## **Profile**

Experienced software and systems architect with an extensive background in team leadership, application development and systems administration.

# Experience

PRINCIPAL SOFTWARE ENGINEER, JUMPCLOUD, LOUISVILLE, CO - 2022 - PRESENT

Leading projects across JumpCloud's Device Management landscape including Apple, Windows, Android, and Linux devices. Development in Go, Python, and Node.js.

PRESIDENT, JUSTIFIED SOLUTIONS, DENVER, CO - 2010 - PRESENT

Creators of SFS Pro - the premiere application for Colorado Family Law firms to create Sworn Financial Statements. In addition to serving as President for the company, I am also the Architect and Lead Developer. SFS Pro fills a key niche in Colorado Family Law practices by providing an easy to use application for paralegals to author Sworn Financial Statements that must be filed with the court.

STAFF SOFTWARE ENGINEER, JUMPCLOUD, LOUISVILLE, CO - 2021 - 2022

Software engineer developing a large scale, cloud-based Apple Mobile Device Management (MDM) solution. Development in Go, Python, and Node.js.

SENIOR DIRECTOR, COMCAST, DENVER, CO - 2018 - 2020

IP Video architect for Comcast's VIDEO architecture team. Continue work with the VIPER architecture organization as well as providing overall IP Video expertise and planning to the VIDEO group. Continued expertise in IP video streaming including VOD, linear, and cloud recordings.

SENIOR DIRECTOR, COMCAST, DENVER, CO - 2013 - 2018

Lead architect for Comcast's VIPER team responsible for developing solutions for the future of video delivery at Comcast. Expert in the IP delivery of linear, VOD, and Cloud DVR for primary and secondary screens at massive scale. Responsible for the design of transcoding, packaging, origination, playback and analytics for IP video within Comcast.

PRINCIPLE ENGINEER, COMCAST, DENVER, CO - 2010-2013

Lead engineer for Comcast's IP video content origination team. Oversaw the architecture and development for solutions that include video transcoding, fragmentation for adaptive bitrate delivery, and HTTP video delivery for both linear and video-on-demand solutions. Familiar with multiple adaptive bitrate technologies including Microsoft Smooth, Adobe HDS, Apple HLS and DASH. Driving innovation in fragmented delivery by leading both an

internal team and vendors to develop Just-In-Time packaging (JITP) solutions that allow Comcast prepare video once and serve it out on-demand in multiple packaging formats.

Previously, I was the primary developer on a IP Video Content Delivery Network (CDN) solution based on the open source Varnish cache server. The project includes the design and development of a cache configuration and status reporting daemon as well as a highly redundant, high performance URL-based content routing solution. Technologies and applications involved include: Varnish, Tomcat, Servlets, Spring, JSON, XML, and XMPP.

#### STAFF SOFTWARE ENGINEER, LOCKHEED MARTIN, DENVER, CO - 2005 - 2010

Oversee the design and development of multiple products utilized within the Air Force DCGS. Includes updating legacy products to add service layers that expose data and other important services to the enterprise. Created and lead a working group to facilitate communication across the program among all developers working on web-based solutions. The program's solutions for exposing these services included a wide range of technologies including: Web Services developed in C, C++, and Java, Web applications developed using JSP, Servlets, Flex, JavaScript and HTML5.

Architect and lead software engineer for the Surveillance and Warning product. Completed a 12 million dollar upgrade to enhance the collaborative situational awareness aspect of the system and add mission management functionality to the system for the AF DCGS. Experience with JEE technologies including JMS, JPA, and JAX-WS. Other products and technologies used in the development include Spring, Tomcat, Sybase ASE, and JAXB.

#### STAFF SOFTWARE ENGINEER, LOCKHEED MARTIN, O'FALLON, IL - 2004 - 2005

Worked with a small R&D team to develop a logistics support application using JEE technologies including Servlets, JSPs, EJBs, and Java Portlets. Successfully demonstrated the application at the C4ISR conference in October 2004.

Led a team of System Administrators and Operators responsible for the day-to-day operations of the Global Transporation Network (GTN) to track all items in the defense transportation system. Administered several machines utilizing both Solaris and DEC Tru64 operating systems. Operated as the primary Database Administrator for several installations of Sybase ASE utilizing Sybase Replication Server to replicate data between the installations. Administered several installations of BEA Weblogic. Responsible for scheduling installation events and reporting operational issues to Lockheed management and the Government. Mentored junior administrators and operators on basic System and Database Administration principles.

## STAFF SOFTWARE ENGINEER, LOCKHEED MARTIN, O'FALLON, IL – 2002 - 2003

Lead Software Engineer on several small development projects. Designed and developed solutions to complex database issues. Mentored junior engineers on database design and development. Worked with other senior engineers to develop and implement a server

replacement strategy that maximized system performance while minimizing system outages.

### SOFTWARE ENGINEER, LOCKHEED MARTIN, TICHFIELD, ENGLAND - 2001

Worked closely with the UK's Office of National Statics to help develop a post-processing solution for the 2001 Census data. Developed C applications on Microsoft Windows utilizing Sybase ASE database servers.

### SOFTWARE ENGINEER, LOCKHEED MARTIN, O'FALLON, IL - 1999 - 2001

Entry level Software Engineer where I developed Sybase and Java solutions for the Global Transportation Network (GTN) for USTRANSCOM.

## Education

University of Colorado, Denver, CO – Master of Science, Computer Science, 2008

Southern Illinois University, Carbondale, IL – Bachelor of Science, Computer Science, 1999

## Presentations

"Simultaneous Migration of Codecs, Formats and DRM," Packet Video Keynote, Amsterdam, Netherlands, Jun 2018.

"XFinity TV Go," Content Delivery Summit Keynote, New York, NY, May 2014.

"Using Varnish for IP Video Delivery," Varnish User Group Meeting 4, Baltimore, MD, Sep 2011.

### **Patents**

Recorded Content Storage and Delivery Management, co-inventor, U.S. 10,791,346, Issued Sep 29, 2020

Custom Content Insertion, co-inventer, U.S. 9,756,103, Issued Sep 5, 2017

Resource Request Management, co-inventor, U.S. 9,560,161, Issued Jan 31, 2017

Custom Content Insertion, co-inventor, US 9,246,963, Issued Jan 26, 2016

Content Distribution Network Supporting Popularity-Based Caching, co-inventor, US 9,167,049, Issued Oct 20, 2015