ANDY KHOV

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WORK EXPERIENCE

Software Engineer II – Laserfiche (2 years, current)

- Developed and maintained numerous gRPC services to support quoting, order fulfillment, invoicing, and asset management in Laserfiche's Order Management System
- Extended Laserfiche's Order Management System to support cloud ordering and cloud renewals
- Migrated 1000+ customer accounts into our team's Order Management System
- Drove the change of a product's model and behavior from ambiguity to shipping into production; Retroactively modified existing customer accounts to support the new behavior
- Discovered an optimization opportunity within a NodeJS service and significantly reduced the number of calls to remote services; This prevented the bottleneck of a rate-limited dependency
- Refactored a NodeJS service to utilize the async/await pattern; Reduced the number of callback functions, therefore decreasing the complexity of the program
- Pushed for effective and non-brittle unit tests to validate features and prevent bugs
- Utilized Azure Pipelines to publish projects into shippable binaries for release; This improved agility in deployments and rollbacks

Software Engineer I – Amazon (10 months)

- Maintained and developed web services for Prime Video's catalog publishing supply-chain
- Improved catalog delivery ingestion by ~20% within an AWS Lambda function; Batched data to concurrent Lambda processes
- Implemented and executed load tests for a new microservice to ensure TPS goals were met
- Improved CI/CD workflows by writing integration tests, load tests, and alarms

PROJECTS

DNS Recursive Resolver *(github.com/andykhv/recursive_resolver)*

- Created a custom parser to read DNS messages according to RFC1035
  - Able to parse DNS Headers, DNS Questions, and A, AAAA, NS Resource Records
- Implemented a UDP server in Rust to handle DNS queries in accordance to RFC1034 and RFC1035
- Resolves domain names for IPv4 and IPv6 standard addresses
- Recursively resolves domain name queries by initially querying a top-level domain nameserver

AkDns (*github.com/andykhv/akdns*)

- A DNS resolver in Go which supports traditional DNS over UDP and DNS over TLS
- Maintains a pool for TLS connections to reduce connection overhead of TLS handshaking
- Caches DNS Answer records with TTL to reduce remote calls
- Built with *miekg/dns* to handle DNS packet parsing

SKILLS

Languages

- Professional Experience: C#
- Other Experience: Golang, Rust, Java, NodeJs

Other

- Professional Experience: Back-end Development, Full-stack Development, ASP.NET, Blazor, Azure Pipelines, SNS/SQS, MSSQL, gRPC, REST
- Other Knowledge: DNS, TCP/UDP, TLS

EDUCATION

B.S. Computer Science 2019, *California Polytechnic State University San Luis Obispo*