

Lovepreet Singh

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Objective

Dedicated and creative-minded professional **Software Developer & Big Data Analyst (Splunk Certified Admin)** with strong communication skills, team spirit, and analytical skills seeking a Splunk Developer Job. Offering solid knowledge of computer science concepts, including Network Security and Data Structures, as well as **AWS and Cribl**. With hands-on experience utilizing AWS services, such as **EC2, S3, and Lambda**.

I am adept at designing and implementing scalable and secure cloud-based solutions. Additionally, my expertise in leveraging Cribl for data pipeline management and log routing allows me to streamline data processing and enhance operational efficiency. With a passion for staying up-to-date with emerging technologies, I am well-equipped to contribute to innovative and cutting-edge projects in the field of Splunk.

Technical Skills

Big Data Analysis & Data Observability

Tools: Splunk Enterprise, Splunk Cloud, Splunk ITSI, Hadoop, Cribl, Prometheus, Grafana

- **Splunk Certified Admin:** [Certification Link](#)
- **Cribl Certified Observability Engineer (CCOE) – Admin:** [Certification Link](#)
- **Experience with Splunk** – Distributed cluster management, Data On-Boarding & HEC, Dashboarding, SPL, Alerting, Summary Indexing, Smart Store, Workload Management, Disaster Recovery, Knowledge Objects, SAML configurations (OKTA) & Role Mapping, Dual SH stack, Splunk & Splunk App Upgrade, Splunk Python Development Kit (SDK).
- **Additional Splunk Add-ons:** DB Connect, CrowdStrike, ServiceNow, Cisco, Salesforce, MS Office 365, VMware, TA_Windows, TA_Nix, TA_AWS so on.
- **Cribl:** Data Replay, Data filtering/normalization/reduction & routing, hosting Cribl on ECS Fargate.
- **Prometheus & Grafana:** Collect metrics with Prometheus, Create visualization & set up alerts with Grafana.

Cloud & Infrastructure

Tools: AWS, Terraform, GitLab (CI/CD), Rundeck

- **AWS Certified Cloud Practitioner:** [Certification Link](#)
- **AWS Services:** IAM, EC2, S3, SQS, SNS, ECS, ASG, EBS, RDS, WAF, Athena, Kinesis, Route53, Lambda so on
- Proficient in building and managing 250 plus AWS resources with Terraform (IAC) & leveraging cloud services to build scalable and resilient solutions.
- Using GitLab pipelines to automate Infrastructure management (CI/CD) and ensure efficient & consistent deployments across multiple environments.
- Developing custom/golden AWS **Splunk AMI** to speed up node initialization.
- Integrating custom build automation solution with AWS Boto3 library to manage AWS resources.
- Migrate Rundeck jobs to GitLab pipelines and develop Python scripts to add required functionality.

Programming & Web Technologies

- ❖ **Languages:** Java, Python, C, C#, PHP (Laravel Framework), ASP .Net, Node.js, React js, Angular, WordPress, jQuery, Ajax, Sass, Bootstrap 4, W3 CSS, W3 JS, HTML5, CSS 3, JavaScript, ES6
- ❖ **Tools/Technologies:** Shopify, Adobe Dreamweaver, SEO (Search Engine Optimization), Filezilla, Putty etc.

- Develop CRM (Customer Relation Management) & ERP (Enterprise Resource Management) solutions with Laravel Framework (PHP) & Angular.
- Expert in REST API development with PHP & Python and then performing testing with **POSTMAN** & other testing applications.
- Proficient in creating responsive website designs using the W3 CSS library and Bootstrap 4.
- Create Web applications using Java servlets, ASP .Net, PHP (Laravel), Node.js, React js and Angular.
- Project customer-facing websites from Cross-Site Scripting, SQL Injection, brute-force attacks & implement secure error handling, encryption and hashing, session management etc.

Database Management

Tools: AWS RDS, MySQL, Oracle DB, Microsoft Access, MongoDB, Hive

- Collaborated with development teams to design and optimize database schemas, ensuring efficient data storage, retrieval, and query performance across different database platforms.
- Knowledge of entity-relationship diagrams, normalization, and class diagrams.
- Knowledgeable in NoSQL databases, including MongoDB, and proficient in designing and implementing flexible and scalable data models to meet the needs of modern applications.
- Familiar with data warehousing technologies, including Hive, and adept at designing and managing data warehouse environments to support analytics and reporting requirements.
- Use Splunk DB connect to query and ingest data from the relational databases, then build dashboards on it.

Project Management & Systems Analysis

Tools: Jira, Clickup, DevOps, Scrum (Agile Methodology), MS Office, Visio, Project and Google Analytics.

- Proficient in utilizing project management methodologies, such as Agile and Waterfall, to effectively plan, execute, and monitor project activities, ensuring alignment with business objectives and stakeholder expectations.
- Project scope, time, cost, quality, communication, human resource, risk and stakeholder management.
- Experienced in conducting business process analysis and optimization, identifying areas for improvement, and recommending solutions to enhance operational efficiency and effectiveness.

Additional Technical Skills

- Build and repair servers/workstations from scratch and install, configure & upgrade hardware and software.
- Repair and upgrade Apple MacBook Pro, MacBook Air, Mac, Mac Pro, Apple iPads so on.
- Design logo, magazine, newspaper, flyer, and banner with Corel Draw Graphic Suite (Vector Designing).
- Web animation designing with code & Adobe Premiere Pro (SVG).
- Photo & video editing with Adobe Photoshop, Lightroom, Premiere Pro and Adobe Flash.
- 3D designing with AutoCAD and SolidWorks.

Soft/Transferrable Skills

- Leadership Skills (Take responsibility, assign work to the team, train juniors/replacement)
- Multilingual (English, Hindi, Punjabi, Urdu)
- Problem-Solving & Critical thinking (Debug code and increase performance)
- Analytical Skills (Analyze customer requirements and provide solutions)
- Creativity Skills (Design user-friendly interface)
- Organization/Time Management Skills

Education

Computer Systems Technician - Software Engineering

Sheridan Institute of Technology and Advanced Learning

Projects

- 1. Automate Splunk Indexer (IDX) Cluster Recycling:** A Rundeck job reads Splunk admin credentials from Vault and then passes those credentials to the Python script, which will perform Splunk IDX decommissioning steps according to Splunk official documents. This script rebuilds 3 peer nodes parallelly (one peer per site at a time). Also, it performs cluster health checks, move buckets, node discovery & termination, and data rebalance (Search Factor & Replication Factor).
Technologies: Splunk REST API, Python, Rundeck, AWS Boto3, Vault
- 2. Automate Splunk Search Head Cluster (SHC) Recycling:** Similar to the above automation, Rundeck reads and passes credentials to the SH recycling script, which is programmed to check KV store & SH cluster health, transfer SH captain, node discovery & termination, remove and join Splunk SH node and so on.
Technologies: Splunk REST API, Python, Rundeck, AWS Boto3, Vault
- 3. Splunk Disaster Recovery:** Create & maintain GitLab pipelines and Splunk configurations to build distributed Splunk infrastructure in different AWS regions in case of disaster. Moreover, configure Splunk smart-store solution to avoid data loss & speed up infrastructure build time. In addition, create Cribl data reply collector jobs to re-ingest data in Splunk (If data get deleted due to the index retention period).
Technologies: Splunk, Cribl, GitLab Pipelines, AWS S3
- 4. Automate Splunk Update:** Build a dashboard to have observability of all installed Splunk apps & add-ons and then update pre-requisite apps & add-ons. In addition, build a Rundeck job, which can update Splunk on all nodes in distributed environment nodes in less than 2 hours. According to Splunk documentation, this job first target Cluster Master, SH Deployer, SH cluster and IDX cluster & then update Splunk on the remaining nodes.
Technologies: GitLab Pipelines, Rundeck, Vault
- 5. Splunk Dynamic Scaling with ASG Lifecycle Hooks:** Set up dynamic scaling-in and out for Splunk IDX and SH clusters to save resource costs. AWS ASG (Auto Scaling Group) monitors resource utilization and triggers the lambda functions in case of high and low resource usage. Lambda functions then perform required actions like issuing remove a node from cluster command & so on before terminating the node. ASG lifecycle hooks scale-in infrastructure on weekends and scale-out on weekdays helps Splunk to adjust according to workload.
Technologies: Splunk REST API, AWS ASG, Lambda, Boto3, Vault
- 6. Automate Splunk Access:** Python script code runs automatically with the help of Linux Cron Job every hour reads a list of IPs from a CSV file and then calls Splunk Admin Config Service API to add or delete IPs from the Splunk cloud whitelist, then ingest JSON logs in the Splunk.
Technologies: Splunk REST API, Python
- 7. Splunk Saved Searches Management:** Python script lowers the resource usage of Splunk by changing the cron schedule of saved searches with the help of **Splunk SDK**. To improve the efficiency of the Splunk SH cluster, First targeted the saved searches with a cron schedule of every minute or every 15th minute.
Technologies: Splunk SDK, Python
- 8. Web Crawler/Spider:** PHP-based object-oriented program fetches data from webpages with the help of DOM-based utilities and supports multi-threading up to 100 crawlers at one time. On the backend, use the raw ranking method to rank the web pages.
Features: Web-based responsive and dynamic interface, Multi-threading, Support 24x7 Run-time.
Technologies: PHP, DOM-based utilities, jQuery, W3-CSS, W3-JS, Bootstrap, Ajax, MySQL

Experience

Systems Engineer – Splunk

(Jan 2021 to Present)

Getty Images/iStock/Unsplash – Seattle, WA

- Build/Maintain distributed Splunk infrastructure (Search Head, Indexer cluster, CM, DS etc.) & Cribl nodes hosted on AWS EC2 and ECS Fargate.
- Automate Splunk SHC recycling, IDX cluster recycling & perform Splunk/Splunk Apps & Add-ons updates.
- Gather requirements from customers, onboard data from various AWS resources into Splunk, perform data normalization/conversion with the help of Cribl and assist end-users with search, dashboards, reports, and knowledge objects.
- Develop complex queries, alerts & reports using Splunk's proprietary SPL language.
- Monitor organization infrastructure with Splunk/Grafana and solve Service-Now/PagerDuty incidents.
- Building AWS resources with the help of Terraform (IAC) & GitLab pipelines (CI/CD).

Splunk Developer

(Jan 2020 to Jan 2021)

Evertz Microsystems – Burlington, ON

- Monitor organization infrastructure with Splunk ITSI (Glass table, KPI, Correlation searches) and Splunk Cloud (Alerts, Reports & Dashboards).
- Troubleshooting Splunk data ingestion pipeline (Universal Forwarder, Heavy Forwarder) and onboarding data into Splunk (Field Extraction, Data Masking & Data Normalization).
- Run playbooks as a level 1 SOC (Security Operation Center) team member and Report to a level 2 member or SOC Manager.
- Providing support to Splunk users related to Splunk knowledge objects, Index/Data retention, Summary indexing and Role permissions.

Full-Stack Developer

(Apr 2016 to Dec 2019)

Swarnkar Rajpoot Sabha - SRS — Ludhiana, Punjab

- Building and maintaining web applications with Angular as front-end and Laravel as back-end using standard web development tools.
- Develop PHP artisan commands for Linux cron job.
- Maintaining and designing databases (MSSQL).
- Performing back-end and User Interface (UI) tests to enhance the functionality of the application.
- Documenting the task progress, architecture, and development process.

Computer Lab Assistant

(Apr 2014 to Mar 2016)

Ryan International School — Ludhiana, Punjab

- Offers general consultations for people who are working or studying in the lab.
- Diagnoses hardware/software problems and fixes them or contacts the appropriate engineer to correct the problem.
- Changes toner in printers, adds paper and otherwise ensures proper functioning of all printers in the lab.
- Sets up and shuts down the lab according to work hours.
- Supplies reference materials to help users learn how to use particular programs.

Portfolio

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