

**ROS 2 Basic Concepts**

Estimated time to completion: 30 seconds

## 2.1 Introduction

It's possible you took this course to answer this question: "**What is ROS 2?**"

For now, however, it will be more helpful to experience what ROS 2 can do for you!

In this unit, you will be introduced to the **foundational concepts of ROS 2**. You will learn how to **structure** and **launch** ROS 2 programs using **packages** and **launch files**, as well as how to **create basic ROS 2 programs** using Python. Additionally, you will explore essential ROS 2 concepts such as **nodes**, **client libraries**, and more.

By the end of this unit, you will have a **solid understanding of how ROS 2 programs are organized and executed** and you will be ready to answer the key question... What is ROS 2?

**Foundational Concepts of ROS 2**

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graph TD; A[Structure & Launch  
ROS 2 Programs  
• Packages  
• Launch Files  
• Organization] --> B[Programming  
Basic ROS 2 Programs  
• Python  
• C++  
• Development  
• Implementation]; B --> C[Essential Concepts  
Core Components  
• Nodes  
• Client Libraries  
• Architecture]; C --> D["Learning Outcome  
Solid Understanding of  
How ROS 2 Programs  
ORGANIZED & EXECUTED"]; D --> E["What ROS 2 Can Do  
• Control Robots  
• Autonomous Factories  
• Medical Devices  
• Fly Drones  
• Smart Homes  
• Research Labs  
• Much More!"]; E --> F[ENGLISH PROOFREAD]
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← ✓ → 2.1 - Introduction