Module system

Contents

Much of the power in Nixpkgs and NixOS comes from the module system.

The module system is a Nix language library that enables you to

- Declare one attribute set using many separate Nix expressions.
- Impose dynamic type constraints on values in that attribute set.
- Define values for the same attribute in different Nix expressions and merge these values automatically according to their type.

These Nix expressions are called modules and must have a particular structure.

In this tutorial series you'll learn

- What a module is and how to create one.
- What options are and how to declare them.
- How to express dependencies between modules.

What do you need?

- Familiarity with data types and general programming concepts
- A Nix installation to run the examples
- Intermediate proficiency in reading and writing the Nix language

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How long will it take?

This is a very long tutorial. Prepare for at least 3 hours of work.

Lessons

1. A basic module

2. Module system deep dive