

# ADAPTATIONS TO COVID-19: HOW WORKING REMOTELY HAS MADE TEAMS WORK EFFICIENTLY TOGETHER

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# NIF Control System Updates

- **Software releases are done quarterly, with 2 to 3 patches in between**
- **Involves operations, hardware, and software teams**
- **Software releases consists of**
  - **Database release dry run and verification**
  - **Deployment**
  - **Regression testing**
  - **Test shot**

# Pre-Pandemic Software Releases

- Database update and verification are done in the control room.
- Software engineers pair up with operational staff in the control room to do regression testing.
- Coordinated by the release manager who is also in the control room.
- When LLNL went into Minimum Safe Operations in March 2020, only essential personnel were allowed onsite. Most staff were required to work from home.



To continue software releases and comply with COVID-19 safety protocols, these steps needed to be done outside of the control room.

# Leveraging Cloud Collaboration Platforms



**Virtual desktops provided a secure access to production environment.**



Cisco Webex Meetings

**Smart phones and Cisco Webex provided a secure one-to-one audio/video communication between software engineers and operational staff, replacing the need for physical pairing inside the control room.**



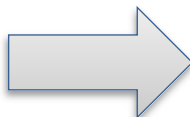
Microsoft Teams

**Microsoft Teams facilitated online collaboration among remote and onsite teams**

**Adapting to COVID-19 restrictions led to a better and more efficient way of conducting software releases.**



# Remote Software Releases Facilitated Online Collaboration



The screenshot displays a software release management interface. On the left, a table lists tasks with columns for status, task name, and assignee. On the right, a chat window titled 'Release 20.4 to B5B1' shows a conversation between team members.

Status	Task Name	Assignee
1215	TAC - TDS Regression Testing - LCU layer using Dry Run GLI (TestRail)	Castro Morales
1215	Laser Video Regression Testing (TestRail) - Diskless Video (Linux)	Hackel
1215	Laser Video Regression Testing (TestRail) - Standard (not Linux diskless video)	Tucker
1215	Shot - Shot Configuration Regression Testing	Sauder
1215	Laser - PEPC Regression Testing - standard tests (TestRail)	Osipian

Chat Window: Release 20.4 to B5B1

- Can we mark #39 as complete?
- Reuter, Lyle C: 12/20/20 3:01 PM  
I'm having difficulty in contacting El's TAC.
- 12/20/20 3:03 PM  
Just got a call from him. He anticipates TASPOS will finish retraction in about 8 minutes.
- Fedorov, Mikhail: 12/20/20 3:03 PM  
Excellent! El is also supporting BCS, he is busy
- Reuter, Lyle C: 12/20/20 3:04 PM  
Understood.
- Reuter, Lyle C: 12/20/20 3:23 PM  
TASPOS is fully retracted behind the gate valve. Item #39 can be marked as closed. Thanks.
- Reuter, Mikhail: 12/20/20 3:48 PM  
#35 PAM Alignment: Miller Kamm (15:15-16:15): DONE
- Miller Kamm, Vicki: 12/20/20 4:19 PM  
Multiple quads successfully executed PAM Alignment. One location having trouble, but operator says it is a known issue and not software related.
- Fedorov, Mikhail: 12/20/20 4:20 PM  
Thank you Vicki. Can we mark #35 as complete or there is more to do?
- The readiness meeting is at 5pm so we don't have lots of time

The COVID-19 restrictions forced us to rethink our software release process. These adaptations to COVID-19 led to a better and more efficient way of conducting the NIF ICCS software releases.

# Benefits of Remote Software Releases

- **Met COVID-19 social distancing requirements**
- **Software team work on their own workstations**
  - Access to their computer and developer tools makes them more effective in supporting the release.
- **More comfortable working environment for the operational staff working inside the control room**
- **Facilitated online collaboration**
  - Release status shared online increased team awareness
  - Faster to escalate and fix problems
  - Escalations and resolutions recorded in the release channel
- **Able to train new hires by having them join the online meeting and watch as their mentor execute the software update procedures**

**Better coordination, communication, and documentation for the release.**

