



<CloudStack Collaboration Conference 2025>

# Migrating Kubernetes Workloads from Azure to a CloudStack based Cloud



<who we are>

# About myself

- 43 year old
- CEO & Founder sc synergy GmbH
- 20+ years of experience in software and IT solutions
- Open Source enthusiast
- Working with CloudStack for 5 years
- Outside of work: I enjoy long-distance motorbike riding — it keeps my mind sharp and my spirit free.



**Christian Reichert**  
CEO & Founder



<who we are>

# Your German cloud provider



- Experience as a infrastructure provider since 2005
- IaaS cloud & managed services at enterprise level
- Personal support & individual assistance
- Three state-of-the-art data centers in the Rhine-Main area
- Focus on IT security & performance
- Customers focus on their business - we focus on IT 🚀



# Product portfolio

01

## OpenCloud

Revolutionize your operations with scalable, secure and sovereign cloud solutions from sc synergy:

→ Public Cloud → Edge Cloud → Cloud Storage → Enterprise Cloud

[learn more →](#)

02

## Identity & Access- Management

Securely manage user identities and ensure access controls for reliable operations.

[learn more →](#)

03

## Managed & DevOps Service

Optimize your IT with tailored managed services and DevOps expertise:

→ Managed  
Kubernetes  
→ IT-Outsourcing  
→ Patching &  
Remediation

[learn more →](#)

04

## Connectivity

Seamless and reliable connections for your digital infrastructure:

→ Internet Access  
→ Campus Networks

[learn more →](#)

05

## Security

Comprehensive protection to secure your digital assets and maintain trust.

[learn more →](#)

06

## Data Protection

Protect your critical data with advanced recovery and backup solutions:

→ Disaster Recovery  
→ Backup

[learn more →](#)







## <Introduction & Motivation>

# Project Background

- 4 managed Kubernetes clusters in a hyperscaler environment (development, staging, production, and tooling)
- ~110 Persistent Volumes (~10 TB total) and 3.5 TB unstructured application data stored in Blob Storage
- VPC with VPN connectivity to end customer sides
- CI/CD pipelines strongly coupled with the provider ecosystem
- CI/CD based on
  - Terraform infrastructure definitions
  - Makefile-based workflow orchestrations
  - Travis CI automation pipelines
- Application dependencies on proprietary services that required re-engineering:
  - Azure Document Intelligence
  - Azure Bot Services



## 02 <Introduction & Motivation>

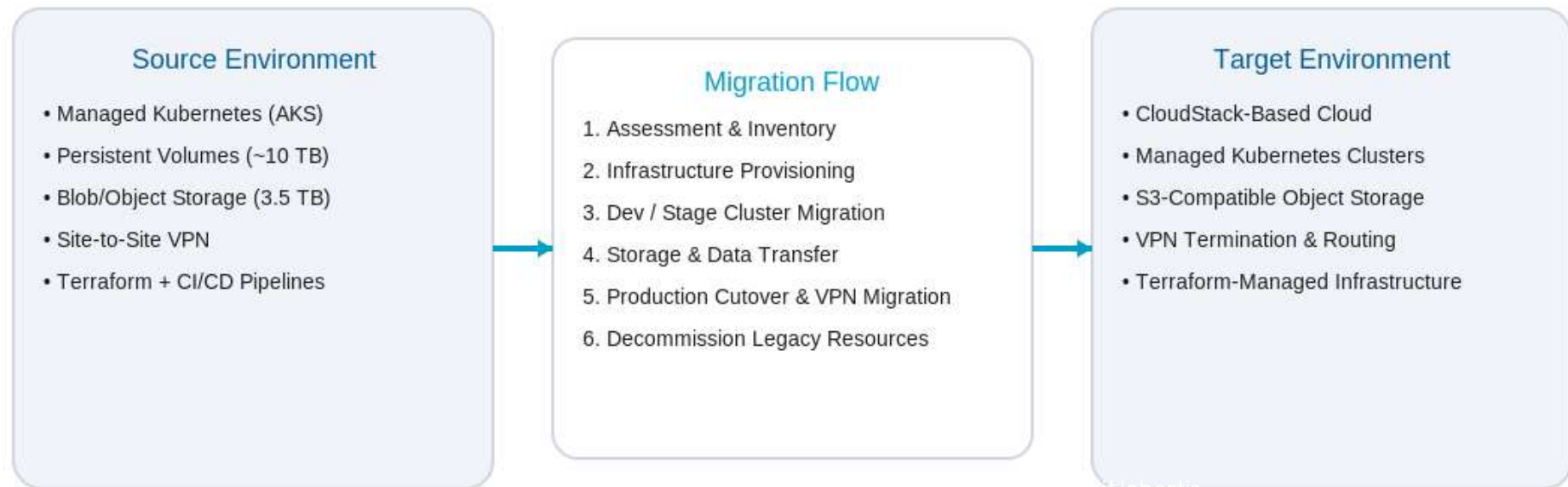
### Business Motivation

- Cost optimization & predictable billing
- Sovereignty & reduced dependency on proprietary cloud services
- Increased operational transparency & control
- Reuse of existing tooling (Terraform, Makefiles, CI/CD)
- Long-term flexibility through open-source and open standards





# High-Level Migration Architecture





## 02 <Migration Strategy & Execution>

### Key Challenges

- Refactoring applications to use S3 APIs instead of Azure SDKs
- Terraform modules containing provider-specific logic
- Differences in networking: load balancers, ingress, routing
- Replacing Azure-native PaaS services (Document Intelligence, Bot Services)
- Risk of downtime during data migration
- Training and change management for the team





## 02 <Migration Strategy & Execution>

### CI/CD & Infrastructure Automation

- Reuse of Makefile-based automation workflows
- Migrating Terraform provider configuration to CloudStack
- Adjusting Travis CI pipelines to new backend & secrets
- Migrating or reinitializing Terraform state safely
- Goal: preserve existing developer/operator workflows as much as possible



## 03 <Results & Outcomes>

### Lessons Learned

- Abstract cloud-specific configuration early
- Pilot migrations significantly reduce overall project risk
- Networking and storage require the most validation
- Expect hidden dependencies on managed cloud services
- Blue-green or parallel clusters enable safe migration paths



## 03 <Results & Outcomes>

### Results & Outcomes

- Successful staged migration across all environments
- Lower and more predictable operational costs
- Full ownership & visibility into infrastructure
- Improved flexibility and easier long-term scaling
- Neutral, open-source friendly ecosystem



## Conclusion

- CloudStack-based cloud environments are a strong alternative for Kubernetes workloads
- Both technical and business objectives can be met
- Open standards help avoid vendor lock-in
- Questions?





# Fill in the CloudStack User Survey

*Help us understand the CloudStack Ecosystem*





A Big Thanks,  
For Your Attention