

Peter Højfeldt Villadsen

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SHORT ABOUT PETER HØJFELDT VILLADSEN

My role at Nordcloud is Senior Cloud Architect and I have more than 30 years working experience in the IT industry. I gained expertise in many sectors, Telecom-, Finance-, Energy- and marketing- sectors. My TechLead and architect roles are based on a solid background primarily from backend development, but full stack development is also among my skills. I thrive in the consultant role based on many years of consultant expertise, both national and international.

I have taken on many roles - everything from developer, technical lead, DevOps, solution architect, technical architect and cloud architect. Based on my many years in developing software, I worked developing everything from Rating and Roaming systems in Telecom to Loyalty software in the marketing domain sector. Robustness and scalability are focus areas with special interest for him.

I have practical experience in "Lift & Shift" applications from "on premise" to cloud. I have a worked with modernizing applications to meet the criteria for an application to be cloud ready.

DevOps as a Mindset is important for me and I have a successful background in getting the development process automated from development to production phases, with none or only a few manual steps to be taken. I have worked with SRE principles and concepts making the infrastructure comply with SLA's, SLO's, SLI's and

created error budgets with full monitoring and alerting when budgets started to burnout

Besides the above, I have extensive expertise working with databases and integrations. I have development and design expertise in strangler pattern, event sourcing pattern and domain driven design.

SUMMARY

- Architecture
- Cloud Infrastructure Architecture
- Backend Development
- DevOps/SRE
- Full stack development

COURSES

- 2022 Terraform associate.
- 2022 Kubernetes Developer.
- 2021 Google Cloud Engineer, Linux Academy
- 2020 Google Kubernetes Engine Deep Dive, Linux Academy
- 2020 Deploying Resources to GCP with Terraform, Linux Academy
- 2020 Google Cloud Essentials, Linux Academy
- 2018 Mean Stack Developer, Udemy
- 2018 The Complete Node.js Developer Course, Udemy
- 2017 DevOps Essentials, Linux Academy
- 2017 AWS Solutions Architect, Linux Academy

WORK EXPERIENCE

05.2022 -	Nordcloud – Senior Cloud Architect
01.2022 - 04-2022	Cognizant – Senior Cloud Architect
06.2020 - 12.2021	Computas – Tech Lead & Senior Cloud Architect
04.2019 - 05.2020	SOS International - Lead DevOps
01.2018 - 03.2019	EnergiData A/S - Senior DevOps developer
03.2017 - 12.2017	Nordea - DevOps developer
12.2015 - 02.2017	Wunderman - Solution Architect
04.2015 - 11.2015	Dibs - Solution Architect
08.2014 - 03.2015	Wunderman - Senior Lead developer
04.2007 - 07.2014	Schantz A/S - Senior Developer
06.2003 - 03.2007	CDRator - Senior Developer
01.1992 - 05.2003	Sonofon (Telenor) - Senior Developer
06.1987 - 12.1991	KommuneData (KMD)

PROJECT EXPERIENCE

Nordcloud

Duration	08.2022 -
Role	Senior Cloud Architect
Project	Non refence customer

Major financial European institution. The client is a non-reference customer, and I am unfortunately not allowed to share any details about the project.

My role as a senior cloud architect include:

- Member of architect board
- Evaluate AWS services and cloud native services
- Develop solution using a high-speed cache
- Implement Kubernetes PoC (EKS)
- Member of CCoE group.

Technology and methods

AWS, EKS, EC2, S3, IAM, Terraform, Argo Workflows, Hazelcast, Java, AWS RDS, Oracle, Posgres, SNS, Pipelines, Event sourcing.

Cognizant

Duration	01.2022 - 04.2022
Role	Senior Cloud Architect
	Project Assessments for client in pipelines.

Ikea (Computas consultant)

Project	Cloud Excellences
Duration	10.2021 - 12.2021
Role	SRE Lead

Project

Implement SRE principles in Ikea.

<u>SRE Lead</u>

I was building a SRE model for the service mesh project. This model will be implemented in various development teams.

Currently he is working on SLI, SLO and error budgets.

Technology and methods

SRE, Splunk, SignalFX, GCP, Jira, GitHub

Aize (Computas consultant)

Project	Trim
Duration	12.2020 - 09.2021

Role Tech Lead, Technical architect, Senior developer

Project

Tag Register Interface Module manages a digital thread of structured data from external suppliers to a project. Built-in features for review and commenting with full traceability. The solution is role driven to ensure that the right people have access to the right data. TRIM contributes to a richer, higher quality Digital Twin.

<u>Tech Lead</u>

I advised architects, project managers and team in how solutions would impact the application. This contributed to project scoping, ease of estimations, redesigns and knowledge sharing.

Technical architect

As a Technical Architect I designed an event driven and micro service architecture. A solution that contributed to simplify and scale the old monolith application. I contributed to ease of onboarding new team members, that previously had a very steep learning curve.

Senior developer

As a Senior developer I took the lead of backend development and was referred as the person who glued everything together.

As senior I took the lead in getting the overview of a huge monolith application. Development of the Trim application had been on hold for many months and knowledge of architecture were lost.

As Senior, I contributed to knowledge sharing and advisory to developer team as well as new incoming junior developers.

I contributed to the daily ongoing development of Trim application. Many times, I developed the first bricks to a solution, so fellow developers could continue the development process.

Technology and methods

Google App Engine, Google Pub Sub, Google Cloud Run, Java 15, Java 8, MySQL, Git, GitLab, BitBucket

Computas

Project	Anthos Test Center
Duration	09.2020 - 11.2020
Role	Technical architect, DevOps

Project

A permanent Anthos competency center, to ensure that we are best suited to help customers in their modernization journey.

Not just sales slides, but real demos, real code & running environments.

Initially based on 6 scenarios, mirroring common customer needs.

Enables Computas own technical evaluation of the Anthos product offerings, advising customers on common issues and a platform for future sales work.

Technical architect

My main role in this project were using the architect role to design a test platform that can be used as a PoC in customer projects. I developed a custom Kubernetes service discovery application that filled the gap missing in Istio regarding service discovery in a multi cloud/cluster setup.

<u>DevOps</u>

As DevOps I worked with infrastructure as code. Main objective was to enable recreation of components in the cloud by versioned declarative files. Many of them with Terraform.

Automation by CI/CD was another objective in my work. Deployments to Kubernetes cluster using ACM.

Technology and methods

Kubernetes, Google Kubernetes Engine, HashiCorp Terraform, Git, Infrastructure As Code, Apigee, Google Anthos, Google ACM

Wind Power Lab (Computas Consultant)

Project	Wind Power Lab
Duration	06.2020 - 09.2020
Role	Solution architect, Scrum master, Tech Lead

Project

Wind Power Lab (WPL) assists partner and customers scoping repairs of wind turbine and related blades. The platform keeps track of defects and their status. It handles high resolution images and repairs. The solution gives a perfect overview of defects and saves many hours for customers not having to read huge pile of documents.

Solution is built on Google Cloud Platform and uses various associated cloud services.

Solution architect

Designing and scoping features. Among others he designed a complexed document upload solution. Criteria's such as multiple files and huge file sizes were part of the design, where security and information parsing between frontend and backend were important.

Scrum master

Plan and manage daily standup. Customer participated in the daily standup meetings, and he was focused on navigating between in house communication and customer communication. He was responsible for sprint planning with customer to select tasks and priorities.

Tech Lead

As a Tech Lead I advised and reviewed the solution with the team to make the solution as optimal as possible in conjunction with project scope.

Technology and methods

Agile methodologies, Scrum, Solution architecture, Project management, Google Cloud Platform, Angular, Google Cloud Storage, Microservices, Integration architecture

SOS International

Project	DevOps implementation
Duration	04.2019 - 05.2020
Role	DevOps, SRE, Back-end tech-lead/developer, Solution architect, Project management

Project

Implementation of DevOps mindset and DevOps technologies in a traditional IT organization. The organization was stocked in an old IT structure and the journey from a project start to a production ready application were extremely long.

My role was to design and implement CI/CD and implement DevOps mindset in the organization.

<u>DevOps</u>

As a DevOps role my main responsibility was designing and developing CI/CD processes. Focus areas were DevOps as a Mindset and automation of processes. I was placeholder for planning DevOps design with multiple development teams in two geographical locations. I cooperated with a traditional IT operational team to

automate phases in deployment.

I cooperated with product owners and project organization to make DevOps tasks a part of project scope.

Back-end tech-lead/developer

I developed PoC's as a guide for the development teams to help making applications containerized and ready for Lift & Shift to OpenShift/Kubernetes. As backend TechLead he guided development teams and did a lot of design reviews.

Solution architect

As a part of the DevOps journey a design and development were needed for tools and pipelines. I had the responsible to draw the lines for technical tools, pipelines and functional library that worked as a package with a lot of helper functions, to make life easier when implementing new CI/CD operations.

Project management

In project management role, I cooperated with development-, operations-, management and product owner teams. Main responsibility was to act as consultant in the project teams and plan the outcome in projects. This meant lot of communication to bring a decision to specific tasks.

Technology and methods

Red Hat Enterprise Linux, OpenShift, Java 8, Java 11, Node.js, Groovy, Ansible, PostgreSQL, Atlassian JIRA, Atlassian Bitbucket Server, Jenkins, Git, GitOps, Kubernetes

EnergiData AS

Project	Implement DevOps modernization
Duration	01.2018 - 04.2019
Role	Cloud Solution Architect/Developer, Devops, Technical architect, Project management, Full Stack Developer

Project

In this project an existing DevOps implementation needed modernization and robustness. Due to instability of many processed and services that were failing.

Cloud Solution Architect/Developer

I was responsible for the cloud architecture in AWS and Azure. I designed and developed an architecture to a scalable and robust infrastructure. I worked with VPC, tunnels, storage, computing instances matching the requirements for the microservice infrastructure. I developed a serverless solution too, which were designed as an event-based solution to serve integration requests from an external partner.

Devops

I had a main role as DevOps where I did modernization of existing DevOps implementation. I developed new features and automations. An important role was to guide and cooperate with the development team making sure that all were automated correctly.

I created a solution to keep the Kafka implementation scalable. Kafka were used in the event driven architecture and couldn't scale.

Technical architect

I had gained expertise in the existing DevOps implementation. I designed solutions to fixe existing issues and add new features. I succeeded to make a 100% automation from code commit to test and production deployment.

Project management

As project management role My tasks were to plan and prioritize tasks defined by the Technical Architect role. This was done in cooperation with management, project management and the development team.

Full Stack Developer

I was a part of developing applications in the company with the focus to modernize software from an old monolith to cloud ready software. I developed many PoC's as guidance of how to develop matching the DevOps implementation. A simple example could be how to do logging in #C and NodeJS.

Technology and methods

Node.js, Linux, AWS Cloud, Azure Cloud, Prometheus, Kong, Docker, PostgreSQL, Rancher, Grafana, Amazon EC2, Amazon S3, Amazon Simple Queue Service, Amazon Elastic Beanstalk, Amazon Web Services, Amazon Simple Notification Service, Amazon Elastic Load Balancer, Apache Kafka, Git, Atlassian Bitbucket Server, Shell Script, Microservices, Event-driven architecture, CI/CD, Build scripts, Pipeline

EnergiData AS

Project	Monitoring of infrastructure
Duration	01.2018 - 11.2018
Role	DevOps, Cloud Architect

Project

In this project we implemented a monitoring and alarm solution to keep a near 100% uptime. One major requirement was to get alarms before customer's experience an issue

EnergiData "MinEnergi2" solution has an uptime near 100%. The solution receives consumption measurements from 10000+ of remote energy meters. These measurements are sent from every second to an hourly basis. Missing measurements due to downtime could potentially have fatal consequences for companies that required an alarm if devices consumed too little or too much energy. This could be a cooling plant for groceries where missing consumption indicates no cooling.

DevOps/SRE

My task was to define and implement metrics in applications, databases and cloud infrastructure. Custom metrics in applications combined with standard metrics in cloud, databases, cluster and end points with low or high input.

I created a solution with Prometheus and Grafana, where all applications got a custom metrics solution implemented and these metrics were consumed by Prometheus. Besides that, I configured and enabled AWS and Azure infrastructure cloud metrics to be used by Grafana. I developed a heartbeat solution for all applications to be implemented in all microservices. This would trigger an alarm if an endpoint didn't have or had low heartbeat.

Part of the solution was to implement multiple monitoring boards in Grafana. Each board were designed to display information to developers, support and operation and management. If issues started, an alarm would be displayed, and emails would be sent.

I designed a successful solution reflecting SRE principles. Potential customers were given a guided tour in EnergiData offices by the CEO, to show how much control they had of the system.

Cloud Architect

I designed an approach to enable and collect metrics from AWS and Azure clouds. This included compute instances, storage, managed databases and services, billing.

Technology and methods

Prometheus, Grafana, AWS Cloud, Azure Cloud, Node.js, MS SQL Server, PostgreSQL, REST services, JSON, XML, DevOps, Elasticsearch, Git, CI/CD, Microservices

Nordea

Project	Modernize DevOps
Duration	03.2017 - 01.2018
Role	Devops

Project

Modernize the old DevOps implementation in which were designed with multiple Jenkins servers in front and too many shell scripts and integrations. Besides that, Nordea needed a design and development of new tools needed for a modern DevOps implementation.

<u>DevOps</u>

I designed an implementation of a containerized CI/CD infrastructure running on VM's Linux servers. This design was implemented for every tool and middleware used in the CI/CD infrastructure. I introduced a new logging framework. This was the ELK stack that was to replace an elderly logging solution.

Technology and methods

Java 8, Java 11, PostgreSQL, Jenkins, Shell Script, REST services, Atlassian Crowd, Atlassian Bitbucket, CI/CD

Wunderman Copenhagen

Project	Club Loyalty
Duration	08.2014 – 02.2015 and 12-2015 - 02.2017
Role	Lead Developer, Cloud architect, Solution architect, Go to Guy

Project

Club Loyalty is a system that rewards consumer with club points when buying an item. The system consists of many components - consuming purchase transactions from PoS systems, interaction with Omni Channel marketing systems, frontend where customers can maintain their interest's information and purchase club items by using rewarded points.

Lead Developer

I was responsible for coordinating of development tasks between members of the development team. As Lead developer I developed among others - domain model, scalable transaction flow, caching and barcode flow.

I thrived in the role of guiding, inspiring and motivating other team members, by introducing PoC's and new technologies in the solution.

Cloud architect

As a Cloud architect I designed the infrastructure and cloud services in the AWS Cloud. I implemented automation of compute instances by using Elastic Beanstalk. All infrastructure was scalable, but always had an eye on budget and costs.

Solution architect

I had the role as Solution architect.

I had the daily contact and coordination with project management and enterprise architect. I participated in meetings with customers and included their requirements and ideas in the design of new assignments. I did the initial breakdown of task in coordination with project management and team members. Among several solutions I designed and scoped: Cloud services, transaction flows, loyalty engine, integration points, Barcode caching, domain model and integration with other systems. E.g., Omni Channel systems like Adobe Campaign and Agillic.

<u>Go to Guy</u>

I had a role as the go to guy for Java development, databases and cloud infrastructure. This role was a part of the same role as lead developer but included all organization units and projects.

Technology and methods

Java 8, AWS Cloud, Amazon S3, Amazon EC2, Amazon Web Services, Amazon Elastic Beanstalk, MySQL, Git, Atlassian Bitbucket, Spring, Hibernate, Jenkins, Maven, SQL, JSON, XML, Postman, Retrofit, Lombok, ELK

Dibs

Project	Payment gateway
Duration	04.2015 – 12.2015.
Role	Tech-Lead and Solution Architect

Project

Development, design of a new cloud-based payment gateway/platform. Move solution from beta to production ready.

Solution Architect

Design Solution to be a cloud scalable payment platform. I created design, specification and a PoC. Design and PoC of a Circuit Breaker pattern on the solution. Design and PoC of an Enterprise Master Key that were within the boundaries of PCI certification. System insourcing. Project management coordination with Product Manager and Scum Master. Task specification.

Tech-Lead

As a Tech-Lead I was member of Dibs architect board, where we planned future solutions, and had discussions regarding current projects and designs.

Technology and methods

Java 8, AWS Cloud, Amazon S3, Amazon EC2, Amazon Web Services, Amazon Elastic Beanstalk, MySQL, Git, Atlassian Bitbucket, Spring, Hibernate, Maven, SQL, JSON, XML, Postman, Retrofit, Lombok, ELK

Schantz Data

Project	Schantz Life
Duration	01.2010 - 07.2014
Role	Lead Developer, Consultant

Project

Schantz Life is a pension system handling all administrative task related to pension. System has 3 major components, -Life, -Advice, -Web.

The Life component is an advanced engine, that do forecasts, administration, and integration do public authorities and financial partners.

Lead Developer

Peters' role was backend development and some web software development.

One of his biggest tasks was to design and develop a generic 'batch' engine, that could handle idempotent pattern and handling could handle serious integrations protocols.

Among other tasks he did development and maintenance of integrations to Danish public authorities and financial partners.

Development and maintenance of applications and tools to manage support and operation of the backend. Database administration.

Consultant

Consultant was one of Peter' roles. He had contact to public authorities, partners and customers. He did tasks for all parties and often on site.

Technology and methods

Java 8, HTML5, CSS3, Oracle, Spring, Hibernate, XML, JSON, Log4j, JUnit, Git, Maven, Apache Tomcat

Schantz Data

Project	Schantz insurance
Duration	07.2007 - 01.2010
Role	Consultant

Project

Schantz insurance is management system build on top on the Tia Systems. The system was basically an administration system with workflows using the Tia System engine. They could handle price calculation of policies, handle fraud and much more.

<u>Consultant</u>

I developed customized solutions for clients. The clients were both national and international. I worked onsite a lot the times developing side by side with customer requirements. In the consultant role I thrived in the role as client issue solver.

Technology and methods

Java, Oracle, SQL, PL/SQL

CDRator

Project	CDRator Billing
Duration	03.2003 - 07.2007
Role	Consultant, Senior Software Developer

Project

CDRator develops billing and customer care solutions for the telecom industry (MNO, MVNE and MVNO Service providers)

<u>Consultant</u>

As a consultant I took part in working with customers and do breakdown of tasks based on customer requirements. I was working onsite internationally. The role included parsing his knowledge in the Telecom sector.

Senior Software Developer

My task were mainly backend development tasks and telecom integrations tasks. I developed solutions for Rating, Roaming and provisioning of data from telecom provider and integration with simcard partners.

Technology and methods

Java, Oracle, SQL, PL/SQL

Sonofon

Project	Billing
Duration	03.1993 - 03.2003
Role	Developer

Project

As the new Telecom company in Denmark this project needs a new Billing and Rating system. The system was built during the early years of Sonofon startup.

Developer

My role was design and develop rating and roaming systems. My main responsible was the rating system in a team of 3. These systems require knowledge of network programming and Unix processing design. Especially the rating had to perform and handle all GSM phone calls and SMS'. Requirements to the system were 100% uptime, no errors and an ultra-stable setup. The system was developed in ANSI C.

Technology and methods

C, C++, Oracle, Maven, Shell Script, Mobile network, Unix, Linux

Sonofon

Project	GSM OMC
Duration	01.1992 - 05.1993
Role	System Developer, IT management

Project

As a new GSM telecom provider Sonofon were building their GSM infrastructure up. The OMC project consistent of several steps. One of them were to build the IT infrastructure of the OMC. The infrastructure consisted of hardware, software from Nokia and in house development.

*OMC is a GSM abbreviation for Operation and Maintenance Center.

System Developer

My roles were writing code and scripts need for the custom setup for the OMC.

IT management

My role as IT management in technical department were to align hardware investment with Sonofon management. Besides that, I had the contact to Nokia in Finland regarding OMC.

Technology and methods

C, Oracle Database, Shell Script, Unix, System administration, Mobile network

KMD A/S

Project	Library system
Duration	06.1987 -
Role	System Developer

Project

System for public libraries to handle members, books and registration of books in and out of library premises.

System Developer

My role as a system developer was to develop software that were hardware near and device drivers, as the

system were compatible on different hardware platform. This were incl. different variants of Unix platform, CCPM operating system. Handling of different network protocols and direct connections between devices and server. Another part of My job was to install the solution on customer sites.

Technology and methods

Pascal, Unix, C, Shell Script, Oracle, SQL

LANGUAGES

Danish written and oral – Native English written and oral – Fluent German written and oral – Some