Junhua Wang

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| ***PERSONAL PROFILE:*** |

**Total Experience:** 17 Years

**Mobile Number:** 18626889386

**E-mail:** [27577012@qq.com](mailto:27577012@qq.com)

**Marital Status:** Married

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| ***TECHNICAL EXPERTISE:*** |

1. Proficient in Linux Kernel Customization: Extensive experience in trimming, booting, driver development and loading, debugging, and starting application service programs on Linux.
2. Skilled in Linux Network Programming: Strong foundation in multi-threaded programming and network programming on Linux.
3. Proficient in Multiple Programming Languages: Strong command of C/C++, Java, Shell scripting, and Python.
4. Knowledgeable in Networking Protocols: Familiar with Ethernet and TCP/IP protocols, with a particular focus on lower-level technologies (IP, UDP/TCP) and switch working principles.
5. Proficient in Yocto Build System: Experienced in using Yocto build tools and setting up cross-compilation environments.
6. Familiar with Emerging Technologies: Knowledgeable in machine learning and big data technologies, with a strong ability to learn and stay updated on the latest industry developments.
7. Experienced in Microcontroller Development: Proficient in microcontroller development and familiar with analog and digital circuit design.
8. Strong Communication and Collaboration Skills: Excellent at communicating and collaborating with others, responsible and detail-oriented, adept at identifying potential issues from a system perspective and avoiding design flaws.
9. Proficient in English: Fluent in English communication and writing (CET-6 level).

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| ***Job Experience:*** |

**2018.10 – Present Nokia Communication Technology Co., Ltd. System Architect**

Clarified the interfaces, impacts, and exception handling of various functional modules (LFS, HWAPI, BMU (FPGA)), wrote prototype code, and provided solutions for complex problems.

* **Primary Responsibilities for ICOM Functionality**:

1. Clarified the MAC/IP definitions for each CPU's Ethernet interface, traffic topology and switch VLAN configuration for boot/C-plane/M-plane/syslog/streaming, QoS configuration, and syscom routing configuration. Clarified the design of the Radio Unit M-plane link, enabling the RU to obtain an IP address via DHCP from the BTS common board, load the image, and boot through a GRE Tunnel.
2. Clarified the backplane Ethernet link detection; reported faults when the link jittered or disconnected beyond the threshold.
3. Clarified the PnP solution for the backplane Ethernet/RP3/Srio link serdes configuration.

* **Primary Responsibilities in HW Management Domain:**

1. Monitored and managed the status of various boards (Common board/Capacity board/subrack) and CPUs.
2. Supported hot-swapping of boards, board/CPU reset, power on/off for different power groups, and software upgrades.
3. Managed various devices such as Fan Kit, Mate FCT, PDU (power distribution unit), and EAC (External Alarm Controller), including status reporting and configuration deployment.
4. Handled various abnormal states and alarm reporting, such as Read EEPROM error, cooling method incompatibility, PIU boot incompatibility, detection timeout handling, OverVoltage, and LowVoltage alarms.

* **Primary Responsibilities for Startup Functions:**

1. Defined the board compatible list in the PID data of the BTS Capacity board, ensuring new versions of the board are compatible with the old software.
2. Read PID data from the Capacity board via the I2C bus, performed device tree overlay, prepared the board boot image, and used BMU interaction to inform the capacity board of the boot method (UEFI/uboot/Intel/ARM).
3. Managed the creation and destruction of LXC containers in bulk using the LXC container supervisor.

**2014.5 – 2018.10 Nokia Communication Technology Linux Software Engineer**

* Responsible for developing the LRC project, fixing various bugs related to Linux drivers and applications, and ensuring system stability and reliability.
* Develop software based on OpenStack and VMware cloud platforms, optimizing application performance and resource management in the cloud environment.
* Successfully migrated LinDX services to the cloud platform, enhancing service scalability and deployment efficiency.

**2010.9 – 2014.5 Nokia Communication Technology Linux Software Engineer**

I am primarily responsible for the booting and management of FRIU boards based on the PowerPC architecture, the collection of system logs and critical data, virtualization management, and the maintenance and development of system services.

* Responsible for loading Linux images on FRIU boards based on PowerPC architecture and mounting the initramfs boot environment, ensuring the system can start and run quickly and stably.
* Using the Reactor pattern, led the development of a Blackbox system that loads the pramfs file system for efficient collection and storage of system logs and critical data, supporting subsequent analysis and debugging work.
* Utilized KVM/QEMU technologies to achieve automated deployment and startup management of virtual machines, optimizing the configuration and resource utilization of the virtual environment, and supporting various virtual machine application scenarios.
* Responsible for maintaining and developing multiple core services on the LinDX system, including time management and IP address management, ensuring the stability and reliability of the system's basic functions.
* Optimized hash algorithms by introducing multiple entropy sources (such as network interface cards and hardware interrupts), significantly improving the randomness and security of the pseudo-random number generator and enhancing the system's performance in security applications.

**2007.7 - 2010.9 Hangzhou Jinshuo Info Technology Embedded Software Engineer**

Designing an instrument using an AVR microcontroller to detect WLAN and GSM communication signal quality:

* Read various parameters of WLAN and communication signals through the serial interface, such as signal strength, noise ratio, connection speed, etc.
* Design and implement a timed reporting mechanism, where the system periodically reports the collected signal parameter data to the central server, providing a reliable data foundation for remote monitoring and analysis.
* Implement the functionality for the system to receive and process commands from the server. The system can execute various tasks based on commands issued by the server, such as call testing, MOS (Mean Opinion Score) switching tests, WLAN speed tests, etc.
* Develop a remote upgrade feature, allowing the system to download and apply firmware updates from the central server over the network.

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| ***Education:*** |

2004.9 – 2007.7 Xi’an Jiaotong University Master of Electric Machines and Electric Apparatus

2000.9 – 2004.7 Lanzhou Jiaotong University Bachelor of Electrical Engineering and Automation

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| ***Additional:*** |

Member of Toastmasters club for 12 years.