13th of June 2019

Maria Barta

Senior Service Manager

# CloudStack: A Service Managers Perspective

© 2016 itelligence classification: internal | version: 1.0

# About Me | Maria Barta

- Cloud Infrastructure Service Manager at itelligence since 2017
- Financial / people / project management background
- 10 years of project management experience
- No prior IT experience

twitter https://twitter.com/miabarta

LinkedIn https://www.linkedin.com/in/maria-barta-18489728/

Meetup german CloudStack user group – https://www.meetup.com/de-DE/german-CloudStack-user-group/

Ansible Meetup Dresden – https://www.meetup.com/de-DE/Ansible-Meetup-Dresden/

5/18/2017 © 2018 itelligence classification: public

# itelligence Worldwide in Numbers

## Founded

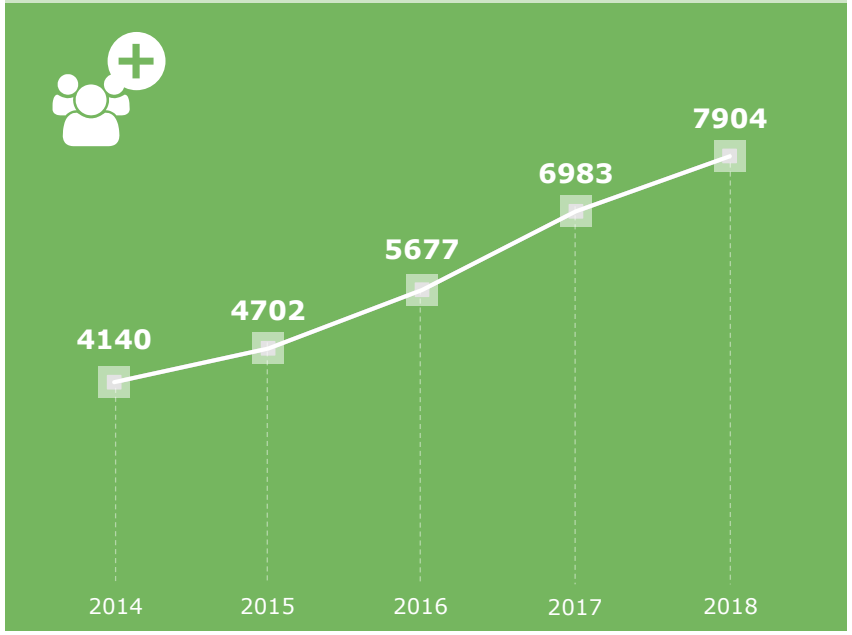
1989

## Employees

7,900+

(as of Dec 2018)

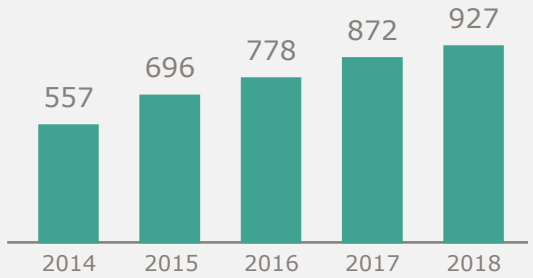
## Development of Headcount



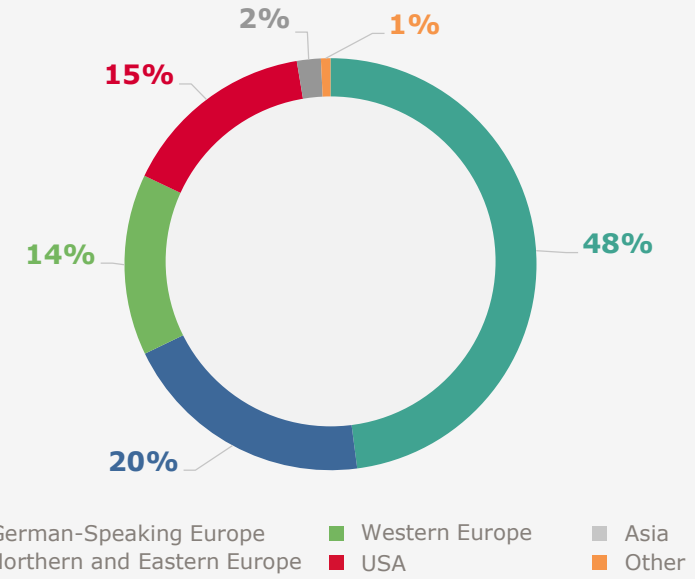

## Revenue

926.6 MEUR
(2018)

**Ø13,6%** Revenue Growth
CAGR over the past 5 years



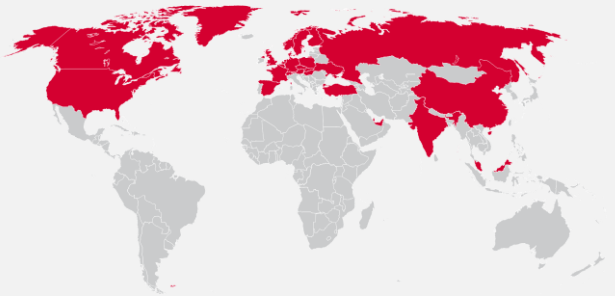

## Revenue per Region (2018)




## Customers

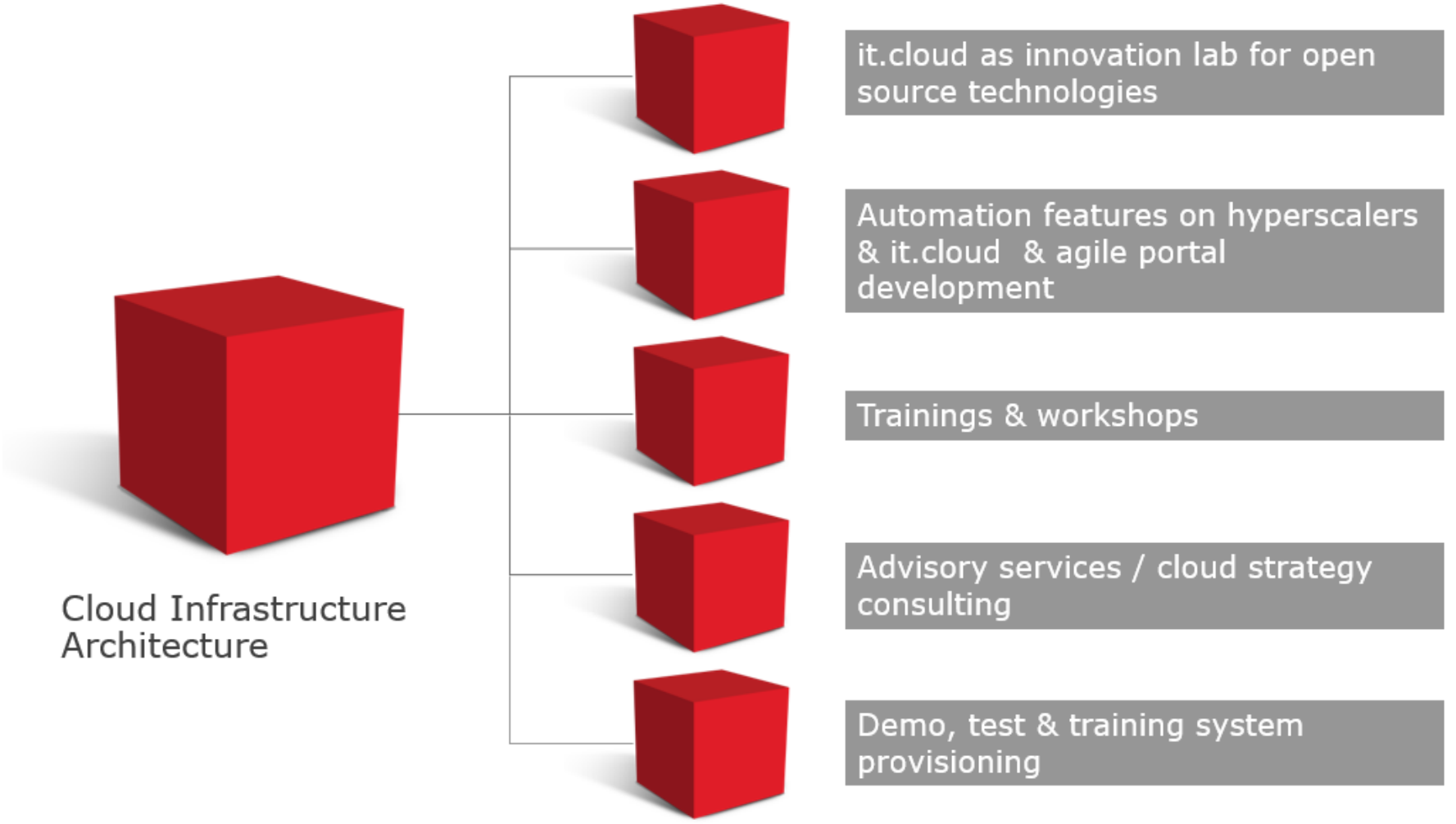
6,000+

## 25 Countries



© 2019 itelligence

# Cloud Infrastructure Services | Innovation areas




© 2016 itelligence

# Service | Automated managed cloud environment

## Brief Description of Service Product

- Fully managed private cloud environment for training, demonstration, development or testing purposes

## Technologies

- Cloud Management Platform for compute, storage, network: Cloudstack 4.11.2
- Automation framework: Ansible
- Authentication & authorisation: OpenLDAP
- Monitoring solution: Check_MK
- Hypervisor: KVM
- Cloud storage: Ceph

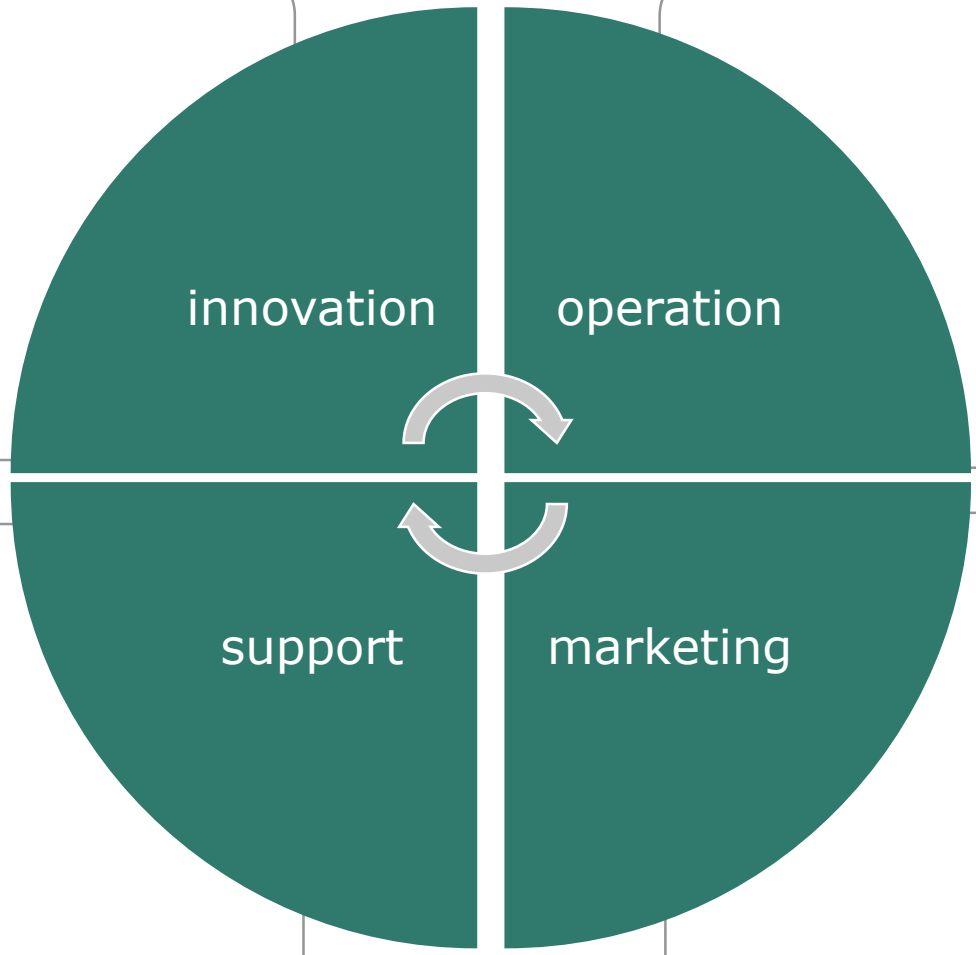
© 2017 itelligence

# Service Management

## Objectives & Expectations

# Service Manager | objectives

- Exploit new business opportunities – new service offerings
- Product optimisation – increase automation ratio
- Customer experience – agile portal development




- Project coordination & prioritisation
- Processes improvement
- Controlling and contracts
- Forecasting and capacity management

- Service Level Agreements
- Incident managements
- Customer satisfaction - Feedback on customer requirements

- Promotion of Open Source Technologies
- Internal expansion of own cloud solution - primary focus within itelligence

© 2017 itelligence

# Service Manager | customer satisfaction

- Transparency
  - Cost
  - Performance
  - Capacity

- Data Security
  - Availability/Stability
  - Data protection

- User Experience
  - Self service
  - User friendly
  - Scalability
  - SLAs

© 2017 itelligence

# CloudStack – cloud management platform

## Our best fit

# Cloudstack | #cloudstackworks for us

- Works for small operational teams
- Easy to upgrade - all in one software
- Great active community
- Usage reports
- Multi-tenancy
- Works well with other chosen open source technologies (Ceph, Ansible)

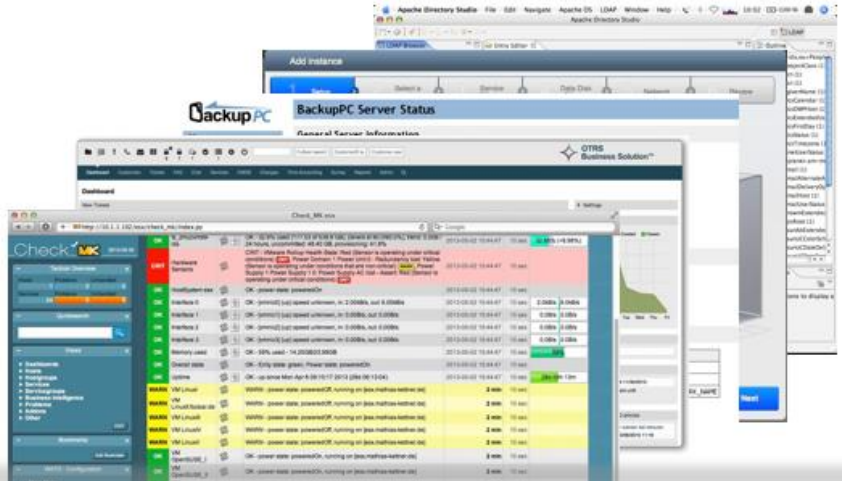
6/13/2019 © 2017 itelligence classification: internal

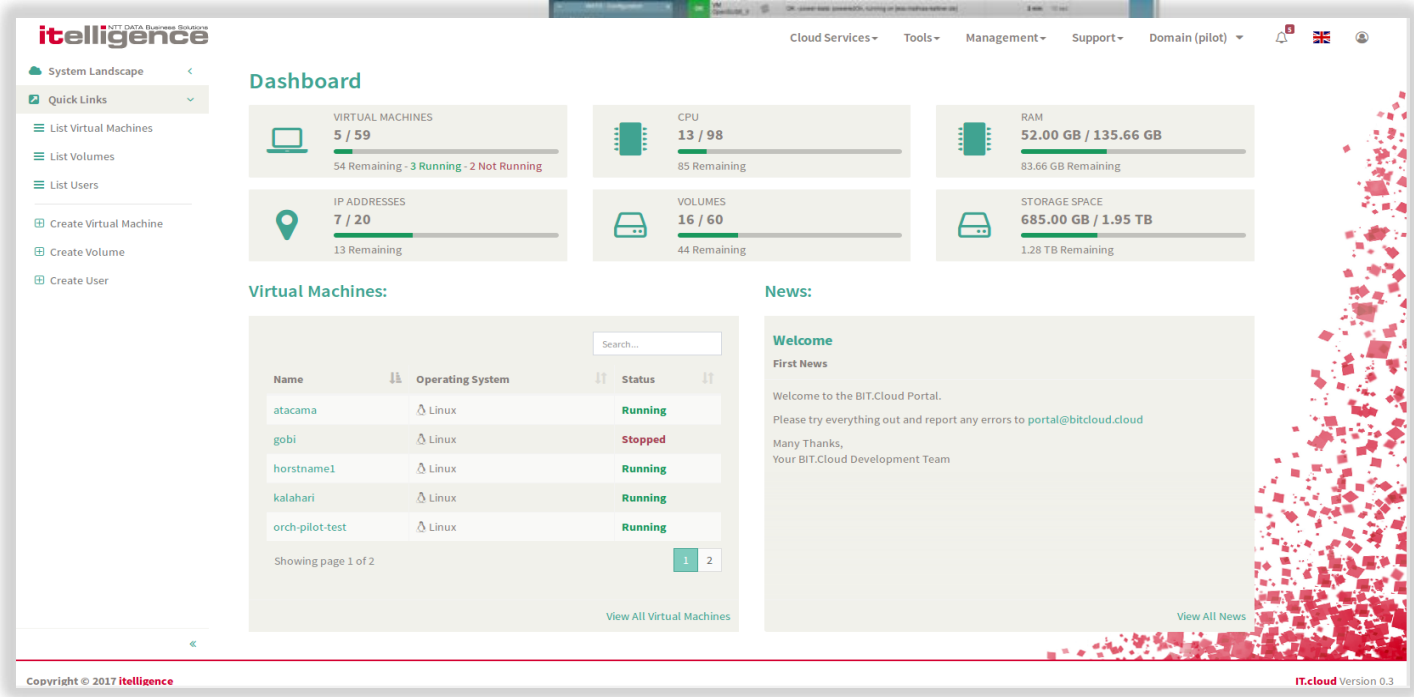
# Additional Enhancements

Our approach

# customer experience | Portal development

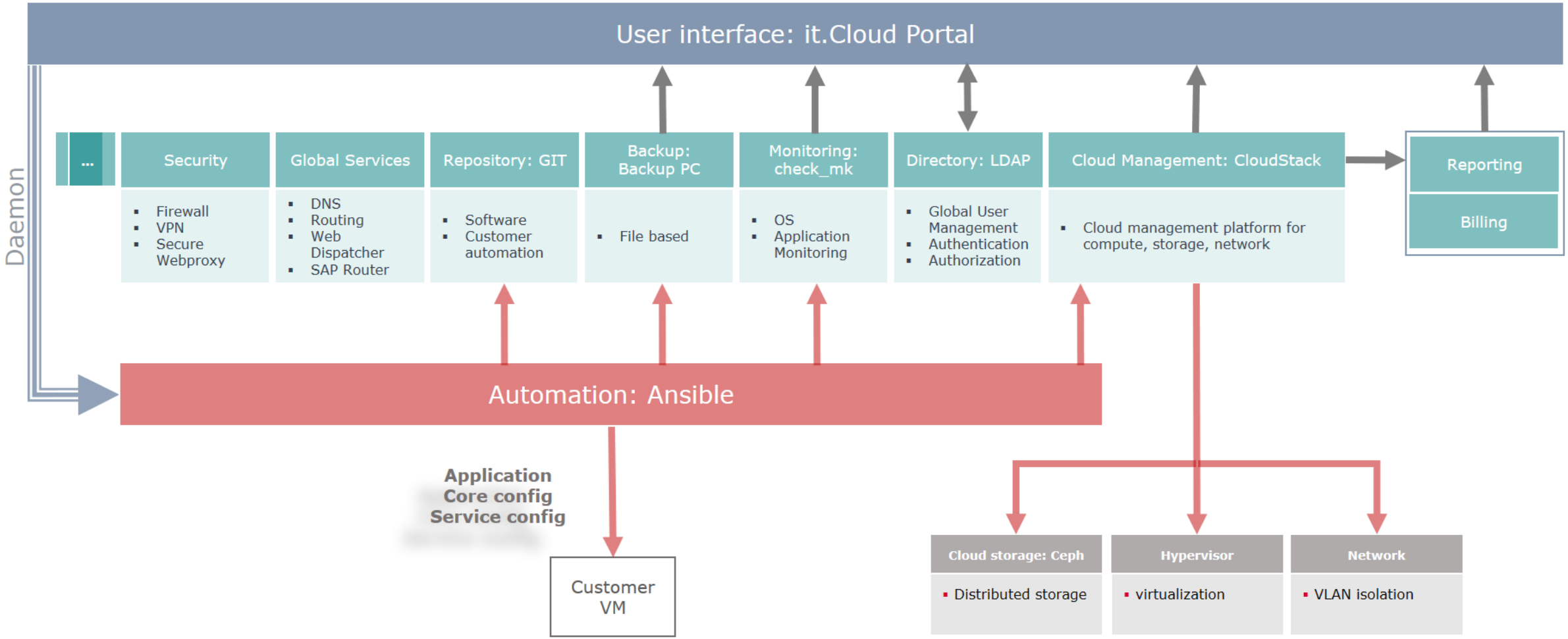
- Consolidate the varying systems with their individual design and functions
- Facilitate process automation
- Immediate availability and scalability of cloud environment
- User dashboard for autonomous infrastructure management
- Portal functionalities:
  - User management
  - Server management
  - Storage management
  - Firewall management
  - SAP Application installation




© 2016 itelligence

# it.Cloud| Architecture




© 2015 itelligence

# Service Manager | additional enhancements

- Customer experience
  - Self-service approach
  - Scalibitity/Flexibilty

→ Diversity of CS application : bugs visibility / priority

- Find the error
- Risk for SLAs & billing
- Work around

✓ Issue request placed and issue resolved in next merge request

✓ Follow Shape Blue upgrade path

© 2016 itelligence

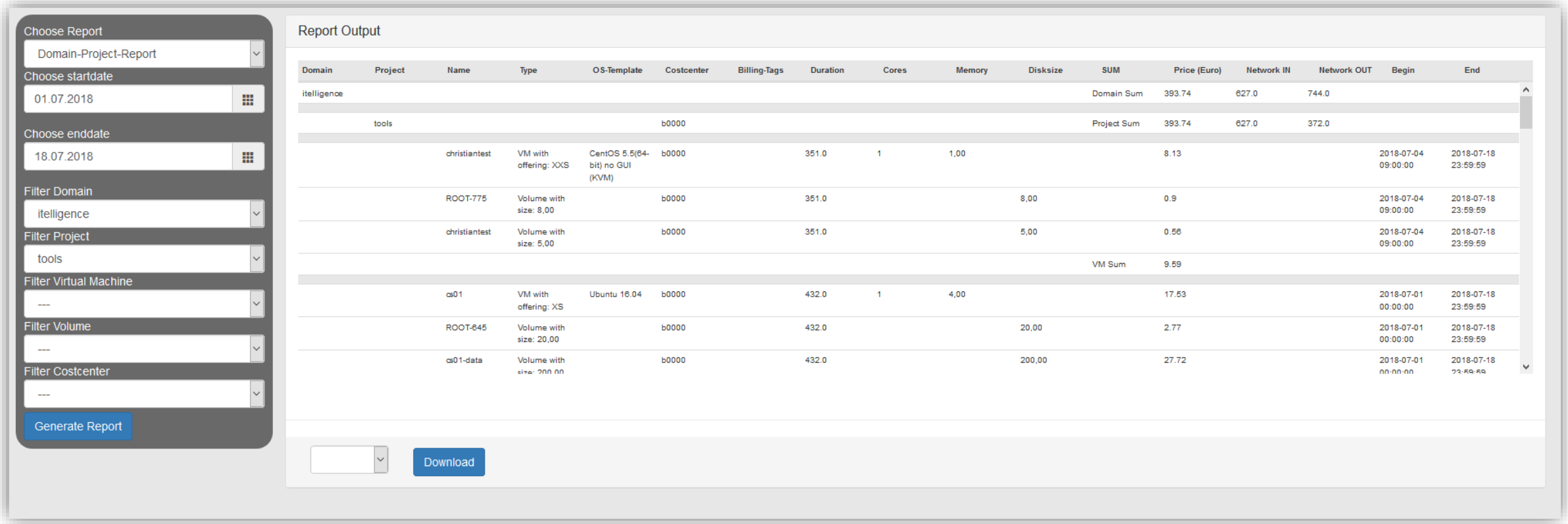
# Service Manager | additional enhancements

- Customer experience
  - Self-service approach
  - Scalibitity/Flexibilty
- Transparency
  - Invoicing

© 2016 itelligence

# Transparency | invoicing through billing tool

- Functions of Report-Module:
  - Selection of different report types and export to xls, csv (PDF planned)
  - Filtering: start, end, domain, project, vm, costcenter




| Domain | Project | Name | Type | OS-Template | Costcenter | Billing-Tags | Duration | Cores | Memory | Disksize | SUM | Price (Euro) | Network IN | Network OUT | Begin | End |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| itelligence | | | | | | | | | | | Domain Sum | 393.74 | 627.0 | 744.0 | | |
| | tools | | | | b0000 | | | | | | Project Sum | 393.74 | 627.0 | 372.0 | | |
| | | christiantest | VM with offering: XXS | CentOS 5.5(64-bit) no GUI (KVM) | b0000 | | 351.0 | 1 | 1,00 | | | 8.13 | | | 2018-07-04 09:00:00 | 2018-07-18 23:59:59 |
| | | ROOT-775 | Volume with size: 8,00 | | b0000 | | 351.0 | | | 8,00 | | 0.9 | | | 2018-07-04 09:00:00 | 2018-07-18 23:59:59 |
| | | christiantest | Volume with size: 5,00 | | b0000 | | 351.0 | | | 5,00 | | 0.56 | | | 2018-07-04 09:00:00 | 2018-07-18 23:59:59 |
| | | | | | | | | | | | VM Sum | 9.59 | | | | |
| | | cs01 | VM with offering: XS | Ubuntu 16.04 | b0000 | | 432.0 | 1 | 4,00 | | | 17.53 | | | 2018-07-01 00:00:00 | 2018-07-18 23:59:59 |
| | | ROOT-645 | Volume with size: 20,00 | | b0000 | | 432.0 | | | 20,00 | | 2.77 | | | 2018-07-01 00:00:00 | 2018-07-18 23:59:59 |
| | | cs01-data | Volume with size: 200,00 | | b0000 | | 432.0 | | | 200,00 | | 27.72 | | | 2018-07-01 00:00:00 | 2018-07-18 23:59:59 |

© 2017 itelligence classification: public

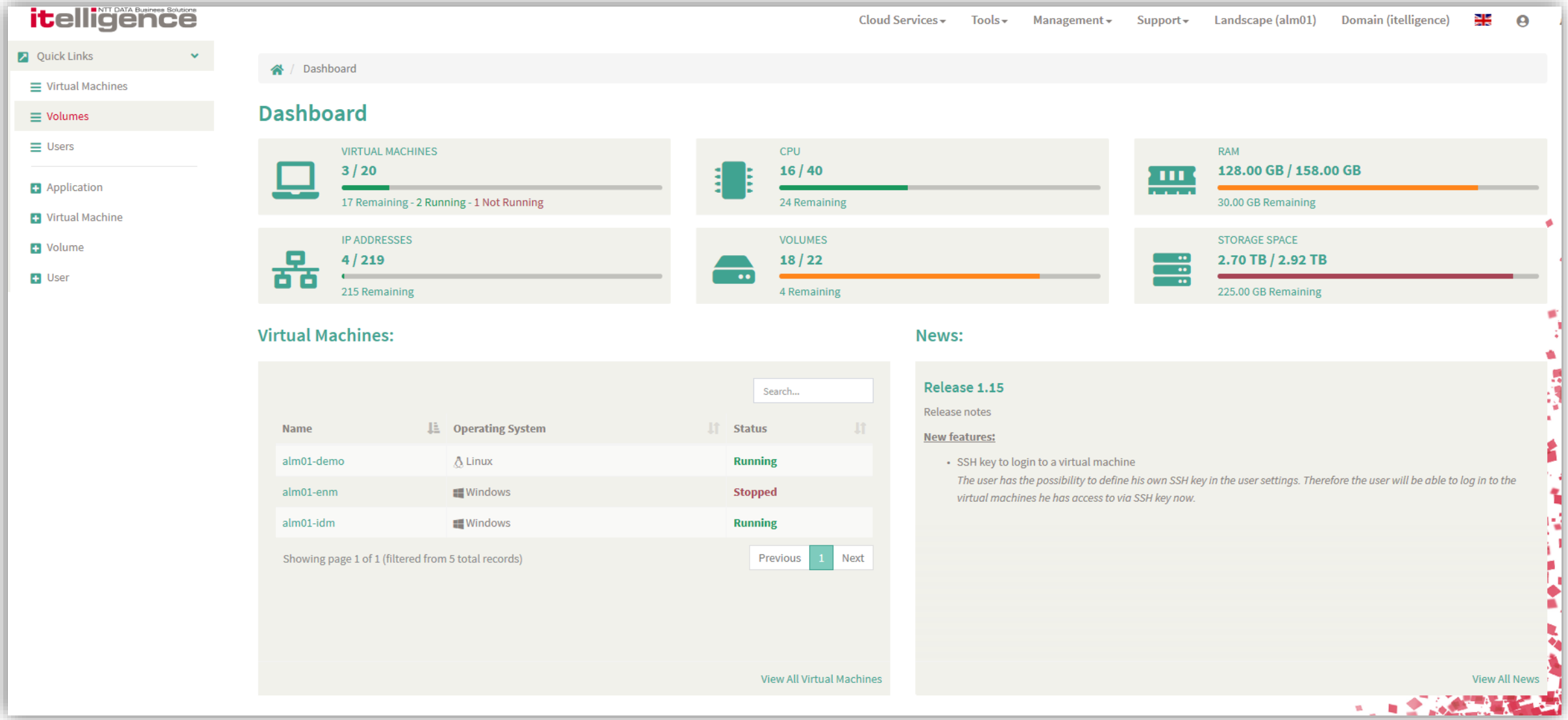
# Service Manager | additional enhancements

- Customer experience
  - Complex UI, therefore difficult to fulfill self-service approach
  - Scalibitity/Flexibilty

- Transparency
  - Exact invoicing
  - Quota

© 2016 itelligence

# Transparency | Quota view in portal dashboard




© 2016 itelligence classification: internal

# Service Manager | additional enhancements

- Customer experience
  - Complex UI, therefore difficult to fulfill self-service approach
  - Scalibitity/Flexibilty

- Transparency
  - Exact invoicing
  - Quota
  - Monitoring

© 2016 itelligence

# Transparency | monitoring

## Monitoring (23)

Search...

| Status | Check | Description | Last check | Age |
|---|---|---|---|---|
| OK | CPU load | OK - 15 min load 0.00 at 4 Cores (0.00 per Core) | 2019-06-11 16:31:53 | 362 days 23 h |
| OK | CPU utilization | OK - user: 0.1%, system: 0.3%, wait: 0.1%, steal: 0.0%, guest: 0.0%, total: 0.5% | 2019-06-11 16:31:53 | 362 days 23 h |
| OK | Disk IO SUMMARY | OK - Utilization: 0.1%, Read: 0.00 B/s, Write: 2.03 kB/s, Average Wait: 4.82 ms, Average Read Wait: 0.00 ms, Average Write Wait: 4.82 ms, Latency: 4.39 ms, Average Queue Length: 0.00 | 2019-06-11 16:31:53 | 362 days 23 h |
| OK | Filesystem / | OK - 14.0% used (5.50 of 39.24 GB), trend: +209.08 kB / 24 hours | 2019-06-11 16:31:53 | 362 days 23 h |
| OK | Filesystem /backup | OK - 1.89% used (2.26 of 119.94 GB), trend: 0.00 B / 24 hours | 2019-06-11 16:31:53 | 362 days 23 h |
| OK | Filesystem /repository | OK - 3.08% used (1.54 of 49.98 GB), trend: -9.70 MB / 24 hours | 2019-06-11 16:31:53 | 362 days 23 h |
| OK | Filesystem /usr/sap | OK - 0.063% used (32.16 MB of 49.98 GB), trend: 0.00 B / 24 hours | 2019-06-11 16:31:53 | 362 days 23 h |

© 2017 itelligence classification: internal

# Service Manager | additional enhancements

- Customer experience
  - Complex UI, therefore difficult to fulfill self-service approach
  - Scalibitity/Flexibilty
- Transparency
  - Exact invoicing
  - Quota
  - Monitoring
- Publicity
  - Recruiting challenges
  - Competitive situation

© 2016 itelligence

# Publicity| Our contribution

## CloudStack

- Meetup “German CloudStack User Group”
- CloudStack Collaboration Conference (CCC)
- Chemnitzer Linuxtage
- European CloudStack Usergroup

## Ansible

- Meetup „ansible Dresden“
- Extention of CloudStack modules

## AWS

- Meetup “AWS Dresden”

## Ceph

- Meetup “Ceph Dresden”

6/13/2019 © 2017 itelligence classification: internal

**Maria Barta**
Senior Service Manager - Cloud Implementation
Itelligence Global Managed Services GmbH
phone: +49 3591 52 53 1706 ▪ mobile: +49 151 824 6762
e-mail: maria.barta@itelligence.de

6/13/2019 © 2016 itelligence classification: internal | author: Max Mustermann | version: 1.0

# Copyright itelligence AG - All rights reserved

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of itelligence AG. The information contained herein may be changed without prior notice.

Some software products marketed by itelligence AG and its distributors contain proprietary software components of other software vendors. All product and service names mentioned and associated logos displayed are the trademarks of their respective companies. Data contained in this document serves informational purposes only. National product specifications may vary.

The information in this document is proprietary to itelligence. This document is a preliminary version and not subject to your license agreement or any other agreement with itelligence. This document contains only intended strategies, developments and product functionalities and is not intended to be binding upon itelligence to any particular course of business, product strategy, and/or development. itelligence assumes no responsibility for errors or omissions in this document. itelligence does not warrant the accuracy or completeness of the information, text, graphics, links, or other items contained within this material. This document is provided without a warranty of any kind, either express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, or non-infringement.

itelligence shall have no liability for damages of any kind including without limitation direct, special, indirect, or consequential damages that may result from the use of these materials. This limitation shall not apply in cases of intent or gross negligence.

The statutory liability for personal injury and defective products is not affected. itelligence has no control over the information that you may access through the use of hot links contained in these materials and does not endorse your use of third-party Web pages nor provide any warranty whatsoever relating to third-party Web pages.