



Oracle Ravello – oder Was hat Richard Wagner mit der Cloud zu tun?

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März 2017



Wie groß ist die Wahrscheinlichkeit,
dass dieses Auto geputzt werden muß?

Die klassischen Big Data Beispiele

- Smart Metering
- Autonomes Fahren
- Staumeldungen
- Fitnesstracking
- Gewaltprävention
- Wahlprognosen und –analysen
- Alexa, Siri, Cortana



HOW HAPPY IS LONDON

By measuring and analysing multiple, freely available data sources, Arrow has created a Happiness Indicator of London, which is refreshed every minute of every day.

How Happy Is London?

<https://howhappyis.london>

SOCIAL



TODAY




LAST WEEK



TRANSPORT




ROADS

TODAY 




BUSES

TODAY 



NATIONAL RAIL

TODAY 



WEATHER



WEATHER TYPE



Partly Cloudy

CHANCE OF RAIN



1%

TEMPERATURE



8 °C
46 °F

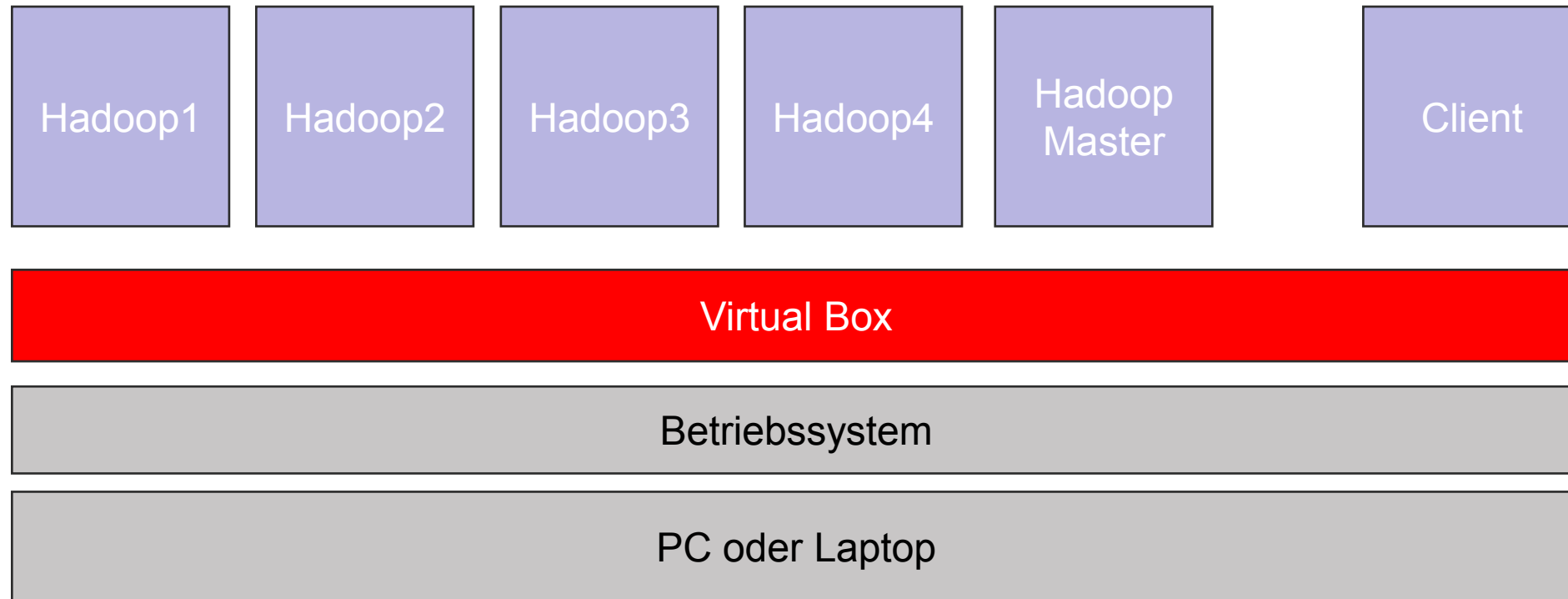
Neue Datenquellen



Umgebungen



Gern genutzt: Oracle Virtual Box

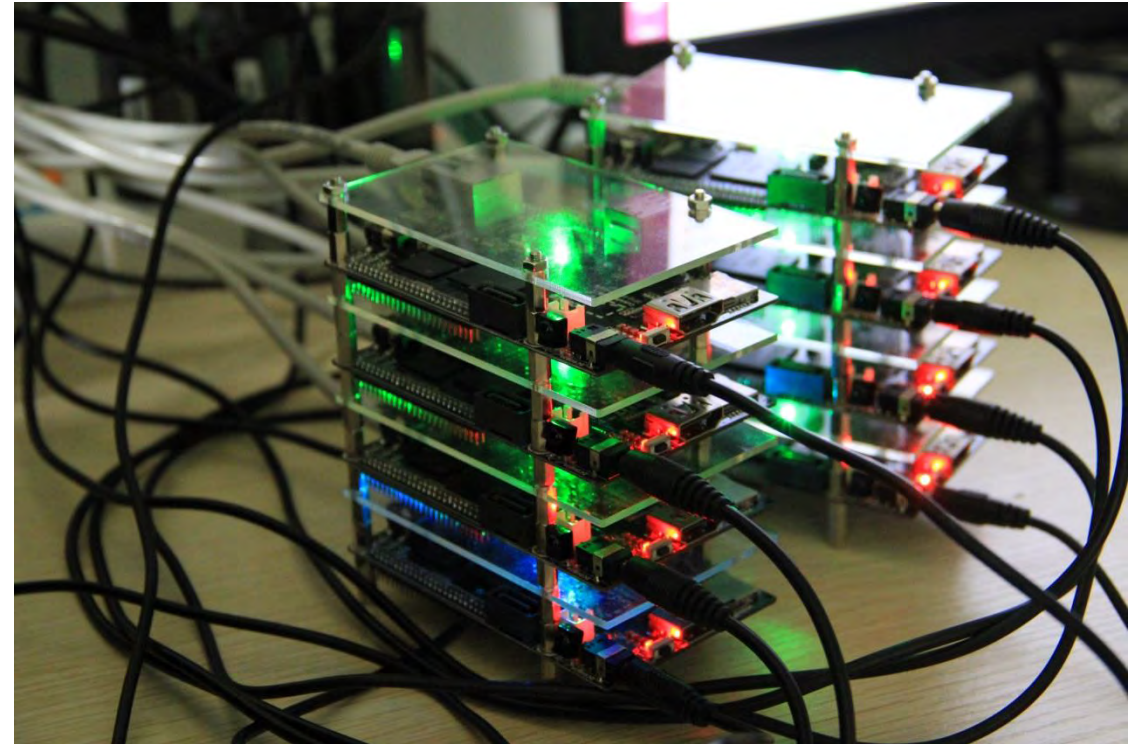
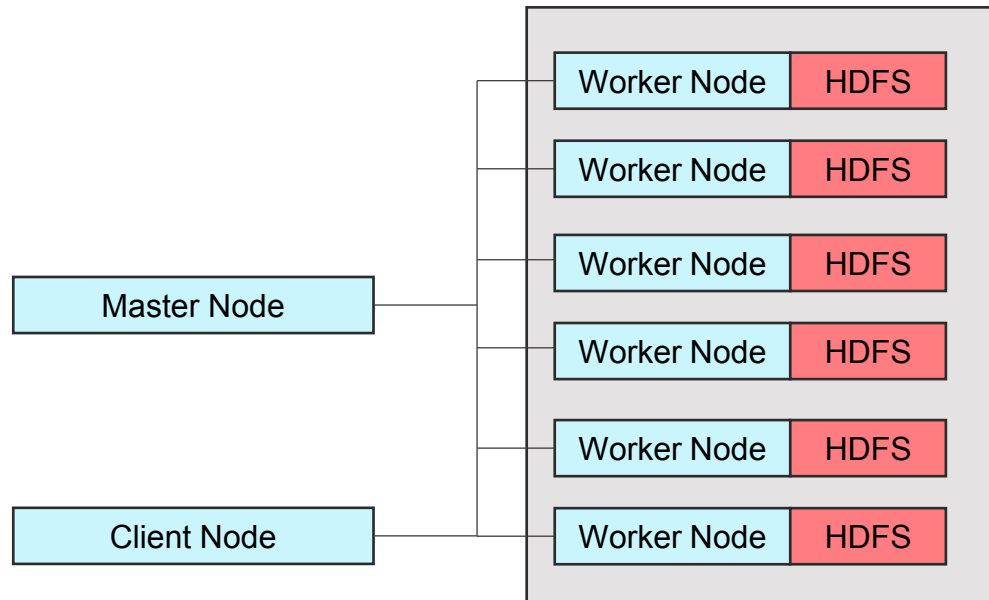


Irgendwann passiert es dann doch...

- > Ich habe den Algorithmus programmiert
- > Ich habe ein Testenvironment aufgesetzt
- > Ich habe 340.000.000.000 Datensätze – aber nur 1 Laptop...



Poor-Mans Cluster



Klassischer Ansatz – Neubeschaffung

- > Sehr lange Projektlaufzeiten
- > Teuer
- > Integration notwendig
- > „Nehmen wir doch den VMWare Cluster“



VMWare Cluster

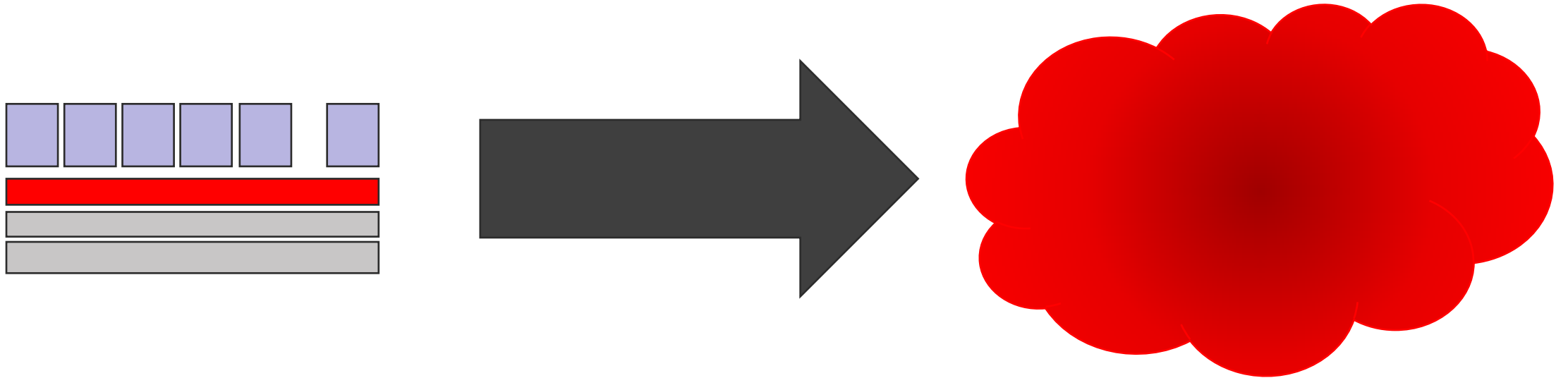
- > Großteil aller IT Infrastrukturen sind virtualisiert
- > Häufig nur wenige Rechner zusammengefasst
- > „Mal eben 1000 VMs ausrollen“????



Cloud



Das Ziel ist der Weg....



Wie komme ich von meinem Laptop in die Cloud?

Oracle Ravello

> Nicht verwirren lassen...



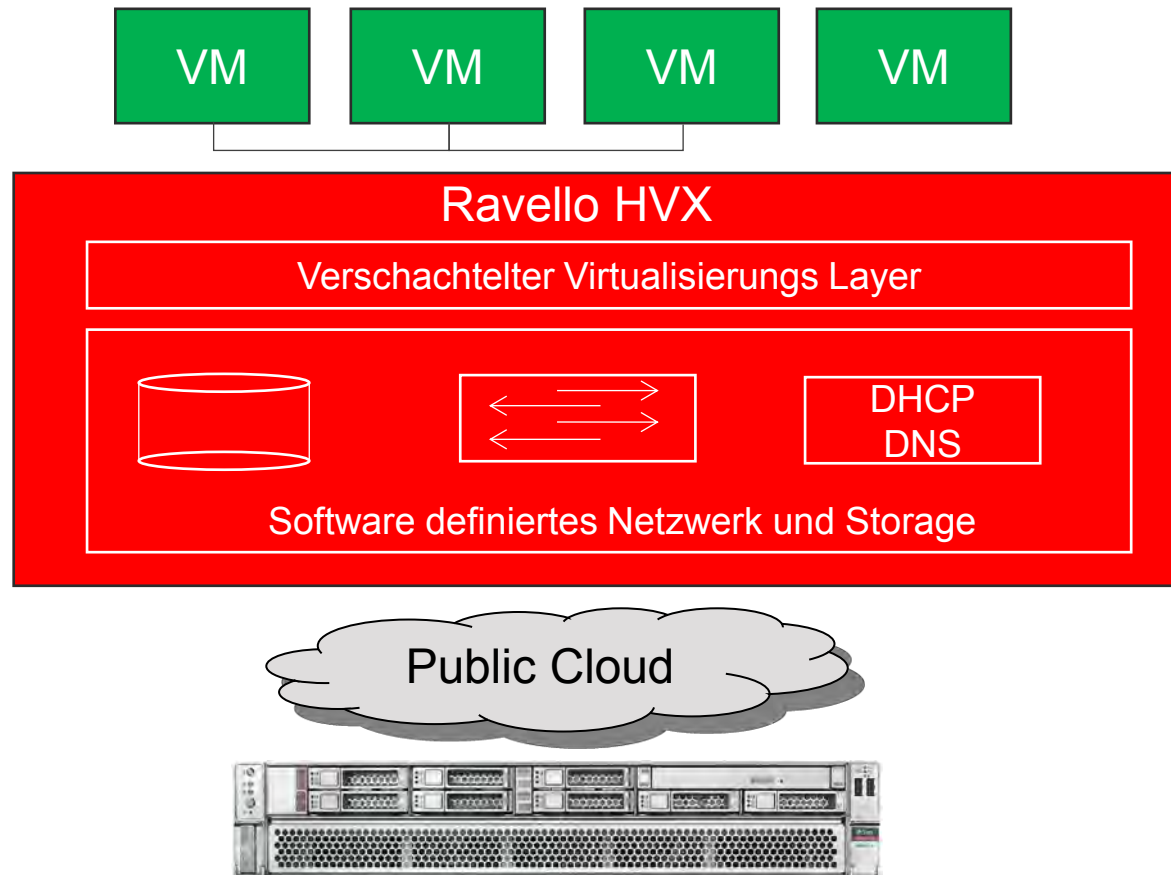
Oracle Ravello

Oracle Ravello ist ein Oracle Produkt, um virtuelle Maschinen von VMWare oder KVM in eine public Cloud zu verschieben und dort zu betreiben.

Funktioniert auch mit VMDK-Images aus Oracle Virtual Box heraus!



HVX – Verschachtelte Virtualisierung



- > VMs können von VMWare OHNE(!) Modifikationen in die Cloud verschoben werden
- > Virtualisiertes Netzwerk
- > Geschachtelte Virtualisierung

Benefits von Ravello

Agilität

Kürzere Zeiten zum Ausrollen neuer Anwendungen

Skalierbarkeit in
jeder Region

Beliebig häufige Replikation von Anwendungsumgebungen weltweit

Self Service

Ausrollen einer Umgebung ohne Abhängigkeiten von IT Ressourcen

High Fidelity

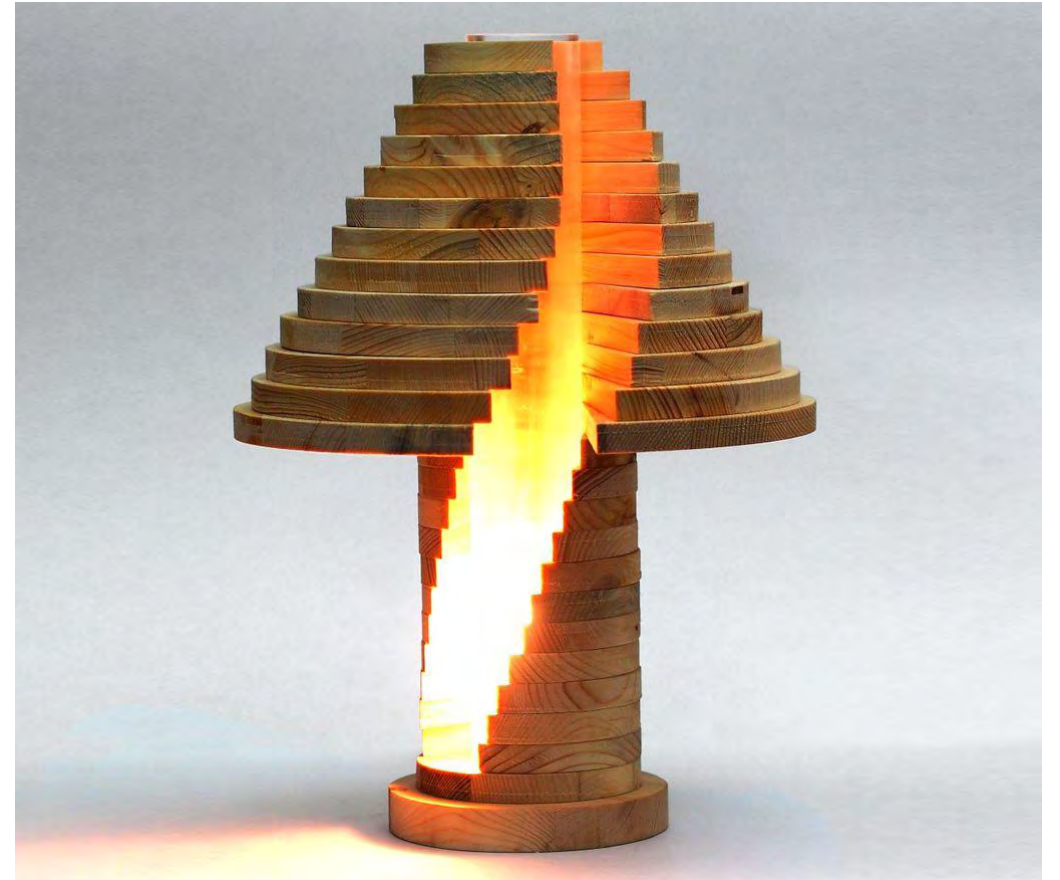
Testumgebungen können EXAKTE Kopien der Produktion sein

Kosteneffizient

Einfaches Verrechnungsmodell

Einfaches Beispiel

- > LAMP Stack
 - > www.turnkeylinux.org/lampstack
 - > Komplett konfiguriert
- > DHCP-Service für IP-Vergabe

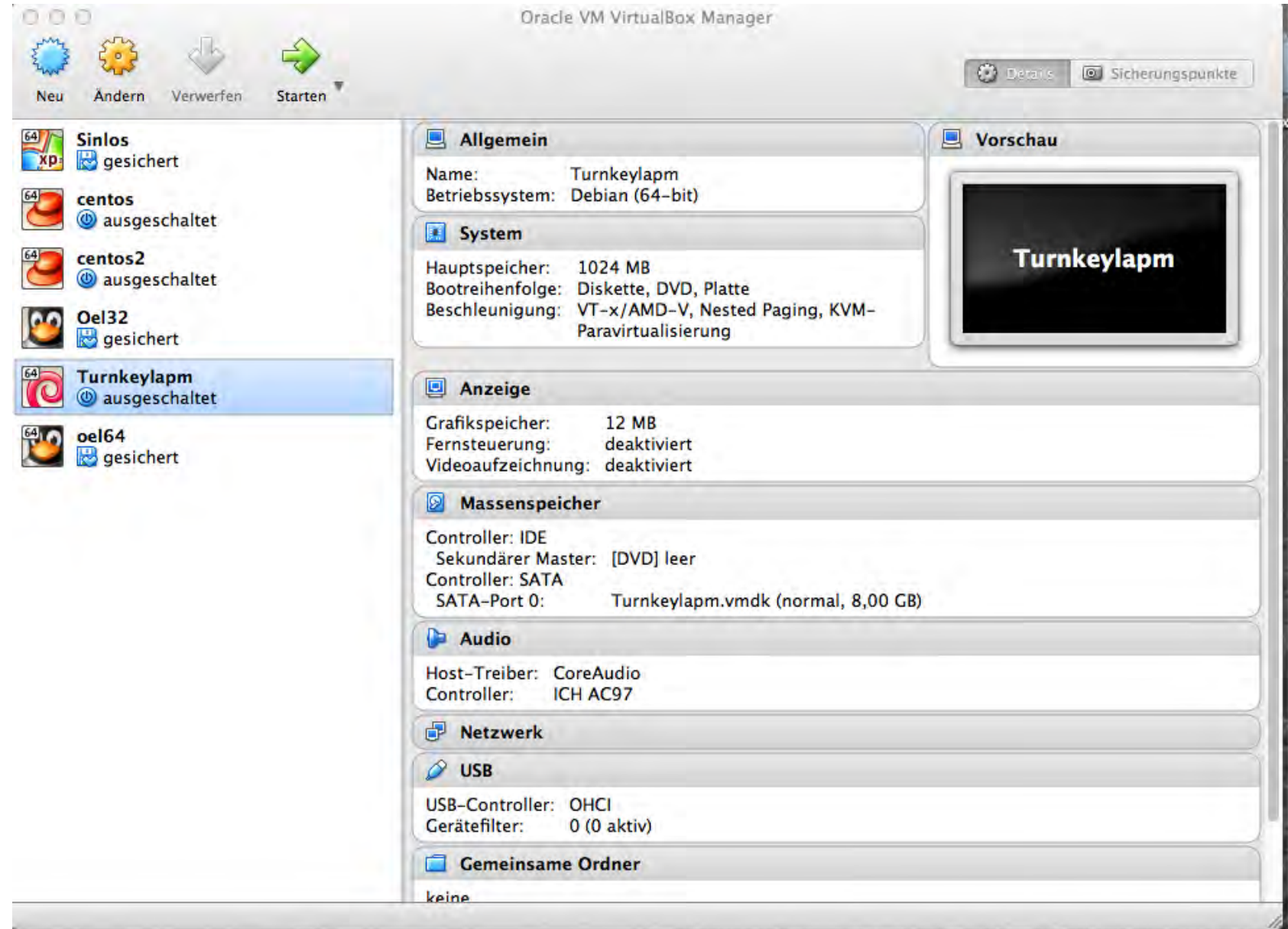


Vorteil von fertig konfigurierten Konfigurationen



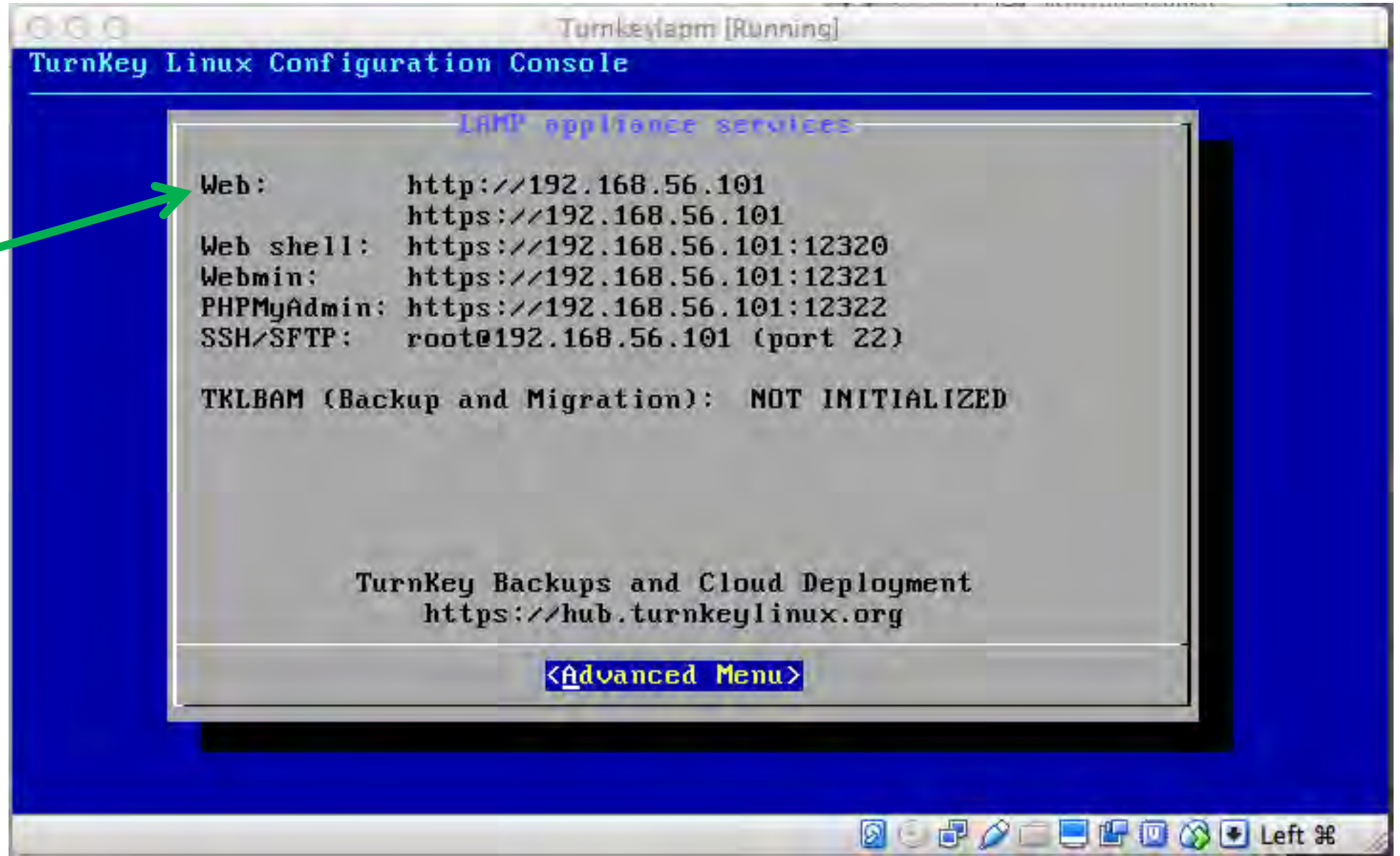
Virtual Box

- LAMP-System



Start

Dynamische IP
Adressen



The screenshot shows a terminal window titled "Turnkey(lamp [Running])" with a blue background. The main text is "TurnKey Linux Configuration Console". A central box titled "LAMP appliance services" contains the following information:

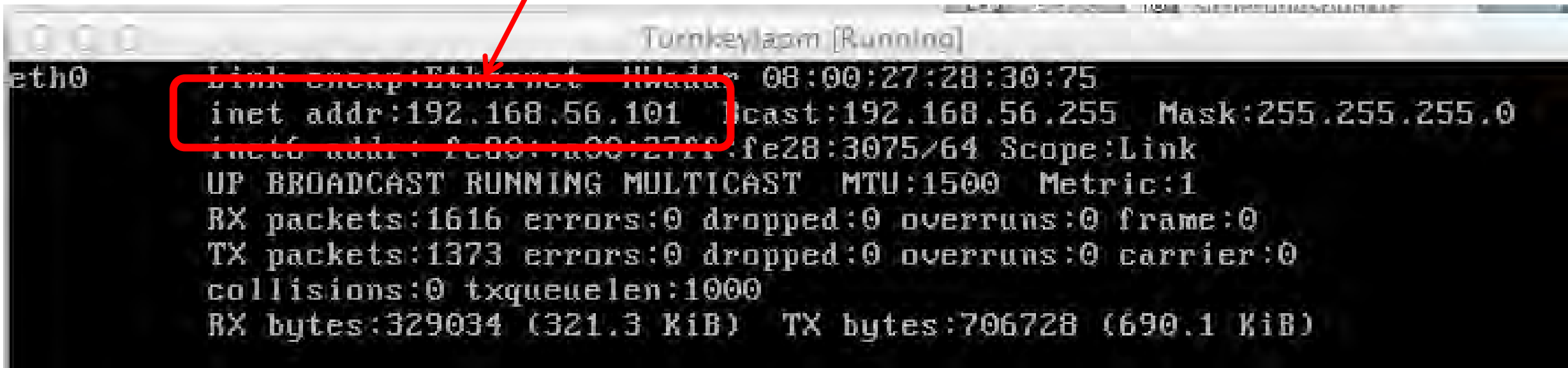
```
Web:          http://192.168.56.101
              https://192.168.56.101
Web shell:    https://192.168.56.101:12320
Webmin:       https://192.168.56.101:12321
PHPMyAdmin:  https://192.168.56.101:12322
SSH/SFTP:    root@192.168.56.101 (port 22)

TKLBAM (Backup and Migration): NOT INITIALIZED
```

At the bottom of the box, it says "TurnKey Backups and Cloud Deployment" and "https://hub.turnkeylinux.org". Below the box is a button labeled "<Advanced Menu>". A green arrow points from the text "Dynamische IP Adressen" to the IP address "192.168.56.101" in the "Web:" line.

IP Adresse in der VM

Private IP Adresse via DHCP



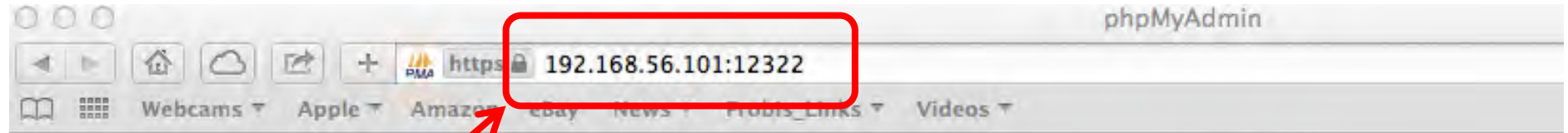
```
Turnkeylaptop [Running]
eth0 Link encap:Ethernet HWaddr 08:00:27:28:30:75
      inet addr:192.168.56.101  bcast:192.168.56.255  Mask:255.255.255.0
      inet6 addr: fe80::a00:27ff:fe28:3075/64  Scope:Link
      UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
      RX packets:1616  errors:0  dropped:0  overruns:0  frame:0
      TX packets:1373  errors:0  dropped:0  overruns:0  carrier:0
      collisions:0  txqueuelen:1000
      RX bytes:329034 (321.3 KiB)  TX bytes:706728 (690.1 KiB)
```

Zugriff über internes Netzwerk möglich

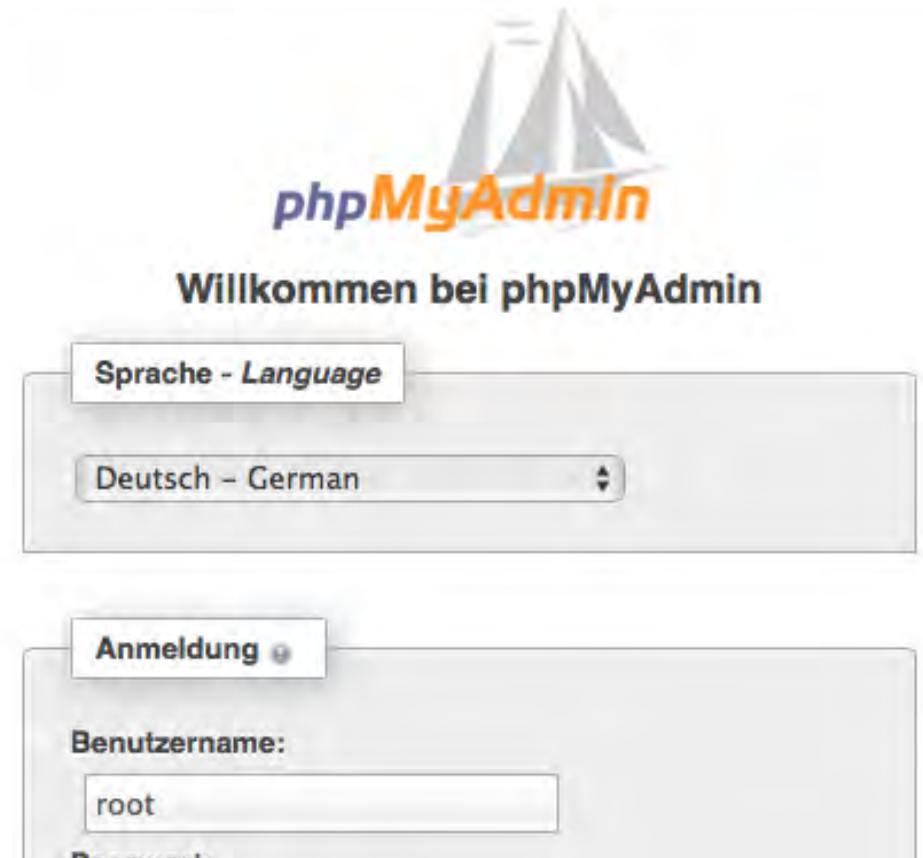


Adminstrationsoberfläche
für alle NON-Linux Anwender

DB-Zugriff



Wichtig:
Welche Ports braucht die Applikation extern?



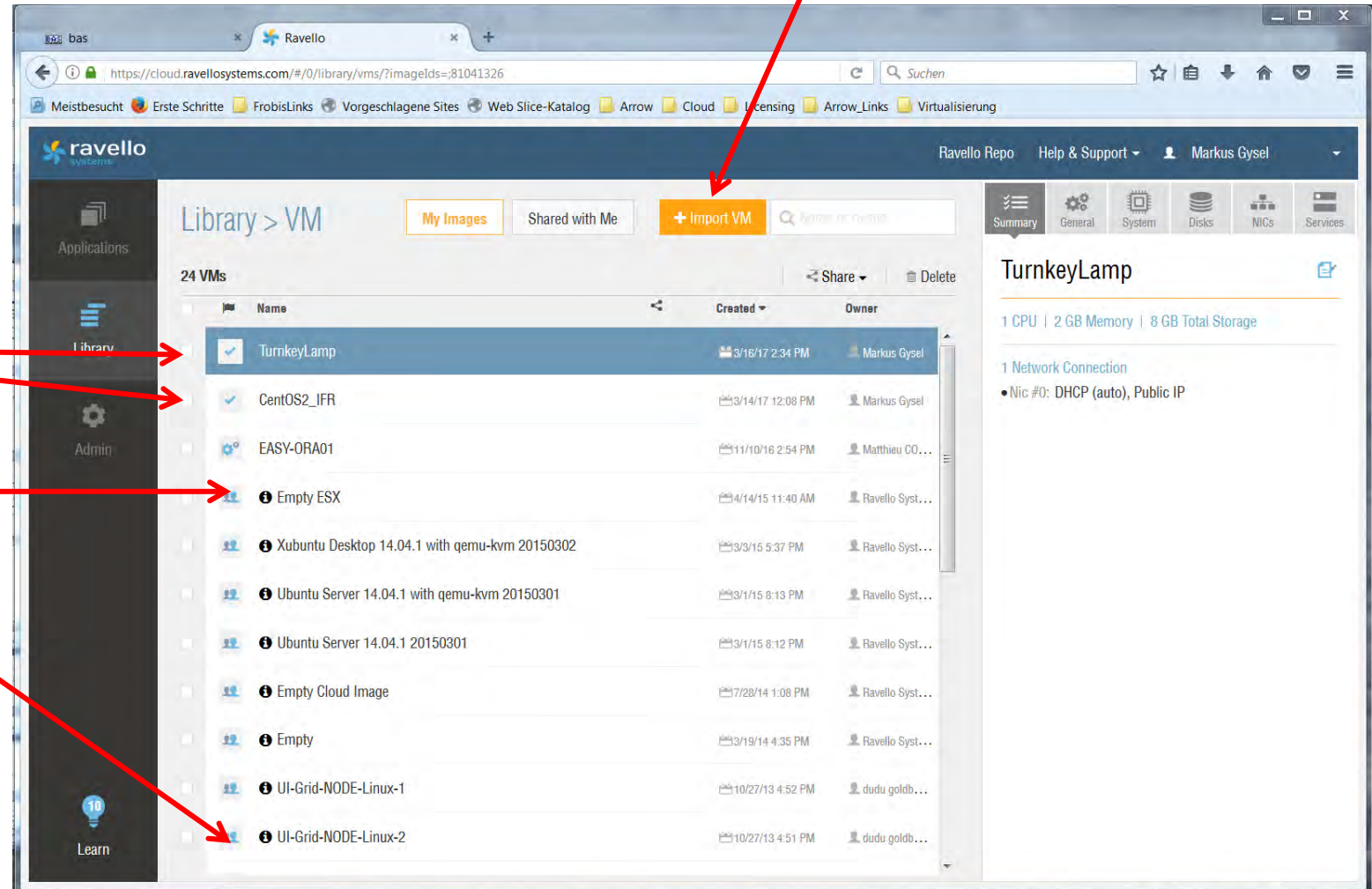
Virtuelle Maschinen in Ravello

VM importieren

> Import einer VM

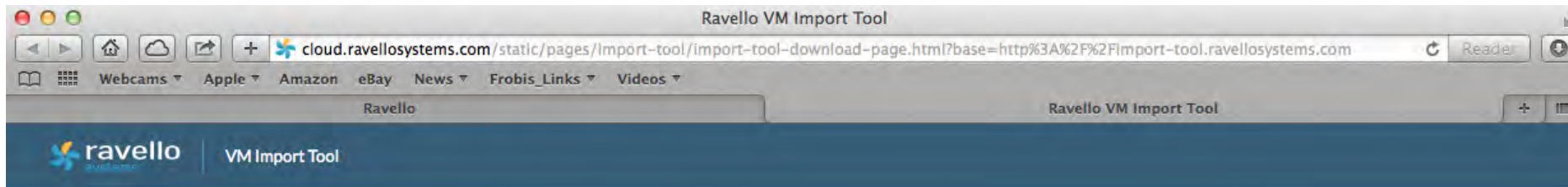
Importierte VMs

Standard VMs



Hochschubsen in die Cloud

- > Import eine VM basierend auf VMDK – Datei
- > Ravello nutzt einen Service auf dem lokalen Host



Unable to connect to the Ravello VM Import Tool

If you have already downloaded the Ravello VM Import Tool before, make sure it is running, and try again.

Select your operating system type and download either the GUI or CLI VM Import Tool

OS

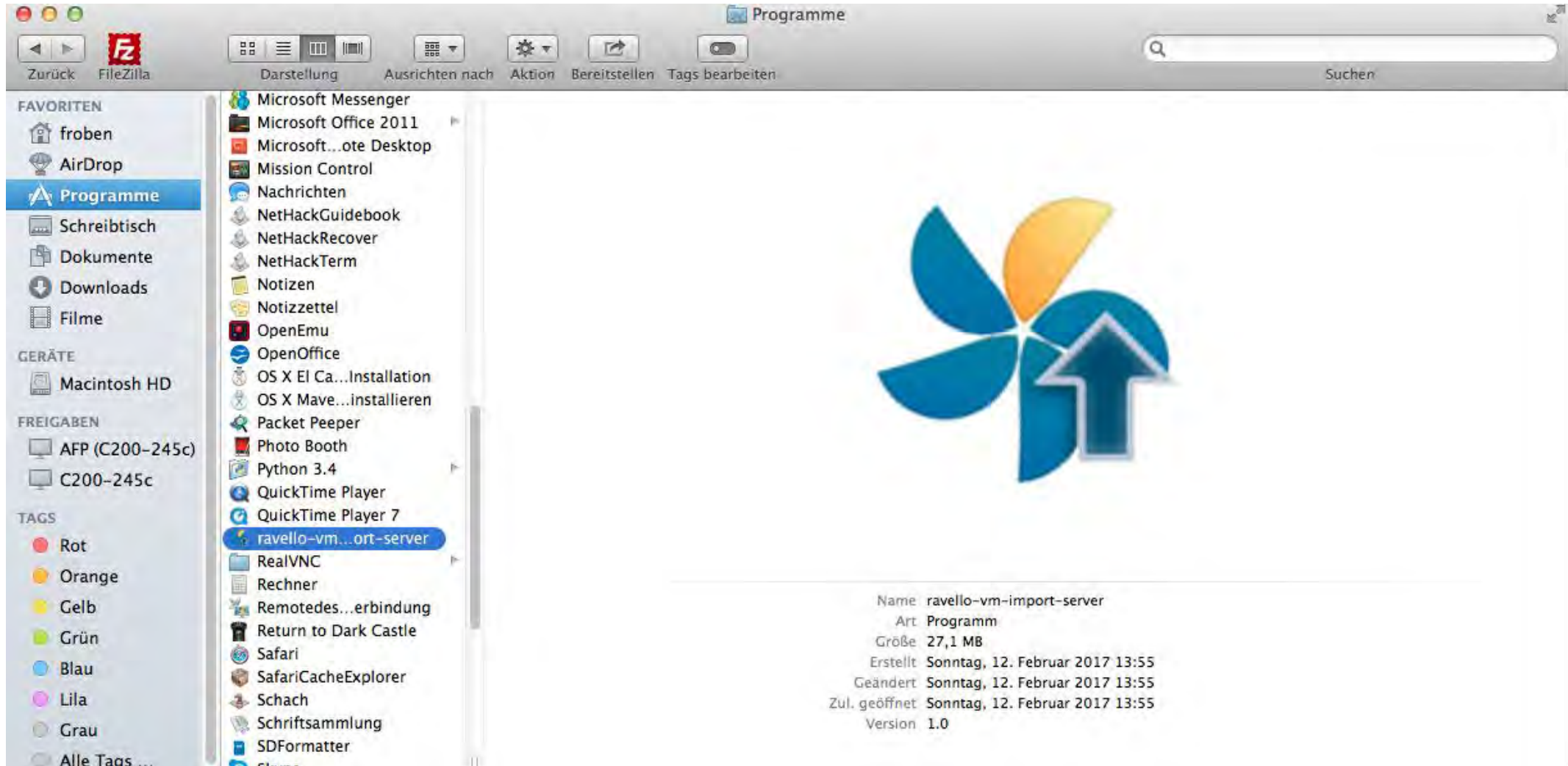
[Download GUI VM Import Tool for Mac](#)

Enables you to import VMs through the product GUI

[Download CLI VM Import Tool for Mac](#)

Enables you to import VMs using a command line interface, so the process can be performed offline and be automated.

Dieser Service muss laufen!



Bisher hochgeladene Dateien

The screenshot shows the Ravello VM Import Tool interface. At the top, there is a navigation bar with the Ravello logo, 'VM Import Tool', and a user profile 'markus gysel'. Below this is a search bar and an 'Upload' button. The main content area displays '2 Uploads' with a filter set to 'All'. A table lists the uploads, showing their names, progress bars, status, and creation times.

Name	Progress	Status	Info	Created
CentOS2_IFR VM	100% 1.21 GB/1.21 GB	Completed	Creating a VM containing 1 disk. More...	3/14/17 12:08 PM
Turnkey-Lamp-13.0 VM	100% 204.06 MB/204.06 MB	Completed	Creating a VM containing 1 disk. More...	3/14/17 11:06 AM

Auswahl der VMDK – Datei

The screenshot shows the Ravello VM Import Tool interface. The browser address bar displays the URL `127.0.0.1:8881/static/index.html#/upload-wizard/custom-vm-selector`. The page title is "VM Import Tool" and the user is logged in as "markus gysel".

The main heading reads: "Create a new VM by uploading existing disk files (ISO, VMDK, QCOW)".

Below the heading, there is a text input field labeled "NAME YOUR VM".

The "CHOOSE DISKS TO UPLOAD" section contains a file browser interface. The current path is `/Users/froben/VirtualBox VMs`. A search bar is present with the placeholder "Enter name". The file type filter is set to "All File Types".

name	Size	Last Modified	Add Disk
Sinlos		1/30/17 4:39 PM	
Turnkeylapm		3/31/17 1:49 PM	
.DS_Store	6 KB	1/30/17 1:28 PM	

A red arrow points to the "Turnkeylapm" folder in the file list.

The "UPLOAD SELECTED DISKS" section is currently empty, with a "Name" label and a "Remove Disk" button.

At the bottom of the interface, there are "BACK" and "CANCEL" buttons.

Maschinename vergeben

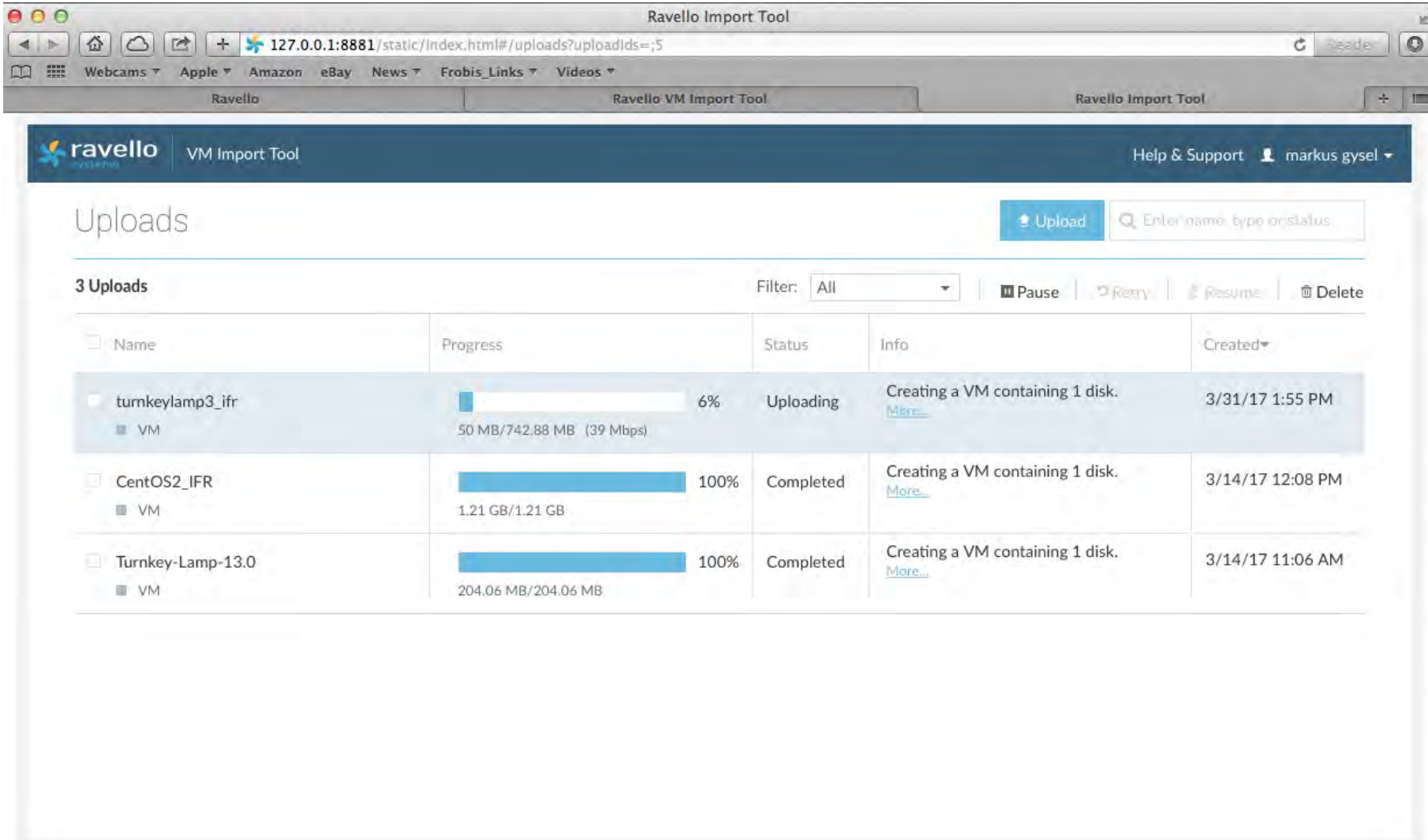
The screenshot shows the Ravello VM Import Tool interface. The browser address bar indicates the URL: `127.0.0.1:8881/static/index.html#/upload-wizard/custom-vm-selector`. The page title is "Ravello VM Import Tool". The main heading reads: "Create a new VM by uploading existing disk files (ISO, VMDK, QCOW)".

The "NAME YOUR VM" field contains the text `turnkeylamp3_ifr`, which is highlighted by a red arrow. Below this field is the "CHOOSE DISKS TO UPLOAD" section, which displays a file browser view of the directory `/Users/froben/VirtualBox VMs/Turnkey`. The file list includes:

name	Size	Last Modified	Add Disk
Turnkeylapm.vbox	7.77 KB	3/31/17 1:49 PM	+
Turnkeylapm.vbox-prev	7.77 KB	3/31/17 11:34 AM	+
Turnkeylapm.vmdk	742.88 MB	3/31/17 1:49 PM	+

The "Turnkeylapm.vmdk" file is selected and is being moved to the "UPLOAD SELECTED DISKS" section, which currently contains the file "Turnkeylapm.vmdk". At the bottom of the interface, there are "BACK" and "CANCEL" buttons, and an "Upload" button is visible in the "UPLOAD SELECTED DISKS" section.

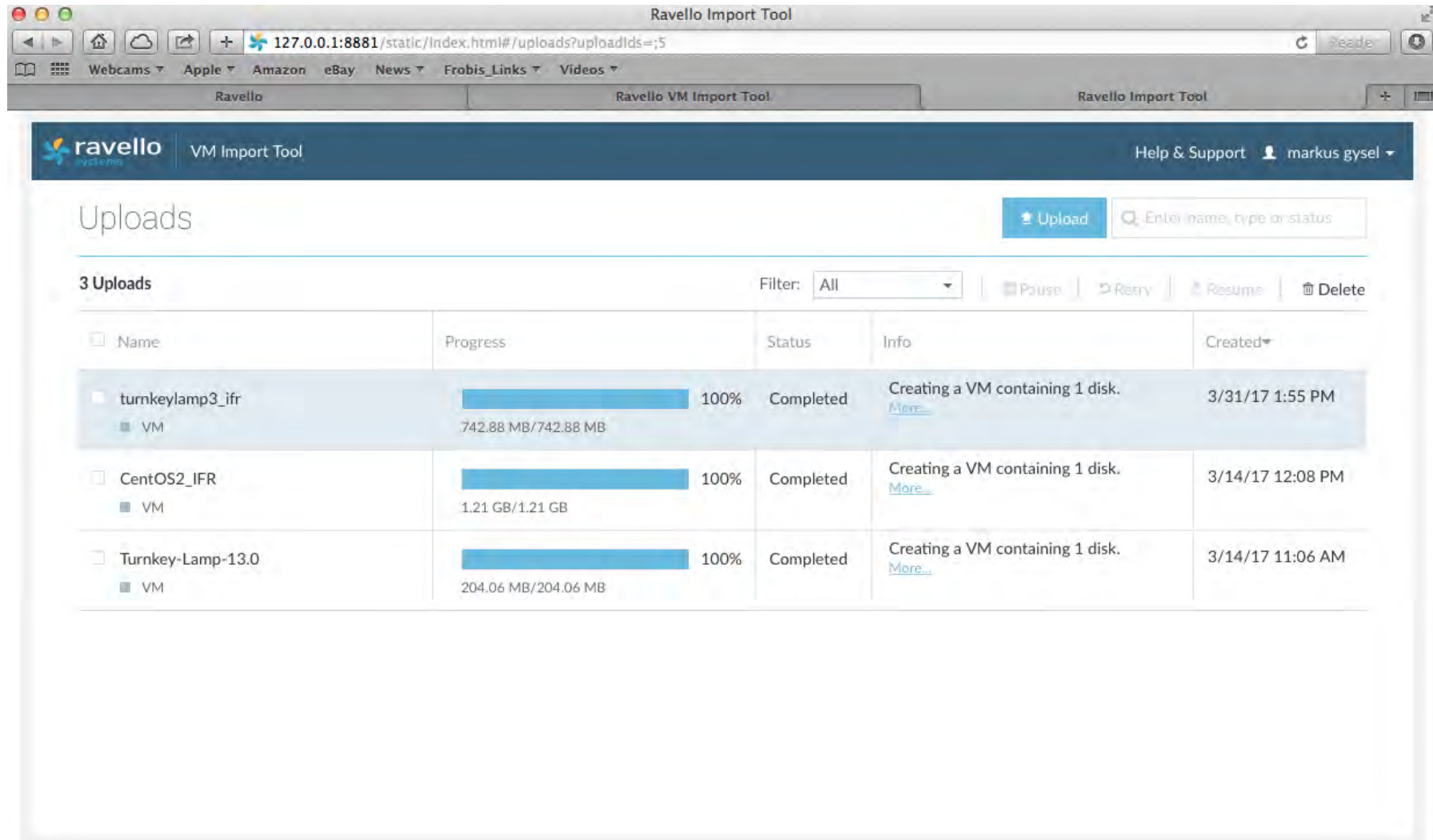
Und los!



The screenshot shows the Ravello VM Import Tool interface. At the top, there's a navigation bar with the Ravello logo, "VM Import Tool", and a user profile "markus gysel". Below this is a "Uploads" section with a search bar and an "Upload" button. A table lists three uploads with their progress, status, and creation time.

Name	Progress	Status	Info	Created
turnkeylamp3_ifr VM	6% 50 MB/742.88 MB (39 Mbps)	Uploading	Creating a VM containing 1 disk. More...	3/31/17 1:55 PM
CentOS2_IFR VM	100% 1.21 GB/1.21 GB	Completed	Creating a VM containing 1 disk. More...	3/14/17 12:08 PM
Turnkey-Lamp-13.0 VM	100% 204.06 MB/204.06 MB	Completed	Creating a VM containing 1 disk. More...	3/14/17 11:06 AM

Nicht über DSL probieren!



The screenshot shows the Ravello VM Import Tool interface. The browser address bar displays the URL `127.0.0.1:8881/static/index.html#/uploads?uploadIds=;5`. The page title is "Ravello VM Import Tool". The main content area is titled "Uploads" and features a search bar with the placeholder text "Enter name, type or status" and an "Upload" button. Below the search bar, there are 3 uploads listed in a table. The table has columns for Name, Progress, Status, Info, and Created. The first upload is "turnkeylamp3_ifr" (VM), which is 100% completed (742.88 MB/742.88 MB) and was created on 3/31/17 at 1:55 PM. The second upload is "CentOS2_IFR" (VM), which is 100% completed (1.21 GB/1.21 GB) and was created on 3/14/17 at 12:08 PM. The third upload is "Turnkey-Lamp-13.0" (VM), which is 100% completed (204.06 MB/204.06 MB) and was created on 3/14/17 at 11:06 AM. Each row includes a "More..." link in the Info column.

Name	Progress	Status	Info	Created
turnkeylamp3_ifr VM	100% 742.88 MB/742.88 MB	Completed	Creating a VM containing 1 disk. More...	3/31/17 1:55 PM
CentOS2_IFR VM	100% 1.21 GB/1.21 GB	Completed	Creating a VM containing 1 disk. More...	3/14/17 12:08 PM
Turnkey-Lamp-13.0 VM	100% 204.06 MB/204.06 MB	Completed	Creating a VM containing 1 disk. More...	3/14/17 11:06 AM

Neue VM in Ravello sichtbar

The screenshot shows the Ravello web interface. The browser address bar displays `https://cloud.ravell systems.com/#/0/library/vms/?imageids=;81570940`. The page title is "Library > VM". A search bar contains "Name: turnkey". A sidebar on the left has "Applications", "Library", "Admin", and "Learn" (with a "10" notification). The main content area shows "1 VM selected" and a table of VMs:

Name	Created	Owner
turnkeylamp3_ifr	3/31/17 1:55 PM	Markus Gysel
TurnkeyLamp	3/16/17 2:34 PM	Markus Gysel
CentOS2_IFR	3/14/17 12:08 PM	Markus Gysel
EASY-ORA01	11/10/16 2:54 PM	Matthieu CO...
Empty ESX	4/14/15 11:40 AM	Ravello Syst...
Xubuntu Desktop 14.04.1 with qemu-kvm 2015...	3/3/15 5:37 PM	Ravello Syst...
Ubuntu Server 14.04.1 with qemu-kvm 20150301	3/1/15 8:13 PM	Ravello Syst...
Ubuntu Server 14.04.1 20150301	3/1/15 8:12 PM	Ravello Syst...

On the right, the "Verify VM settings" panel for "turnkeylamp3_ifr" shows:

- 1 CPU | 2 GB Memory | 8 GB Total Storage
- 1 Network Connection
 - Nic #0: DHCP (auto), Outbound only

Festlegen extern sichtbarer Services

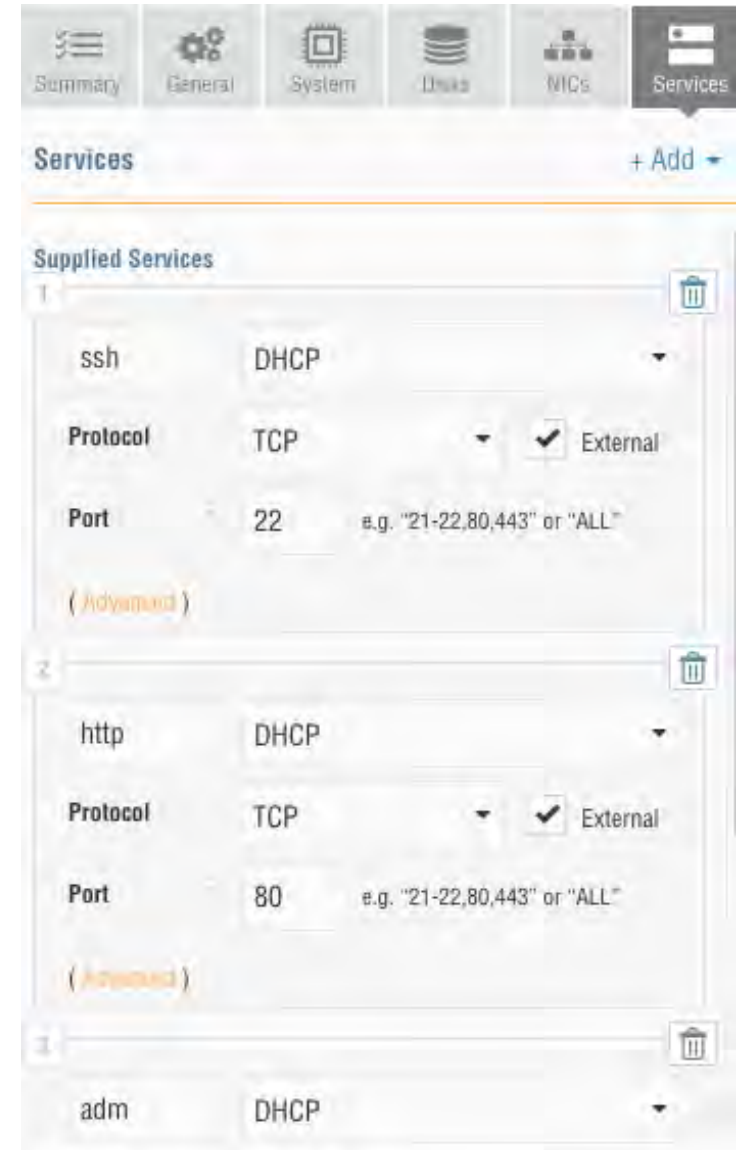
The screenshot shows the Ravello VM Import Tool interface. The main content area displays a list of 25 VMs with columns for Name, Created, and Owner. The first VM, 'turnkeylamp3_itr', is selected. The right-hand panel shows the 'Services' section, which is currently empty, displaying 'No Supplied Services' and 'No Required Services'. An arrow points from the text 'Was soll extern (im Internet) sichtbar sein?' to the 'No Supplied Services' box.

Name	Created	Owner
turnkeylamp3_itr	3/31/17 2:14 PM	Markus Gysel
TurnkeyLamp	3/16/17 2:34 PM	Markus Gysel
CentOS2_IFR	5/14/17 12:08 PM	Markus Gysel
EASY-ORA01	11/10/16 2:54 PM	Matthieu CO...
Empty ESX	4/14/15 11:40 AM	Ravello Syst...
Xubuntu Desktop 14.04.1 with qemu-kvm 2015...	3/3/15 5:37 PM	Ravello Syst...
Ubuntu Server 14.04.1 with qemu-kvm 20150301	3/1/15 8:13 PM	Ravello Syst...
Ubuntu Server 14.04.1 20150301	3/1/15 8:12 PM	Ravello Syst...

Was soll extern (im Internet) sichtbar sein?

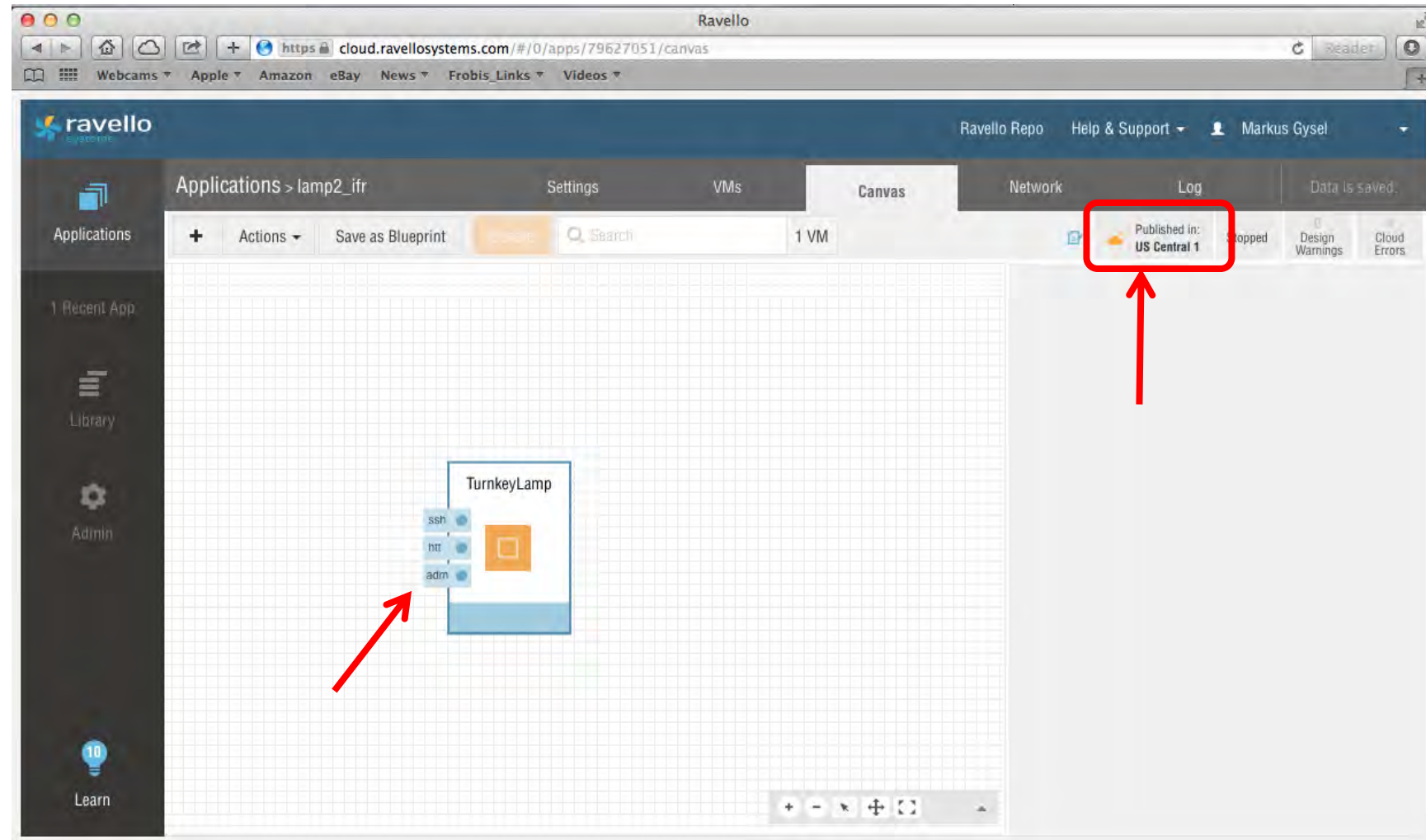
Freigegebene Ports

- > SSH
 - > Keypair erforderlich!
 - > Public Key muss vor dem „Publishen“ eingetragen werden
- > http (Port 80)
- > Ports 12300 – 12400
 - > Admin-Ports
- > IP-Adressen – wie bisher per DHCP vergeben



Publishing

- > Durch das Publishing wird die Applikation in der Cloud zur Verfügung gestellt
- > Applikation verbraucht Platz, ist aber noch nicht aktiv
- > Dazu ist ein expliziter Start erforderlich!



Netzwerk

> Intern nur 10.0.0.0-Netz

The screenshot displays the Vellov Cloud Manager interface for an application named 'lamp2_ifr'. The interface includes a sidebar with navigation options: Applications, Library, Admin, and Learn (with a '10' icon). The main area shows a network diagram on a grid background. At the top, there are controls for 'Actions', 'Save as Blueprint', and a search bar. The diagram features a 'TurnkeyLamp' application box connected to a network icon labeled '10.0.0.0 / 255.255.0.0'. A red arrow points from the text '> Intern nur 10.0.0.0-Netz' to this network icon. Below the diagram, there are icons for 'DHCP Servers', 'DNS Servers', 'IP Filtering', and 'Router'.

Publishing

Zusammenfassung

Wo soll es laufen?

Wie lange soll der Service laufen?

Preis

Publish Application

Content of application: `pricetest_ifr`

4 VMs 4 CPUs 8GB Memory 128GB Disk Space 4 Public IP Addresses

Optimize for **Cost** Performance

Cloud Best Fit Region Best Fit

Schedule application to stop in: **02:00hr**

Advanced ▶

Detailed Pricing ▶

Publish Cancel

Preisdetails

\$ 0.5034 pro Stunde

- Preisschwankungen durch IP Nutzung möglich

Publish Application

Content of application: pricetest_ifr

4 VMs 4 CPUs 8GB Memory 128GB Disk Space 4 Public IP Addresses

Optimize for **Cost** Performance

Cloud Best Fit Region Best Fit

Schedule application to stop in: 02:00hr

Advanced >

Detailed Pricing ▾ [View price list](#)

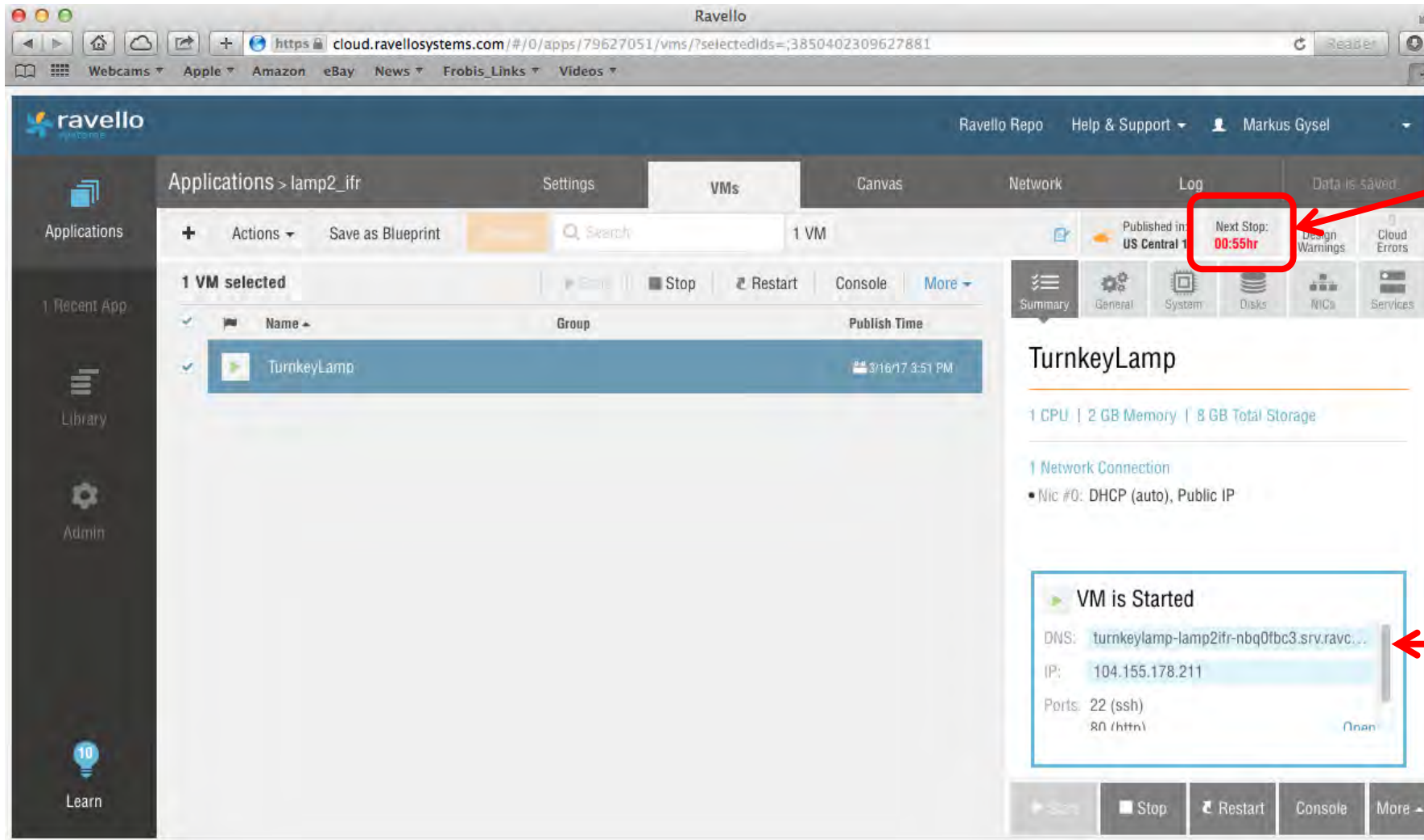
Application Tier	ENTERPRISE
Computing. This is the lowest price available	\$0.42/hr
Volume Storage	\$0.0434/hr
Public IP Addresses	\$0.04/hr
Network, based on usage	\$0.15/GB
Total Price	\$0.5034/hr

Publish Cancel

Starten der VM

The screenshot displays the Ravello cloud management interface. The browser address bar shows the URL: `https://cloud.ravelliosystems.com/#/0/apps/79627051/vms/?selectedIds=,3850402309627881`. The interface is titled "Ravello" and includes a navigation sidebar on the left with options like "Applications", "Library", and "Admin". The main content area shows the "Applications > lamp2_ifr" view, with a "VMs" tab selected. A table lists one VM, "TurnkeyLamp", with a "Start" button highlighted in a red box. The right-hand panel provides details for the "TurnkeyLamp" VM, including its status ("Stopped"), location ("US Central 1"), and specifications: "1 CPU | 2 GB Memory | 8 GB Total Storage". It also shows network settings: "1 Network Connection" and "Nic #0: DHCP (auto), Public IP". A summary box at the bottom right indicates "VM is Stopped" and lists DNS, ports (22 for ssh, 80 for http, 12300-12399 for admin), and a "Start" button.

Startup dauert etwas

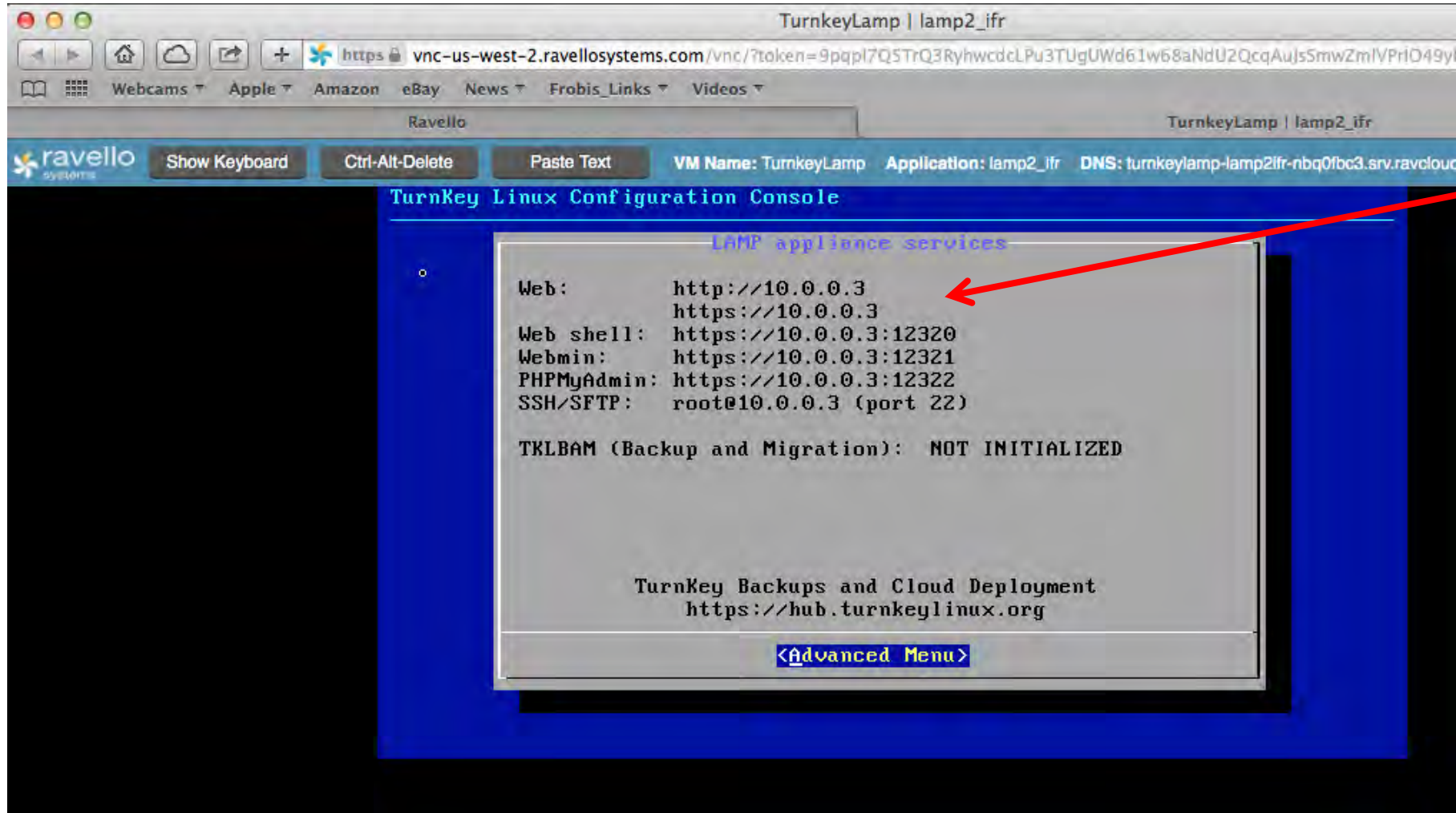


Start etwas 5 Minuten

Automatischer
Shutdown in 55 Minuten

Externe Adresse
und DNS Eintrag

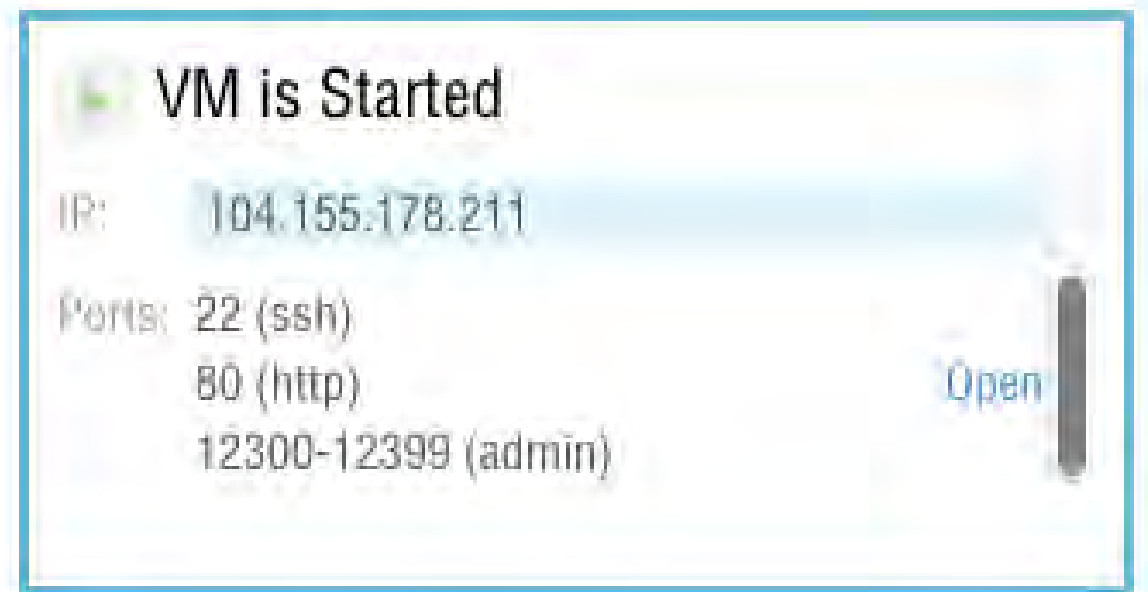
Virtuelle Konsole



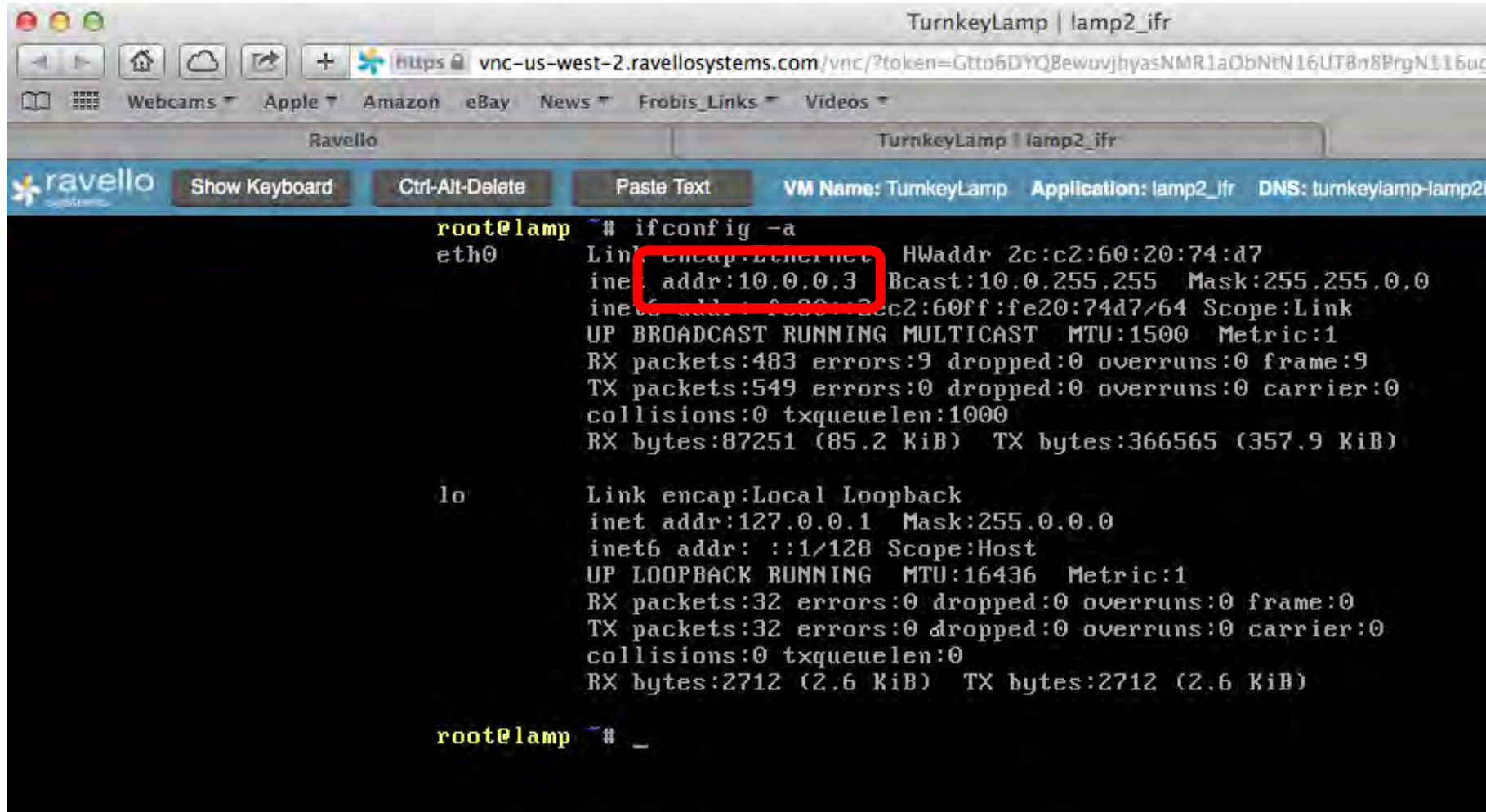
Adressen im 10.0.0.0 Netz

Extern sichtbare Dienste

- > Die definierten Dienste, die extern erscheinen sollen sind extern sichtbar
- > Intern werden trotzdem „nicht-geroutete“ IPs genutzt



IP Adresse im Cloud – System

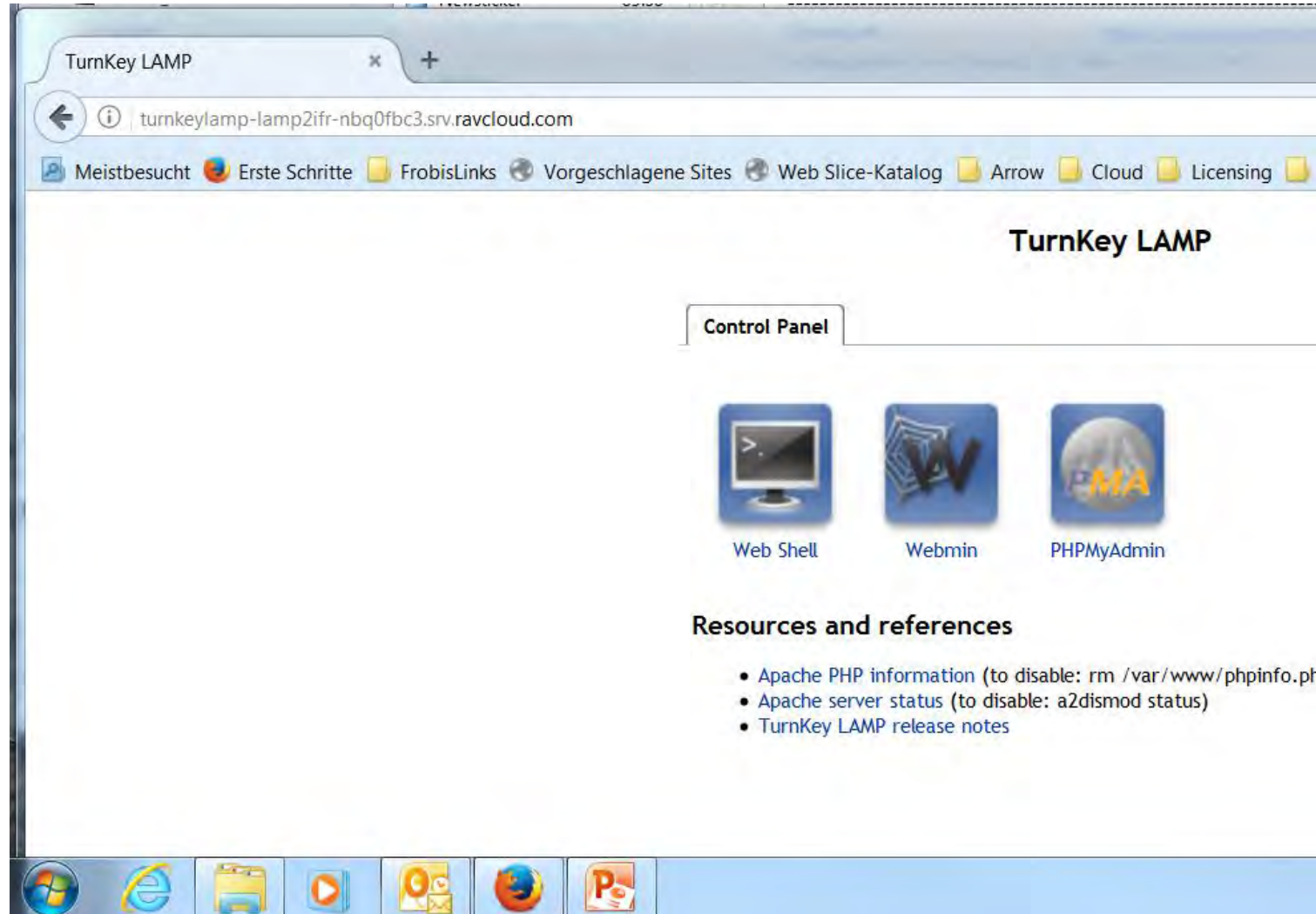


```
TurnkeyLamp | lamp2_ifr
https vnc-us-west-2.ravellosystems.com/vnc/?token=Gtto6DYQBewuvjhyasNMR1aObNtN16UT8n8PrgN116ug
Ravello TurnkeyLamp | lamp2_ifr
Show Keyboard Ctrl-Alt-Delete Paste Text VM Name: TurnkeyLamp Application: lamp2_ifr DNS: turnkeylamp-lamp2if
root@lamp ~# ifconfig -a
eth0      Link encap:Ethernet HWaddr 2c:c2:60:20:74:d7
          inet addr:10.0.0.3 Bcast:10.0.255.255 Mask:255.255.0.0
          inet6 addr: fe80::2c2:60ff:fe20:74d7/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
          RX packets:483 errors:9 dropped:0 overruns:0 frame:9
          TX packets:549 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:87251 (85.2 KiB) TX bytes:366565 (357.9 KiB)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1 Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING MTU:16436 Metric:1
          RX packets:32 errors:0 dropped:0 overruns:0 frame:0
          TX packets:32 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:2712 (2.6 KiB) TX bytes:2712 (2.6 KiB)

root@lamp ~# _
```

Verbindung vom Windows-Laptop aus



MySQL Administration

The screenshot displays the phpMyAdmin web interface in a browser window. The address bar shows the URL: `https://turnkeylamp-lamp2ifr-nbq0fbc3.srv.ravcloud.com:12322/index.php?token=02fae4493398ebbcba2605576eec6164#PM/`. The interface is for the `localhost` database.

Navigation Menu: Datenbanken, SQL, Status, Prozesse, Rechte, Exportieren, Importieren, Variablen, Zeichensätze, Mehr.

Left Sidebar (Database List): information_schema, mysql, performance_schema, phpmyadmin, test.

Main Content Area:

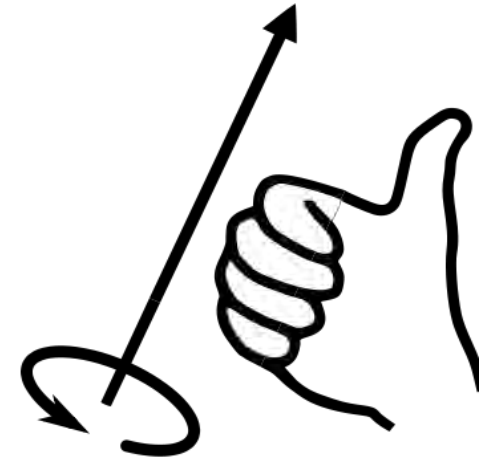
- Allgemeine Einstellungen:** Passwort ändern, Zeichensatz / Kollation der MySQL-Verbindung: `utf8_general_ci`.
- Anzeige-Einstellungen:** Sprache - Language: `Deutsch - German`, Oberflächendesign: `pmahomme`, Schriftgröße: `82%`, Weitere Einstellungen.

Right Sidebar (System Information):

- MySQL:**
 - Server: Localhost via UNIX socket
 - Server Version: 5.5.31-0+wheezy1
 - Protokoll-Version: 10
 - Benutzer: root@localhost
 - MySQL-Zeichensatz: UTF-8 Unicode (utf8)
- Webserver:**
 - Apache/2.2.22 (Debian)
 - MySQL-Client-Version: 5.5.31
 - PHP Erweiterung: mysqli
- phpMyAdmin:**
 - Versionsinformationen: 3.4.11.1deb2
 - Dokumentation
 - Wiki
 - Offizielle Homepage
 - Mitmachen
 - Unterstützung erhalten
 - Liste der Änderungen

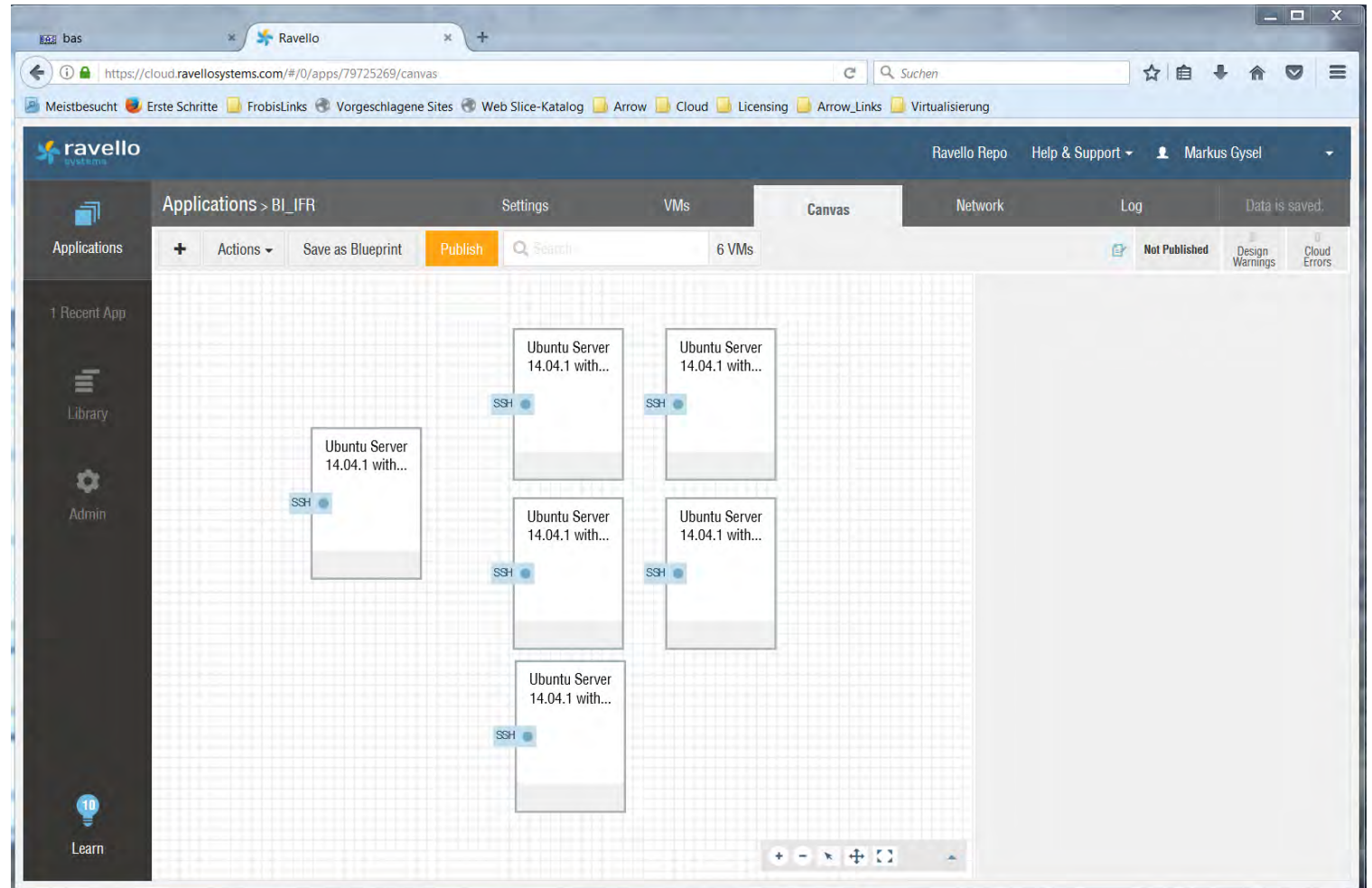
Benefit

- > Erstellen einer Applikation am Laptop
- > Virtualisierte Umgebung
 - > VMWare
 - > KVM
 - > Virtual Box über VMDK
- > Komplettes lokales Netz, das extern nicht sichtbar ist
- > Einfaches Upload der Applikation
- > Durch Dienstkonfiguration lassen sich extern sichtbare Dienste festlegen



Design einer Applikation „from Scratch“

- > Designen einer Applikation aus vorgefertigten VMs
- > VMs können auch eigene hochgeladene VMs sein



Applikationen aus einem „Blueprint“

Beispiel:
Nginx,
Tomcat
MySQL

The screenshot shows the Ravello cloud management interface. The browser address bar indicates the URL <https://cloud.ravelsystems.com/#/0/library/blueprints/>. The page title is "Library > Blueprints". The interface displays a list of 5 blueprints:

Name	Description	Created	Owner
nginx-tomcat6-mysql	Nginx, Tomcat 6 and MySQL. A blueprint for developing Java applicatio...	10/21/14 2:20 AM	Ravello Syst...
nginx-tomcat7-postgres	Nginx, Tomcat 7 and postgres. A blueprint for developing Java applicati...	10/21/14 2:18 AM	Ravello Syst...
nginx-tomcat6-postgres	Nginx, Tomcat 6 and Postgres. A blueprint for developing Java applicati...	10/21/14 2:16 AM	Ravello Syst...
nginx-tomcat7-mysql	Nginx, Tomcat 7 and MySQL. A blueprint for developing Java applicatio...	10/21/14 2:11 AM	Ravello Syst...
UI-Test-Farm	1xHub vm (2cpu / 4G mem), 3xNode vms (1cpu / 2G mem), 6 webdriv...	10/29/13 7:57 AM	Ravello Syst...

A red arrow points from the "Library" menu item in the left sidebar to the first blueprint entry, "nginx-tomcat6-mysql".

Beispiel

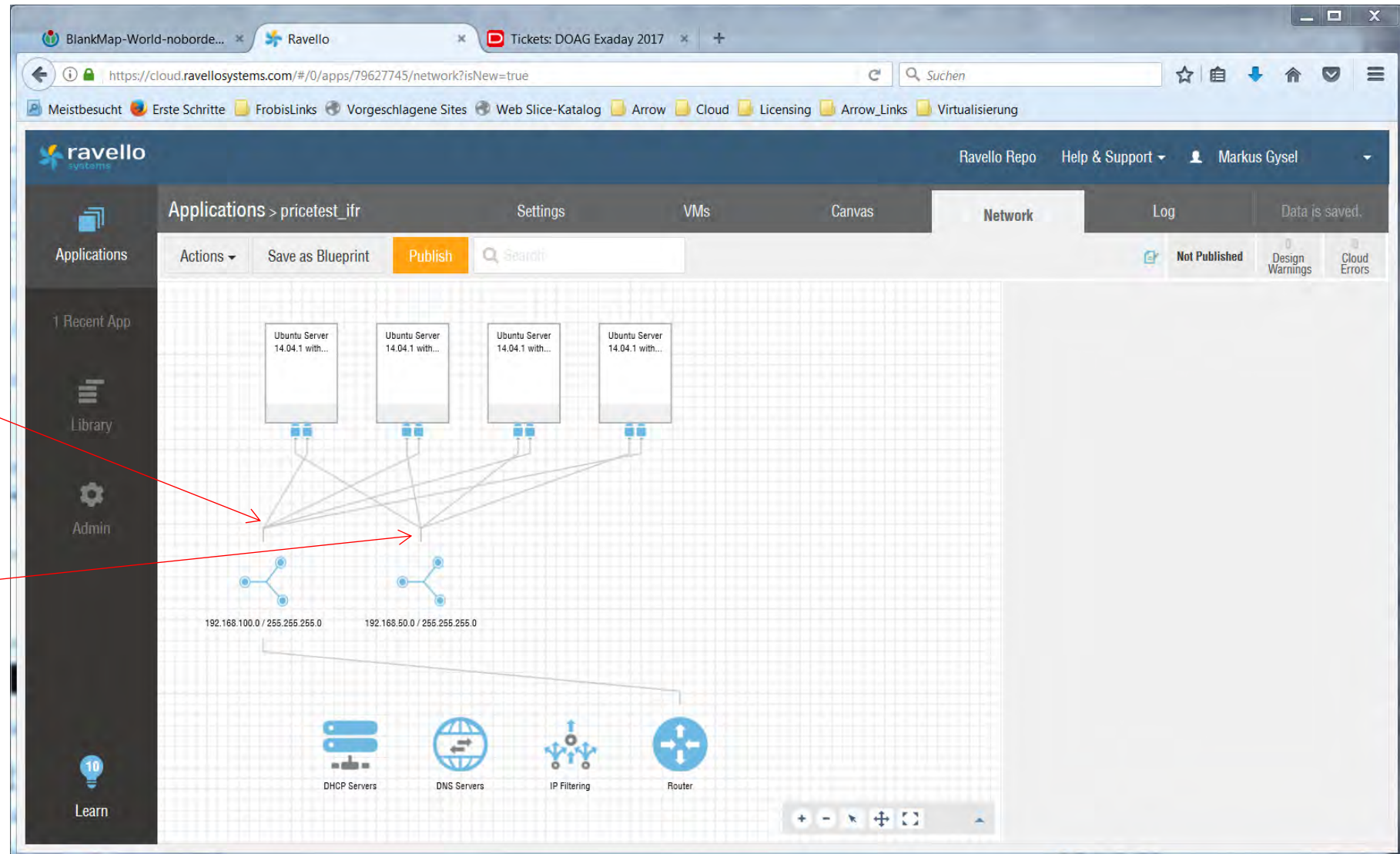
„from Scratch“

- 4 VMs
 - 1 CPU
 - 2 GB RAM
 - 32 GB Storage
 - 2 NICs

The screenshot displays the Ravello Systems web interface. The browser address bar shows the URL: <https://cloud.ravell systems.com/#/0/apps/79627745/canvas?isNew=true>. The interface includes a top navigation bar with the Ravello logo, user name 'Markus Gysel', and various menu items like 'Ravello Repo', 'Help & Support', and 'Log'. Below this is a sub-navigation bar for the application 'pricetest_ifr', with tabs for 'Settings', 'VMs', 'Canvas', 'Network', and 'Log'. The main area is a canvas with a grid background, containing four 'Ubuntu Server 14.04.1 with...' VMs. Each VM has associated icons for 'SSH', 'http', and 'jva'. The bottom-right VM is highlighted with a black border. On the right side, there is a detailed view for the selected VM, titled 'Ubuntu Server 14.04.1 with qe...', showing specifications: '1 CPU | 2 GB Memory | 32 GB Total Storage' and 'Keypair: ravello_ifr'. It also lists '2 Network Connections': 'Nic eth0: Static 192.168.50.13, Public IP' and 'Nic eth1: Static 192.168.100.13, Outbound only'. The bottom of the interface features a 'Learn' button and a row of control buttons: 'Start', 'Stop', 'Restart', 'Console', and 'More'.

Netzwerk

- Zwei Netzwerke
 - Ein public Netzwerk 192.168.50.x
 - Ein private Netzwerk 192.168.100.x



Wann nutze ich Ravello?

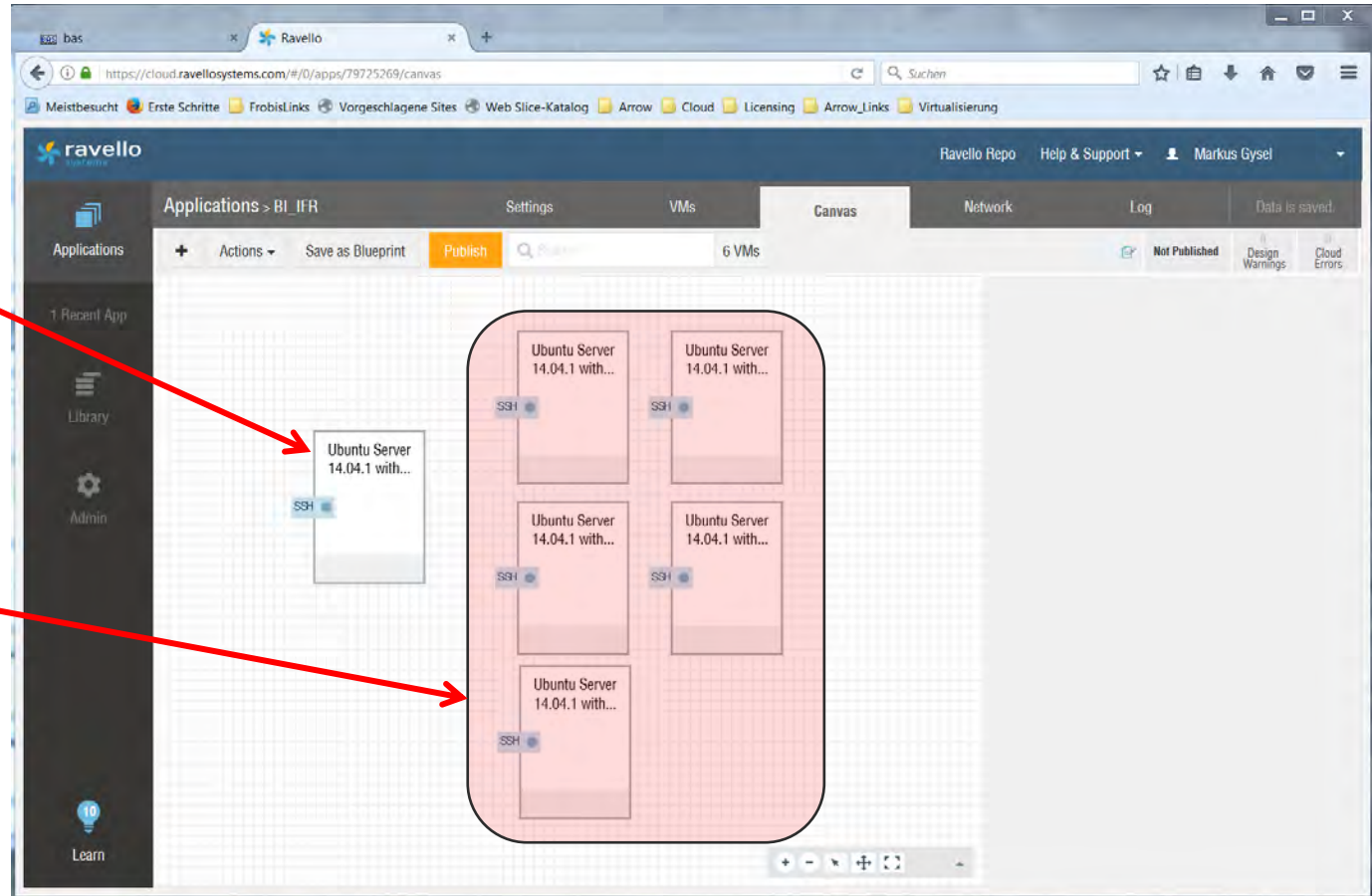
- > Entwicklungsumgebungen
- > Testumgebungen
 - > Stresstests
 - > Patchtests
- > Umgebungen, die nicht permanent zur Verfügung stehen müssen
 - > Big Data Umgebungen
 - > Analyse von Tweets bei Produktankündigungen
 - > Analyse von „Likes“ & „Dislikes“
- > Für permanente laufende Umgebung ist eine genauere Kostenanalyse notwendig



Beispiel: Big Data

Cloudera
Management
Server

Hadoop Cluster
oder
SPARK Cluster



Mehrwert von Oracle Ravello

- > Einfaches Einbringen von Applikationen in die Cloud



Oracle Ravello

- > Keine „Lipgloss Cloud Solution“, sondern ein einfacher Cloud – Einstieg
- > Jeder mit VMWare kann – auch testweise – eine VM in die Cloud verschieben
- > Ideal für zeitlich begrenzte VMs
- > Sollte auch nicht verwechselt werden mit den verführerischen Kokosfettpralines



<http://www.chefkoch.de/rezepte/1280051233339024/Raffaello-selbst-gemacht.html>

Test mit Best in der Arrow Cloud Testumgebung

- > Echte Cloud-Umgebung
 - > Für Proof-Of-Concepts
- > Unterschiedliche Cloud-Umgebungen
 - > SaaS
 - > CRM (ehemals Siebel)
 - > Peoplesoft
 - > PaaS
 - > Oracle Database
 - > Java
 - > IaaS
 - > Ravello



Das Ziel ist der Weg...



Fragen?

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<mailto:ingo.frobenius@arrow.com>





Vielen Dank!