

Nicholaus Suprpto

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Experience

IBM

Toronto, ON

DevOps Engineer - Real-Time Rail Payments System

Aug 2025 - Present

- Managed ArgoCD / OpenShift GitOps across 12 clusters with 2 management instances, enabling GitOps-driven delivery for C&S and Exchange workloads across 16 environments
- Standardized and maintained CI/CD pipelines across 16 environments, including snapshot and release pipelines for C&S teams and per-environment CD pipelines for both C&S and Exchange
- Migrated and rebuilt CloudBees CI Jenkins from IBM Cloud to on-premises OpenShift using CasC, deploying in an active-passive configuration across 2 management clusters
- Deployed and configured Kong Gateway (Control Plane and Data Plane) on OpenShift; built a custom plugin image pipeline; implemented Kong Deck config-as-code for version-controlled API infrastructure
- Deployed ActiveMQ (AMQ) Broker via OpenShift operators, configuring Queue Federation and Mirroring across pre-production and production for cross-site message persistence
- Installed and configured EDB PostgreSQL with synchronous commits between datacenters to achieve RPO=0 across production environments
- Engineered a Zero-Trust network model using OpenShift Network Policies for microsegmentation and Istio Service Mesh to enforce mTLS across all in-mesh microservices
- Installed HashiCorp Vault operator across all clusters, configuring Kubernetes auth methods and managing 17 namespaces with automated certificate lifecycle management via the PKI engine
- Deployed F5 CIS operators to provision Virtual IPs for platform components, collaborating with the network team to define and validate network flows
- Supported resiliency and performance testing including 300 TPS load tests and 36-hour soak tests, serving as the platform layer interface between development, QA, and infrastructure teams

Platform Engineer - IBM Payments Center

Jul 2025 - Aug 2025

- Led a compliance-driven decommission of the Wires Services Jenkins instance, migrating CI/CD infrastructure to IBM One Pipeline (1PL) — a Tekton-based framework — across development, platform, QA, and operations teams
- Migrated 40+ Jenkins pipelines to IBM One Pipeline, covering PR, CI, and CD pipelines across Stage, QA, and Production environments
- Reduced pipeline execution time by up to 3x by enabling concurrent stages for code scanning, vulnerability checks, and compliance, and optimizing base image sizes
- Connected IBM Cloud CD instances to AWS accounts to support deployment of CloudFormation infrastructure and Lambda-based microservices

Platform Engineer Part-Time - IBM Payments Center

Jan 2025 - Apr 2025

- Migrated 800+ platform base images from JFrog to IBM Cloud Container Registry, supporting the platform team's AMI build pipeline
- Provisioned EKS add-ons using Terraform to enhance existing Kubernetes clusters
- Developed a CloudWatch-based log monitoring system to detect critical patterns and trigger Instana alerts
- Enabled ELB access logs and implemented S3 cross-region replication for disaster recovery and compliance

Platform Engineer Intern - IBM Payments Center

May 2024 - Sep 2024

- Automated IBM Cloud Toolchain provisioning with Terraform, reducing setup time by 80% — automation later reused as the foundation for the Wires Services CI/CD migration
- Developed CI/CD pipelines for Terraform projects using IBM Toolchain, boosting reliability and productivity
- Migrated Terraform CI/CD workflows from Jenkins to IBM Toolchain, reducing deployment times by over 20%
- Implemented SPbD by integrating Mend (WhiteSource) for automated code compliance and security checks

Manulife Global

Toronto, ON

Cloud Engineer Intern - Platform Architecture Team

Sept 2023 - Dec 2023

- Implemented Azure Blob Storage lifecycle policies, reducing access costs by over 20%

- Built an Azure Function to periodically refresh credentials for ParkMyCloud, improving automation and governance
- Developed an Azure Function to forward Azure Health Alerts to Microsoft Teams, increasing system observability
- Led development of a PoC internal chatbot using Azure OpenAI and RAG architecture, enabling secure internal knowledge retrieval without public data exposure

Rhetoricon Research - University of Waterloo

Waterloo, ON

Software Developer

May 2023 - Sept 2023

- Migrated legacy MySQL database to PostgreSQL, and optimized queries to reduce search and response times
- Integrated Redis caching for Zotero API calls, significantly improving page load performance
- Built and optimized admin frontend using client-side rendering and lazy data fetching for near-instant load times
- Developed reusable pagination components to streamline UI/UX across multiple views

State Street Corporation

Toronto, ON

Cloud Engineer Intern - Infrastructure Team

Jan 2023 - Apr 2023

- Built observability dashboards in OpenSearch to monitor node health and log ingestion performance
- Designed pipelines to stream logs from S3, CloudWatch, and CloudTrail to OpenSearch using AWS Lambda
- Integrated Kinesis to optimize log streaming, reducing Lambda invocation costs by 10%
- Refactored and tuned Lambda function, cutting tail latency by 20% and preventing throttling by optimizing SQS

FarmLink Marketing Solutions

Winnipeg, MB – Remote

Software Developer Intern - Fullstack Development Team

May 2022 - Aug 2022

- Refactored front-end components using standardized Vuetify components to reduce code complexity
- Configured Vite and front-end code splitting to reduce load times by 26% and bundle size by 72%
- Optimized Django ORM queries by utilizing lazy loading to reduce response times
- Dockerized the application into microservices to improve development and deployment processes

Skills

Containers & Orchestration: OpenShift, Kubernetes, Helm, ArgoCD, OpenShift GitOps, CloudBees CI

IaC & Automation: Terraform, CloudFormation, Jenkins, IBM One Pipeline (Tekton), Kong Deck

Cloud Platforms: AWS, Azure, IBM Cloud

Networking & Security: Istio Service Mesh, F5 BIG-IP (LTM/GTM), F5 CIS, HashiCorp Vault (PKI/Secrets), OpenShift Network Policies, LDAP

Messaging & Middleware: ActiveMQ (AMQ) Broker, Kong Gateway

Data & Storage: CockroachDB, EDB PostgreSQL, Nooba Storage, Redis

Observability & Scanning: Dynatrace (ActiveGate), SonarQube, JFrog Artifactory & Xray, Mend (WhiteSource)

Programming: Python, Golang, C/C++, Bash, JavaScript

Web Frameworks: Svelte, Vue.js, Next.js, React

Education

University of Waterloo

Sept 2020 - Apr 2025

Bachelor of Computer Science, Data Science Major

- Dean's Honours distinction, cumulative GPA above 87%
- Relevant Coursework: Distributed Systems, Networks, Machine Learning, Algorithms and Data Structures