Hardware Systems Engineer - Storage

Meta   Fremont, CA   5 days ago   **6 applicants**

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About the job

Facebook's mission is to give people the power to build community and bring the world closer together. Through our family of apps and services, we're building a different kind of company that connects billions of people around the world, gives them ways to share what matters most to them, and helps bring people closer together. Whether we're creating new products or helping a small business expand its reach, people at Facebook are builders at heart. Our global teams are constantly iterating, solving problems, and working together to empower people around the world to build community and connect in meaningful ways. Together, we can help people build stronger communities - we're just getting started.

Who are we: The Hardware Engineering team designs, builds, brings-up, tests and lands the hardware systems that power the Facebook social network, deployed in our data-centers worldwide. Designs are published for industry adoption through the Open Compute Project Foundation.Who are we looking for: We are looking for a Hardware Systems Engineer for our Infrastructure Storage Hardware Engineering team. The ideal candidate will operate in a highly multi-tasked, fast-paced and highly cross-functional engineering environment. They will have

have deep knowledge and experience in storage technology, and a good understanding of server and network technology. They will be data-driven and focus on the highest impact they can create as part of a world-class engineering team. This is an opportunity to join our team and help us build some of the world's most open and efficient hardware platforms.

Responsibilities

- Work as part of the Hardware Engineering team, and in collaboration with our ODM partners, to design, develop, test and deploy Facebook Storage hardware platforms.
- Partner with Data Center Site Operations team to understand installation, operation and maintenance considerations within Facebook data centers and incorporate feedback into future hardware designs.
- Participate hands-on with cross-functional partners to bring up new systems including Linux OS, firmware, and other important fundamental software on new hardware designs. This includes integrating systems, achieving stability, performance and power requirements, and driving defects to resolution with our external supply chain and manufacturing partners and internal Facebook partners.
- Collaborate with Hardware Engineering, Software Engineering and Capacity Management teams to develop the exact specifications for our hardware platforms, including in-depth performance analysis of future Facebook software environments on upcoming hardware designs.
- Work closely with software and hardware sub-system subject matter experts to bring disparate technologies together to produce highly efficient and reliable systems.
- Influence the direction of the landscape of datacenter storage through development and collaboration with open source hardware communities.

Minimum Qualification

- BS or MS in Computer Engineering, Electrical Engineering, Computer Science or a related technical discipline or equivalent experience.
- 4+ years of industry experience in the development and analysis of storage systems hardware.
- Knowledge of hardware system design that crosses multiple subsystems.
- Experienced in complex, multi-subsystem system-level troubleshooting, including hands-on experience with system performance and power analysis, debug, and optimization practices.
- Experience working with ODM partners for system design and delivery.

Debug wherever the problem leads and have the confidence to engage cross functional partners to support issue resolution.).

- Proven knowledge in storage technology, including demonstrable depth in at least one area out of the following storage domains: Primary Storage Systems (Rotating Media and/or Solid State) and Archival Storage. With experience spanning at more than one media type (HDD, SSD, Tape or Optical).
- Experience quickly learning new hardware technology, protocols, frameworks and understanding firmware and software concerns/requirements.
- Familiarity with Linux operating system internals (e.g. kernel dev, tracing, profiling, scheduling, IO subsystems), x86-based server hardware, storage, networking and IO stacks, and large-scale Infrastructure automation.
- Proven scripting (Python, Perl, Ruby, SQL, etc.) and data analysis skills with an understanding of how to take complex data sets and analyze and decompose the information into broadly consumable documentation and presentations.
- Proven English language communications skills and the experience in pivot communication style and depth for the audience.
- Detail oriented with careful and balanced rapid execution in a fast-paced environment.

Preferred Qualification

- Understanding of storage protocols such as: NVMe, SATA or SAS.
- Knowledge of typical system IO and management buses (PCIe, CXL, I2C/SMBus, LPC, etc.).
- Knowledge of compute systems and memory buses (DDR4, DDR5, HBM, UPI/QPI, etc.).
- Experience with typical data center networking technology: Ethernet, IPv4/v6, InfiniBand, ROCE, etc.
- Experience in firmware development and debugging.

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