



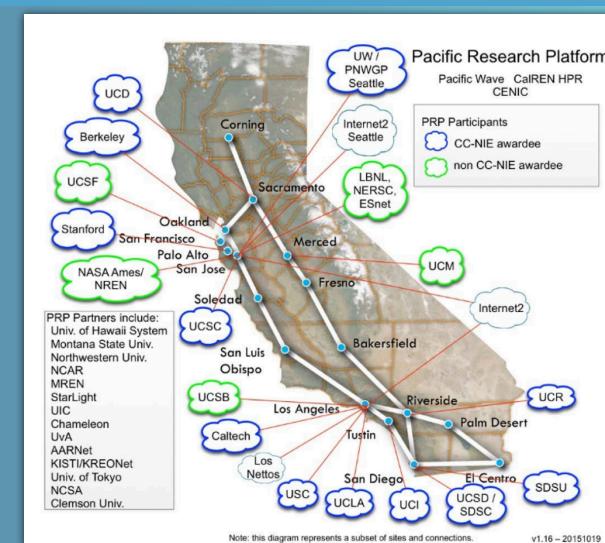
Award #: ACI-1541349
CC-DNI DIBBs 2015-20



CSSI Element: Pacific Research Platform

PI: Larry Smarr, Co-PIs: Camille Crittenden, Tom DeFanti, Philip Papadopoulos, Frank Würthwein
Institutions: UC San Diego, UC Berkeley

NSF CSSI PI Meeting, Seattle, WA, Feb. 13-14, 2020



The Pacific Research Platform Has Connected Science DMZs to Create an End-to-End Science-Driven Community Cyberinfrastructure

In 2015, The PRP got Letters of Commitment from:

- 32 IT/Network Organization Leaders
 - 50 Researchers from 15 Campuses

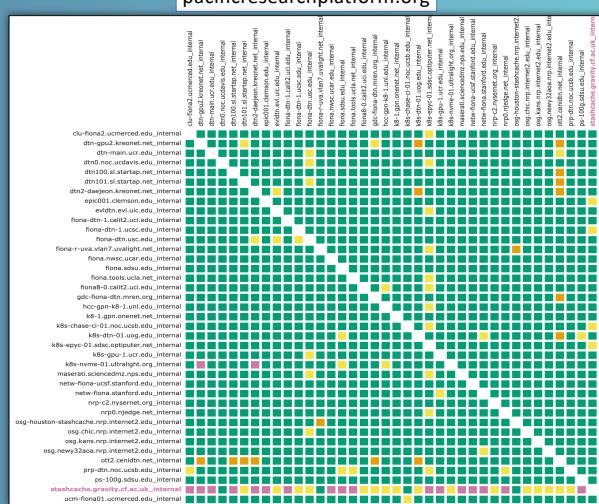
PRP's Focus was set on data analysis in Particle physics, Astronomy and astrophysics, Biomedical, Earth science, and use of Scalable visualization, virtual reality, and machine learning

Now, In 2020, The PRP has partnered with

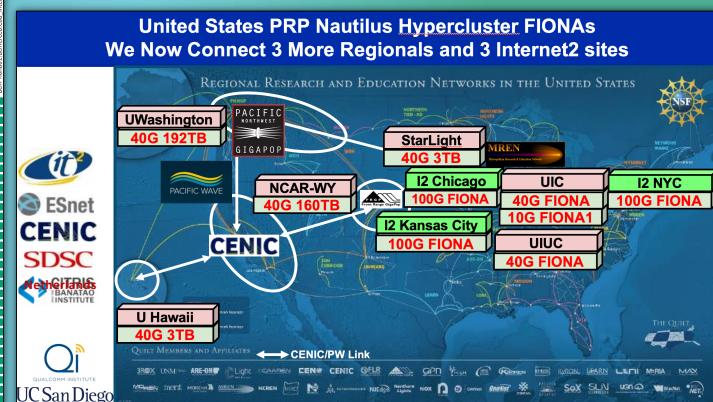
- 24 campuses and supercomputer centers in 6 states,
 - Another 24 institutions in the US and 4 other countries
 - OSG and nascent NRP, GRP and *RP efforts

PRPv1 (2015-2016) focused on getting GridFTP data transfer speeds >12Gb/s by propagating ESnet's DTN/DMZ strategies

PRPV2 (2017-2020) built a Kubernetes-based data sharing community cyberinfrastructure with >2PB of storage, >5800 CPU cores, and >550 GPU boards on 165 hosts in 35 research facilities, compatible with clouds and supercomputers



The perfSONAR Meshconfig dynamic configurator tool for monitoring latency on 1-13-2020
perfsonar.nautilus.optiputer.net/maddash-webui/index.cgi?dashboard=Nautilus%20Mesh



Nautilus hyper-converged cluster details in the United States outside of California as of Y4 Q4. Internet2 Disk Caches are colored green



KISTI
40G 28TB
40G FIONA6

Transoceanic Nodes Show Distance is Not the Barrier to Above 5Gb/s Disk-to-Disk Performance

Netherlands

UvA
10G 35TB

Korea

PRP GENIC

Guam

U of Guam
10G 96TB

Singapore

Australia

U of Queensland
100G 35TB

PRP's Current International Partners

GRP Workshop 9/17-18 at UCSD

PRP
PACIFIC RESEARCH
PLATFORM

NSF

