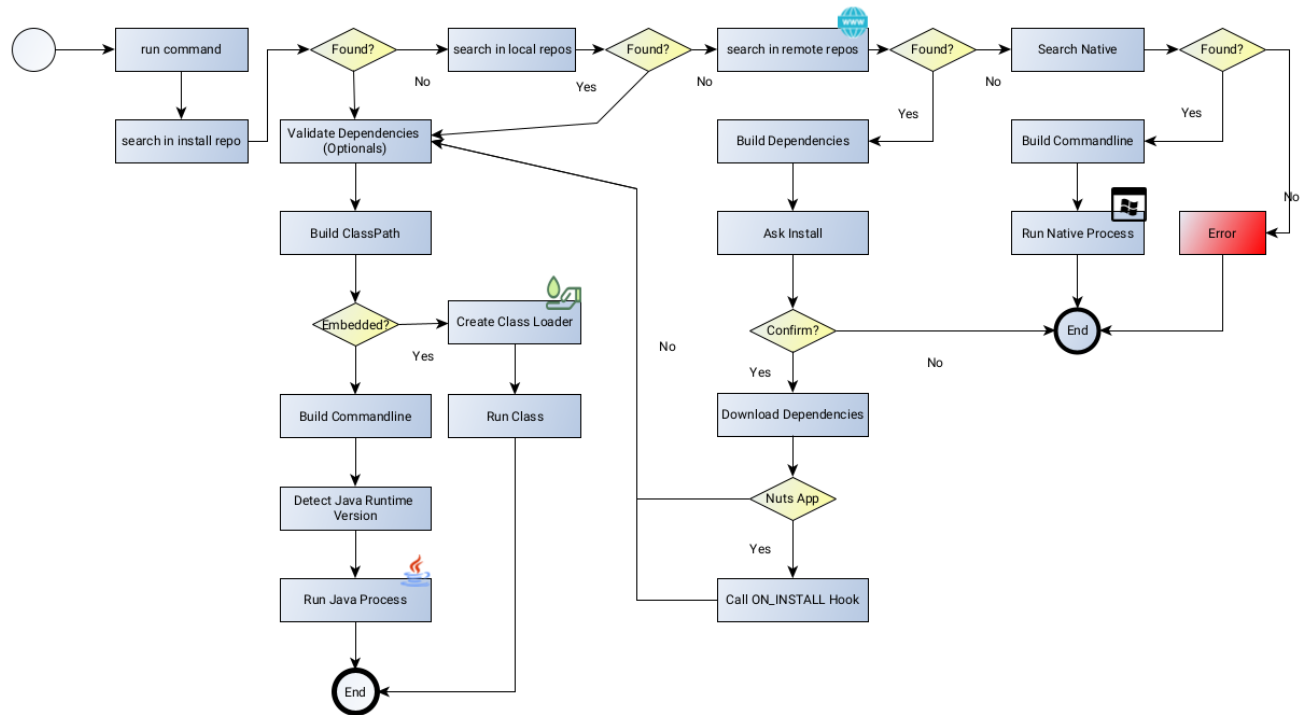


## 16. Running an Application

```
nuts my-application  
nuts --exec my-application  
nuts --exec --java-version=9 -Xmx2G my-application  
nuts --embedded --java-version=9 -Xmx2G my-application  
nuts ls  
nuts --system ls
```



## 17. Running an Application





## 18. Imports

```
nuts com.whitecape:white-app  
nuts com.whitecape.yellow-app:yellow-app  
nuts settings add import com.whitecape  
nuts white-app  
nuts yellow-app  
nuts yellow-app#2.3
```



## 18.1. Conclusion

- **nuts** commandline is very rich
- **nuts** behaves seamlessly on linux/windows/macos
- I invite you to
  - Take a shot, try to use it and give feedback
  - **Star(\*)** the repository <https://github.com/thevpc/nuts>
  - Spread the word
  - Join the Core Team to enhance **nuts**



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Thank you

please support us by starring our repo at

<https://github.com/thevpc/nuts> (git repo)

<https://thevpc.github.io/nuts> (website)

[nuts.packagemanager@gmail.com](mailto:nuts.packagemanager@gmail.com)