

A marketplace for e-Infrastructure services

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e-IRG Workshop

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Background

- ✓ Relevant 2-page document - <http://bit.ly/1Sgbjhb>
 - ✓ *DATE: 2 DECEMBER 2014*
- ✓ Written as input to EC Consultation for Work Programme 2016-17/e-Infra part
- ✓ Document supported by e-IRGSP4 (support programme of e-IRG)
 - ✓ Part of [e-IRG LinkedIn Group](#)
- ✓ Disclaimer: Does not necessarily reflect the views of e-IRGSP4 partners or e-IRG



Main idea

- ✓ A concrete step towards e-Infra **services integration**
- ✓ Towards the **e-Infrastructure Commons 2020**
 - ✓ Integrated living ecosystem of resources & services
 - ✓ Open, user friendly, accessible to EU researchers
 - ✓ Continuously adapting to user needs (e.g. RIs)
 - ✓ Summary of the e-Infra Commons:
 - ✓ <http://e-irg.eu/documents/10920/290578/e-Infrastructure+Commons+summary.pdf/>
- ✓ EU Open Science Cloud (instantiation of e-Infra Commons)
part of [EU Digital Single Market](#) related [EC Communication](#)
 - ✓ *“The Commission will launch a European Cloud initiative including cloud services certification, contracts, switching of cloud services providers and a **research open science cloud**”*

#OpenScienceCloud joint paper

✓ By EGI, EUDAT, GEANT, LIBER, OpenAIRE

✓ <https://t.co/s6dgWw5U8f>

✓ Presented at EGI Community Forum – Open Science Cloud workshop

✓ 8 main points

✓ Publicly funded-governed, Research-centric, Comprehensive, Diverse-Distributed, Interoperable, Service-Oriented, Social

✓ Missing:

✓ One-stop-shop for users: catalogue of services + access

✓ Industrial services



What is a marketplace for researchers?

- ✓ A place for researchers to find all services they need
- ✓ A service catalogue and/or store
 - ✓ Search/find info and/or Access to the services/Install software
 - ✓ Networking, Computing, Data, Middleware-Software, other services
- ✓ Both from e-Infra and Commercial Service Providers
 - ✓ Commodity services can be provided by commercial providers

→ Integral part of the e-Infra Commons/Open Science Cloud

Examples

✓ UK Gov Digital Marketplace

- ✓ Previously G-Cloud ServiceStore
- ✓ <https://www.digitalmarketplace.service.gov.uk/>

✓ Microsoft Azure Marketplace

- ✓ <https://azure.microsoft.com/en-us/marketplace/>

✓ BT/Strategic Service Store

✓ HelixNebula AppStore on cloud services


- ✓ <https://bb1.hnx.helix-nebula.eu/appstore>
- ✓ Also referred to from the EIROForum paper

✓ Major e-Infrastructure projects (such as EGI, EUDAT) also working towards this direction



Gov.uk Digital Marketplace

✓ Not only services/apps but also find technology/support, buy data centre space, find experts...

 **GOV.UK**

Digital Marketplace
Supplier login Create supplier account

BETA This is a [beta service](#) – please send your feedback to enquiries@digitalmarketplace.service.gov.uk


Digital Marketplace

Find technology or people for digital projects in the public sector

[Find cloud technology and support](#)
eg web hosting or IT health checks
Procurement framework: [G-Cloud](#)

[Buy physical datacentre space for legacy systems](#)
Procurement framework: [Crown Hosting Data Centres](#)

[Find specialists to work on digital projects](#)
eg technical architects and user researchers
Procurement framework: [Digital Services](#)

 **GOV.UK**

Digital Marketplace
Supplier login Create supplier account

BETA This is a [beta service](#) – please send your feedback to enquiries@digitalmarketplace.service.gov.uk

[Digital Marketplace](#) > [Cloud technology and support](#) > Infrastructure as a Service

Search results

Choose a category
[All categories](#)
[Software as a Service](#)
[Platform as a Service](#)
Infrastructure as a Service
[Specialist Cloud Services](#)

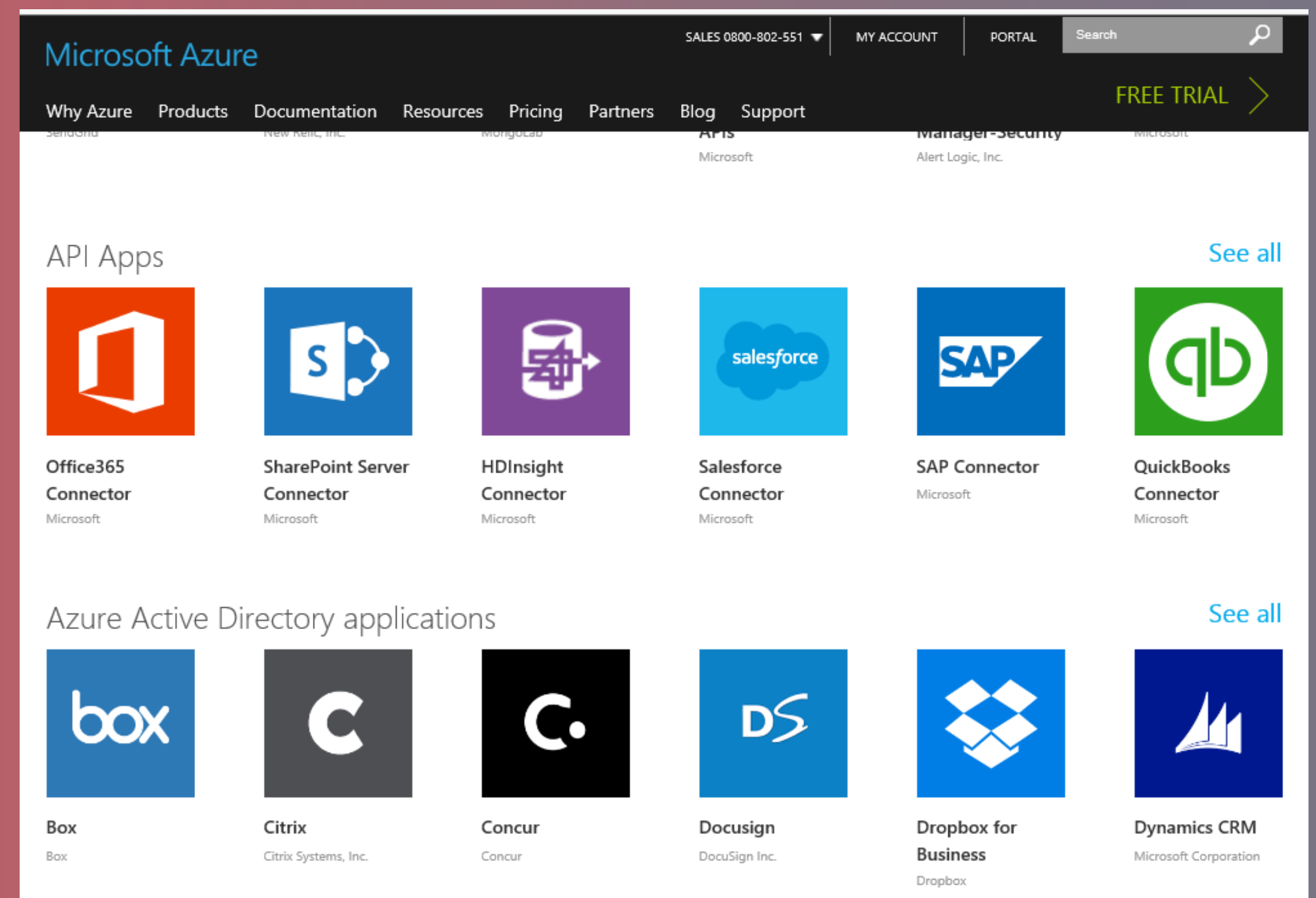
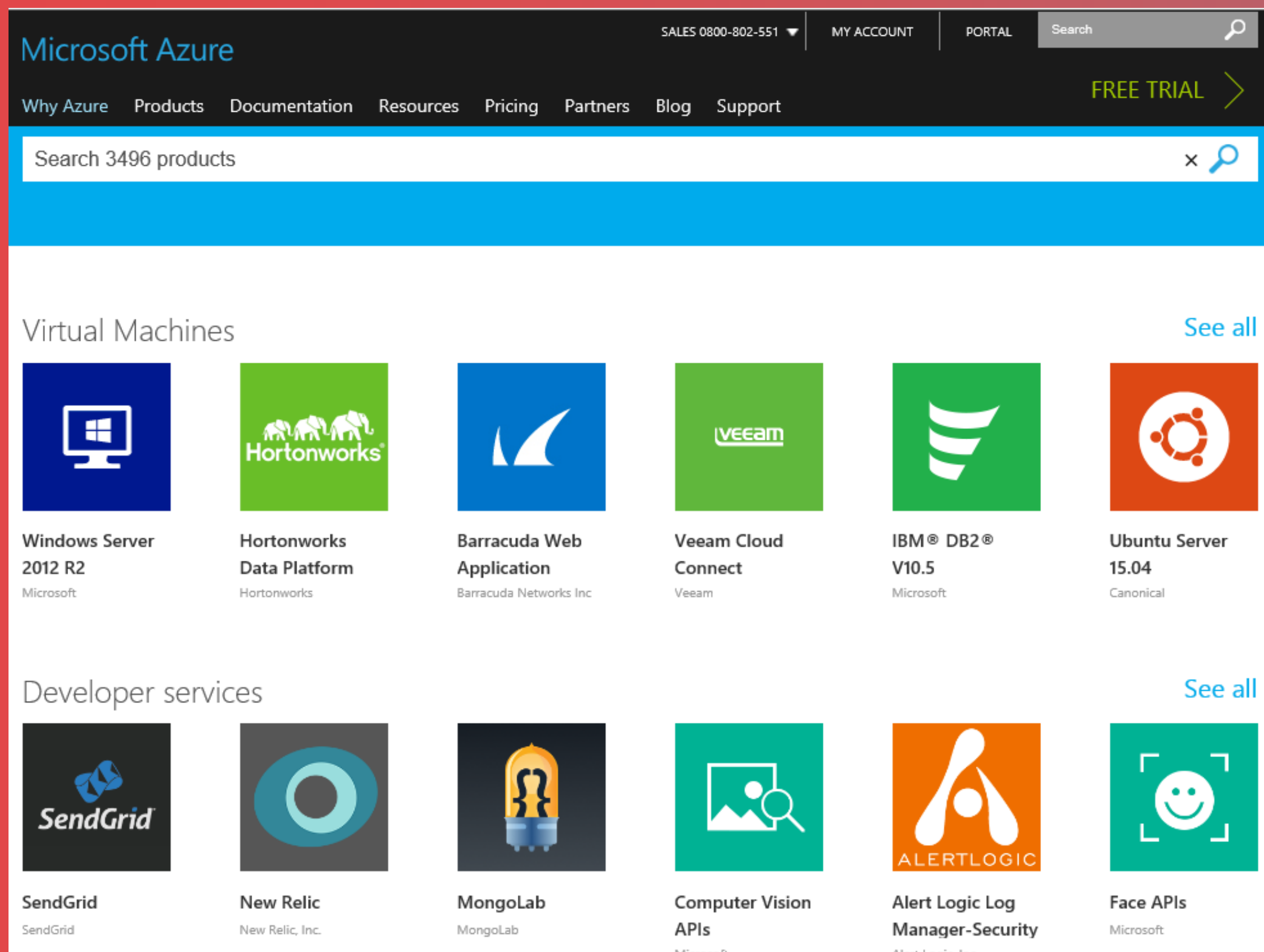
1374 results found in **Infrastructure as a Service**

AWS Identity and Access Management (IAM)
Amazon Web Services
AWS Identity and Access Management (IAM) enables you to manage users and user permissions in AWS. The service is targeted at organizations with multiple users or systems that use AWS products. You can centrally manage users, security credentials such as access keys, and permissions. aws.amazon.com/iam/
Infrastructure as a Service G-Cloud 6

Accenture Private Cloud
Accenture (UK) Limited
Accenture Private Cloud is an end-to-end, enterprise class private cloud solution. Based on a standard global architecture and delivery model, it provides a secure, reliable, cost-competitive infrastructure platform to underpin IT and business operations. It can be

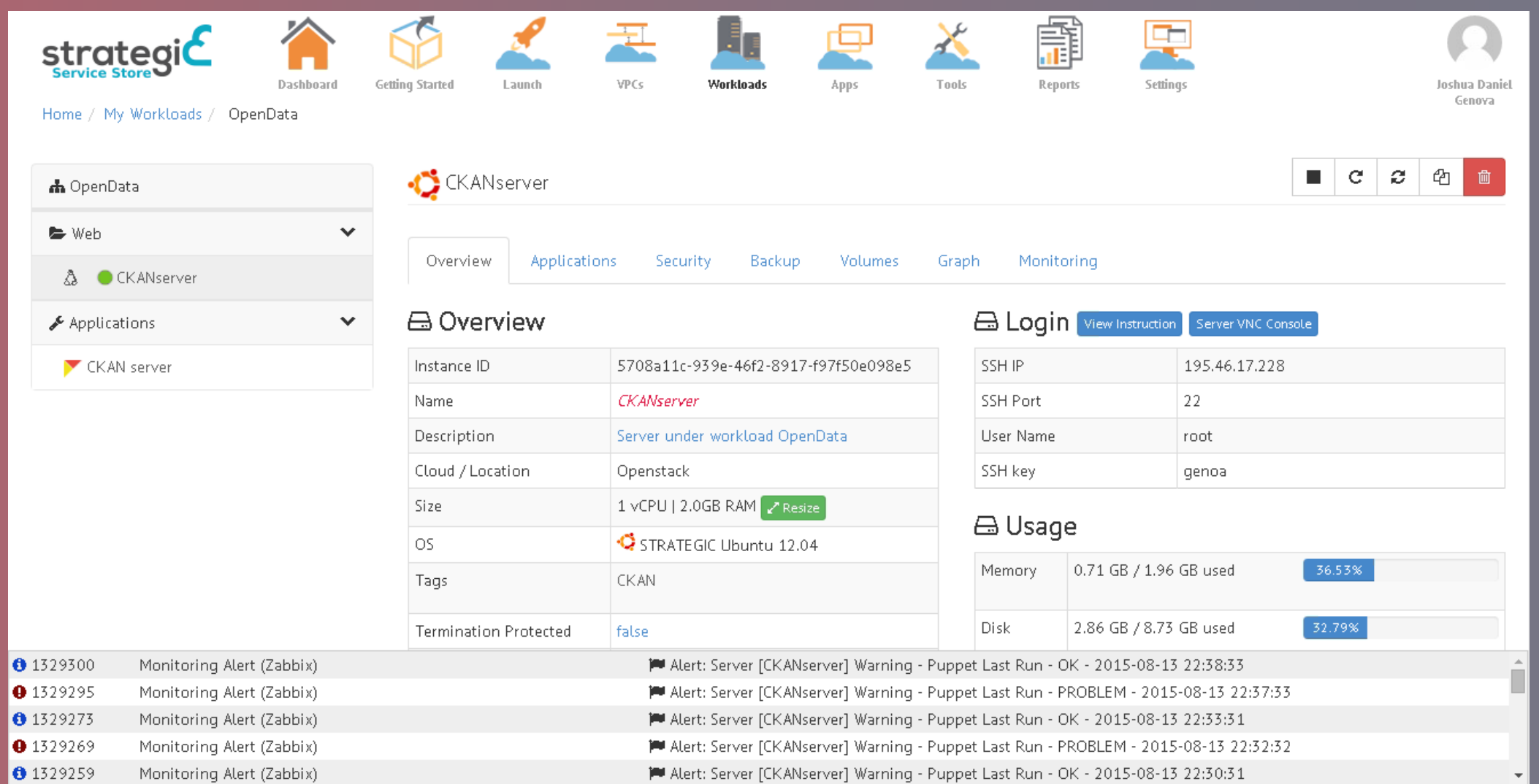
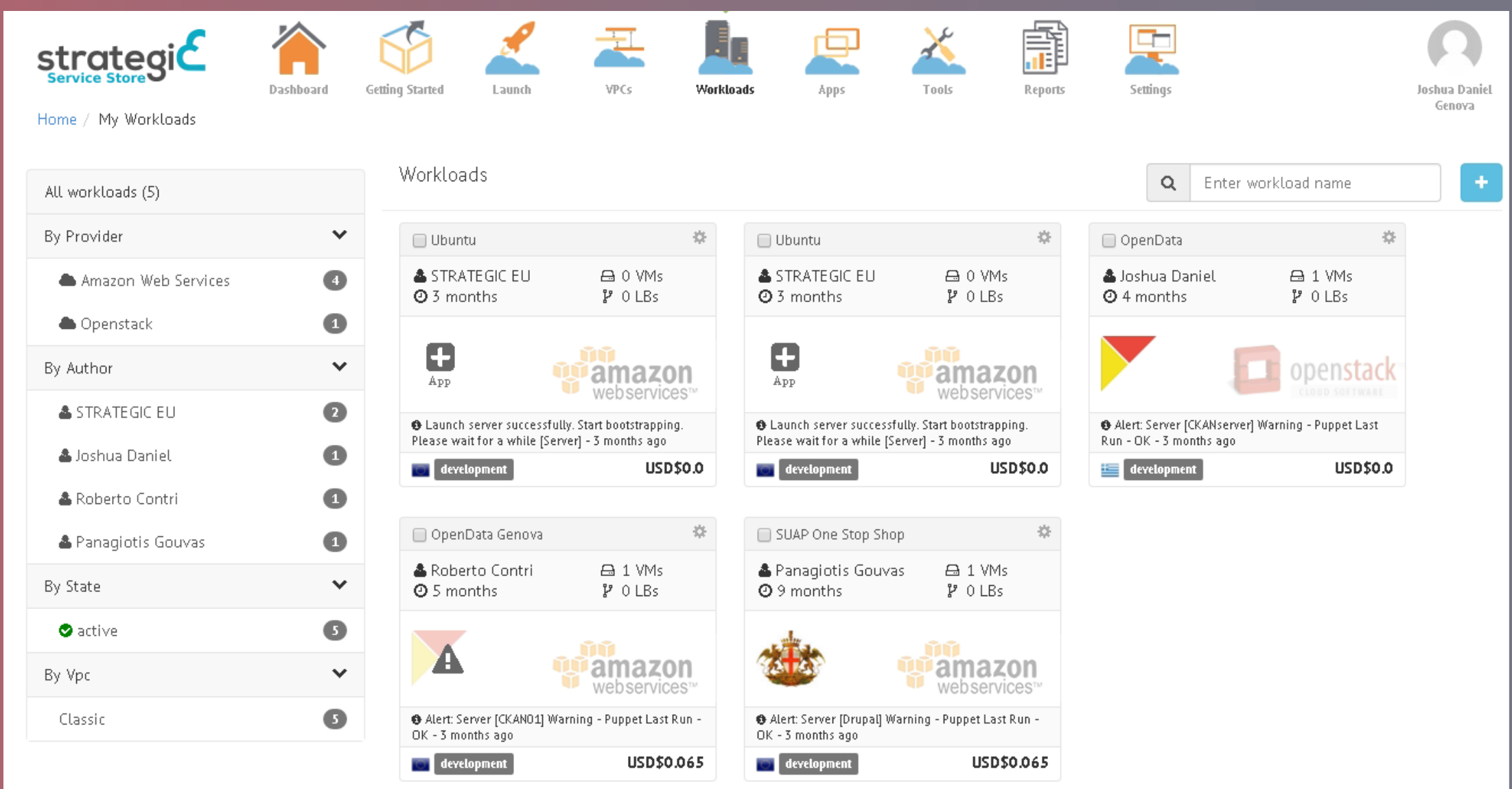
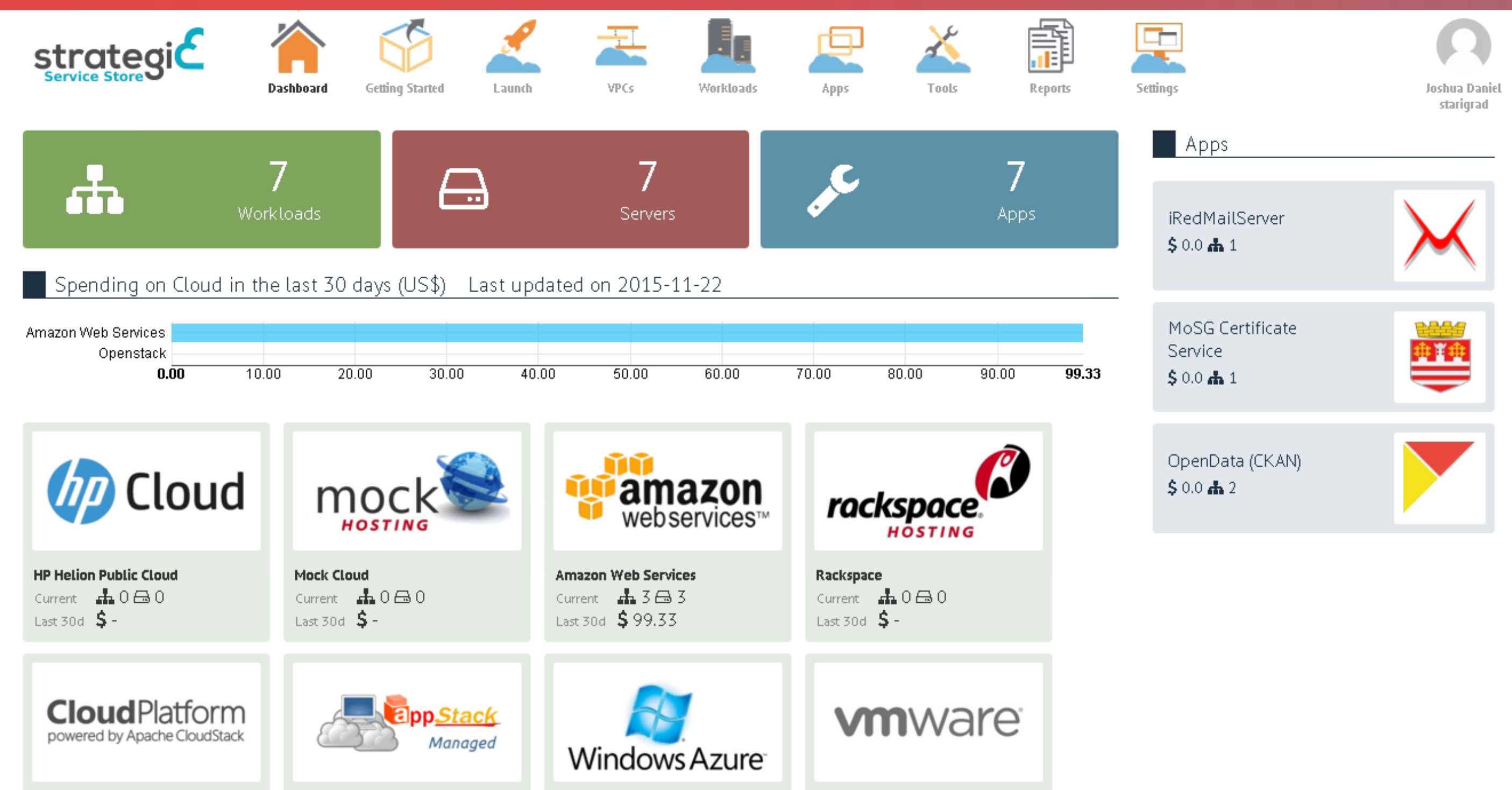
Microsoft Azure Marketplace

- ✓ Searchable catalogue
- ✓ Categories: VMs, Developer Services, API Apps, Web applications, Data Services, ...




BT Research/Strategic Service Store

✓ Full marketplace – beta tested




Source: BT Research

HelixNebula MarketPlace – App Store




DashboardApp StoreWorkspaceService Catalog

Help · f.kara ·



App Store

The SlipStream App Store provides you with all currently published modules and root modules, including yours and the ones shared with you.




lamp++ > v 483

Publisher

meb

Descripti...

Demonstration LAMP deployment, using Ubuntu,




rstudio-deploy... > v 1301

Publisher

test

Descripti...

Deployment of RStudio




hadoop > v 2125

Publisher

sixsq

Descripti...

Hadoop_Cluster Deployment (v 2.6)




docker > v 2129

Publisher

sixsq

Descripti...

Docker Swarm (manager & nodes)




mongodb-cluster > v 2737

Publisher

meb

Descripti...

MongoDB cluster deployment



centos-6-25GB > v 2742

Publisher


super

Descripti...

25GB free space on /

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Marketplace main features

- ✓ **Single point of access (one-stop shop)**

- ✓ Users can access to specific services

- ✓ **Catalogue of services – central registry**

- ✓ With metadata for each service based on a common agreed metadata schema
- ✓ **Compliance profiles for providers and services**, with legal, technical and operational requirements

- ✓ **Search** facility for easily finding relevant services

- ✓ Use common **identity**, authentication and authorisation schemes

- ✓ Supporting eduGAIN and eGOV ID, but possibly also other methods (social media access)

- ✓ **Both research and industrial ones**

- ✓ E.g. Commercial cloud and storage services
- ✓ Both “free” (research) and with a fee (commercial) for its users
- ✓ Business models/payment framework

- ✓ **Service Level Agreements**

- ✓ Monitored performance parameters such as the availability, reliability and other states

Marketplace next features

- ✓ **Multi-lingual** user interfaces (and/or translation widgets)
- ✓ On-line **accounting**, analytics, visual monitoring of the services
- ✓ **Rating** of the services by the users
 - ✓ Possibly named rather anonymous
- ✓ **Social media features - infographics**
 - ✓ Share it, Like it, Comment
 - ✓ Data/stats visualisations on services/usage
- ✓ **National/regional “views”/abstractions and/or instances of the EU marketplace**
 - ✓ A sub-set of the EU services, possibly based on national laws and restrictions on commercial services
 - ✓ Extra services available at national/regional level

Inspired by engagedata.eu

Technical considerations

- ✓ Open modular services framework
 - ✓ With a multi-purpose interface towards both users and providers
 - ✓ Service providers register services to the marketplace through an agreed interface after achieving compliance
- ✓ Open API (for service providers)
- ✓ Open platform (non-proprietary)
- ✓ Modular (new functionality added/changed)
- ✓ Horizontally-scalable architecture (that can handle large number of providers/services with big-data capabilities for rich business intelligence)

Marketplace Vision

- ✓ A coordinated marketplace environment among EU and national/regional levels
 - ✓ Not only a single EU marketplace, but an ecosystem of marketplaces!
- ✓ EU-national marketplaces in sync: National/regional “views”/abstractions of the EU marketplace

Related points at recent events

✓ #EC eConcertation2015:

- ✓ Not only production-quality services, but also under-development ones (through which innovation is promoted)
- ✓ Classification of services before the catalogue? Probably in parallel!
- ✓ Access Policies on usage have to be clear!
 - ✓ E.g. if only at national use, clearly state it!
- ✓ New draft paper on Service Catalogue by e-Concertation team to be published in Q1 2016

✓ #EGICF15

- ✓ Privacy and data security concern;
- ✓ Proposed list of services
- ✓ Co-designed approach between RIs and e-Infras (e-RIs)
- ✓ Report already available: 18/11/2015! <http://go.egi.eu/osows15>

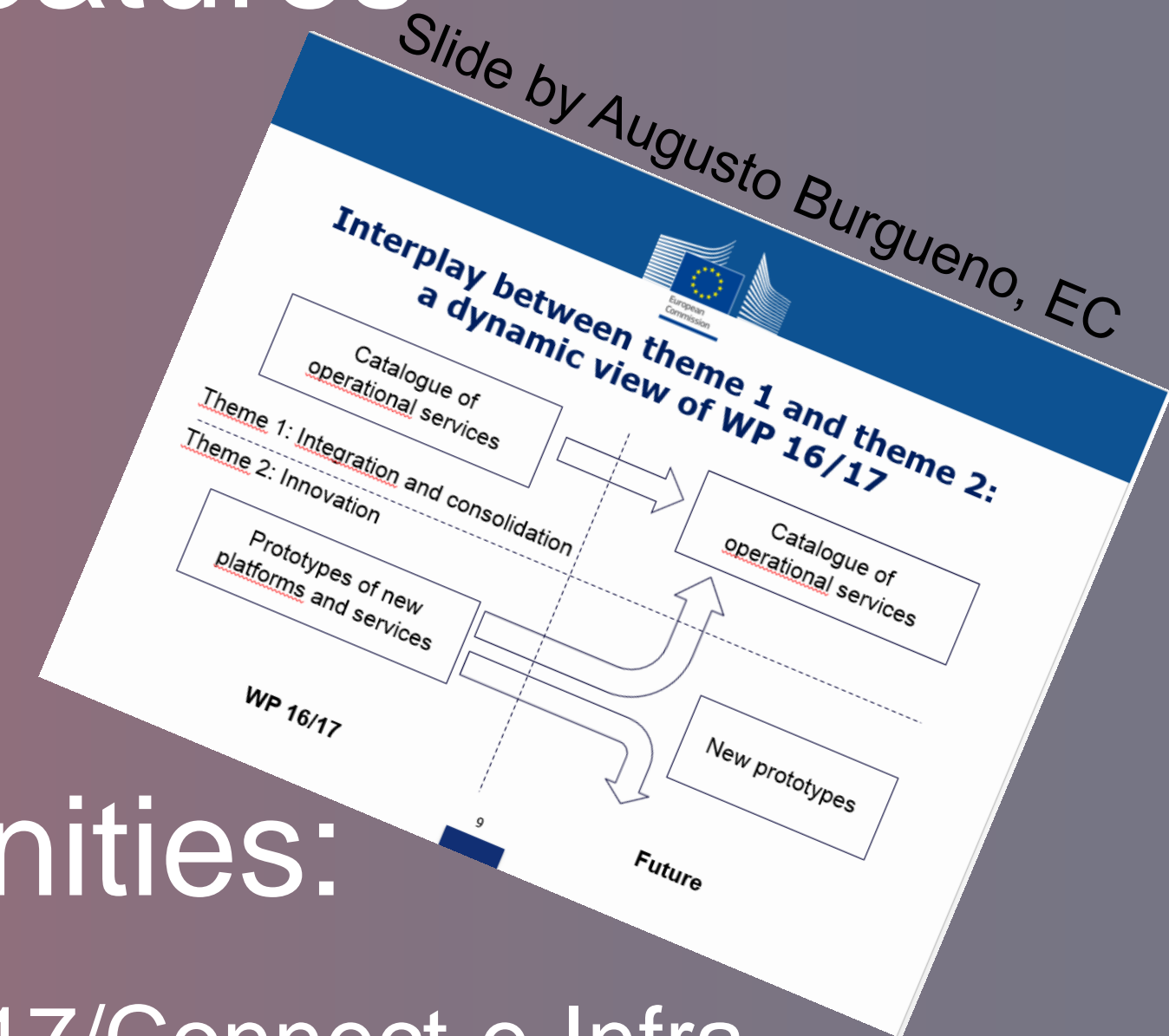
Multi-phased approach

- ✓ First version of the marketplace with main features
- ✓ Updates taking into account user feedback
- ✓ Full-featured by 2020?

- ✓ Great opportunity for e-Infra and RI communities:

- ✓ Catalogue of Services already part of EC WorkProgramme 16-17/Connect-e-Infra
- ✓ OpenScienceCloud (RTD) and Computing-Data Integration calls (Connect)

→ **UNITE TO ACHIEVE THIS GOAL FOR THE BENEFIT OF USERS-PROVIDERS**



Who should be leading/involved in this?

- ✓ Major EU e-Infrastructure initiatives/providers
- ✓ Diverse user communities (from ESFRI RIs to long tail representation)
- ✓ Technology-data experts, developers (AAI, data services)
- ✓ Industrial representation

Conclusions

- ✓ Marketplace: a first step towards the Commons and “lightweight” integration of e-Infra services
- ✓ Main features: one-stop shop, searchable catalogue, common access, research+industrial services, ...
- ✓ Some convergence already
 - ✓ EC has already published relevant calls
- ✓ Great opportunity to deliver something beneficial for the users!

Thank you!

 e-IRG Twitter: [@eirgeu](https://twitter.com/eirgeu)

 LinkedIn: [e-Infrastructure Reflection Group \(e-IRG\)](https://www.linkedin.com/company/e-Infrastructure%20Reflection%20Group%20(e-IRG))

 Facebook: [EInfrastructureReflectionGroupEirg](https://www.facebook.com/EInfrastructureReflectionGroupEirg)



<http://e-irsp4.e-irg.eu>

