Rui Cao

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Education Background

- **Beijing University of Posts and Telecommunications(BUPT)**

  - o **M.E.   Software Defined Networking**   **(2015-Present)**

- **Wuhan University of Technology(WUT)**

  - o **B.E.   Computer Science and Technology**   **GPA:3.5/4 (2011-2015)**

Project Experience

- **Inter Controller ONOS Application(ICOA) project (2016.4 - 2016.8)**

  - o Researched the West-East Interface and optimized Open eXchange Protocol(OXP) proposed by FNLab, BUPT.
  - o Implemented Open eXchange Protocol in Java language.
  - o Designed and implemented ICOA on ONOS which use OXP as east-west interface protocol to enable inter-ONOS controller communication and cooperation.
  - o Achieved the coordinate work of multiple ONOS controllers to make the shortest forwarding cross multi-domains.

- **Device Monitor Application on ONOS controller (2016.4 – 2016.5)**

  - o Participated on a development team to implement an app that monitors the up/down of devices in the network and when the up/down times of a device exceed a threshold value the APP will disable the device automatically to guarantee the stability of the network.
  - o Provided leadership and mentoring to the team. Selected as a group leader and organized the team completed the project successfully.
  - o Designed the application and developed the major function modules of the application.

- **SDN-IP Application on Ryu controller (2016.3 – 2016.5)**

  - o Implemented an SDN application which is applied to Ryu controller based on OpenFlow.
  - o Designed and implemented the function that allows the Software Defined Network to connect to external networks on the Internet using the standard Border Gateway Protocol (BGP) when running this application.

- **Network Trouble Shooting Project on ONOS controller (2015.12 - 2016.2)**

  - o Participated on a development team to implement an ONOS module for check the network problems include routing loop, routing black hole and app conflict.
  - o Implemented the serialization/deserialization function which is applied to clone an instance of a class.
  - o Contribute the project to the ONOS Codebase.

- **Java web container project (2015.4 – 2015.5)**

  - Selected as team leader to organized the implementation of the project.
  - Designed the architecture of the software system and propose a kind of multithreading optimization solution.
  - Implemented the multithread processing module using instance pool, which brings the web container a high efficiency when handling massive HTTP requests.

Internship

- **Wuhan Wanjianglong Network Technology Co., Ltd(www.shangquanquan.com) —— Software development (2014.10 - 2015.05)**

  - Responsible for development and optimization of user subsystem in WeChat Official Account web project.
  - Led a team to refactored the company's official website to enhance it as a CMS. Designed a new architecture for the official website based on JFinal web framework and built a basic project prototype.

Skills

- Familiar with Software Programming(3 years), Computer Network(1 year), OpenFlow (1 year), SDN (1 year),
- Programming language: Java (master), C++(average), Python (beginner)
- System: Linux (Familiar with Ubuntu)
- Languages:
  - Major: Chinese
  - Second: English (CET-6)

Awards

- "The Second Prize" of National University Software Defined Networking Competition (2016)
- "Winning Prize" of HUAWEI Developer Challenge 2016
- "The Second Prize" of World's First ONOS Boot Camp & Hackathon (2016)
- "The Third Prize" of China Students Service Outsourcing Innovation and Entrepreneurship Competition (2014)
- "National Endeavor Fellowship" at WUT (TOP 3%, 2012)
- "Merit Student" at WUT (2012)

Activities

- Vice Minister of Science and Technology Department in Students' Union
- Psychological consultant for classmates of Wuhan University of Technology
- Member of the serving center of Wuhan University of Technology
- Youth volunteer of Wuhan University of Technology
- Member of Table Tennis Association of Beijing University of Posts and Telecommunications

Hobbies

Billiards, Table tennis, Basketball, Chinese chess, LOL, Photography