Julia is a high-level, high-performance dynamic programming language for numerical computing. It provides a sophisticated compiler, distributed parallel execution, numerical accuracy, and an extensive mathematical function library. Julia’s Base library, largely written in Julia itself, also integrates mature, best-of-breed open source C and Fortran libraries for linear algebra, random number generation, signal processing, and string processing.

**USE CASES**

**ClIMA** - A next generation climate modeling platform that is open, scales, and build on the latest advances in machine learning.

**Pfizer** - Uses Julia to accelerate simulations of new therapies for metabolic diseases up to 175x

**Federal Aviation Administration (FAA)** - Using Julia to develop the Next-Generation Airborne Collision Avoidance System

**PLANNED FEATURES**

+ **Parallel precompilation**: In upcoming 1.6, package precompilation is faster and happens before you leave `pkg mode`.

+ **Compile time percentage**: A small change that should help understanding of one of Julia’s quirks for newcomers is that the timing macro `@time` and its verbose friend `@timev` now report if any of the reported time has been spent on compilation.

+ **Downloads & NetworkingOptions**: In Julia 1.6 all downloading is done with libr7.73.0 via the new Downloads.jl standard library.
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<th>PROJECT NEEDS</th>
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<tr>
<td>More elaborate and verbose learning materials on JuliaAcademy</td>
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<tr>
<td>Analysis and update of base Julia docs to ensure they are beginner friendly</td>
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<td>Compute resources for CI and testing</td>
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For more information on Julia, including our governance structure and project roadmap, please visit https://julialang.org/

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