



Environment Canada

Contributing code developments to the **CICE** Consortium

Alice DuVivier



February 3-5, 2020

Frequently Asked Questions

Contributing to the Consortium

How do I contribute to the Consortium?

A: The Consortium welcomes all community contributions and can provide assistance. The Contributing Page is a good place to start for an overview.

If you would like to contribute code changes to the Icepack or CICE repositories, you'll need to create a Pull Request in Github. Various documents exist on the Resource Index that outline the process in detail. We expect new code to be documented and tested before a Pull Request is made. The code will then be carefully reviewed by Consortium team members before being merged into the code repositories.

The Community Forum is the best contact if you would like to contribute feedback or propose changes to any documentation, or if you would like to contribute new ideas, discuss new features, or discuss science results.

Icepack r	eleases
History	
Organizat Governar	
News and	d Highlights
List of pu	blications

Clone this wiki locally

https://github.com/CICE-(

https://github.com/CICE-Consortium/About-Us/wiki/FAQ-(Frequently-Asked-Questions)



CONTRIBUTING.md files

Branch: master - CICE / CONTRIBUTING.md	Find file	Сору р	bath
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2 contributors 🊸 🥘			
16 lines (10 sloc) 1.18 KB Blame H	listory	e 1	Ī
Contributing to CICE			
Welcome to the CICE Consortium ! Thank you for your interest in contributing to CICE. There are many ways to contribute, and we appreciate your efforts. For an introductory tour, head over to Contribution guide and take a look at the Resources page, our go-to index with links to code, documentation information, guidelines, and more.		I	
Getting help			
If you still need help getting started using the model after reviewing the model documentation, the first po with the CICE Consortium is the Consortium Community Forum. This forum is monitored by Consortium m is also open to the whole community. Please do not use our issue tracker for general support questions	embers an		



Contributing Wiki Page

Contributing

Philippe Blain edited this page 2 days ago \cdot 3 revisions

Contributing to the CICE Consortium

First, thanks a lot for considering a contribution to CICE!

Getting help

The central index for CICE repository information is the Resources page, which contains links to code, extensive documentation, testing information and procedures, helpful guidelines, and more.

A quick-start overview of how to get the code, compile the model and run a case is available in the documentation, linked from the Resources page. CICE and Icepack each have their own set of documentation.

If you still need help getting started using the model after reviewing the model documentation, the first point of contact with the CICE Consortium is the Consortium Community Forum. This forum is monitored by Consortium members and is also open to the whole community for input. Please do not use our issue tracker for general support questions.

Reporting issues

We use GitHub issues mainly for confirmed bugs in the model and discussion of Consortium-led development tasks. If you believe you have found a bug in CICE, please open a thread on the Forum. We will create a GitHub issue if needed.

CICE Consortium

https://github.com/CICE-Consortium/About-Us/wiki/Contributing

CICE and Icepack Workshop and Tutorial

February 3-5, 2020

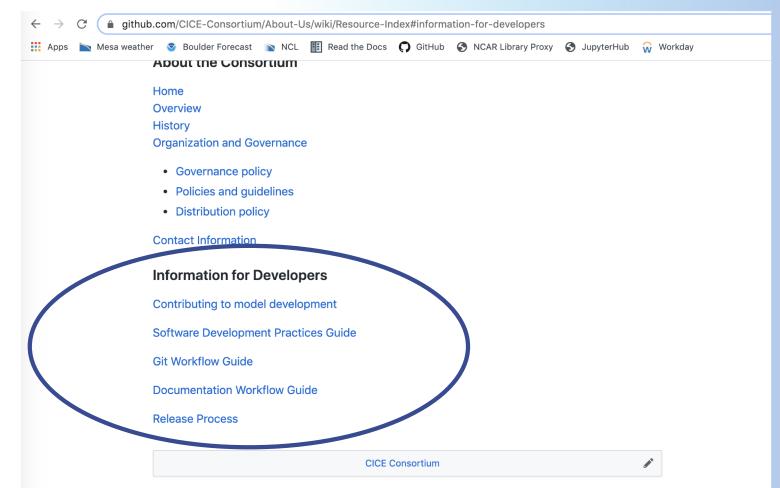




Edit

New Page

Resource Index – Information for Developers

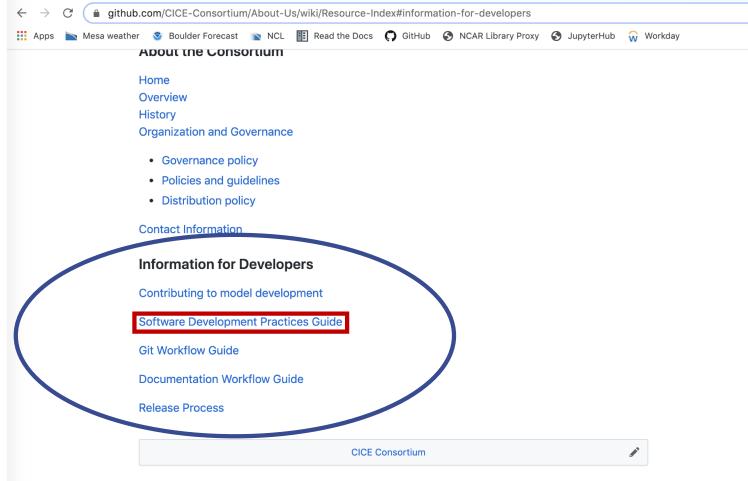




https://github.com/CICE-Consortium/About-Us/wiki/Resource-Index

CICE and Icepack Workshop and Tutorial

Resource Index – Information for Developers





Software Developers Practices

CICE-Consortium / About-Us	 ✓ 4 ★ Star 1 % Fork
<> Code ① Issues 1 ⑦ Pull requests 0 ① Actions III Projects 0 国 Wiki ① Security 山	Insights 🔅 Settings
Software Development Practices Philippe Blain edited this page on Aug 30, 2019 - 14 revisions	Edit New Pa
CICE Consortium Member representatives and community developers should strive to incorporate these practices throughout the development process, to the extent possible:	Pages 14
Process	Home
Define tasks of team members ahead of time, including coordination rolesUtilize a common communication space for chats and discussions	Overview History
 Work in shared repositories Adhere to the documentation strategy Provide consists comments throughout the code 	Organization and Governance
 Provide concise comments throughout the code Write readable guides for build/run and a scientific overview Deposit namelist settings, confidence scores and other documentation for tested and 	News and Highlights
 Deposit namelist settings, confidence scores and other documentation for tested and validated configurations in the repository Document and track requirements and issues 	List of publications Contact Information
 Describe code changes and their effects on performance and physical result Document "lessons learned" e.g. configuration errors, compiler errors, software versions 	Community Bulletin



CICE and Icepack Workshop and Tutorial

Software Developers Practices – Naming conventions

File Naming Convention

CICE and Icepack file naming convention		
CICEcore modules	ice_*.F90	
CICEcore namelist	ice_in	USEFUL BEFORE
Icepack driver modules	icepack_drv*.F90	YOU ARE DEEP I
Icepack namelist	icepack_in	CODE
Icepack interface modules	icepack_intfc*.F90	
Icepack modules	icepack_*.F90	DEVELOPMENT!

Required Testing

The following code acceptance testing criteria must be completed for consideration of a pull request to the Consortium repositories:

- Icepack-only contribution:
 - i. Code contributor must run the Icepack base_suite with at least 1 compiler; all tests must PASS.
 - ii. If all tests PASS, then run the CICE quick_suite with at least one compiler; all tests must PASS.
- CICE contributions:

i. If there are changes in Icepack, perform step 'i' above.

I Due the CICE have quite with at least 1 compilers all tests must DACC



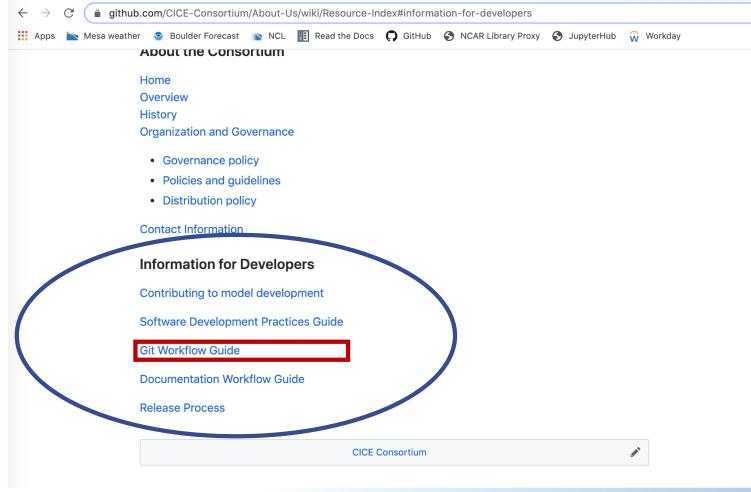
CICE and Icepack Workshop and Tutorial

Software Developers Practices – Required testing

Required Testing YOU HAVE The following code acceptance testing criteria must be completed for consideration of a pull request to the Consortium apositories: COMPLETED pack-only contribution: THESE TESTS i. Code contributor must run the Icepack base_suite with at least 1 compiler; all tests must **THIS WEEK!** PASS. ii. If all tests PASS, then run the CICE quick_suite with at least one compiler; all tests must PASS. CICE contributions: i. If there are changes in Icepack, perform step 'i' above. ii. Run the CICE base_suite with at least 1 compiler; all tests must PASS. iii. If all tests do not pass, then perform QC testing to classify the changes Inseme instances, a new physics parameterization etc. may require a more thorough invest adation of the model output to determine if the model is performing appropriately. **Document history** 16 January 2017: Initial draft 1 July 2017: Dated for public posting 28 August 2018: Updates for testing practices **CICE** Consortium



Resource Index – Information for Developers





Thorough Git Workflow Guide

CICE-Consortium / About-Us	• Watch →4★ Star1% Fork
◇ Code ① Issues 1 ⑦ Pull requests 0 ◎ Actions Ⅲ Projects 0	CSecurity 🔟 Insights 🔅 Settings
Git Workflow Guidance Elizabeth Hunke edited this page 2 days ago · 92 revisions	Edit New P
Table of Contents	Pages 14
Introduction	Home
General Recommendations	Overview
Git Overview	
Getting Started with Git	History
Setup a Github Account	Organization and Governance
Local Git Initialization	Governance
Setting up Github Forks	News and Highlights
Updating your Github Fork Master	List of publications
Git Collaborators	List of publications
Clone, Commit, Branch	Contact Information
• Clone	Community Bulletin Board
Branch	board



Thorough Git Workflow Guide – Consortium examples

Pushing and Pulling

- Remotes
- Push
- Pull, Rebase
- Some examples
 - Update fork master from Consortium master
 - Update a branch from Consortium master
 - Rejected pushes
 - Push to a different repository

Pull Request (PR)

- PR Overview
- Refreshing your PR

Submodules

- Submodule Overview
- Update Icepack in CICE
- Resync Icepack in CICE
- Development of Icepack under CICE
- Develop Icepack and CICE Concurrently
- · Switch the Icepack Submodule Repository
- · Remove and Replace the Icepack Submodule

Final Notes

- Overall Workflow
- Collaborating on Development

Resource Index	

Icepack releases

Frequently Asked

Clone this wiki locally

Questions

https://github.com/CICE-(

THESE EXAMPLES ARE USEUFL



CICE and Icepack Workshop and Tutorial

Thorough Git Workflow Guide – submodules can be tricky!

Pushing and Pulling

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Final Notes

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- · Collaborating on Development

SUPER USEFUL IF YOU'RE GOING TO BE WORKING WITH ICEPACK.



CICE and Ice	pack Workshop	p and Tutorial



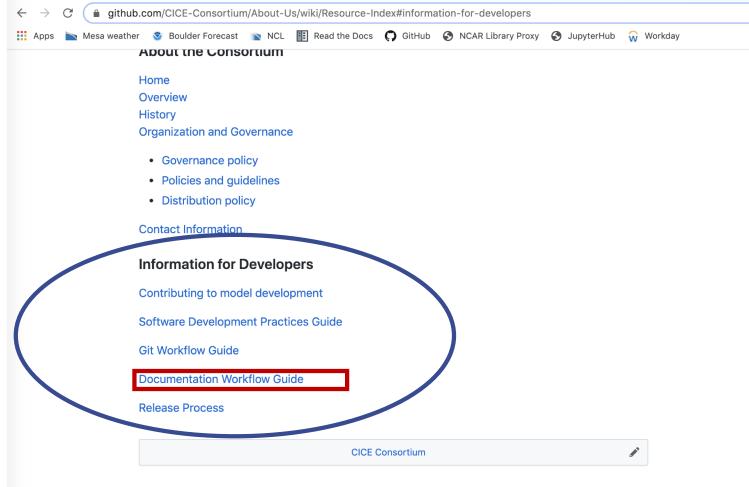
Frequently Asked

Clone this wiki locally

Questions

https://github.com/CICE-(

Resource Index – Information for Developers





Documentation – You must add documentation of any new features.

	CICE-Consortium / About-Us	• 4 ★ Star 1 % Fork 5
	<> Code ① Issues 1 ⑦ Pull requests 0	Insights 🔅 Settings
	Documentation Workflow Guidance Philippe Blain edited this page 21 days ago · 16 revisions	Edit New Page
	With CICE or Icepack development, corresponding updates or modification to the CICE or Icepack documentation are required. Whenever you modify the model you should update documentation.	Pages 14
	The Consortium uses readthedocs.org to create online HTML and PDF documentation.	Home 🖋
	FAQs	Overview
	1. What is reStructuredText (RST)?	History
	The CICE and Icepack documentation is written using reStructuredText (RST) markup language. ReStructuredText is a markup language, like HTML, markdown, or LaTeX.	Organization and Governance
	readthedocs.org is a tool for publishing RST documents in other formats such as HTML and PDF. Additional information about using RST and readthedocs.org are found in the sections	News and Highlights
	below.	List of publications
IORE USEFUL	2. What is expected of <i>me</i> when changing the documentation?	Contact Information
NFORMATION	Updated static PDF documentation will be generated for each new CICE or Icepack code release. However, the online "master" version of HTML or PDF documentation is considered a	Community Forum
\downarrow	living document and will be updated regularly with regular code development workflow. Links to the "master" and static versions of CICE and Icepack documentation can be found in the Resource Index.	CICE releases
×	Resource index.	Icenack releases

Consortium

Documentation lives in the code repositories

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NTHESE \rightarrow	intro	Add checks for circular dependencies in cice.build (#336)	6 months ago
$N I I I E S E \to I S E$	science_guide	CICE: Floe size distribution (#382)	2 months ago
IRECTORIES	user_guide	Add conda environment to run on personal computers (#393)	4 days ago
	BIB_TEMPLATE.txt	Fixing the documentation (#227)	15 months ago
	cice_index.rst	CICE: Floe size distribution (#382)	2 months ago
DD	conf.py	Update Icepack interfaces consistent with recent changes in Icepack	(# 2 months ago
EFERENCES	index.rst	table of contents for PDF (#234)	15 months ago
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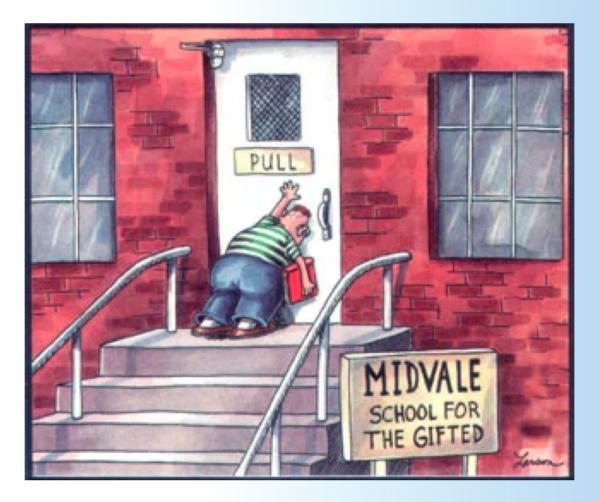


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Anatomy of a Pull Request





Initiating a Pull Request

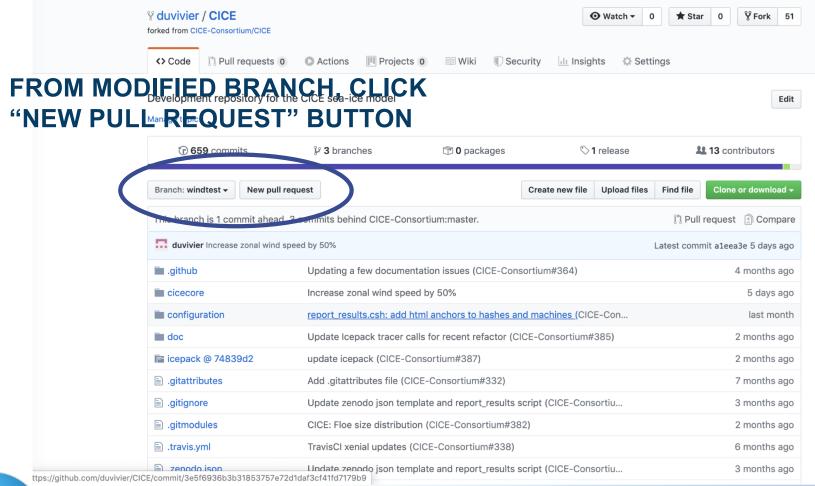
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CICE and Icepack Workshop and Tutorial

Initiating a Pull Request





Creating Pull Request

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For detailed information about submitting Pull Requests (PRs) to the CICE-Consortium,	📮 apcraig
please refer to: https://github.com/CICE-Consortium/About-Us/wiki/Resource-Index#information-	At least 1 approving review is re-
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Creating Pull Request

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Creating Pull Request

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please refer to: <https: about-us="" cice-consortium="" github.com="" resource-index#information-<br="" wiki="">for-developers></https:>	At least 1 approving review is required to merge this pull request.
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Attach files by dragging & dropping, selecting or pasting them.	None yet
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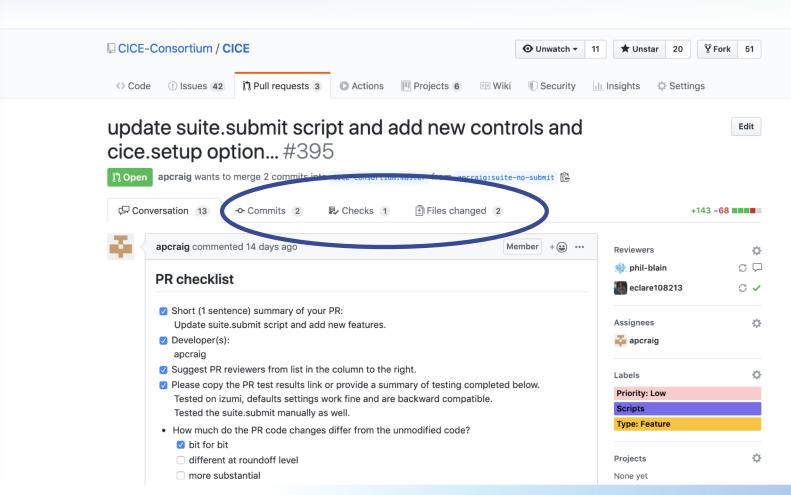


Pull Request – Next steps

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ф.	apcraig commented 14 days ago Member + 😄 …	Reviewers	<
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	 Suggest PR reviewers from list in the column to the right. Please copy the PR test results link or provide a summary of testing completed below. Tested on izumi, defaults settings work fine and are backward compatible. Tested the suite.submit manually as well. 	Labels Priority: Low Scripts	<
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Pull Request – Next steps



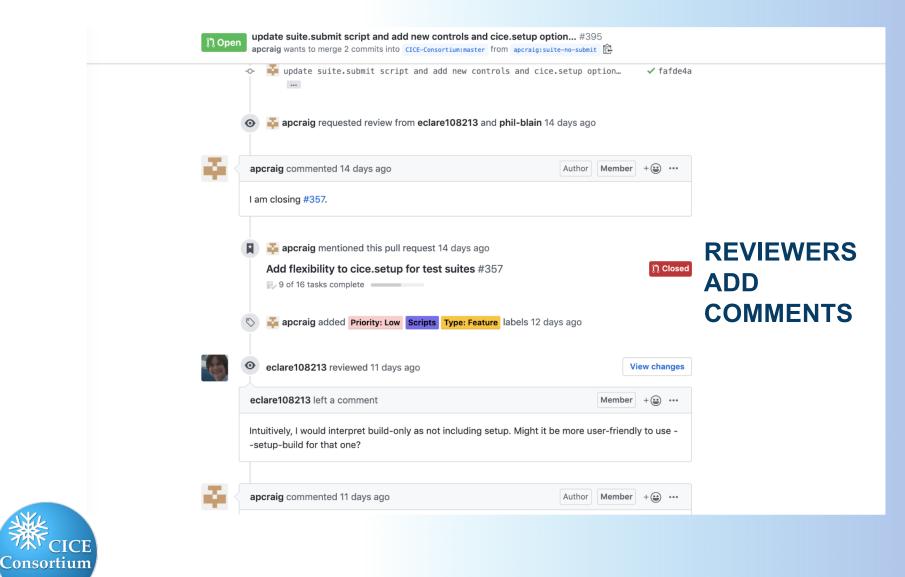


Pull Request – how to see code mods

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34 set docase = 0	34 set docase = 0
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37	40
38 if (\$#argv < 1) then	41 if (\$#argv < 1) then
39 set helpheader = 1	42 set helpheader = 1
213 213 @@ -79,6 +82,7 @@ SYNOPSIS	
79suite SUITE[,SUITE2] -m MACHtestid ID	82
80 [-e ENV1,ENV2][acct ACCT][bdir DIR][bgen DIR]	83 [-e ENV1,ENV2][acct ACCT][bdir DIR][bgen DIR]
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Pull Request – review stage

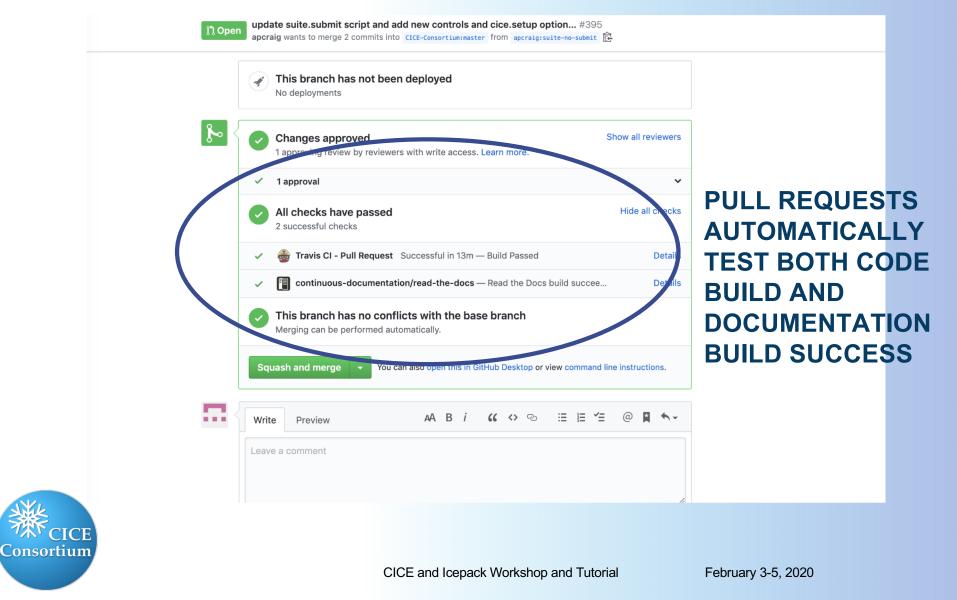


Pull Request – review stage

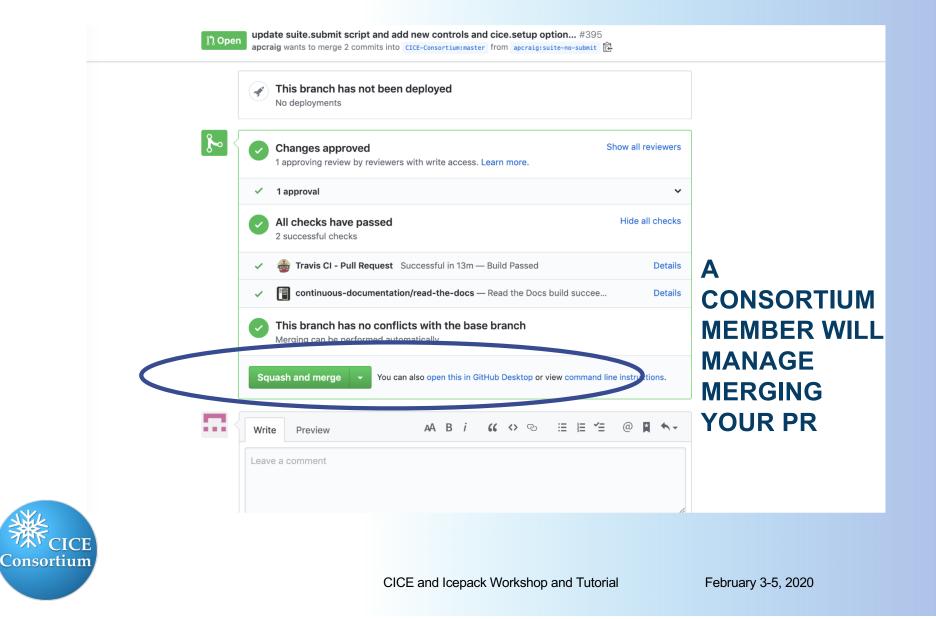
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😃 👍 🌘	eclare108213 approved these changes 1 days ago	View changes Member + 😄 ••••	REQUEST MUST BE APPROVED
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4	apcraig commented 5 days ago	Author Member + 😀 …	
	Just a quick update that we are waiting for @phil-blain to urgency, but that's why this PR is on hold for the moment.	do a test/review. There is no rush or	
**	ophil-blain reviewed 13 hours ago	View changes	

Pull Requests - Automatic Tests



Pull Requests - Automatic Tests



Use Pull Requests tab to check on open and closed PRs.

CICE-Consortium / CICE					O Unwatch → 11 ★ Un		🖈 Unstar	nstar 20 [°] Fork	
↔ Code ① Issues 42	រិឿ Pull requests 3	Actions	Projects 6	🗏 Wiki	C Secur	ity 🔟 Insi	ghts 🔅	Settings	
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Questions?

