

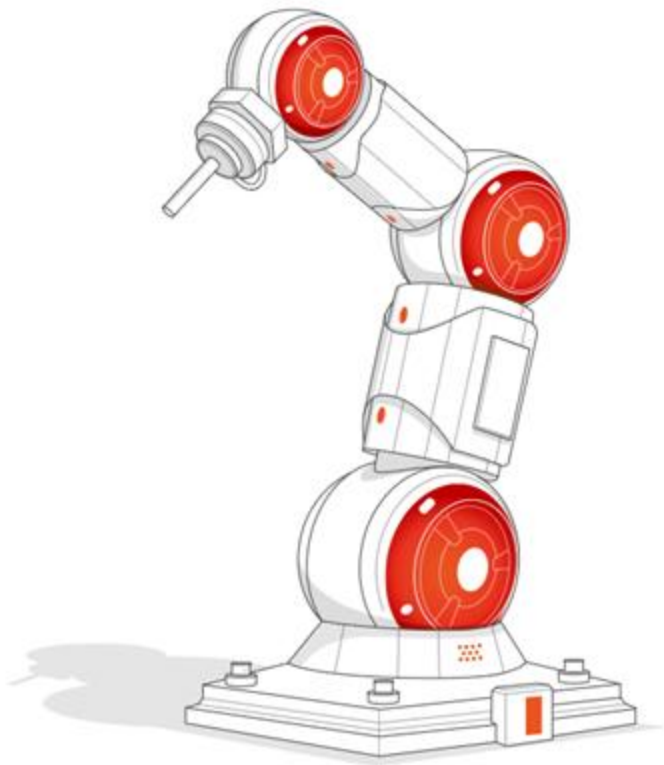
Making waves with Hawksbill and Jellyfish

22.04 and Core news

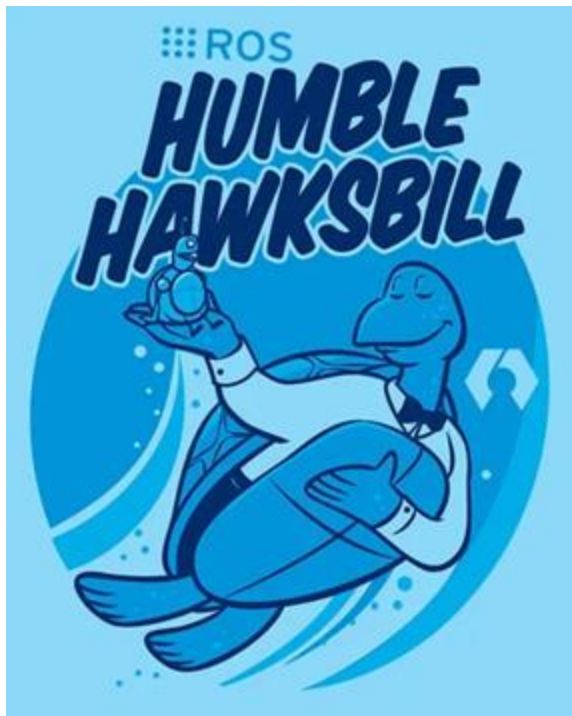
Agenda

News and releases

- New features on Ubuntu 22.04
- New features on Core 22
- Improving ROS developer experience



Ubuntu helps us get further



Ubuntu 22.04



Real-time Ubuntu 22.04 LTS Beta



Real-time Ubuntu 22.04 LTS Beta

Available now!

- Available for x86_64 and AArch64
- Generic release with no specific platform tunings
- Publicly available, testing highly encouraged
 - Report any bugs you may encounter on the [Bug Tracker](#)
 - Join the [free beta programme](#) for an open communication channel with our team

Real-time Ubuntu 22.04 LTS Beta

Available now!

```
ua attach <free token>
```

```
sudo apt install ubuntu-advantage-tools=27.8~22.04.1
```

```
ua enable realtime-kernel --beta
```

Security compliance & Ubuntu 22.04

Increasing open source security

- Straightforward to conform to various industry compliance standards, such as PCI-DSS, HIPAA and FedRAMP
- Ubuntu OVAL uses the OVAL vulnerability and patch definitions to enable auditing for Common Vulnerabilities and Exposures (CVEs)
- Active Directory fully supported

Security compliance & Ubuntu 22.04

Increasing ROS security - 10 year of security maintenance



ROS ESM
(*Kinetic, Melodic, Foxy (TBD)*)

Ubuntu Universe
28,000 deps

Ubuntu Main
2,300 deps



Security compliance & Ubuntu 22.04

Increasing ROS security - 10 year of security maintenance



```
sudo ua attach [token]
```

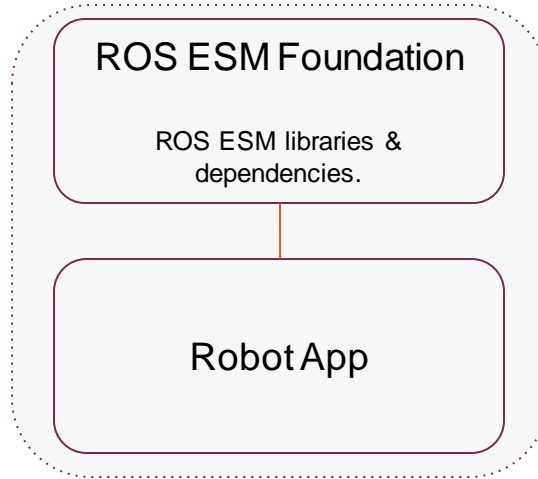
```
sudo ua enable ros-esm [security|updates]
```

```
sudo apt update
```

```
sudo apt upgrade
```

Security compliance & Ubuntu 22.04

Increasing ROS security - 10 year of security maintenance



What is new in Ubuntu 22.04?

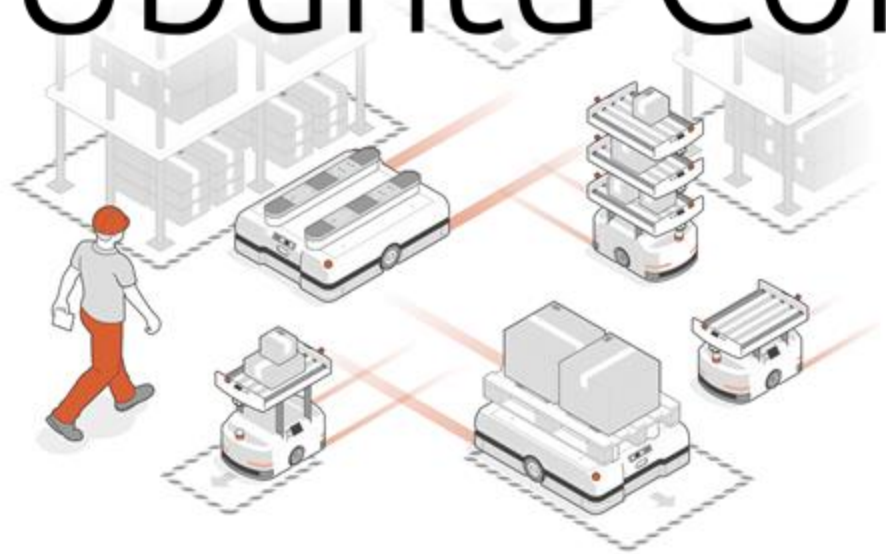
Other highlights from the release

- Natively install NVIDIA vGPU
- Rust for memory-safe system-level programming
- OpenSSL v3 with new cryptographic algorithms
- GNOME 42 for usability, battery and performance improvements

Ubuntu Core 22

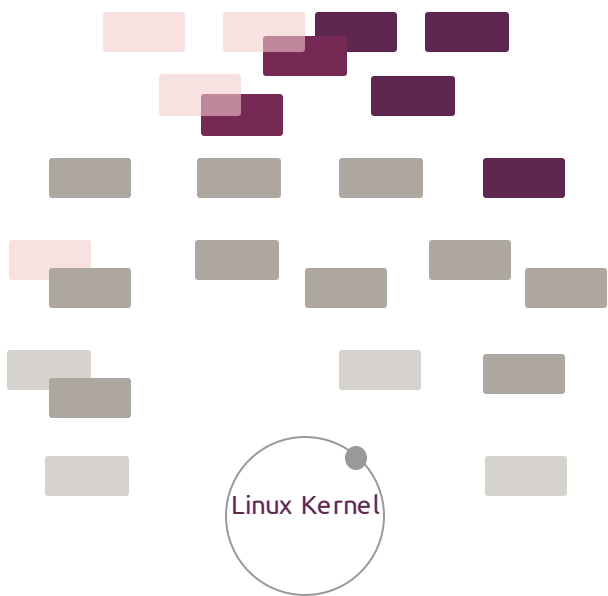


Ubuntu Core



What is Ubuntu Core?

Classic



Legend:



Ubuntu Core



Confined applications packaged as a snap with dependencies



Minimal OS packaged as snap



Clearly defined Kernel and device packaged as snap



What is Ubuntu Core?

Modular OS architecture

Reusable components

Composable system images

Automated image builds

App sandboxing

Ubuntu Core



Confined applications packaged as a snap with dependencies



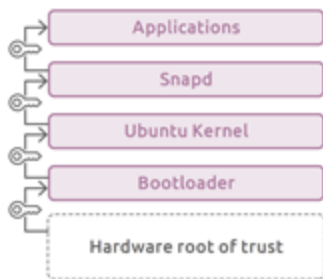
Minimal OS packaged as snap



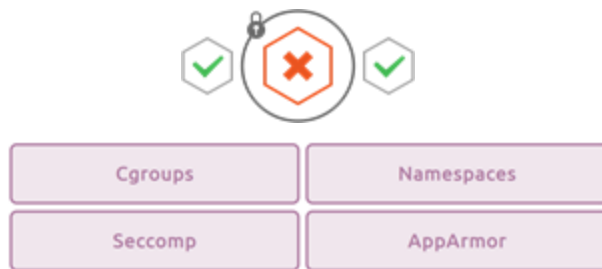
Clearly defined Kernel and device packaged as snap



Secure boot



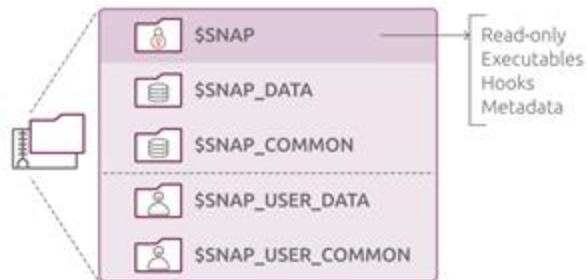
Strict confinement



Full disk encryption



Ultra-secure containers



Deploying robotics software as a Pro

- Safely move forwards and backwards
- Update streams from channels
- Graceful error handling and automatic recovery
- Delta updates



2.8/stable



What is new in Ubuntu Core 22

Highlights from the release

- Validation sets - straightforward installation logic
- Remodelling - enable resellers to rebrand devices
- Quota groups - sets resource limits for services (memory and CPU)
- Factory reset - preserving essential data created during initialisation
- Performance improvement (e.g. boot time, execution time)

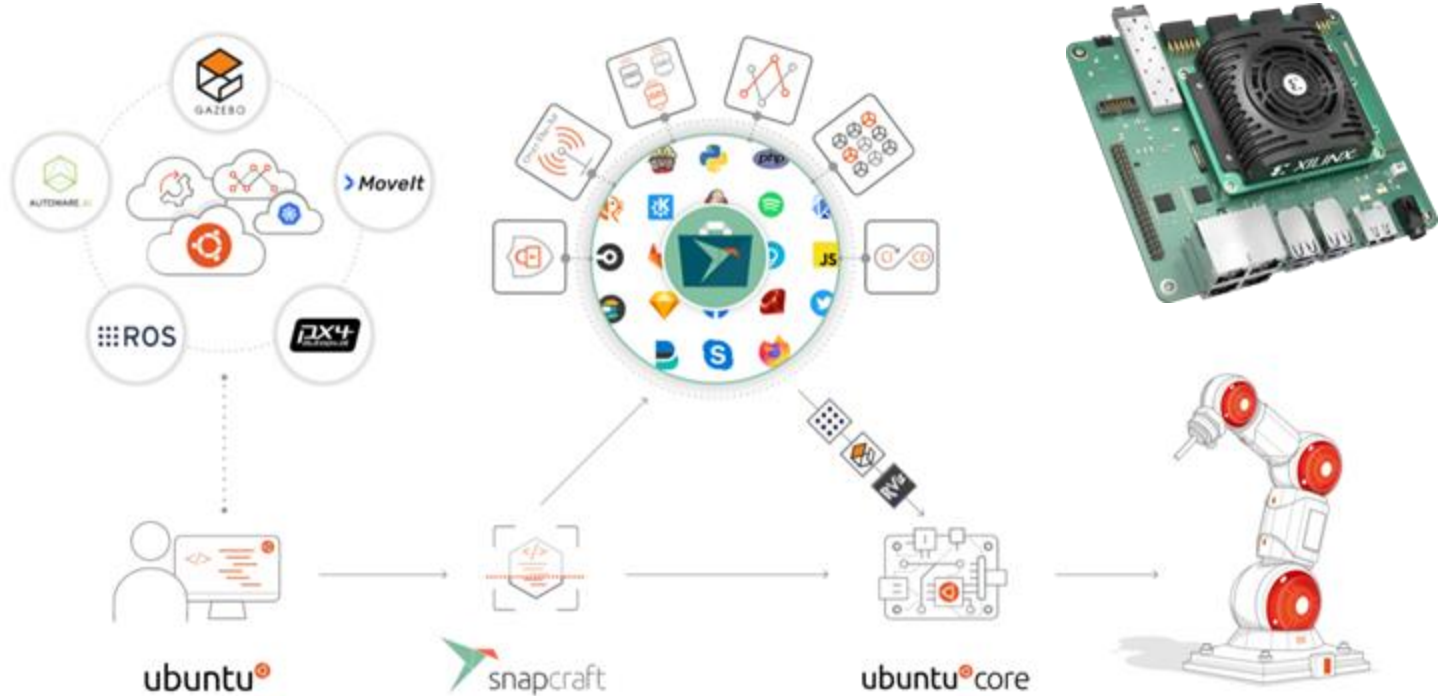
Accelerating ecosystems



Xilinx KR260

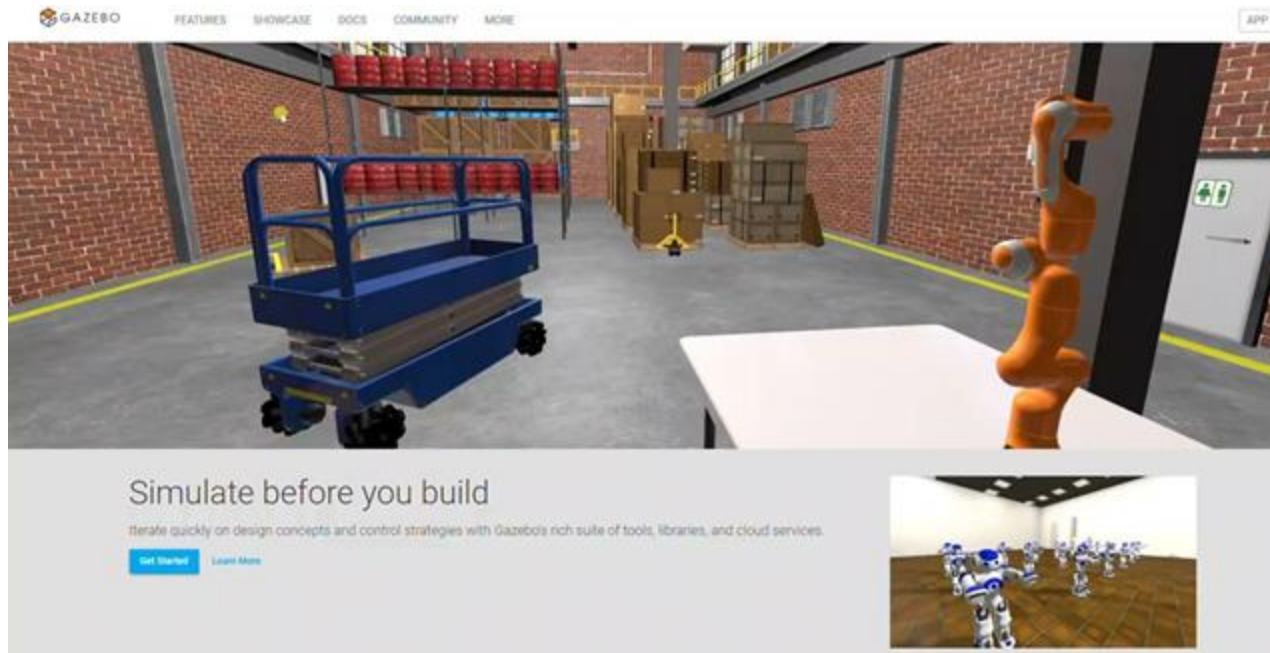


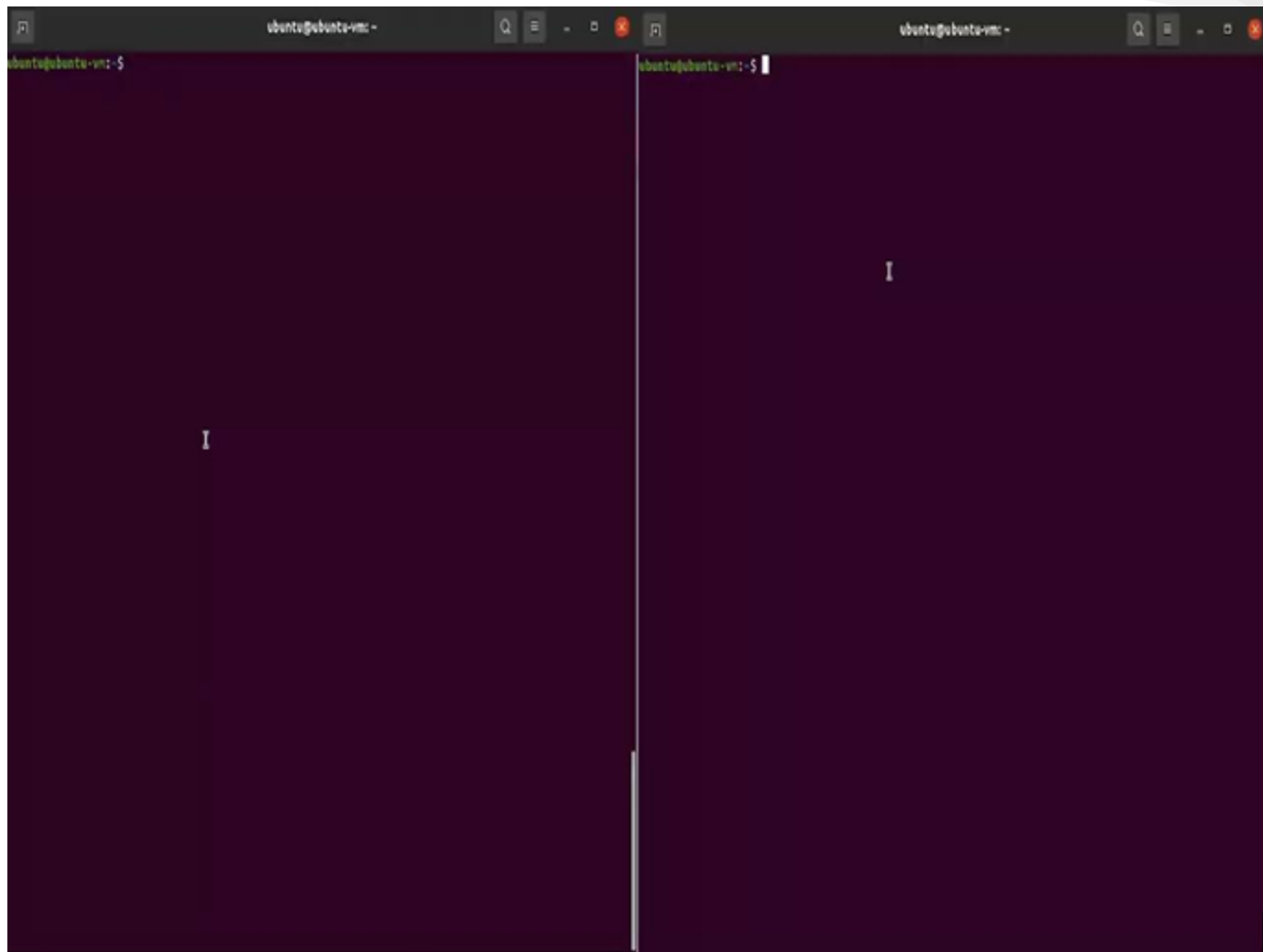
Easy transition from development (Desktop) to production (Core)



Improving developer experience

Gazebo snap - beta call





About ROS 2 humble on snapcraft

```
name: ros2-humble-talker-listener
version: '0.1'
summary: ROS2 Humble talker/listener example
description: |
  This example launches a ROS2 Humble talker and listener.

base: core22
confinement: strict

apps:
  ros2-humble-talker-listener:
    command: opt/ros/humble/bin/ros2 launch demo_nodes_cpp talker_listener.launch.py
    plugs: [network, network-bind]
    extensions: [ros2-humble]

parts:
  ros-demos:
    plugin: colcon
    source: https://github.com/ros2/demos.git
    source-branch: humble
    source-subdir: demo_nodes_cpp
    stage-packages: [ros-humble-ros2launch]
```



Thank you. Questions?

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