Ivan Pesin

Lviv, Ukraine | ivan.pesin@gmail.com | https://www.linkedin.com/in/ipesin | https://github.com/ivanpesin

DEVOPS / SRE / SA

I am an engineer with 20 years of experience in SA/SRE/DevOps roles with the emphasis on automation, orchestration, and configuration management. I have an extensive experience in designing and operating large-scale configuration management infrastructure, HA production application environments (on-prem and cloud), and project CI/CD pipelines.

I enjoy designing and implementing automated distributed self-healing systems, problem-solving, application of systematic analytical skills, and developing elegant solutions. I am open to new ideas, always try to extend and share my knowledge, learn new technologies, and maintain focus on the end-goal. I work well alone or in a team, and have experience building and managing teams.

RHCE (ID:805009130739410), **LPIC-3 + ME** (LPI000179831, code: qnr7ugmsu4), **MCSE**, **OTLSA**, **IELTS** band **8.0**

EMPLOYMENT HISTORY

Syniverse — Telecom   Jan 2019 — May 2020
Consultant, reporting to **Director, Head of DevOps**

Designed and implemented a RHEL OS Patching automation proof of concept for a fleet of 8,000 servers. Collected requirements from stakeholders, defined processes and integrations, designed patchset lifecycle, patching and rollback procedures, readiness checks, automation architecture. Implemented critical parts of automation and directed a team of 5 engineers to deliver the PoC. Managed onboarding and patching for the initial 1,000 servers and designed phase 2 patching automation.

- Designed and implemented Ansible AWX/Tower setup as the orchestration engine
- Wrote Ansible playbooks for automating onboarding, health checks, reboots, patching, rollbacks, and common configuration fixes
- Designed patching readiness checks framework and reporting (ansbible/bash)
- Wrote an Ansible job report generator concept (python)
- Wrote an AWX job progress monitor (python)
- Implemented and supported GitLab CI/CD pipeline for the project
- Managed the implementation of a reporting UI for patching readiness checks and job reporting
- Managed the PoC release and patching events from Lab to multi-DC production environments
- Provided trainings and L3 support to operation teams on PoC and patching events
- Patching PoC demonstrated 97% active in-scope vulnerabilities reduction, above 90% target
- PoC resulted in 70% reduction in human resource allocation for the patching activities
- Onboarded and patched initial 1,000 servers

Wells Fargo — Banking corporation   July 2016 — Dec 2018
    Consultant, reported to **Technology Manager**

Designed and managed the development of application patching control plane for an estate of 50,000 servers. The project significantly improved the percentage of the fleet in security compliance. Designed and developed various APIs integrating Puppet configuration management infrastructure and application deployment. Developed Puppet modules and Ansible playbooks for various tasks; designed and implemented a 5k puppet node simulation environment running on 3 servers using KVM, LXC, and namespaces.

- Designed and managed implementation of REST API for Puppet Hiera data updates in Github repositories.
- Designed and managed implementation of a system that automated gradual updates of various software packages across 50k hosts using maintenance window abstraction.
- Managed the implementation of a UI for surveying and managing maintenance windows-based update process.
- Designed and managed implementation of query language and interface for PuppetDB

- Implemented and supported CI/CD pipeline based on GitLab, fpm, puppet, and virtualenv
- Designed and implemented test environment that simulated network with 5k puppet clients with different run outcomes.
- Implemented an array of Puppet modules to simulate various states in simulated environment as well as maintain the build and test environment itself.
- Developed various mock APIs (Golang) to facilitate development of maintenance window management tool

JPMorgan Chase — Banking corporation   June 2012 — June 2016
    Consultant, reported to **Vice-President**

Initial focus was on development of configuration management policies for CFEngine and rolling them out to the estate of over 70,000 servers. Later it shifted towards development of APIs, orchestration, and data collection and mining systems to allow other teams to use existing policies and automation directly. Some of the automation I wrote resulted in thousands of man-days per year savings.

- Implementing cross-platform configuration promises for CFEngine on AIX, Solaris, and Linux, peer reviews, and code QA.
- Set of library functions to manage IBM Tivoli configuration across the estate
- Automated cross-platform software deployment
- Developed generic framework for running third-party scripts and binaries from CFEngine and producing execution reports
- Various OS-specific automations of housekeeping tasks: mail subsystem, file tiding, static routes mgmt, etc
- Framework for applying SQL scripts to Oracle database instances
- Host configuration database (redis), with CLI and API toolset; data transfer mechanism with direct import into DB
- Autobalancing algorithm and implementation for cfengine clients to pick their servers

- Web-reports (bootstrap/google charts api) for svn repo and CFEngine code execution stats
- L3 on-call support duty, dealing with issues that involve Unix OSs, Oracle, etc
- Reporting module to discover and report PROD/DR environment discrepancies
- Reporting cross-platform module to discover SAN multipath configuration issues, blacklist gatekeeper devices, and automatically remediate common issues
- Developed a test framework for automated regression testing of CFEngine policies
- Detection, reporting, and automated patching for vulns (heartbleed, shellshock, glibc)
- API for on-demand execution of configuration policies (perl) with access control/rate control and throttling, and parallelising.
- Automated patching (upgrade) for RHEL, Solaris, AIX which is invoked via API.

EPAM Systems — Software development firm   January 2012 — June 2012
    Lead Maintenance Engineer/Resource manager, reported to **Vice-President**

Worked on establishing Support and Maintenance competency, designed and implemented autoscaling and static AWS environments for numerous projects.

- Designed, managed, and implemented an R&D project on moving generic J2SE apps to cloud
- Prepared a white-paper based on R&D project, available at EPAM web-site
- Participated in PoC projects with EPAM internal cloud infra
- Designed and implemented high-load dynamic autoscaling infrastructure for data transformation in Amazon AWS

- Managed a group of 5 S&M engineers.
- Devised and delivered a training on cloud technology for firm's software engineers
- Participated in EPAM OpenDay event delivering a talk on AWS autoscaling features
- Delivered a technology overview on trends in DevOps and cloud infrastructure for EPAM competency management

N-IX LLC — Software development firm   November 2002 — January 2012
    Linux Engineer, later **Senior SA/Team Lead**, reported to **Vice-Presidents**

Starting as a Linux Engineer, over the next 9 years with the firm, I had built an SA team responsible for entire IT infrastructure of the firm. Later, the team successfully began to offer SA services to firm's clients.

- Infrastructure: from 10 to 250+ nodes
- SA team: from 0 to 6 people
- Linux-based networking
- Corporate-grade Linux-based mail services
- Metrics and health monitoring
- Designed and managed implementation of infrastructure health dashboard
- Designed and managed implementation of self-service VM provisioning interface
- Designed and implemented firm's time-tracking system (perl)
- Introduced extensive virtualization (VMware/KVM/OpenVZ/VirtualBox)
- Designed and implemented firm's VoIP (Asterisk)
- Designed and implemented Asterisk VoIP system for Ukrainian State Sanitary Inspection

- Introduced and maintained CFEngine deployment
- Linux-based firewall solutions
- Router redundancy configuration (vrrpd and carp)
- Introduced and maintained RT3 request tracking
- Introduced and maintained corporate wiki
- Performed Linux performance tuning
- Web-servers setup and maintenance
- Designed and implemented firm-wide backup configuration using Bacula
- Designed and implemented a number of internal processes that conformed to ITIL
- Designed and developed service catalog system (perl)
- Amazon EC2 instances administration.
- Designed and supported infrastructure for a number of start-ups: (ClienteQ, Nuospace, g-recorder, im-history, thickbuttons)

Intelliarts, Ltd — Software development firm   October 2001 — May 2003
    Systems Administrator, reported to **Vice-President**

User and system support: Internet connectivity, mail system, internal network services, and Linux development environment (cvs, jdk, IDE, etc)

Modem, Ltd — IT consulting and support firm   August 1998 — October 2001
    Systems Administrator, reported to **Vice-President**

While working at Modem, Ltd. I was involved IT consulting, development and support for Lviv's Regional Post Enterprise.

- Designed and configured LAN with redundancy for 200 computers (3Com, Cisco)
- Implemented leased-line connections between multiple business locations
- Developed a set of reporting scripts to monitor and analyze Lotus cc:Mail logs (shell/perl)
- Developed and implemented user environment for SCO UNIX integrated with Software AG Natural (C/shell/perl)

- Configured and supported Linux-based Internet gateway with firewall and QoS
- Developed edge VPN router Linux-based distribution to connect regional branches
- Designed and implemented automated DBMS dumps (shell/expect)
- Developed a tool for encoding conversion for major database upgrades (shell/perl)
- Implemented local printing and cash register support for console terminal (C)

Polinom, Ltd — Oil trading firm   February 1997 — August 1998
    Systems Administrator, reported to **Director**

User, computer, and network support: OS installation, troubleshooting, backups, etc.

PUBLICATIONS AND PUBLIC ACTIVITY

- Participated in Russian Linux Gazette Project; over 50 translations into Russian, 10 articles authored. Some articles were published in printed magazines (e.g. Network Solutions).
- Participated in Wikipedia Project – a set of articles in Russian about my home city Lviv.
- Translated numerous articles from RedHat Knowledge Base into Russian.
- Participated in Foswiki (http://foswiki.org) translation project.
- Delivered a variety of lectures for students at local universities and conferences on topics of critical thinking, cloud computing, and configuration management.
- Enhanced bare bone vim syntax highlighting definition for CFEngine, available on github.
- Blogger for USENIX LISA17

TECHNICAL SKILLS

Configuration management: cfengine, puppet, ansible/AWX
Operating Systems: RedHat/CentOS, older Unixes
Programming: bash, awk, perl, golang, python (outdated: java, C)
Software: webservers, proxy, vcs, mail servers, ldap,
Virtualization/containers: KVM, LXD/LXC, docker/compose, VirtualBox;
Databases: MySQL, PostgreSQL, ADABAS C, Redis, ElasticSearch;
Networking: dns, dhcp, ntp, vpn, stp, vlan, snmp, nfs, iptables, tcpdump, vrrpd/ucarp, etc
Monitoring: Nagios, GroundWorks, Prometheus/Grafana, TICK