



Documentation Improvements

Chapel Team, Cray Inc.
Chapel version 1.12
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Outline

- Online Documentation Improvements
- Language Specification Improvements



Online Documentation Improvements





Online Docs: Background

- **v1.11 added some online documentation via 'chpldoc'**
 - Most standard modules were documented online
 - We wanted to make a lot more documentation available online
- **The repository contains many README files**
 - These are not very readable in a browser
 - It can be hard to find what you want





Online Docs : As of 1.11

chpldoc

Search docs

chpldoc documentation

Module: AdvancedIters

Module: Assert

Module: BitOps

Module: Buffers

Module: CommDiagnostics

Module: Curl

Module: Error

Module: FFTW

Module: FFTW_MT

Module: FileSystem

Module: GMP

Module: HDF5

Module: HDF5Iterator

Module: Help

Module: IO

Module: List

Module: Math

Module: Memory

Module: Norm

Module: Path

Module: Random

Module: RecordParser

Docs » chpldoc documentation

View page source

chpldoc documentation

Contents:

- [Module: AdvancedIters](#)
- [Module: Assert](#)
- [Module: BitOps](#)
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- [Module: Path](#)
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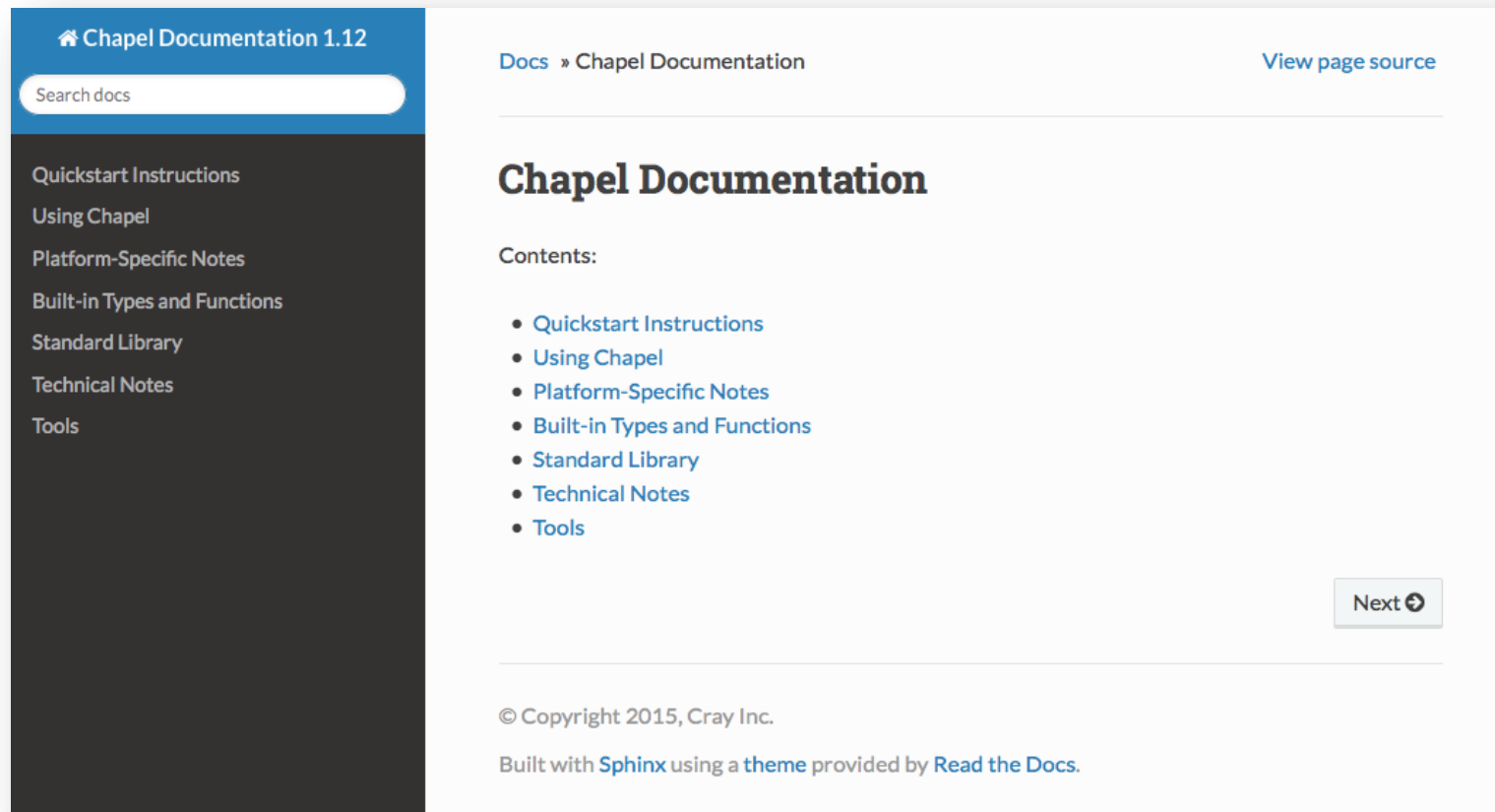
Online Docs : This Effort

- **Converted the READMEs to reStructuredText**
 - Renders nicely on the web
 - GitHub
 - Sphinx-generated html
 - Still readable as plain text
 - Supports links between related documents
- **chpdocs and READMEs are now in one location online**
 - <http://chapel.cray.com/docs/1.12/> -- docs for the 1.12 release
 - <http://chapel.cray.com/docs/latest/> -- links to the latest release docs
 - <http://chapel.cray.com/docs/master/> -- docs for the master branch
- **Added chpdoc-based documentation for:**
 - Built-in types and functions
 - Standard domain maps (layouts and distributions)
- **Refreshed the “Quick Start” instructions**



Online Docs : Impact

- Over 100 pages of online documentation!
- Documentation front page:



The screenshot shows the front page of the Chapel Documentation 1.12. The page has a dark blue header with the title 'Chapel Documentation 1.12' and a search bar. A dark sidebar on the left contains a list of navigation links: Quickstart Instructions, Using Chapel, Platform-Specific Notes, Built-in Types and Functions, Standard Library, Technical Notes, and Tools. The main content area has a breadcrumb 'Docs » Chapel Documentation' and a 'View page source' link. The title 'Chapel Documentation' is prominently displayed. Below it, a 'Contents:' section lists the same navigation links as the sidebar. At the bottom right, there is a 'Next' button with a right arrow. The footer contains copyright information: '© Copyright 2015, Cray Inc.' and 'Built with Sphinx using a theme provided by Read the Docs.'



Online Docs : Impact

- Quick Start Page:

Chapel Documentation 1.12

Search docs

Quickstart Instructions

Quick Start Instructions

What's next?

Using Chapel

Platform-Specific Notes

Built-in Types and Functions

Standard Library

Technical Notes

Tools

Docs » The Chapel Language

View page source

The Chapel Language

Chapel is an emerging programming language designed for productive parallel computing at scale. Chapel's design and implementation have been undertaken with portability in mind, permitting Chapel to run on multicore desktops and laptops, commodity clusters, and the cloud, in addition to the high-end supercomputers for which it was designed. Chapel's design and development are being led by [Cray Inc.](#) in collaboration with academia, computing centers, and industry. See [chapel.cray.com](#) for more information.

This is the 1.12.0 release of the Chapel compiler, intended to give potential users a look at what we're doing and the opportunity to provide us with feedback. See the LICENSE file for the release's licensing terms.

Quick Start Instructions

The following instructions are designed to get you up and running with Chapel with a minimum of fuss. Note that building and using Chapel in this mode disables enhanced runtime options and optional language capabilities in the interest of a simple and clean build.

0. See [prereqs.rst](#) for more information about packages you might need to have installed for Chapel to work.



Online Docs : Next Steps

- **Improve the process for building online documentation**
 - Better integration with chpldoc
- **Write a User's Guide and add to the docs/ webpages**
- **Add a drop-down menu to switch between doc versions**
- **Continue to move remaining documentation to the web**
- **Consider moving examples/[primers/] directory to the web**



Language Specification Improvements





Language Specification Improvements

- **Retired chapters that are now documented online**
 - i.e., standard modules and standard domain maps
- **Rewrote the memory consistency model chapter**
- **Documented the bidirectional I/O operator: $\langle \sim \rangle$**
- **Improved the page numbering and format**





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