Philibert OLLIER

Cloud architect with extensive experience building scalable, data-driven platforms that bridge physical infrastructure with cloud technologies.

Passionate and always on the hunt for new technologies and solutions, I strive to anticipate tomorrow's problems and find **simple** solutions to them.

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Education

- **École 42** : 2014 / 2016
  - Software engineering
  - Cloud infrastructures
  - Security & Ethical Hacking
- **High School Diploma** : 2012
  - Embedded Electronic Systems
  - Telecommunications and Networks

Languages

- **French:** Native
- **English:** Professional
- **Workplaces**:
  - Remote
  - France
  - Spain
  - Poland
  - Morocco

Hobby

- Kite Surf
- Sailing
- DIY Home Automation
- Video Games
- HomeLab Servers
- Scuba Diving

Tech Skills & Tools I've worked with

Programming Languages

- **Python**: Data processing, API development, and automation
- **Bash**: Deployment, automation, and system management
- **C / Arduino**: Embedded systems programming, firmware development, low-level hardware control
- **PHP**: Legacy system maintenance
- **Assembly (x86-64)**: Security research, low-level debugging

Python Ecosystem

- **Web Frameworks**: FastAPI, Pydantic, asyncio for high-performance APIs
- **Data Processing**: Pandas, NumPy
- **ORM**: SQLModel, SQLAlchemy, Alembic
- **Task Processing**: Dask, Celery, Dagster
- **Dependency Management**: UV / Ruff for modern packaging and requirements management

Cloud Infrastructure

- **Infrastructure as Code**: Terraform, Pulumi, Ansible, CloudFormation
- **Cloud Providers**: AWS, Azure, GCP
- **Regional Providers**: Scaleway, OVH, Oracle Cloud
- **Serverless**: AWS Lambda, Azure Functions, Knative
- **Private Infrastructure**: OpenStack, Proxmox, VMware, HomeLab environments

Containerization & Orchestration

- **Container Technologies**: Docker / Snap for application packaging
- **Orchestration Platforms**: Kubernetes, OpenShift
- **Management Tools**: Rancher, Portainer
- **Edge Computing**: Azure IoT Edge, Portainer, Fabric, MicroK8S

DevOps & CI/CD

- **CI/CD Platforms**: GitLab CI, GitHub Actions, Azure DevOps
- **Workflow Orchestration**: Dagster, Windmill
- **Monitoring & Observability**: Grafana, Prometheus, Loki, Elastic Stack
- **Secret Management**: HashiCorp Vault, Azure KeyVault

Data Storage & Processing

- **Relational Databases**: PostgreSQL, MariaDB, MS SQL
- **NoSQL Databases**: MongoDB, Redis, Neo4j for graph data
- **Time-Series Databases**: InfluxDB, TimescaleDB, Prometheus
- **Processing Frameworks**: Dagster, Dask
- **Storage**: S3, Azure Blob, Parquet

IoT & Hardware

- **Protocols**: MQTT, OCPP for EV charging, MODBUS, CAN Bus, LoRaWAN
- **Hardware Platforms**: Raspberry Pi, BeagleBone, ESP32, Teltonika networking devices
- **Industrial Systems**: Fuel dispensers, ATGs, EV chargers, sensor networks
- **Edge Deployment**: Linux-based edge gateways, field-updatable firmware
- **Connectivity**: 3G,4G/5G cellular networks

Project Showcase

Fault-Tolerant Fuel Station Monitoring

Problem: Gas stations in remote areas with unreliable connectivity needed continuous operation.

Solution: Designed edge computing architecture with local storage and automatic sync capabilities.

Impact: Reduced data loss, improved operational availability across stations, and decreased manual interventions.

Scalable Time-Series Platform

Problem: Processing millions of metrics from field devices with fast query requirements.

Solution: Implemented multi-tier architecture with in-memory processing, time-series database optimization, and data lifecycle management.

Impact: Achieved responsive queries across daily data points and reduced storage costs.

Unified Asset Tracking Solution

Problem: Multi-national organization with diverse equipment fleet across multiple countries struggled with disparate tracking systems.

Solution: Developed cloud platform integrating Teltonika networking devices and custom firmware with geofencing capabilities.

Impact: Unified asset management, improved fleet utilization, and reduced equipment loss.

ESG Data Analytics Platform

Problem: Financial institutions needed to analyze environmental impact across investment portfolios.

Solution: Built data platform with version-controlled data pipelines and reproducible analysis workflows.

Impact: Enabled analysis of ESG data across multiple asset classes, reducing reporting time.

Fraud Detection System

Problem: Insurance company struggled with detecting complex fraud patterns across policy claims.

Solution: Implemented graph database (Neo4J) solution with relationship analysis algorithms and suspicious pattern detection.

Impact: Identified previously undetected fraud patterns, reducing fraud losses.

Multi-Region E-Learning Platform

Problem: Global consulting firm needed scalable platform for live video e-learning across regions.

Solution: Designed cloud architecture with multi-region replication, content distribution network, and auto-scaling capabilities.

Impact: Successfully supported concurrent users with live video streaming across regions.

CI/CD System for Robotics

Problem: Robotics development team needed consistent testing and deployment across hardware variants.

Solution: Implemented containerized CI/CD pipeline with hardware-in-the-loop testing, simulation environments, and automated deployment.

Impact: Reduced integration issues, shortened release cycles, and improved code quality through automated validation.

Work Experiences

February 2024 – Present

Madic Group | Cloud Architect

Project: IoT platform for fuel management and electric vehicle charging infrastructure

Cloud Architecture

- Development of cloud-to-edge solutions for monitoring 500+ gas station equipments
- Evolution of OCPP-compliant electric vehicle charging infrastructure supporting 50+ stations
- Python-based data processing system handling 1M+ daily metrics with sub-second query performance

Cost Reduction

- Implementation of asset tracking systems.
- Integration of Simbase MVNO for secure IoT device connectivity across 1,000+ devices, reducing costs by 85%
- Integration of Teltonika networking devices for reliable field connectivity with custom configurations

DevOps & Data Engineering

- CI/CD pipelines for Python and .NET microservices using Docker and GitHub Actions
- Real-time monitoring dashboards with Grafana
- Secure communication between 1,500+ field devices and cloud services with end-to-end encryption
- Terraform deployments for multi-environment infrastructure

Technical Leadership

- Integration of diverse hardware systems (fuel dispensers, Tank Gauges, EV chargers, IoT sensors) into unified platform
- Architecture design for telemetry collection on 500+ remote sites with offline capabilities
- Migration of legacy systems to modern cloud platform architecture
- Design and implementation of fleet management and asset tracking solution for 1,200+ assets worldwide

Key Projects

- **Hermes**: Integration of external supervision system into Madic solution processing 2M+ metrics daily
- **Simbase / Teltonika**: Overhaul of connectivity solution on the field for 1,500+ devices with 99%+ reliability
- **MagView**: Cloud monitoring platform for fuel stations with real-time telemetry across 8+ countries

December 2021 – May 2024

Oxia Initiative | Cloud Architect

Project: ESG data platform

Cloud Architecture

- Designed cloud platform processing 500GB+ of ESG data with analytics capabilities
- Migrated from on-premise to AWS, improving processing speed by 70% and reducing costs by 45%
- Implemented distributed data architecture handling 300+ simultaneous analytics workloads
- Established multi-region redundancy for critical financial services

DevOps & CI/CD

- Created end-to-end deployment pipelines with GitLab CI, cutting release cycles from weeks to hours
- Built version-controlled data pipeline system ensuring reproducible analytics across environments
- Orchestrated zero-downtime migration from OpenStack to AWS for business-critical systems
- Implemented role-based secret management supporting team members with audit capabilities

Development Environment

- Standardized developer environments with Docker, reducing onboarding time
- Created seamless local-to-cloud workflow for distributed and internationnal team collaboration
- Designed secure credential handling system for both local and cloud environments
- Built automated dataset synchronization integrated with version control and database schemas

February 2023 – July 2023

Wyca Robotics | Architect

Project: Support development and operations for robotics applications in logistics

CI / CD Pipelines GitLab CI

- Full robot virtualisation with various architecture and controller
- Dynamicaly link part of the pipeline with onboard real hardware and sub systems
- Support various CPU architecture
- Connectivity and FOTA on site

Dev environment

- Create ready to use tools for dev team
- Local dev virtualisation solution
- Move onboard workloads to Docker
- Secret management beetween cloud and robots usign GPG.

Onboard Engineering

- Network evolutions (Ethernet, CAN, MODBUS)
- Electrical engineering
- Computer specs & testing
- Monitoring and Metrics

January 2020 – October 2023

OuiCheck | Cloud Architect

Project: Quality control solution for McDonald's.

Cloud Architecture (AWS)

- Design, deployment, and maintenance of a multi-region AWS architecture.
- Kubernetes (EKS) multi-cluster, with one cluster per region.
- S3 storage.
- RDS database.
- Lambda functions.
- IoT architecture connected between sales locations and cloud services.

Infrastructure as Code (IaC)

- Infrastructure deployment and management using Terraform and Pulumi.
- Setup and maintenance of a CI/CD pipeline (for both infrastructure and application) with GitLab CI.
- Docker image artifact management.
- Secret management in the CI/CD pipeline using GPG encryption.

Scalability and Resilience

- Handling peak activity with auto-scaling using **Horizontal Pod Autoscaler** in Kubernetes.
- Leveraging Fargate to enable horizontal scaling of Kubernetes clusters.
- Managing cross-region asymmetry issues on AWS, including:
- Inter-region resilience.
- Service availability by Availability Zone (AZ).

Training and Support

- Training a team of data scientists to be autonomous in using the deployed infrastructure and tools.
- Providing support to company leadership by defining service offerings:
  - Analysis of operational constraints.
  - Assessment of service profitability.

March 2019 – September 2021

Boston Consulting Group | Cloud Architect

Project: Supported multiple consulting case with cloud and DevOps strategies.

Cloud Strategy and Architecture

- Multi cloud design & deploy tool across AWS, Azure, GCP, and Ali Cloud.
- Used Neo4J (graph DB) to optimize cloud solution selection.

Infrastructure as Code (IaC)

- Wrote Terraform and Ansible templates for different cloud providers.
- Set up multi-cloud deployment patterns.

CI/CD & Deployment

- Established CI/CD pipelines with GitLab-CI, Terraform, and Pulumi.
- Deployed Kubernetes setups (AKS, Spark clusters, Dask, Neo4J).

Scalability & E-Learning Platform

- Built a scalable internal e-learning platform capable of handling 700+ concurrent users with live video.

Big Data & Analytics platform

- Large scale processing of ESG data and analysis on Credit Agricole investements portfolio

March 2017 – September 2024

Hadrian Advisors | Cloud Architect

Project: Developed infrastructure to support data scientists and AI research.

Infrastructure Modernization

- Designed and modernized internal infrastructure.
- Deployed cloud services on Scaleway and AWS.

Data & AI Solutions

- Data/AI pipelines with Azure Databricks.
- Dask processing clusters
- Realtime financial market data ingestion and processing

Key Client Projects

- **Generali:** Fraud detection platform (Neo4J, Rancher Kubernetes, Synology/Minio).
- **SucDen:** Predictive analysis of sugar prices in Asia.

April 2018 – December 2018

Orange | Cloud Architect

Project: Developed a cloud and mobile app for Orange Poland.

Tasks

- Deployed cloud infrastructure (AWS, OpenStack, Kubernetes, OpenShift).
- Built and maintained CI/CD pipelines (GitLab, GoCD, Ansible).
- Managed logs using Elastic Stack.

Tech Stack: AWS, OpenStack, Kubernetes, Terraform, Elastic Stack, Ansible

June 2016 – December 2016

HyperCube Research | DevOps Engineer

Project: Developed a predictive analytics product using big data.

Tasks

- Deployed cloud infrastructure on AWS.
- Set up CI/CD pipelines with Jenkins and Ansible.

Tech Stack: AWS, Jenkins, Ansible, Terraform