Jean-Baptiste Lasselle
Cloud Engineer/SRE

Who I am

*I code with **terraform, packer, pulumi**, **CI/CD Pipelines**, I dive into code with developers, I **automate everything** about infrastructures. I am a **Gitops** and **Infrastructure As Code** evangelist. I love understanding, learning, implementing new ideas within my team, And everywhere, I love challenges !*

My best friends list

Kubernetes, Terraform, Packer, Pulumi, FluxCD/ArgoCD, Atlantis, Ansible Tower, Circle CI, Gitlab CI, Tekton, Jenkins, Openstack, Ansible Tower (AWX), HashiCorp Vault/OpenBAO, Docker, K3D, Minio, Nginx, Traefik, Linux shell, TypeScript/NodeJS, React, Golang, Python, https://gohugo.io https://astro.build

I usually work with

Terraform, Packer, Pulumi, FluxCD/ArgoCD, Atlantis, Circle CI, Gitlab CI, Tekton, Jenkins, Ansible Tower (AWX), shell scripting (sh/bash)
Azure, AWS, GCP, OVH, VMWare vSphere, OpenStack

At University, I studied pure mathematics.
I started IT as a developer.
2015, I turned my focus on infrastructure (as code), and the cloud world.
I love coding and automating everything.

*I today am a **Cloud Engineer/SRE**, an **Evangelist** in love with automation, Cybernetics is a concept i am really keen on (Kubernetes Controllers, Operators, AutoScalability, self-healing abilities).*

My interests today are:

- *Designing and implementing **Infrastructure As Code** the gitops way*
- *Developing **terrafrom providers**, **OpenBAO utilities***
- *Developing **Kubernetes Operators***
- *Landing zones: What comes after the Cloud Adoption Framework?*

Professional Experiences

> Michelin

SRE Devops, Infra As Code SME

02/2024 - Today

Project Context: 30 engineers on 5 continents. The Project aims at unifying all of the on-premises infrastructure as one IAAS platform (100 small datacenters spread around the whole world).

Tech stack: VMware vSphere, VMware Aria Automation, Ansible/Ansible Tower, Kubernetes, Docker, Packer, Hashicorp Vault, OpenTOFU, python, Artifactory, Gitlab pipelines

Automation SME in the Team, in a team of about 30 engineers.

Achievements I am so proud of:

- I have introduced the use of Hashicorp `Packer`, the concepts of immutable infrastructure, golden images, and hardening in a packer image build.
- I have entirely built an Ansible Tower service, in a kubernetes cluster, with full automation of provisioning, backup and restore. The AWX service is managed with the AWX Operator. Fully Airgapped environment, includes automated K3S Kubernetes Cluster provisioning, and upgrades. Private Image registry on Artifactory
- I have fully automated provisioning of Windows server VMs using packer golden images, autounattend xml answer files, and ansible to run post install operations.
- I have built and demonstrated the full lifecycle of Ansible Tower (AWX) Execution Environments using Ansible Builder, with Ansible Collections in a fully private context - artifactory configured as a private ansible galaxy service, and private python wheels / packages repository service.

Duties:

- I provide Proof of concepts, tools bench-marking, I build environments, with and about automation technologies
- I evangelize concepts across the team
- I train team members to new tools
- I review merge requests

> Limagrain

SRE Devops, terraform SME
09/2023 - 02/2024

Project Context: At Limagrain, a business critical, internally developed app, had only one environment, which was manually built. I was in charge of building all environments, with automation.

Tech stack: Terraform, Helm, kubectl, Docker, Azure AKS / App Gateway Ingress Controller (AGIC), Azure Functions, Azure CosmoDB, Azure EventHub, Azure Devops (Pipelines), Azure Managed identities / Service Principals, Azure networking - vnet, subnets, private endpoints, Artifactory, shell scripting (sh, bash).

I was first assigned the task of auditing the whole project, both in terms of infrastructure, and CI/CD, with an executive summary as deliverable.
My two main recommendations were:

- to automate "everything": both the infrastructure management with terraform, and the dev CI/CD
- to spin up isolated environments to promote releases from dev, to staging, UAT, up to the production.

Duties and achievements:

- I was **in charge of implementing** my recommendations, working with the **Dev Team (5 developers), on one end, and the core infrastructure teams**, on the other hand.
- I was invited to **architecture labs**, to give a **talk on terraform and infrastructure as code concepts**. My talk was very appreciated, so that other departments requested to have knowledge sharing workshops with me.
- I was required to attend the validation gates meetings: the process to allow the app to go to production. My role was to **answer the question about infrastructure and automation design** choices details.
- Terraform was not used at all in the project, and I **convinced** the management, and the core infrastructure teams, **to start using terraform for infrastructure management**, especially in **production**.
- In less than 4 months, I brought up with terraform, 3 new isolated environments: DEV, UAT and production. I also found and solved a couple of very complex issues integrating `Azure` cloud components and Microsoft Dynamics.
- The terraform achievements, my **evangelist** work, added to the support of the project managers, resulted in a real victory: In January 2024, several dedicated Azure subscriptions were granted to the Dev Team department, where initially a single Azure subscription had to be shared by all departments!

> Michelin

SRE Devops Lead
11/2022 - 09/2023

Project Context: At Michelin, Data Engineering / AI Project

Tech stack: Terraform, Kubernetes, Helm, Docker, Azure, Databricks, dbx, Snowflake, dbt, azcopy, Gitlab, Artifactory, shell scripting, Python, TypeScript, Astro, Hugo.

In charge of managing all Azure resources with **terraform** (Azure Storage Accounts, vnet/sbnets, VMs, managed identities, service principals, etc…)
Re-designing and implementing, with 2 Data engineer SMEs, the whole **Data Engineering platform**. I was working on the CI/CD pipelines scope. The new design involved a **migration from** an **{Azure Data Factory / ADF Pipelines} stack**, to a much more advanced, Python/PySpark-based, **{Databricks + Snowflake} Stack**.

The new data engineering platform processed data by executing Python code, and therefore needed a fully fledged Python CI/CD.

Duties and achievements:

- Managing of **Azure** resources with terraform: Databricks workspaces, Azure Account Storage, networks, Azure Key Vaults, Managed Identities, R-Studio VMs, MongoDB clusters, etc…
- **Modularization of terraform code**, management of terraform state: **terraform modules**, terraform private registry, terraform state into Azure Account storage container
- Design of **CI/CD Modules**, **CI/CD runners** Docker images (Python code)
- Design of **CI/CD Pipelines**: **Git workflows**, **Gitlab** release automation with gitlab-cli, python packages deployment to databricks (**databricks scheduled jobs**), snowflake (with liquibase).
- Design of **Documentation**: astro/hugo documentation repo with automation based on Gitlab CI/CD pipelines.

> Gravitee Source

SRE Devops Leader
07/2020 - 03/2022

Project Context: Gravitee is an Open Source API Gateway

Tech stack: Pulumi, Terraform, Kubernetes, Helm, Docker, K3D, Azure AKS, AWS EKS, FluxCD. NodeJS, TypeScript, Python, shell scripting, Golang.

I completely re-designed I re-implemented the whole Gravitee CI/CD, migrating from Jenkins to Circle CI on the way. I today am a top expert about Circle CI and git based CI/CD.
I am extremely proud that I had the opportunity to work with the https://gravitee.io Team, a World Class Team of Software Engineers, with which I deeply learned about many topics.
I also there learned a lot about what cybernetics is in the real cloud industry world. In particular, it is there that I started working on Kubernetes Operators.

Duties and achievements:

- Design, implement, and migrate of the whole of the Gravitee CI/CD System. I designed and implemented a very unique CI/CD component, using NodeJS, TypeScript, RxJS, to orchestrate Circle CI Pipeline executions, for the Gravitee Release process (dozens of git repositories): bringing scalability, and removing Single Points of Failures.
- Automation of all standard operations of Gravitee, for hosted offers (deployment, backup, restore, upgrades, downgrades, etc).
- Design of SAAS offer for the Gravitee API Gateway,
- Design of best architecture practices for Gravitee API Gateway users.
- CircleCI Evangelist for the Dev Engineers
- Training junior Devops engineers
- Level 3 Support for Gravitee Customers, example: design and provisioning of a VPN Gateway between Azure and Google GCP

> CRESH.EU

Cloud Engineer
04/2020 – 07/2020

Project Context: Cresh offer is a SAAS Offer, an innovative b2b payment solution.

Tech stack: Pulumi, Helm, Docker, Kubernetes, AWS EKS, Gravitee API Gateway. NodeJS, TypeScript, bash / sh shell.

At https://cresh.eu , a small french Startup, I worked on designing and implementing the entire Cloud Infrastructure, 100 % `Kubernetes` based.
AWS EKS, Helm deployment of dev's work, `Gravitee` API Gateway. https://gravitee.io founders heard of me because of the work I did there at cresh.
Small Startup when I helped them, I was at the time the only devops engineer, and massively used Pulumi, Packer and Terraform.

Having major architecture and technical points of disagreement with the CTO, we together agreed to end our collaboration.

Duties and achievements:

- Cloud Engineer, full infrastructure design
- Kubernetes SME
- Main Kubernetes Cluster Terraformation Automation.

> SFR

Devops Engineer
07/2019 – 10/2019

Project Context: Edge Datacenter deployments for an ISP/Phone Operator.

Tech stack: Ansible, Docker, Gitlab EE, Jenkins Pipelines, LVM, Cisco NSO, Cisco KUBAM for PXEless boot, SSH Bastions, Python.

Devops contractor at SFR (French ISP and phone operator), Cisco NSO project Team (SDN). In charge of datacenter deployment automation and operations in the context of the new 5G network deployment.

Duties and achievements:

- I worked on designing and deploying a full devops stack, for developers to git push their `Python` source code, ending with their code deployment to production Cisco NSO devices. I even had, on the SFR request, to build from source docker registry it self : SFR needed its CI/CD platform to be "fully built from source" (docker, registry, etc.), and that, for security constraints.
- I was a CI/CD evangelist on this `Cisco NSO` project (networks engineers do not have the same culture as Dev Engineers, to say the least). This included introducing and training network engineers on git, and why Gitlab and Github are our everyday Facebook (I used to say, *Facebook is our today's real office* - and by *"Facebook"* I meant Github/Gitlab-like platforms).

- I designed git workflows, trained on how to operate Gitlab EE as an infrastructure on premise : software engineers at SFR, were in charge of operating their own Gitlab EE.
- I took a Cisco NSO training session at Cisco, on how to automate bare metal provisioning of Cisco NSO Clusters, in « Issy-les-Moulineaux » a French city close to Paris.
- With those duties, I worked with more than 100 engineers, coming from 3 different teams :
  - pure Infrastructure team (those who own the OpenStack),
  - software development teams,
  - network engineers teams

> Bosstek

Devops Engineer
04/2018 – 11/2018

Project Context: Infrastructure Management Consulting services.

Tech stack: Terraform, Ansible, Jenkins Pipeline, Docker (docker-compose) , NGINX, Gravitee.io (API Gateway), Keycloak, Kubernetes, ELK.

Employee at Bosstek, a french consulting SMB, specialized into infrastructure management, that was my first experience in a « Pure Infra » company.

I took part into 3 projects with Bosstek, for 3 different French Customers. This experience was very interesting, for I worked there with people who never ever worked in software development. I would say they were from the « old style » infrastructure world, and that is why I had a lot to learn with them.

Duties and achievements:

- I worked in the core team of projects for huge companies : **SOPRA Steria**, **ENEDIS**, and **Carrrefour One Cloud**, as Cloud Engineer.
- I have been Dev Engineers Team Leader At SOPRA STERIA, where I worked under the authority of David Maurange.
- I also conducted two internal studies about in that company, where i was the only Kubernetes SME :
  - Production grade Kubernetes Cluster Ingress Controller best practices.
  - A proposed solution of system monitoring with Rsyslog/Elastic Stack, (with a focus on CA servers restarts) : purpose was to have the company certified as a CA Authority delivering SSL/TLS certificates.
  - Working in the Carrefour One Cloud (a project in collaboration with Google), I there discovered for the first time the concept of Headless CMS, with https://strapi.io , and it is the first time I worked on a production grade use of the Gravitee API Gateway.

> Vierling Communication

Java Dev Engineer – CI/CD SME
02/2016 – 01/2018

Project Context: R&D fault detection in fiber optics large networks (OTDUs).

Tech stack:

- *Devops*: Ansible, PXE boot, PXE boot kickstart installations, Docker, Virtual Box, KVM, Free IPA Server, SSH / SCP/WinSCP, with a lot of bin/bashing.
- *CI stack*: Gitlab, Artifactory, MAVEN3 Git, Eclipse JBoss Tools, Jenkins, Checkstyle, JMeter, JUnit, DbUnit, Jasmine + Karma, Wireshark & wireshark dissectors
- *Dev stack*: Java, JCA IronJacamar, JPA, Hibernate, WILDFLY, EJB3 Stateless & MDBs', JAX-RS & Resteasy, Apache Shiro, Leaflet, Angular, Linux Pluggable Authentication Mechanism, mariadb, postgresql/postgis, .Net Windows Service Application component, Visual Studio.

Java Dev Engineer at Vierling-Communication, an R&D company of the « Laudren Group ».
R&D main goal was to design and develop a cutting edge network monitoring system.

What was thrilling and extremely interesting in this experience, is that the system did not monitor software, but hardware, and in particular, the system goal mainly was to monitor Fiber Optics and Copper cables failures!

The developed Monitoring system consisted in both hardware and software: pure Linux OS, java and C language.

Duties and achievements:

- I worked on the software part which was the « brain » of the monitoring system : the server that collects all data from distributed systems, analyze them, and manages alerts, using JCA Components in a Jee JBoss EAP app.
- I introduced there bare metal provisioning : `PXE-` booted to deploy the whole stack, and i automated all that to be able to run reliable testing. That was my answer to « it is not possible to fully automate our solution deployment ».
- I introduced and convinced of the necessity of Acceptance Tests.
- I developed an authentication module implemented using `Jee` Listeners and `Spring` modularization
- I brought in Dockerized deployments, the internal use of Pipelines using Gitlab on premises, the Java deployment happening in JBoss EAP (Angular 8/9 + bootstrap Web UI).
- Geo-location of hardware failures, so GIS matters, I introduced Leaflet on the Web UI This experience was a turning point for me : That is were I worked months with whom I consider my master as far as *NIX and what OS actually are, a « Linux Wizard », **Eric Lévenez**, a man I will always remember.

> SPVC Group

IS Architect, IT department founder
06/2013 – 07/2015

Project Context: IT Dept. in a construction industry company

Tech stack:

- *Operational*: Gantt charts, Specific Terms and Conditions documents in building industry (CCTP in French) / Response to tenders (« Réponses à appel d'offres » in French) / supply chain management on a constuction site.
- *Devops*: Chef.io, Virtual Box SOAP API, KVM Virtual Manager, GNU/Linux (CentOS/Ubuntu server)
- *CI stack*: Artifactory, MAVEN3 (M2E), Git, Eclipse (eclipse bpmn modeler), Jenkins, Checkstyle, JMeter, JUnit, Mockito, DbUnit.
- *Dev stack*: Spring, JPA, Activiti BPMN engine, petals ESB / JBI java standard, tomcat 7, JAX-WS/ SOAP/ WSDL, JAX-RS, Spring WS, JSF2, Prime Faces, jQuery v2.x.x, JavaMail, Apache James server, Mailets.
- *Misc.*: **FM 200** Fire protection systems...?

SPVC was an SMB of the construction industry, specialized into fluids.

I designed the first real Information System, conducted and took part in developments of software components required to deliver that first I.S.

I thereafter structured the newly created IT department to be fit for production management. All in all, this was among my most craziest professional experiences, that made me learn a lot about who i am in the IT industry.

Also my first experience as a pure Software guy, putting his hands unawarely into infrastructure.

Duties and achievements:

- The Work began with the design and implementation of a simple utility software, whose goal was to normalize Business Processes, especially for the commercial and build sites managers everyday tasks.
- I then made it production « almost » ready, by adding to it the seed of a DRP. The implemented services were relation to construction project management : Gantt Charts, Tasks Management, reporting.
- A second generation, redesigned IS turned it into a B.A.M. system (Business Activity Monitoring) using :
  - The Acitviti `BPMN` engine.
  - A `JBI` ESB coupled to the BPMN engine, SOA architecture (all `BPMN` execution were invoked through the ESB, using JAX-WS / JAX-RS).
  - 15 users in January 2014, up to 30 end of 2014, then 40 end of 2015.
  - As I first talked of the critical importance of a DRP, i was certainly not realizing how deeply I would dive into infrastructure management…
- I built weeks after weeks a small team consisting of 3 to 5 developers and ops, I was the software architect with 2 developers, and manager for the 2 / 3 ops engineers (system engineer, security engineer, network engineer).
- I was personally working on the CI system a classical recipe of `Git`, `Maven`, `Jenkins` (`Junit`, `DbUnit`, `Mockito`, etc...), Artifactory. All classics of that prehistoric times.
- One unthinkable thing happened there, where I learned a lot about real infrastructure , I conducted and designed a full server room: SPVC used on premises servers, the IS being used by employees from their tablets mainly (MTT french trademark Android tablet). A crazy experience where i learned what a data-center really is, e.g. what material are used on the floor (epoxy) of data-centers, Server Hardware Benchmark, network backbone, DRP with FM200 fire systems, air cooling, electricity etc...

Atermès Group

Java Dev Engineer
02/2013 – 05/2013

Project Context: Atermès, a French Company affiliated to Thalès, a player in the military technologies industry.

As Java Dev Engineer, I worked in the R&D department, where i designed and implemented a set of Java JSE6 Swing components, using the Luciad Lightspeed framework (a GIS Framework, very early endowed with 3D capabilities).

It was mainly about Terran elevation analysis, hypsometry in GIS.
Military purpose only.

Duties and achievements:

- designed and implemented a set of Java JSE6 Swing components, using the Luciad Lightspeed framework, and Luciad Lightspeed hypsometric "IndexColorModels".
- I pushed in JUnit testing, the guys were mainly working over there with the well know Qt C++ UI framework.
- I learned for the first time, and a lot about GIS systems:
  - that's after that pro experience, that I got interested into OpenStreetMap, Leaflet, etc.
  - Fundamental knowledge: geoid, reference ellipsoid, reference system, projections, reference point, datum, reference ellipsoid, reference system, projections, reference point, datum, tiles server, "line-of-sights", etc.…

Tech stack:

- *OS*: Windows, on Dell Alienware.
- *Devops*: Chef.io, Virtual Box SOAP API, KVM Virtual Manager, GNU/Linux (CentOS/Ubuntu server)
- *CI stack*: Maven + JUnit.
- *Dev stack*: Swing JSE6, JAXB, Luciad Lightspeed, MVC2 design pattern.
- *Misc.*: a bit of differential geometry of finite dimensional manifolds.

> Michael Page International

Dev Engineer
01/2012 – 12/2012

Project Context: IT Dept. of one of the world's biggest HR industry player.

Tech stack:

- *CI stack*: Maven, Tortoise SVN, JIRA, Jenkins, Nexus Sonatype.
- *Dev stack*: Tomcat 6, WebLogic 9, struts 1, Taglibs, Spring, hibernate, JUnit, JMX, JAXP, Log4J, Fractal Julia, Javamail.

At the heart of Michael Page's IT Department (EMEA), I took part in the full revamping of Michael Page's Information system, along with 10 à 15 Java Dev Engineers, 2/3 IT Architects, QA and 10 Business Analysts.

My personal scope was focused on the « backend » part of all software responsible for Candidates Processes Management, including the Candidates Assessment. This was my first professional experience into a major large scale IT Department of an International Corporation.

Duties and achievements:

- In collaboration with IT Architects, and Business Analysts, I designed and implemented the "candidate assessment" components. That made me an SME on the Candidate Assessment functional scope.
- Classic Java development, involving CI, using Maven, JUnit, on premise Nexus Sonatype repo. Some Java dependencies had to be « mavenized », some others already were.
- I took part in a huge Security Operation, because of a discovered major intrusion attack in Michael Page Information System, a long memorable pizza week-end…
- I started there being involved into topics of CI/CD and it the Infrastructure it relies on.

{ 2011: I spent one year in a French IT school named « AFCEPF » to get a Software Architect degree}

> Sanofi Aventis

Java Engineer
02/2010 – 12/2010

Project Context: At Sanofi Aventis, R&D, Genetics Data Analysis

Tech stack:

- *CI stack*: Subversion, Tortoise SVN.
- *Dev stack*: Java EE Servlet Containers, Struts 2, Taglibs, Tomcat, Spring, Hibernate, Junit.

I was hired as contractor At Sanofi Aventis, R&D, in order to design and develop a software able to collect, and bring up analytics in form of Analytics Dashboard, in the field of Genetics: The researchers had in mind to try and use Data mining techniques.

The main requirements were:

- The software modularization: It should be easy to add more analysis modules, such as within a plugin model: The researchers wanted the ability to add custom analysis modules on demand.
- Moreover, the plugins must not require any change for deployment, except editing a configuration file, and a restart.

Duties and achievements:

- Java Development, UML analysis,
- MVC2 Architecture model, struts 2, Spring, Hibernate based implementation
- Configuration and Set up of Development environments: Eclipse , Maven, Nexus, SVN Subversion et ses plugins eclipse/tortoise.
- I conducted workshops to train 2 researchers for java development in that framework: they wanted to develop themselves the future analysis models, with the help of other contractyoirs when needed.
- I learned a bit about what epi-genetics is

> CPAM

Java Engineer SME
03/2009 – 11/2009

Project Context: Task management software in Java

Tech stack:
- *CI stack*: Tortoise SVN, Junit, Ant.
- *Dev stack*: Java Swing, Spring JUnit, Tom, Axis 2,Tomcat, Spring, Hibernate, Junit, Netbeans, Ant

The "CPAM", is somehow the equivalent of NIH in the USA. I was hired as a contractor, Java technology SME, in a team which was developing a task management and employee assessment software.

That software was made with Java Swing, and called a server using soap web-services (tomcat axis2), and SQL Server Database behind the scene.

All classical public administration needs, nothing fancy.

Duties and achievements:
- Training the Devs to Java Swing, Spring, Hibernate Frameworks
- UML / Use Cases based analysis
- Java Dev (I coded, I always get bored if i do not code), And was required to give my point of view for toics where the team members needed Java Tech expertise.
- I introduced JUnit Testing, and the concept of "acceptance tests" mirrored on Use Cases.

> Mnémosyne

.NET Developer
10/2008 – 12/2008

B2B MNEMOSYNE was a software vendor, which aimed at providing tools for Notaries, and the software had to bee capable of building digital documents recognized by the Law.
I there developed a C# ASP.NET search field auto-completion module.

Tech stack:
- *Dev stack:* Visual Studio, C# .NEt, ASP .NET Ajax, Telerik ASP.NET framework.

Duties and achievements:
- I there developed a C# ASP.NET search field auto-completion module, searched data were archived files and customer data.
- I learned on the Telerik Ajax Framework for ASP.NET.

> Ascott

Java & .Net Developer
06/ 2008 – 07/ 2008

Ascott was a French SMB consulting company, my first employer.
I worked for their main customer: the french SCOR corporation, which plays into a very specific financial filed: reinsurance.

I there completed a few minor small ASP.NET development tasks, and spent most of my time implementing reports to be executed in Crystal Report, in a Business Intelligence Project.

Tech stack:

- *Dev stack*: Crystal Reports XI for the BI project, ASP .NET ADO.NET, and IngresDB for the .NET project.

Duties and achievements:

- Design / Configuration of « Crystal Report » reports (SQL queries + report formatting), Information System integration, in collaboration with other consulting companies employees. Reports were integrated with Business Intelligence processing made by « SIMCORP Dimension »
- Developed a few ASP.NET pages using ADO.NET and specific ODBC driver to go and get data in a very old kind of Database named « Ingres »,
- I learned about IFRS standards, what is business intelligence, what reinsurence business is.

Education

2011	Software Architect Engineer Degree	AFCEPF, http://www.afcepf.fr/
2007	2 years Degree in IT engineering	AFPA Paris, https://www.afpa.fr/
2001	DEUG MIAS (Mathematics under graduation)	Paris 6 University, http://www.upmc.fr/en/
1999	DEUG SCVT, (Biochemistry under graduation)	Paris 6 University, http://www.upmc.fr/en/

Languages

Fluent English, school level German, a few words of Bulgarian, souvenirs of classic Ancient Greek.

And...

Jogging, trekking, fencing (sword, saber), trout fishing. An Trout Fishing, plus a bit of Trout Fishing (I LOVE Trout fishing:))