



ECP

Erste Container Platform

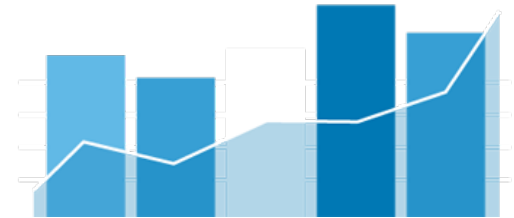
Reinhard Schilling
Martin Kaderabek

About s IT Solutions AT Spardat GmbH

Facts and Figures

More than just IT – more than 50 years of innovation for Erste Bank and Sparkassen

s IT Solutions AT Spardat GmbH is the Erste Bank and Sparkassen's IT solutions provider in Austria and is responsible for developing, implementing, supporting and servicing IT solutions for banking. Furthermore, s IT Solutions Austria is in charge of Erste Group's data centre operations and on-site technical service in Austria.



Facts & Figures

Turnover 2019
EUR 362 m

Employees
31 December 2019: 934

Headquarters

s IT Solutions AT Spardat GmbH
1110 Vienna, Geiselbergstraße 21-25

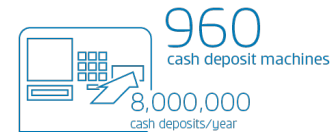
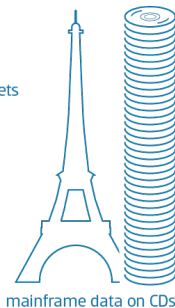
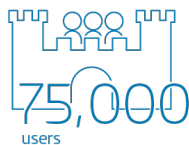
Tel.: +43 (0)5 0100 – 10400
Fax: +43 (0)5 0100 – 15704

Locations

Vienna
Graz
Innsbruck
Linz
Salzburg

About s IT Solutions AT Spardat GmbH

Facts and Figures



More information at:

<https://www.s-itsolutions.at/en/core-competencies>

<https://www.s-itsolutions.at/en/our-products>

<https://www.s-itsolutions.at/en/our-methods>

The early stages

History is the version of past events that people have decided to agree upon
Napoleon Bonaparte

Erste Container Platform

The Beginning



2000



2013



2015



2016

ChopSuey 1.0



2018



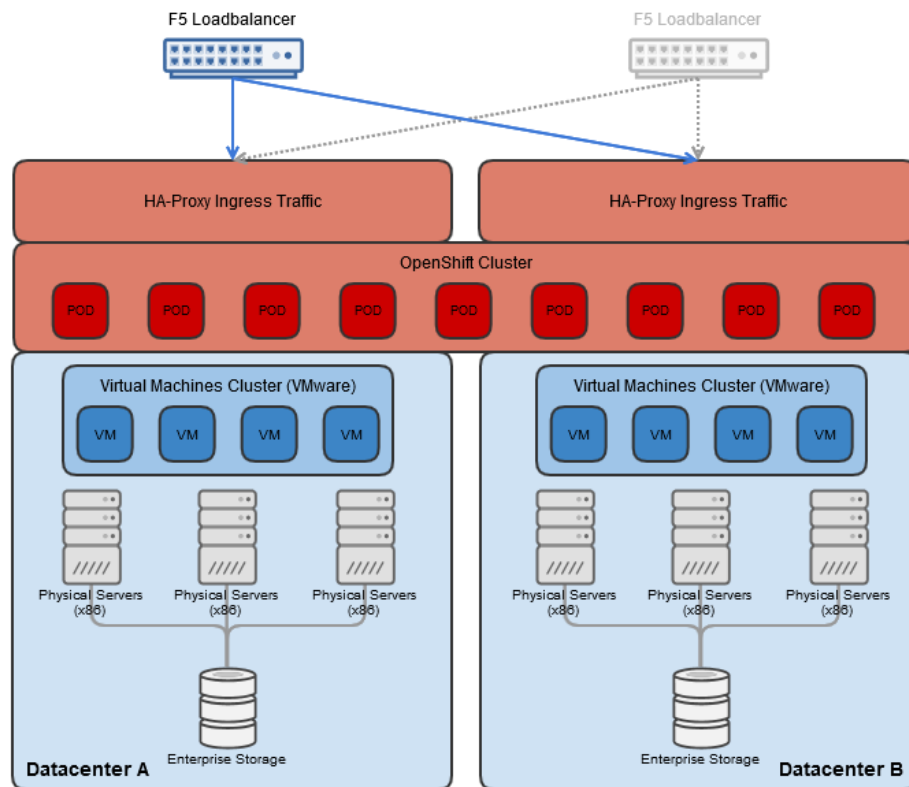
2019



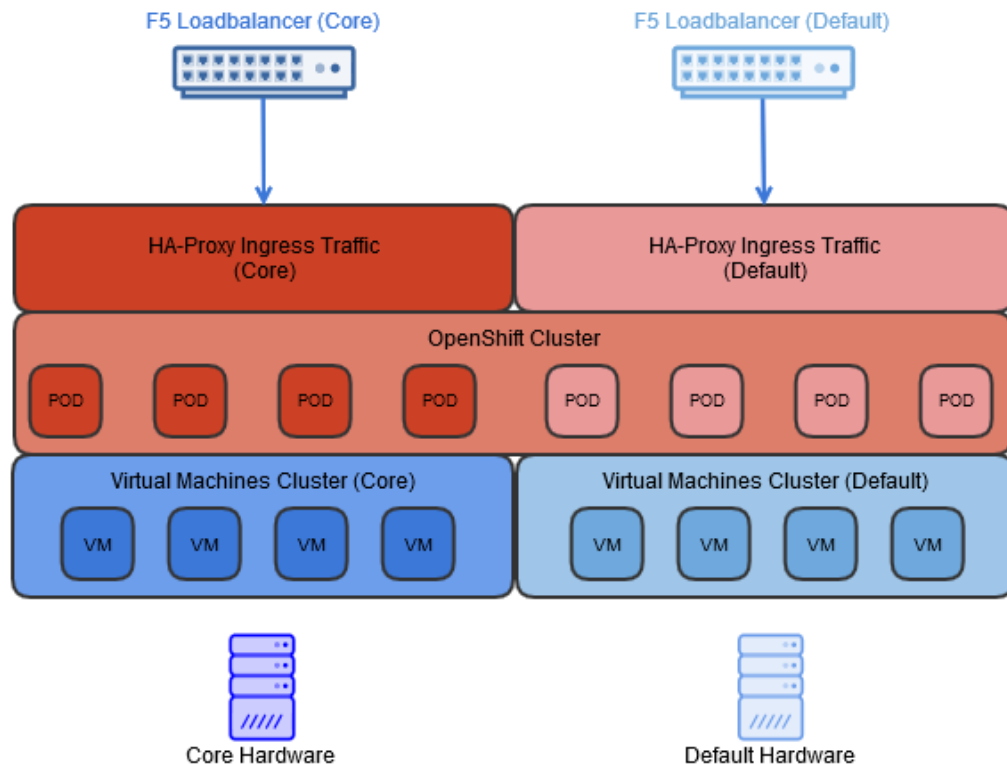
How does the architecture look like?

Architecture begins where engineering ends.
Walter Gropius

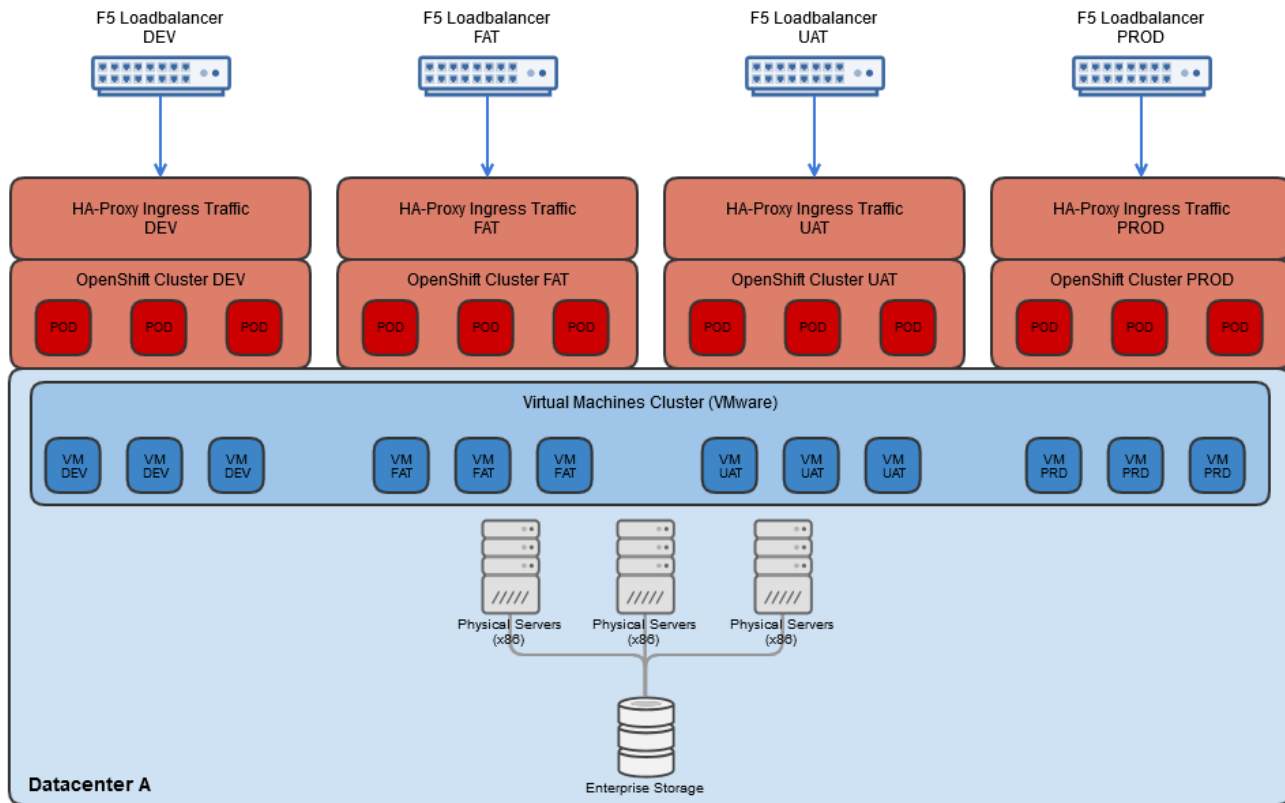
High level overview of the infrastructure



High level overview of a logical OpenShift cluster



High level overview of the environments



How developers use the Platform?

Rockets are cool. There's no getting around that.
Elon Musk

New Tools



Source Repository

The applications source code



Bitbucket



ChopSuey Toolbox

Image Repository

All the data needed to build the image

Used in OpenShift builds as source



GitLab

Config Repository

Environment dependent

Templates of:

- DeploymentConfigs
- Routes
- Services
- Secrets
- ConfigMaps
- ...



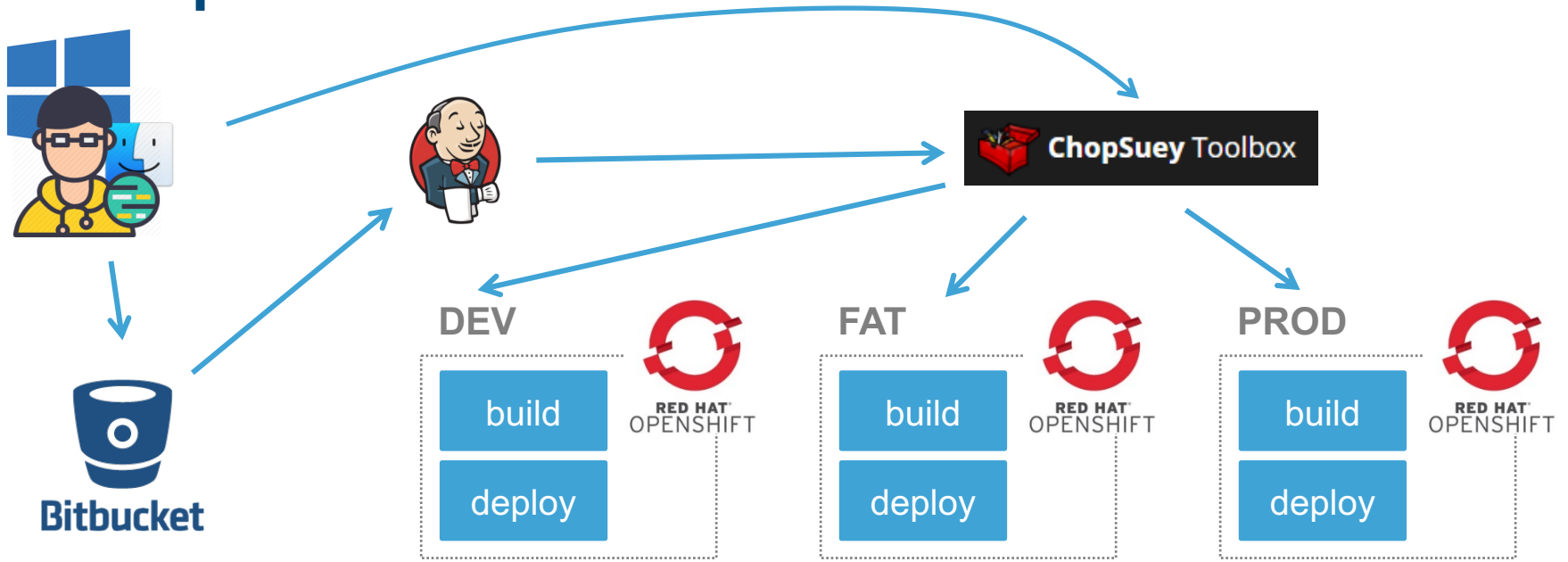
GitLab



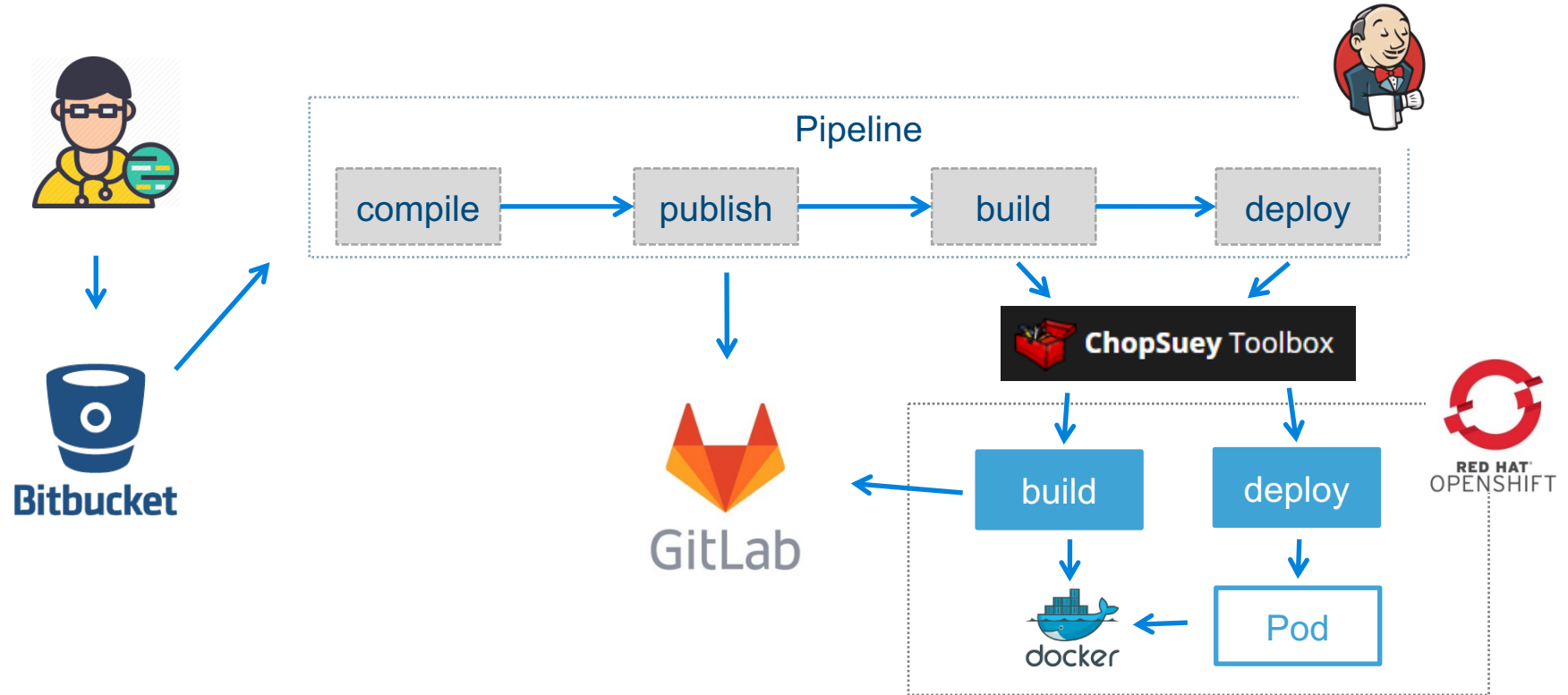
RED HAT
OPENSIFT



Development Process



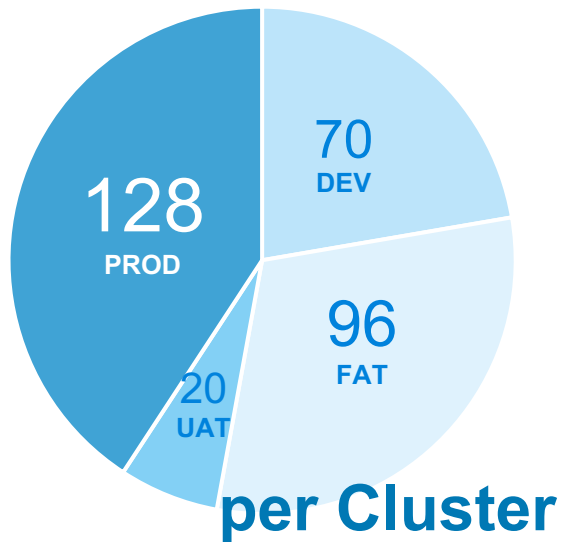
Delivery Pipeline



Some figures?

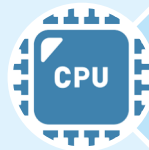
The secret of getting ahead is getting started.
Mark Twain

Compute Nodes

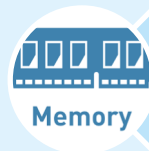


314
overall

Compute Node



8 vCores

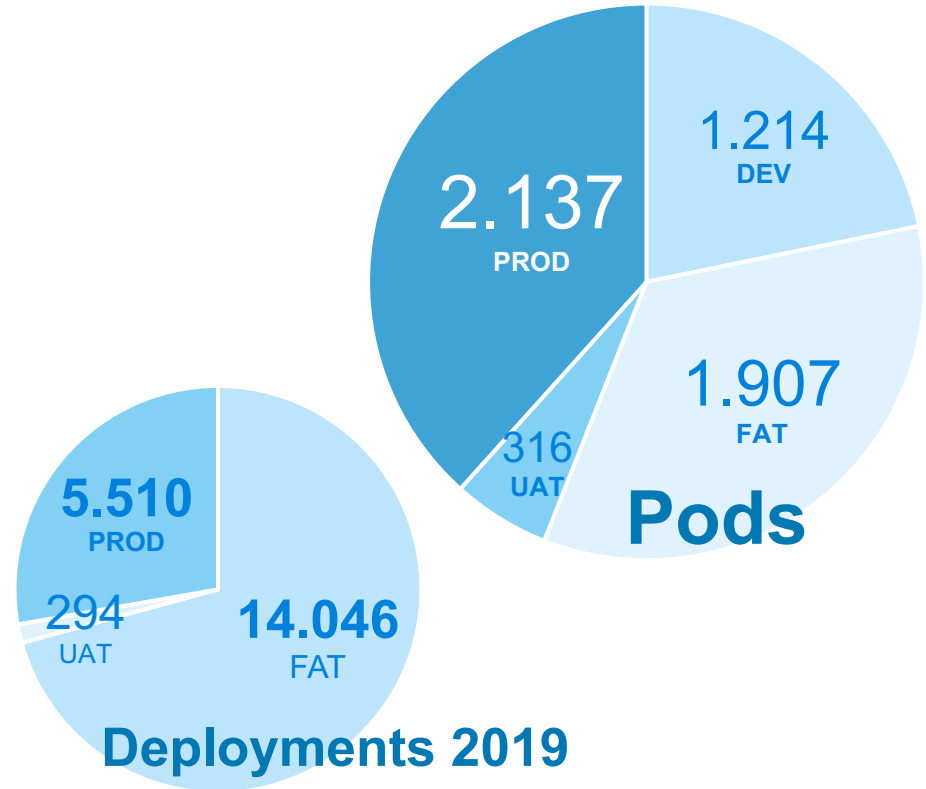
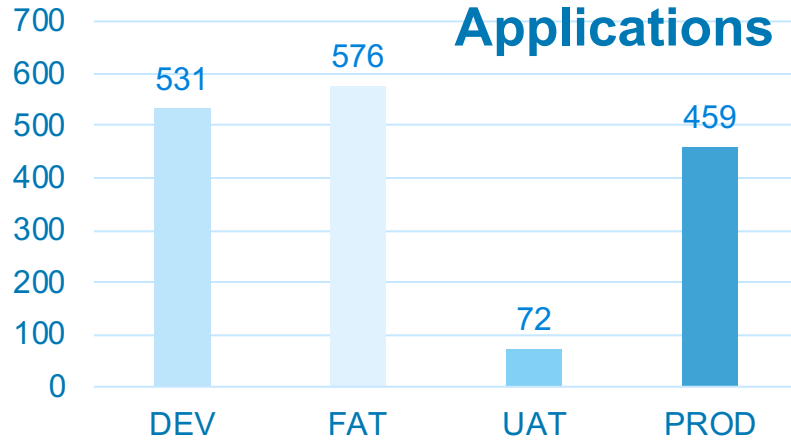


32 GB
RAM

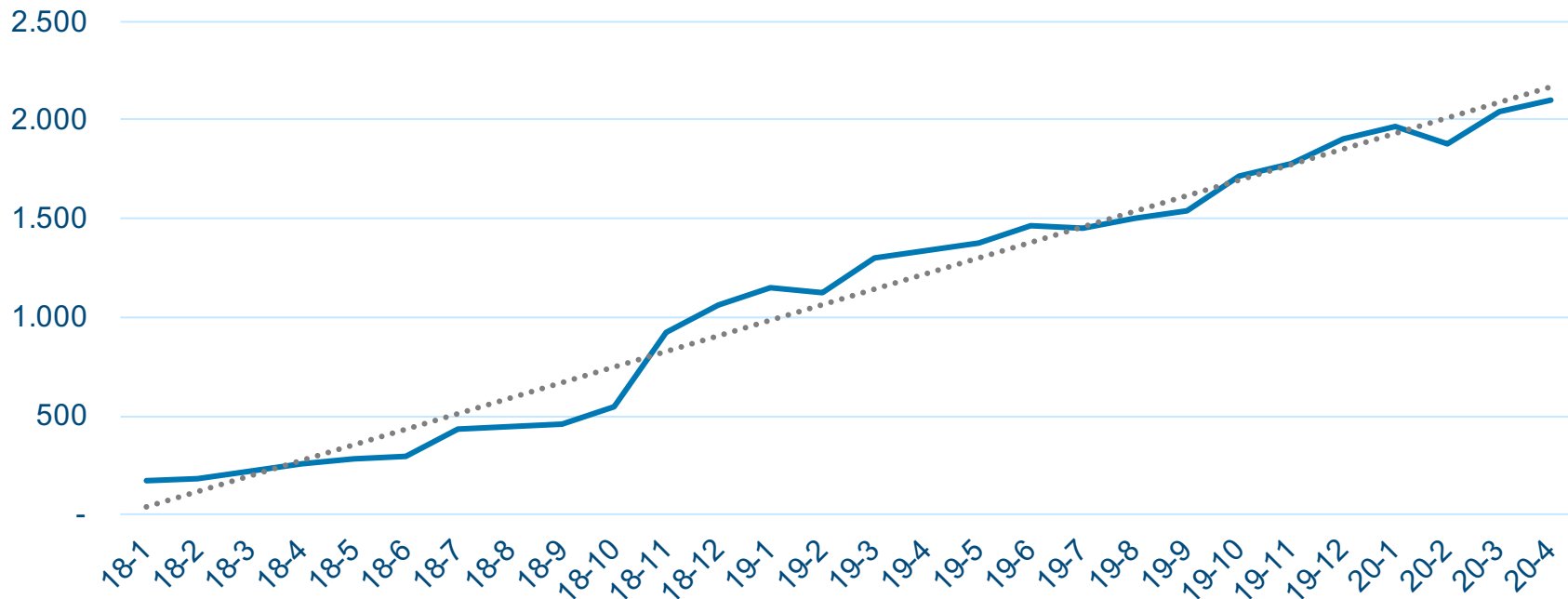


160 GB
Storage

Applications, Pods & Deployments



Memory Requested in GB



*) Requested Memory is the initial memory, a container get's started with. The max. amount of memory an application is allowed to use can be up to twice as high.

Why we are successfully?

Success is not final, failure is not fatal: it is the courage to continue that counts.

Winston Churchill

Success Story

Reason I



- A cross functional team is responsible for the platform operation and development of new features
 - The platform team consists of members from 4 different departments, ~1/2 from CTO (mainly focusing on ops) and ~1/2 from CIO (mainly focusing on dev)
 - Because of the involvement of CIO developers & software architects, together with CTO platform & ops experts, from the very beginning of the project, the focus was always to support the needs of our developers

Success Story

Reason II



- Developers love the platform
 - They can start working on a new project within minutes
 - They got much more power to control their projects, e.g.: performing deployments on their own, scaling up/down, ...
 - With more power comes more responsibility - They do understand this
 - Developer Community
 - We built up a community with >100 members from sIT and EGIT and it's still growing, which meets on a monthly base
 - We also installed 'Coaches' – developers with good knowledge about the platform and microservice architecture, they are happy to help their colleagues

Success Story

Reason III



- The platform is extremely stable
 - The platform is productive since 3 years
 - So far there was not one minute outage, neither planned nor unplanned
 - Several OS and OpenShift upgrades have been done, all of them rolling without an outage of the applications running on the platform
 - Software deployments are seamless
 - The platform supports Zero Downtime Deployments, and, if required, seamless roll-backs as well
 - Several hardware (ESX hosts) failures got mitigated completely transparently



Success Story

Reason IV



- Toolbox
 - It's a self-developed tool on top of the OpenShift platform, which integrates perfectly into our internal infrastructure and processes
 - Developers mainly work with this tool and hardly ever use the OpenShift UI
 - Toolbox supports:
 - Audit conform deployments
 - SSL Certificate management
 - Cost overview for Solution Managers
 - Configuration management between environments
 - Automatic generation of new projects, integration of code repository, generation of CI pipeline for supported frameworks, ...
 - Developers can submit feature requests, we put them in our backlog and implement them based on prioritization

What is on the Roadmap?

The future influences the present just as much as the past

Friedrich Nietzsche



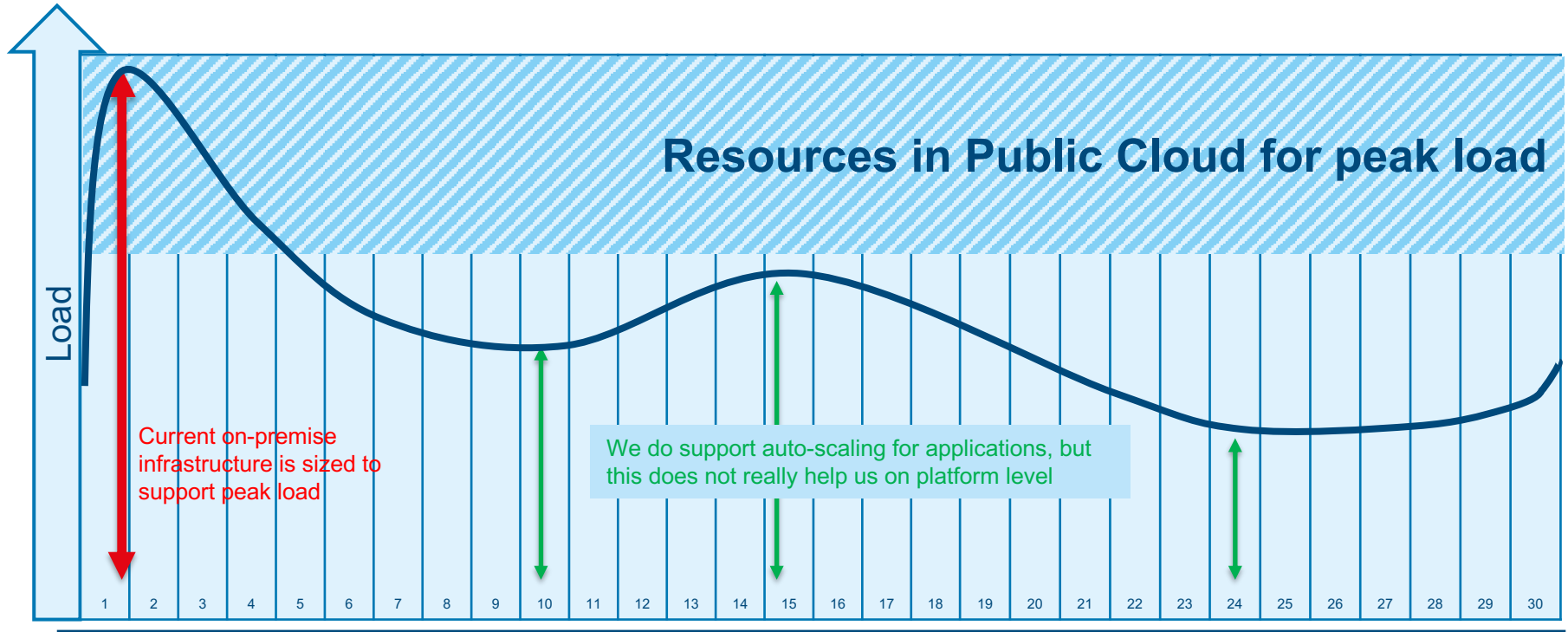
RED HAT®
OPENSHIFT

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What else?

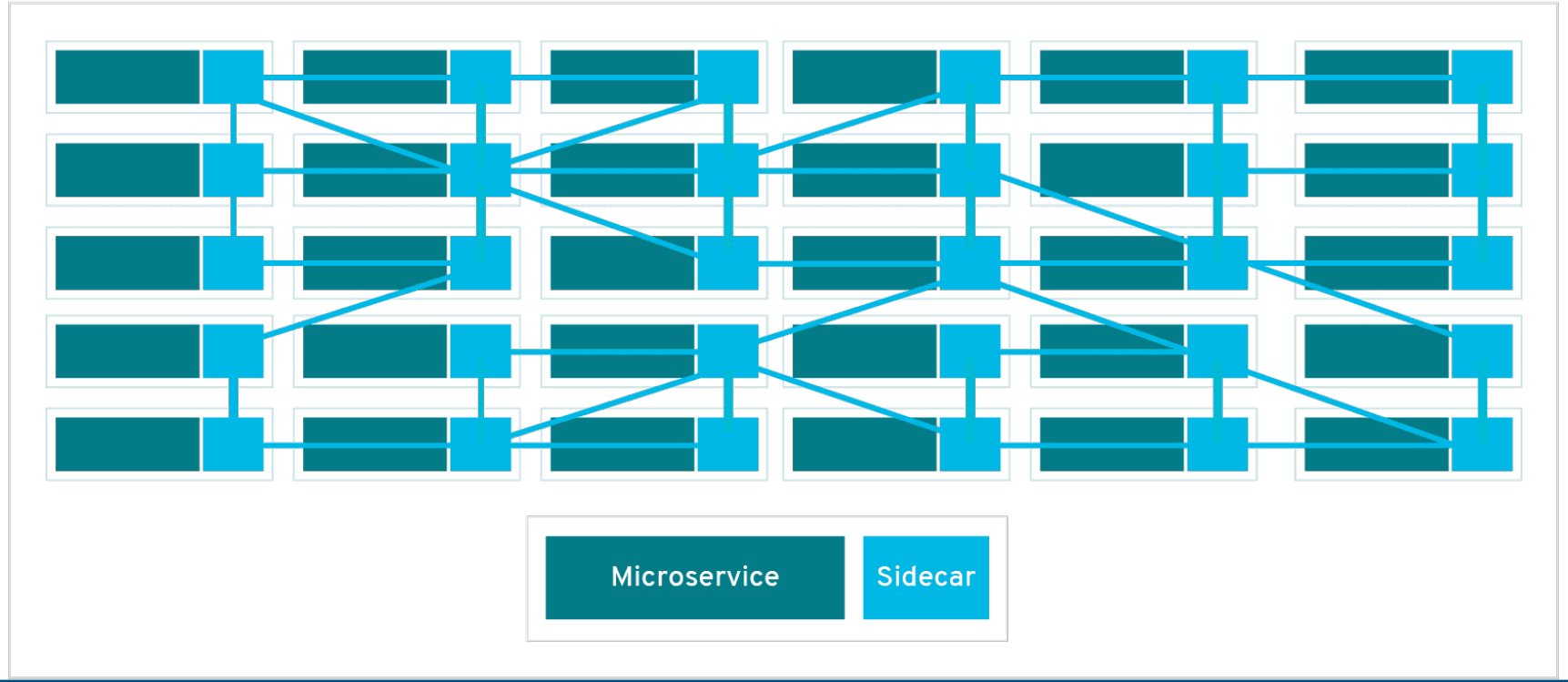
Roadmap

Hybrid Cloud



Roadmap

Service Mesh



Questions?

The power to question is the basis of all human progress.
Indira Gandhi