

# JASON S. MACKLIN

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Solutions-oriented HPC Systems Engineer with significant success managing multiple, large data centers utilized site-wide for life-sciences diagnostics development.

- Track record of increasing responsibility in secure network environments, systems analysis and configuration, and full life-cycle systems management.
- Experience managing High Performance Computing environments, distributed applications processing, workload managers (SGE, Moab/Torque), performance benchmarking, cluster provisioning and management tools like Bright, CMU, Satellite/Spacewalk, Foreman, Puppet and Ansible.
- Proven ability as Six Sigma Specialist employing ideas that decrease costs, strengthen system integrity, and increase system functionality.
- Direct experience in all stages of system installation efforts, including cluster design, system, user and application configuration, validation, testing, and support.
- Able to work as a team player or in an isolated environment. Able to coordinate and direct all phases of project-based efforts with different levels of management, and customers.
- Adept at developing effective policies and procedures and project documentation.
- Proven skills mentoring all levels of administrator.

\* **Core Competencies:** HPC cluster design and provisioning. Systems integration, maintenance and troubleshooting, network troubleshooting, problem-solving to resolution and system configuration.

\* **Platforms:** Linux (Red Hat, Ubuntu, Suse, CentOS), UNIX (Solaris, IRIX, AIX), Microsoft Windows, OSX.

\* **Languages:** Shell Scripting, Perl, Python.

\* **Tools & Services:** VMWare, LDAP, Wireshark, CFEngine, Putty, Xming, MySQL, VNC, Samba, FlexLM, Tftp, PXE, NIS, DNS, SSH, Apache, Zenoss, Jenkins, Nagios, SMTP, Postfix, Kickstart, Jumpstart, NFS, etc.

## PROFESSIONAL EXPERIENCE

**The Jackson Laboratory, Salem, CT**

2017 – Present

- **HPC Systems Engineer**

Currently manage 4 separate production level clusters totalling 175 compute nodes and 9 PB of storage running Moab/Torque. Storage layers consist of GPFS, Isilon, object and tape tiers. Actively architecting next generation cluster for replacement of existing research clusters.

### *Key Contributions:*

- Instrumental in storage showback and quota implementation resulting in storage savings of 1.2 million dollars from 2017 to 2018.
- Introduced Spack for application management and versioning.
- Working with HPC users to encourage more efficient cluster utilization.
- Generated “Intro to HPC” course for new users. It incorporated both linux CLI and cluster queue interactions.

**Roche Sequencing Solutions, Pleasanton, CA**

2015 – 2017

- **Lead Technical Consultant - Sequencing**

Sole administrator responsible for server room infrastructure availability, stability and uptime.

Approximately 1000 users dependent on 200+ physical and virtual machines, 1.2 PB storage across Isilon and Tintri. Responsibilities also include linux administration, HPC architecture and implementation for parallel analysis of genomic data.

*Key Contributions:*

- Management of all things HPC related.
  - Infrastructure rack & stack
  - OS provisioning
  - Backend services like Spacewalk, Github, Docker registry, shiny etc.
- Stood up 1.4 PB Isilon storage array and 36 node (984 core) SGE cluster in 3 weeks.
- Mentoring and onboarding of junior and contract staff personnel.
- Responsible for RFP process and conducting POCs with new and existing vendors and technologies.

**Roche Molecular Systems, Pleasanton, CA**

2013 – 2015

- **Senior Solutions Engineer**

Sole administrator responsible for server room infrastructure availability, stability and uptime. Approximately 700 users dependent on 100+ physical and virtual machines, 200 TB storage across 3Par and Netapp with nightly backups. Responsibilities also include linux administration, HPC architecture and implementation for parallel analysis of genomic data.

*Key Contributions:*

- Implemented local instance of monitoring and alerting solution (Nagios) to overcome latency issues between east and west coast. Also installed, configured and manage Observium, Pandora monitoring and InsightIQ.
- Stood up 100 TB Isilon storage array and 15 node (360 core) SGE cluster in 10 days.
- Coordinated installation and configuration of new Data Domain disk based backup solution with replication to remote site. Installed updated Tivoli Storage Manager server and migrated all existing clients to new server and backend storage.
- Started linux training class as informal mentoring program for local colleagues.

**Roche – 454 Life Sciences, Branford, CT**

2011 – 2013

- **Senior Systems Administrator**

Lead architect of approx. 250 Red Hat linux servers providing services to 454 Life Sciences developers, engineers, and researchers generating more than 1 TB per day of unique data. This data is a collection of images of chemical reactions that our custom software analyzes in order to map DNA.

*Key Contributions:*

- Research emerging technology - attending trade shows, meeting with vendors, reading whitepapers to keep up on technologies, hardware and software.
- Responsible for providing a roadmap for technology decisions for the next 12 month product cycle.
- Coordination of Proof-Of-Concept engagements with vendors and providing test results back to the management team.
- Providing technical leadership and mentoring regarding Red Hat linux, VMWare and all HP hardware for the 3 Systems Administrators on site.
- Planning upgrades, advanced troubleshooting and participating in monthly maintenance windows.

**BAE Systems Incorporated, Groton, CT**  
- **Computer Systems Analyst III**

2010 – 2011

Integral member of Submarine Multi Mission Team Trainer (SMMTT) support staff. Responsible for ensuring 100% up-time of various trainer systems in support of U.S. Navy 24/7 training environment. System troubleshooting, initialization and maintenance performed in accordance with prescribed military best practices. Currently possess Top Secret clearance.

*Key Contributions:*

- Grooming junior staff for trainer system engineer qualifications.
- Troubleshooting and maintaining complex environments incorporating various hardware and software configurations including Windows, CentOS, Solaris, Cisco and VMWare.
- Responsible for generation of Linux curriculum and training of all on-site trainer technicians.
- Primary lead for creating streamlined rebuild and configuration process for electronic classrooms running both Redhat and Windows systems.

**Raytheon Integrated Defense Systems, Portsmouth, RI**  
- **Senior Information Technologist III**

2006 – 2010

In a very short span, went from junior administrator to primary Point of Contact for multi-million dollar defense contract. As POC instructed and directed both junior level and more senior level personnel on a daily basis concerning processes and procedures. Responsible for the configuration, availability and overall up-time of multiple data-centers. With success of current tasks, given primary responsibility managing secondary satellite sites, again as primary Point of Contact.

*Key Contributions:*

- Primary POC for Zumwalt program in first year of employment
- Resident site expert for Raytheon proprietary ASOSS tool for automated building, configuring and administering of clients and servers
- Developed processes and procedures for bringing Red Hat Enterprise Linux 5 into compliance with NISPOM Ch. 8 guidelines
- Provided support to external contractors in both PA. and CT. with IBM blades, eServers and intelligstations configured with Red Hat Enterprise Linux 4 & 5
- Responsible for troubleshooting hardware driver compatibility for initrd.img boot kernel for PXEBoot cold-start of IBM hardware with Red Hat Enterprise 4

**Raytheon Technical Services Corporation, Portsmouth, RI**  
- **Field Engineer**

2004 – 2006

Recruited to maintain high system integrity and availability in accordance with all DD-X contract requirements. Design and implement security processes and procedures to ensure system isolation during acceptance testing phases. Path-finding to meet system testing requirements ensuring greater system integrity and usability.

*Key Contributions:*

- Key member involved in Dahlgren site system installation for Navy contract buy-off for Release 2.
- Spearheaded SAT string isolation and verification procedures.
- Key contributor to three 6 Sigma projects in 18 month span.

**Lockheed Martin, Groton, CT**  
- **Electronics Technician**

2002 – 2004

Perform preventative maintenance and troubleshooting repairs on submarine simulators and submarine

school training equipment. Continually training to maintain proficiency in the operation of all equipment through self study of technical manuals and schematics. Support U.S. Navy personnel in their efforts to continuously improve training efficiency.

*Key Contributions:*

- Hand picked to prepare for Virginia Class “Dive & Drive” trainer acceptance and turnover to support staff. Required learning full trainer cold-start procedures and operational functions including VME card and chassis troubleshooting.
- Responsible for training all site technicians on proper operation and troubleshooting of Virginia Class “Dive & Drive” trainer.
- Integral component of Seawolf troubleshooting efforts ultimately leading to designation of “Tiger Team” for system wide repair and update of Seawolf trainer.

**Professional Training and Certifications**

Red Hat Certified System Administrator RHEL 6 Certificate #120-051-891  
Red Hat Certified Technician RHEL 5 Certificate #605007192613998  
6 Sigma Certified Specialist

**Bachelor of Arts Degree in English**

UNIVERSITY OF CONNECTICUT – Storrs, Connecticut