Partner presentation

Productive 4.0

How to install Arrowhead 4.1.0 on a Debian-based Linux distribution

Bilbao Workshop, 28.11.2018

Remote presentation from Denmark

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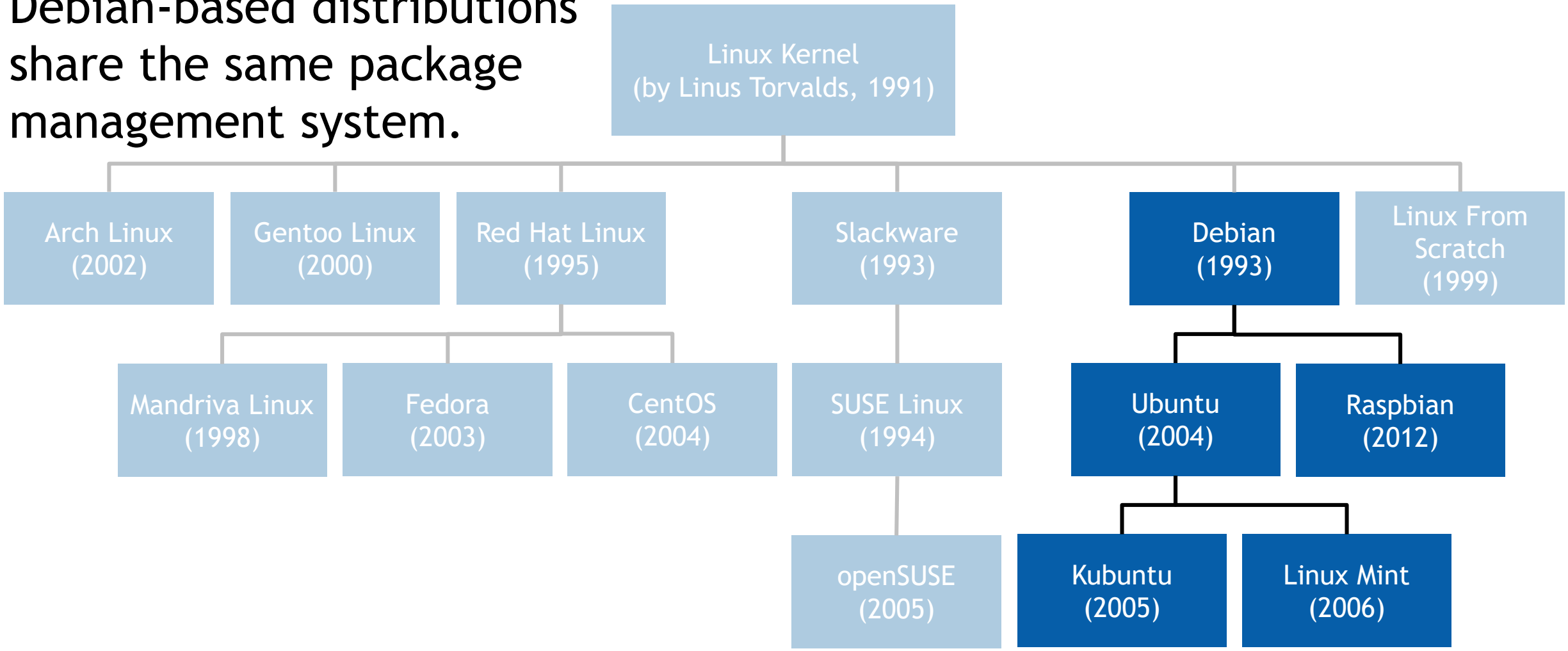
How do you install something on Linux?

Debian-based distributions share the same package management system.



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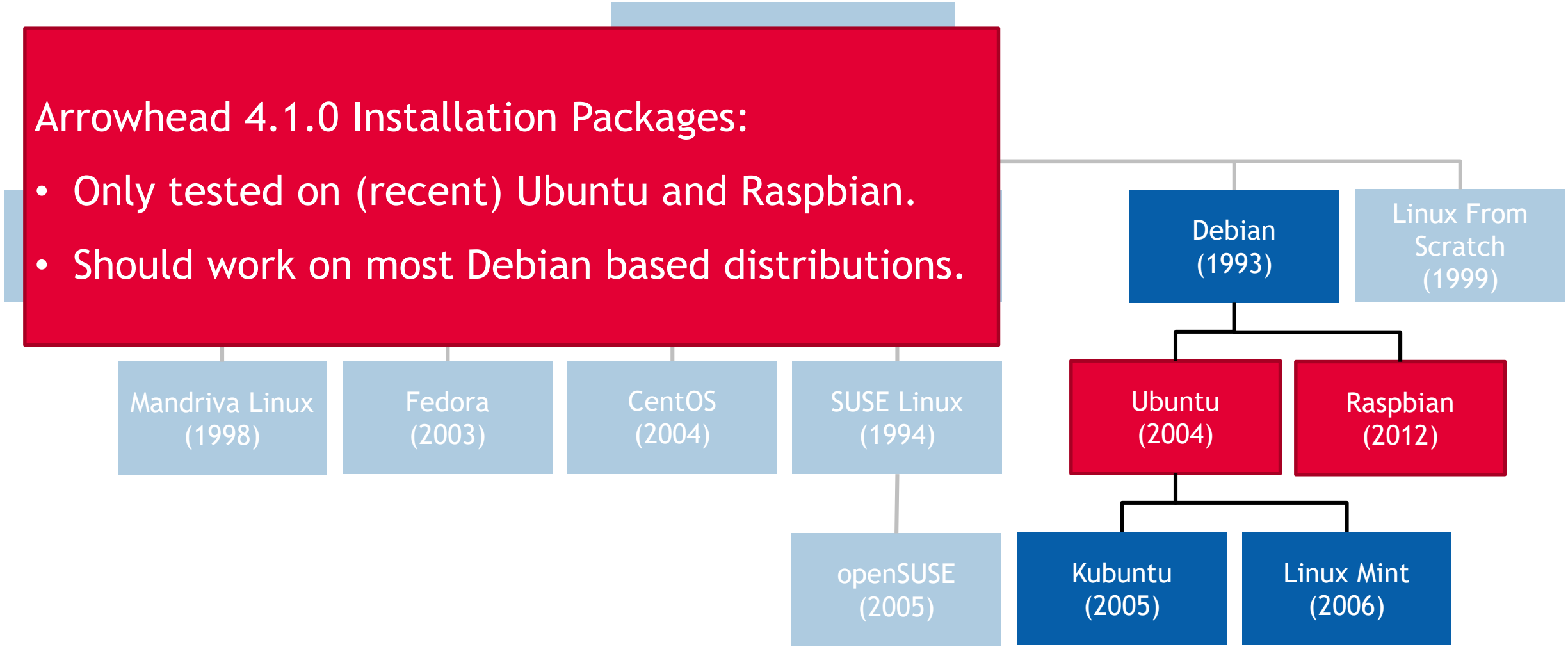
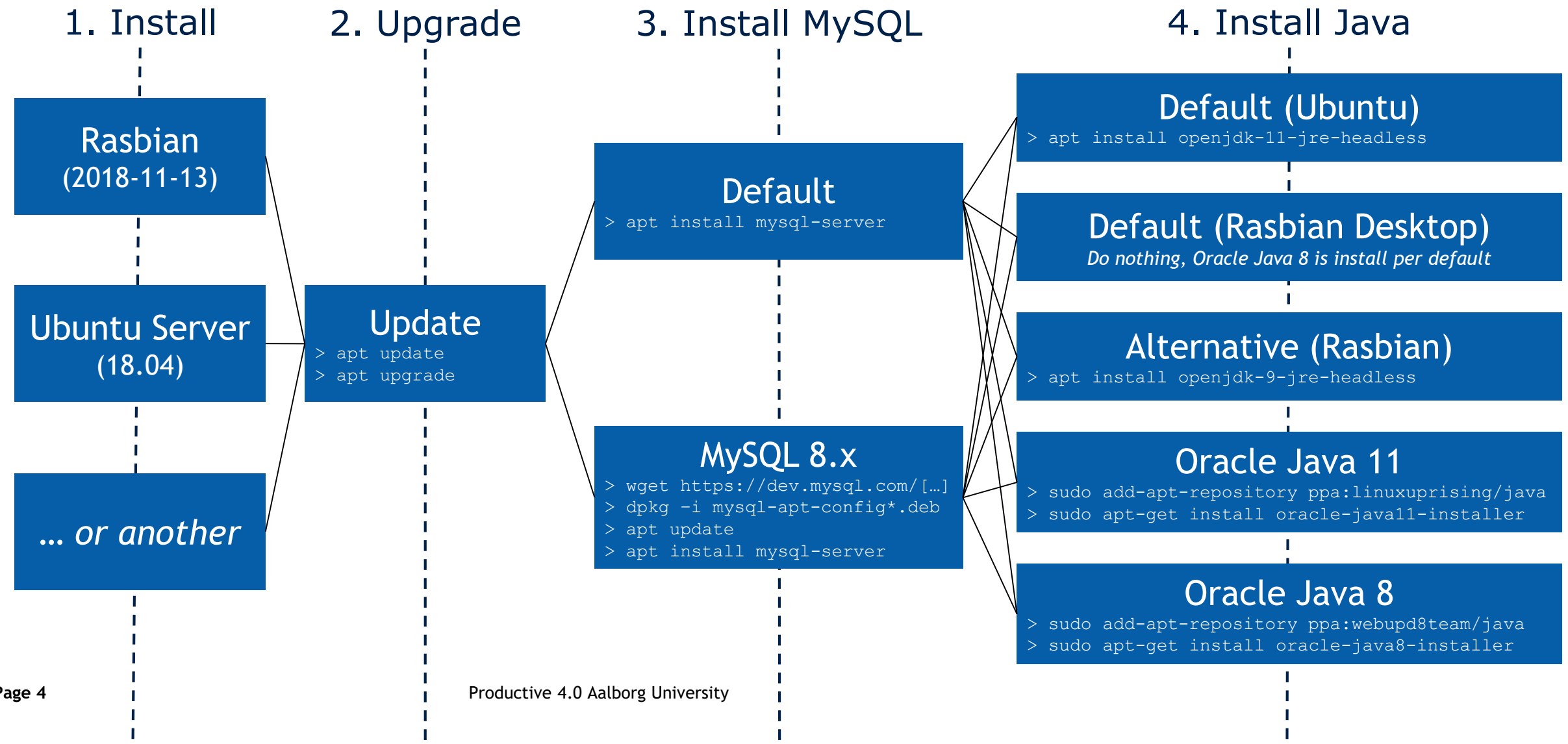
Arrowhead 4.1.0 Installation Packages:

- Only tested on (recent) Ubuntu and Raspbian.
- Should work on most Debian based distributions.



Installation Procedure



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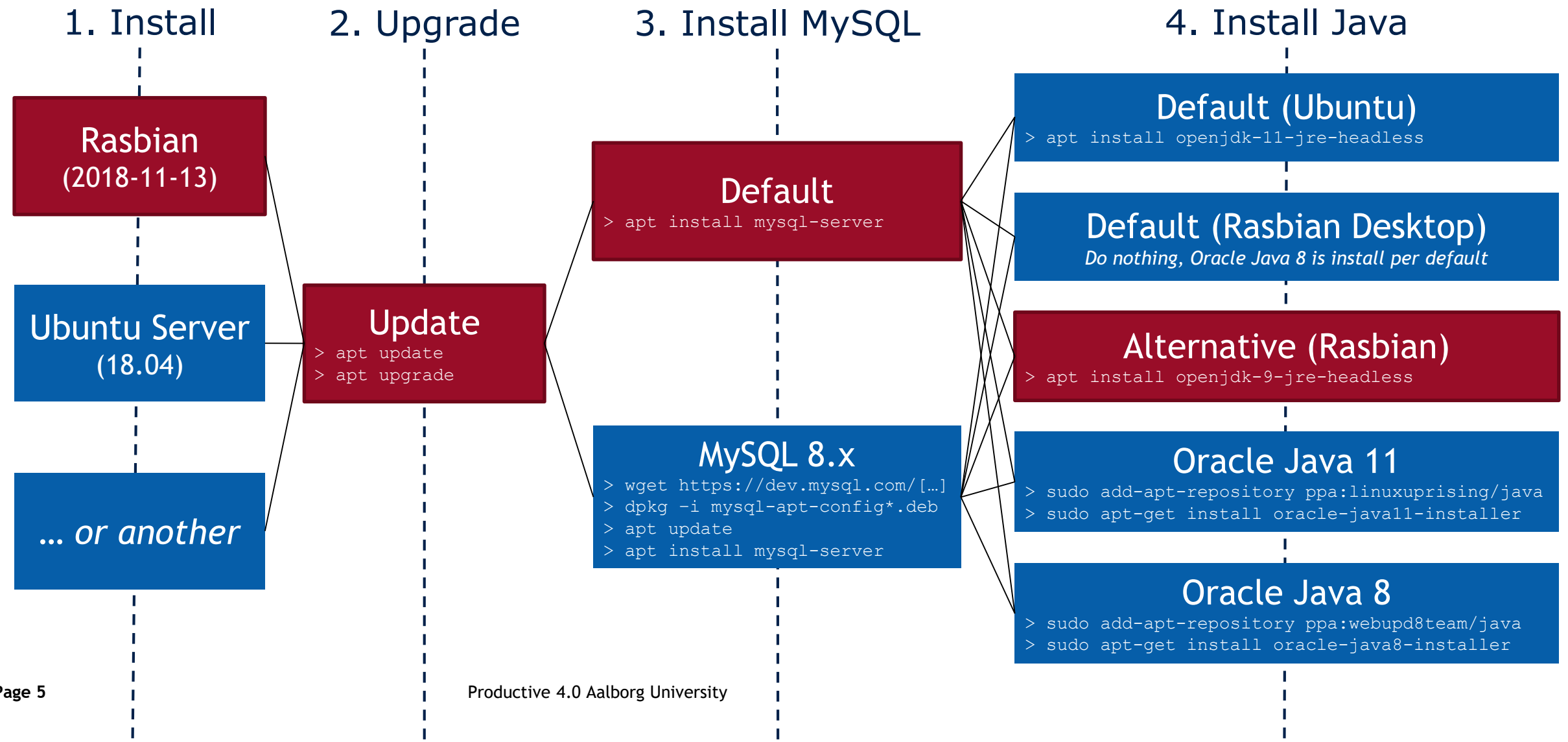


5. Download & Install Arrowhead

Official Arrowhead Release

```
> wget -c https://github.com/arrowhead-f/core-java/releases/download/4.1.0/debian_packages.zip

> unzip debian_packages.zip

> cd debian_packages/
```

Compile Yourself

```
> git clone --depth=1 https://github.com/arrowhead-f/core-java.git -b master

> cd core-java && mvn package

> find . -name \*.deb
```

Would recommend you do this on your regular development machine

Install

```
> sudo dpkg -i arrowhead-*.deb
```

Arrowhead Packages

Package	Description
arrowhead-common	Libraries and functionality shared by the other packages.
arrowhead-authorization arrowhead-eventhandler arrowhead-gatekeeper arrowhead-gateway arrowhead-orchestration arrowhead-service-registry	Individual core system packages – one per system. • Independence: Systems can be updated separately. • Customisable: Install only those system you want. • Flexibility: Install each system on different hosts (not yet). Right now there are dependencies between these packages to ensure they are installed and started in the right order. This prevents the installation on different hosts.

Installation Choices

Detached Mode

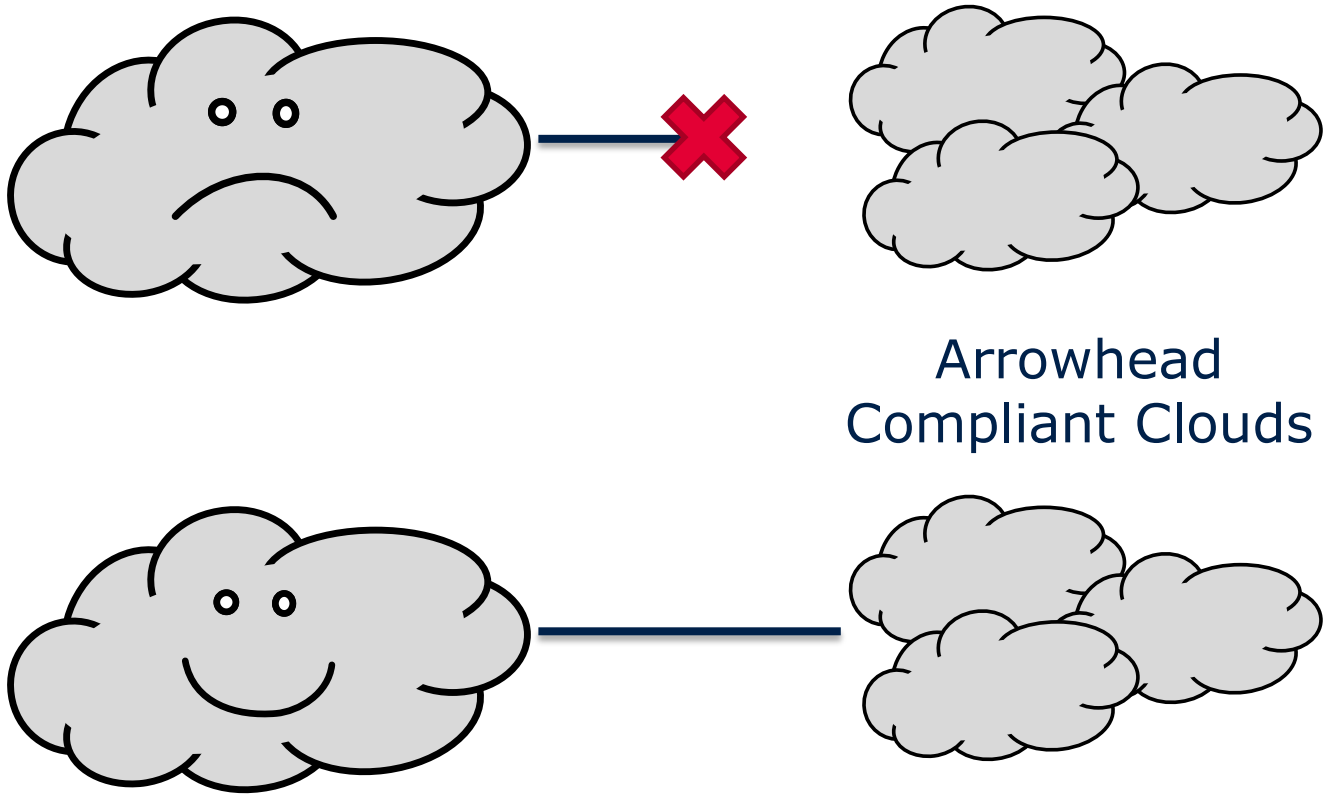
Generate a standalone non-compliant local cloud

Start with this. The local cloud will be based on self-signed certificates and therefore unable to communicate with existing clouds. However, the installation is simpler, and you can add your own second cloud later to play with cloud-to-cloud communication.

Authorized Mode

Install a compliant local cloud

This requires you to have a set of signed certificates already uploaded to the machine. You will be asked for the paths for these. Certificates should ideally be obtained from the Arrowhead Consortium, but this mode can also be used to connect a second cloud to a previous standalone installation.



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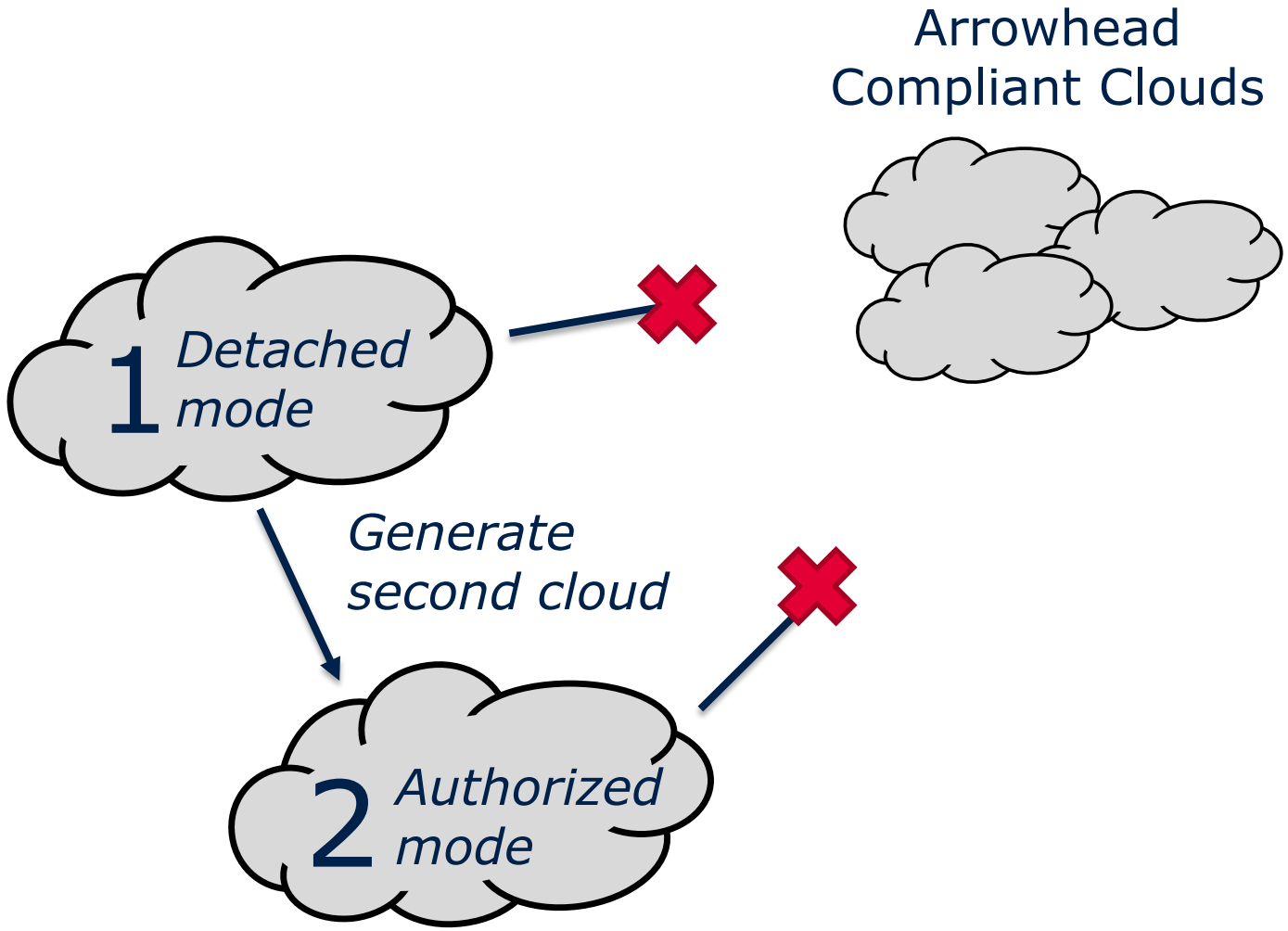

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Cloud name, Operator, Company, Country

Common name in certificates: bilbao-test1.tp.arrowhead.eu

Passwords (Certificates & MySQL)

These can be left empty for a random password.

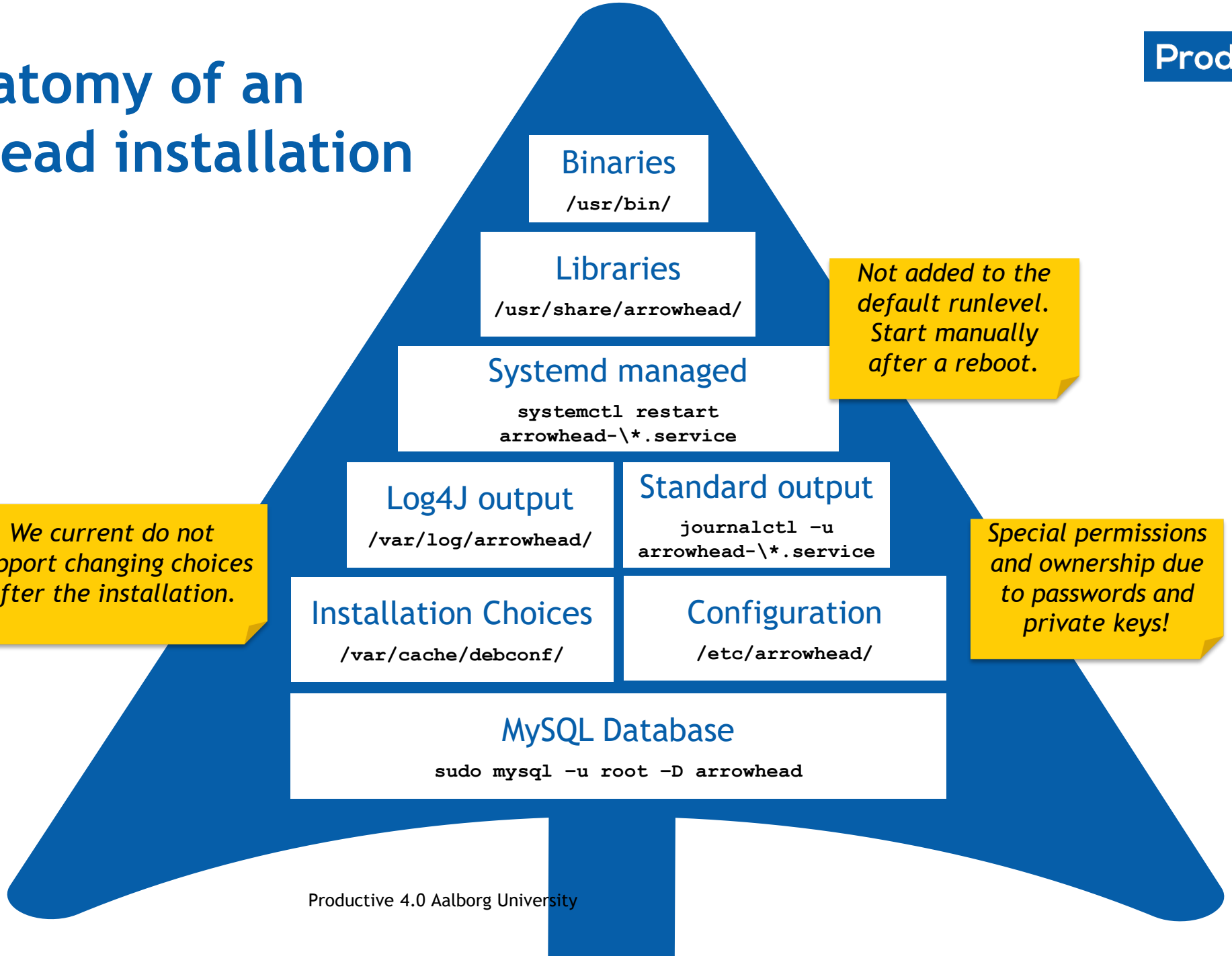
Gateway / Gatekeeper IP

These cloud-to-cloud systems needs an IP of the interface to listen to.

Arrowhead Brokers

You can add the default Arrowhead brokers (as provided by the consortium) for the cloud-to-cloud communication.

The anatomy of an Arrowhead installation



Helper Scripts

Add a new application system

```
> sudo ah_gen_system SYSTEM_NAME HOST
PORT [SERVICE_NAME]
```

Add a new cloud (detached only)

```
> sudo ah_gen_cloud CLOUD_NAME HOST
```

- *Use authorized mode to install the second cloud with the generated certificates.*
- *On the second cloud, the execute the generated `CLOUD_NAME.sh` file.*

Add a new neighbor to a cloud

```
> sudo ah_add_neighbor OPERATOR
CLOUD_NAME HOST AUTH_INFO
```

MySQL public access and user

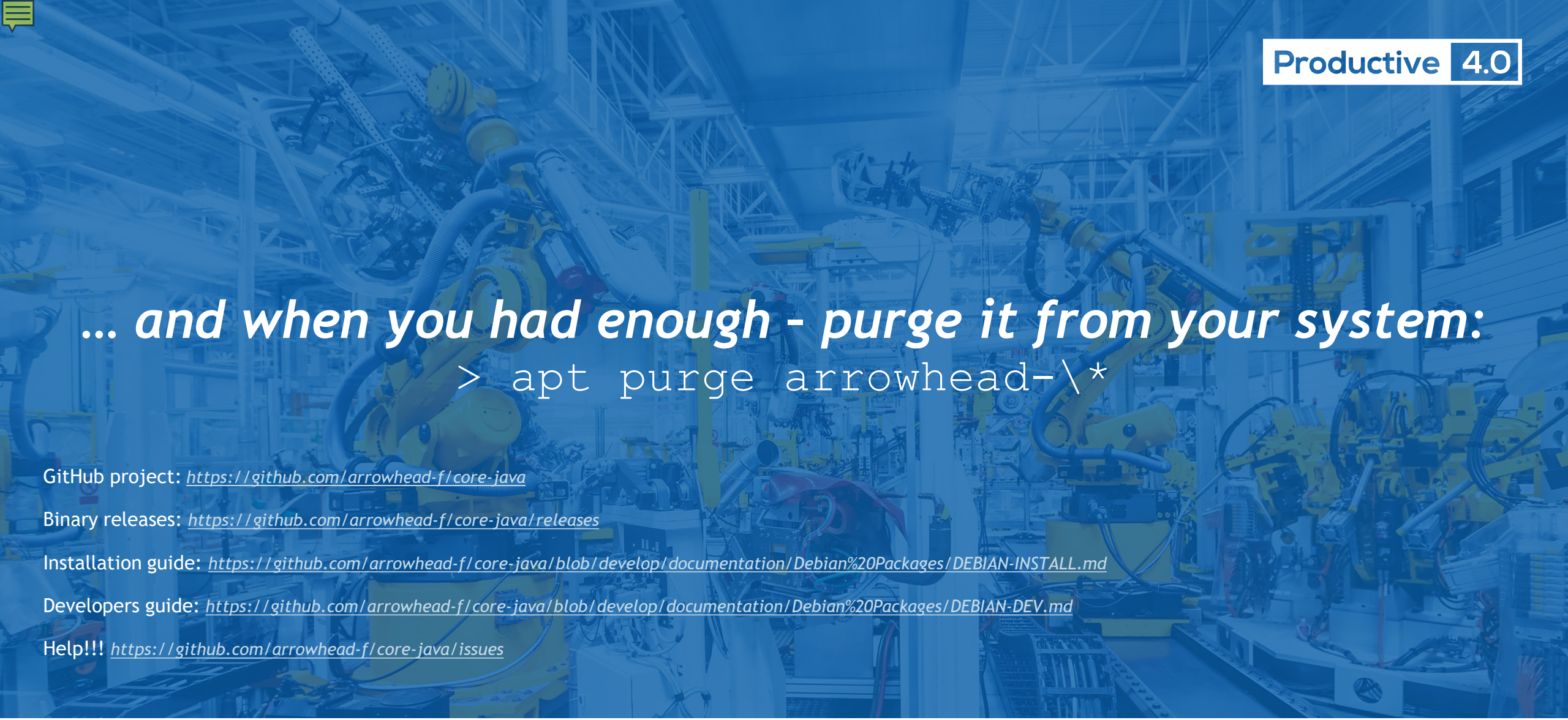
```
> sudo ah_mysql_public
```

Quickstart cloud (skeletons)

```
> sudo ah_gen_quickstart HOST
```

Secure / Insecure mode

See documentation for commands on how to switch all systems between secure and insecure mode.



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... and when you had enough - purge it from your system:

```
> apt purge arrowhead-\*
```

GitHub project: *https://github.com/arrowhead-f/core-java*

Binary releases: *https://github.com/arrowhead-f/core-java/releases*

Installation guide: *https://github.com/arrowhead-f/core-java/blob/develop/documentation/Debian%20Packages/DEBIAN-INSTALL.md*

Developers guide: *https://github.com/arrowhead-f/core-java/blob/develop/documentation/Debian%20Packages/DEBIAN-DEV.md*

Help!!! *https://github.com/arrowhead-f/core-java/issues*

The participating countries are Austria, Belgium, Finland, France, Czech Republic, Denmark, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Spain, Sweden and Turkey.

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