

# Ravello

Mit bestehenden Anwendungen einfach und schnell in die Cloud und zurück

best Systeme GmbH



# Agenda

- Ravello Geschichte
- Vorteile
- Alleinstellungsmerkmale
- Einsatzgebiete
- Regionen
- Anwendungsbeispiel: „Mit der Applikation über Ravello in die Cloud“

# Ravello Geschichte

- 2011 gegründet
- Ähnliches Team wie KVM
- Erfahrung in den Bereichen
  - VM
  - Networking
  - Hypervisor
- 22 Feb. 2016 Übernahme durch Oracle
- Eingliederung ins Oracle Cloud Portfolio

# Vorteile

## Agilität

- Schnell
- Self Service
- Blueprints

## Hohe Genauigkeit

- „1 zu 1“ Klon
- L2 Netzwerk
- Keine Änderungen an der Applikation

# Vorteile

## Skalierbarkeit überall

- Auswahl aus verschiedenen Regionen in der Welt

## Kosten Reduktion

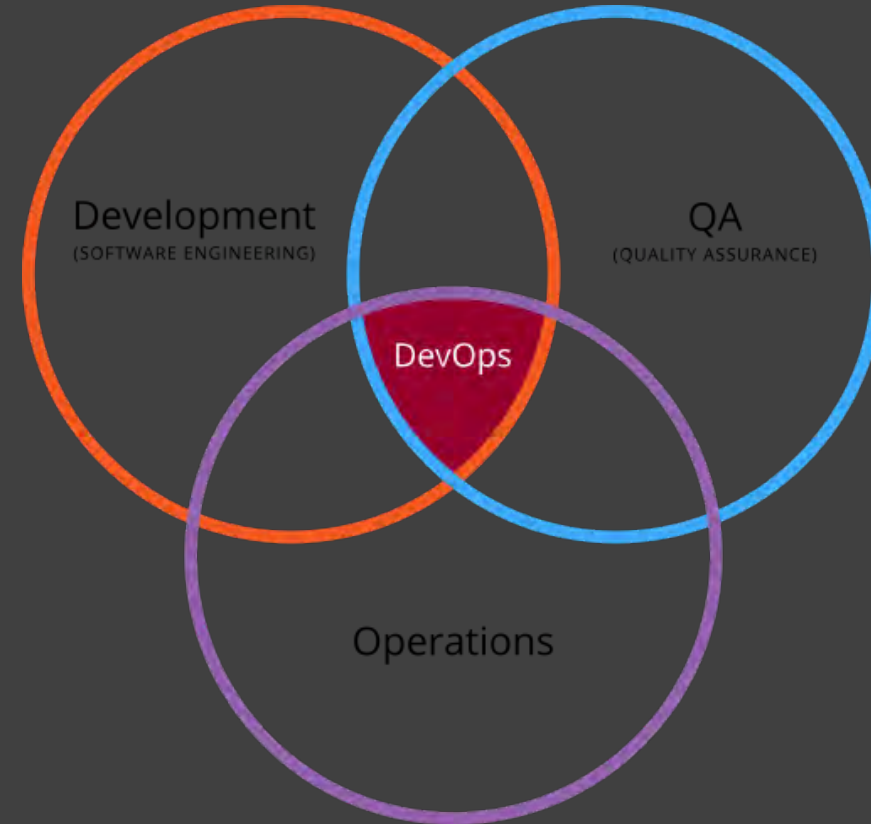
- Keine Anschaffungskosten
- Granulare Abrechnung

# Alleinstellungsmerkmale

- Anbietersvielfalt
- Nested Hypervisor HVX
- Layer 2 Netzwerk
- Ephemeral Access Token

# Einsatzgebiete

- DevOps
  - Entwicklung
  - Produktion
  - Qualitätssicherung



Quelle: <https://en.wikipedia.org/wiki/DevOps>


# Regionen

## Testzugang

- Begrenzt auf US
  - West
  - East
  - Central

Weitere Regionen können nach Anfrage beim Support freigeschaltet werden

### Supported clouds and additional regions + disclaimer

 **Ravello Support Agent** September 25, 2022 14:33 [Follow](#)

Accounts in Ravello are created by default with a limited set of regions available. If you require access to additional regions please open a support ticket.

These are the available regions currently supported by Ravello:

<u>API Name</u>	<u>Display Name</u>
us-east-1	US East 1
us-east-2	US East 2
us-central-1	US Central 1
us-west-1	US West 1
us-west-2	US West 2
eu-central-1	Europe Central 1
eu-west-1	Europe West 1
eu-west-2	Europe West 2
sa-east-1	Sao Paulo
ap-east-1	Taiwan
ap-northeast-1	Tokyo
ap-southeast-1	Singapore
ap-southeast-2	Sydney

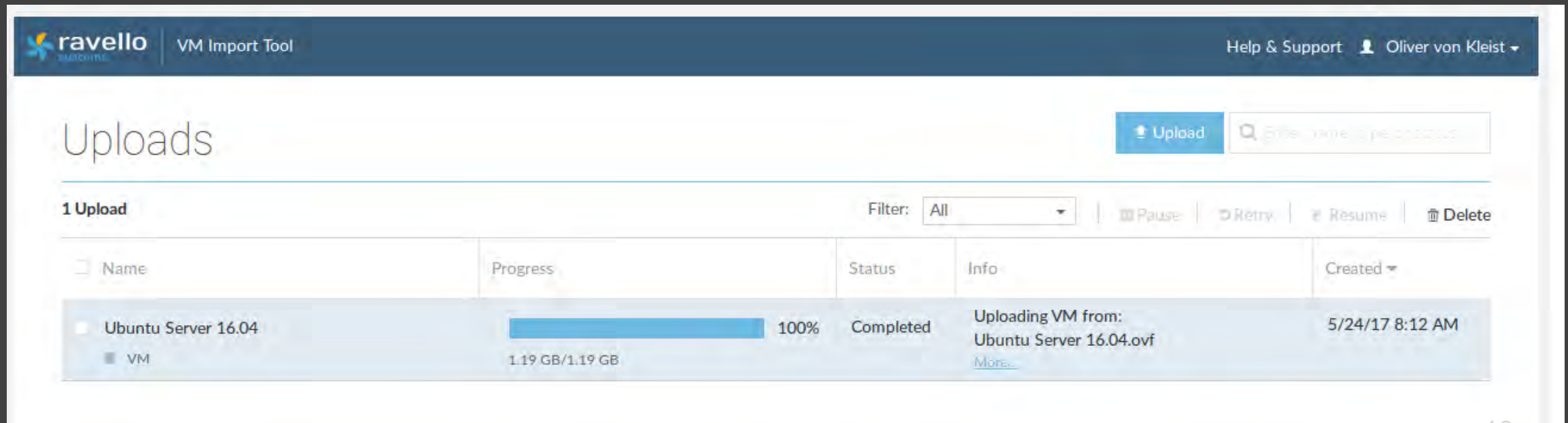


## Mit der Applikation über Ravello in die Cloud

- Upload einer VM
- Erstellung der Applikation
- Veröffentlichen
- Von der Applikation zum Blueprint und zurück
- Kostenbetrachtung
- Ephemeral Access Token

# Upload einer VM

- Ansicht aller hochgeladenen VMs
- Upload Server nötig (OSX, Windows Linux)
- Internetanbindung beachten

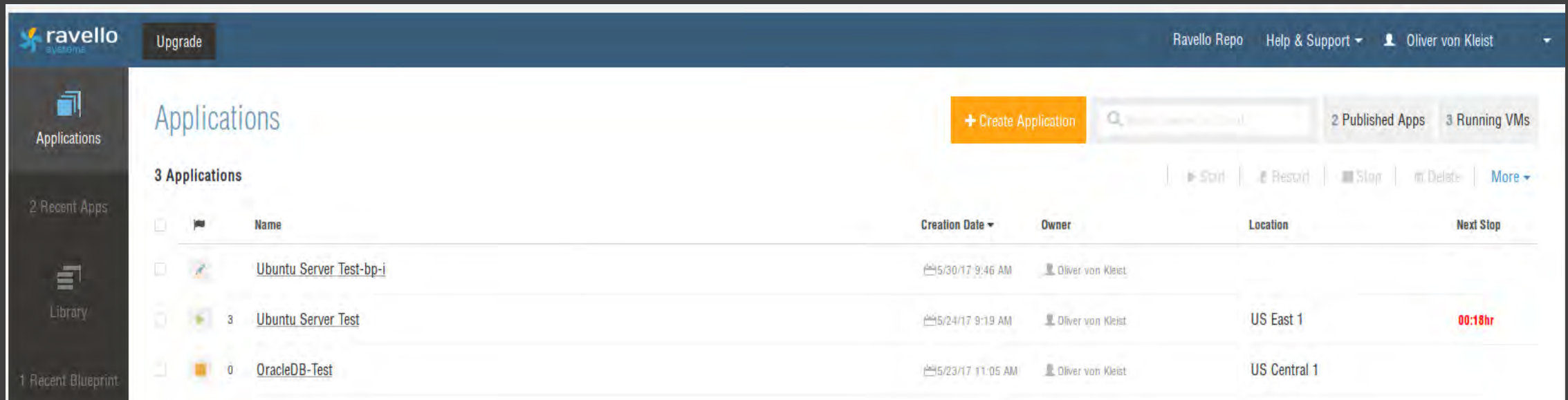


The screenshot shows the Ravello VM Import Tool interface. The header includes the Ravello logo and 'VM Import Tool' on the left, and 'Help & Support' and 'Oliver von Kleist' on the right. The main heading is 'Uploads'. Below it, there is a search bar and an 'Upload' button. A summary bar indicates '1 Upload' and includes a filter dropdown set to 'All', along with 'Pause', 'Retry', 'Resume', and 'Delete' actions. The main content is a table with columns: Name, Progress, Status, Info, and Created. One upload is listed: 'Ubuntu Server 16.04' with a progress bar at 100%, status 'Completed', and info 'Uploading VM from: Ubuntu Server 16.04.ovf'. The created time is '5/24/17 8:12 AM'. A 'VM' icon is shown below the name, and a 'More...' link is in the info column.

Name	Progress	Status	Info	Created
Ubuntu Server 16.04 VM	100% 1.19 GB/1.19 GB	Completed	Uploading VM from: Ubuntu Server 16.04.ovf <a href="#">More...</a>	5/24/17 8:12 AM

# Meine Applikationen

- Ansicht aller Applikationen
- Status der Applikationen
  - Zustand
  - Anzahl der laufenden VMs
  - Next Stop

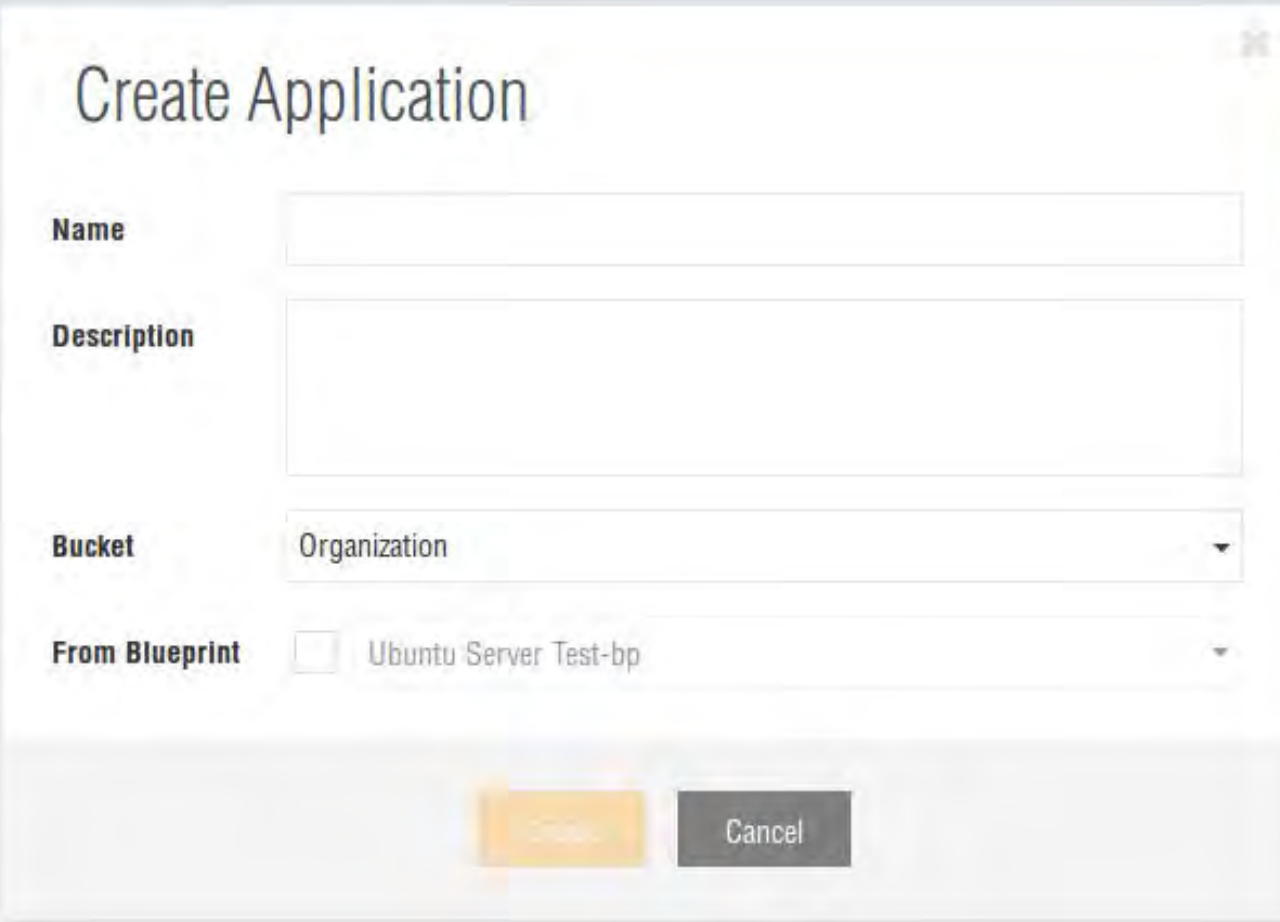


The screenshot shows the Ravello Systems Applications dashboard. The top navigation bar includes the Ravello logo, an 'Upgrade' button, and user information for 'Oliver von Kleist'. The main content area is titled 'Applications' and features a '+ Create Application' button, a search bar, and summary statistics: '2 Published Apps' and '3 Running VMs'. Below this is a table listing three applications:

Name	Creation Date	Owner	Location	Next Stop
Ubuntu Server Test-bp-i	5/30/17 9:46 AM	Oliver von Kleist		
3 Ubuntu Server Test	5/24/17 9:19 AM	Oliver von Kleist	US East 1	00:18hr
0 OracleDB-Test	5/23/17 11:05 AM	Oliver von Kleist	US Central 1	

# Erstellung der Applikation

- Leerer „Canvas“
- Auswahl in welchem „Bucket“
- Blueprint

A screenshot of a 'Create Application' dialog box. It contains four input fields: 'Name' (empty text box), 'Description' (empty text box), 'Bucket' (dropdown menu showing 'Organization'), and 'From Blueprint' (checkbox followed by a dropdown menu showing 'Ubuntu Server Test-bp'). At the bottom, there are two buttons: a yellow 'Create' button and a grey 'Cancel' button.

Create Application

Name

Description

Bucket Organization

From Blueprint  Ubuntu Server Test-bp

Create Cancel

# Meine Applikation

The screenshot displays the Ravello Systems web interface. At the top, the 'ravello systems' logo is on the left, and 'Upgrade' is in the center. On the right, there are links for 'Ravello Repo', 'Help & Support', and a user profile for 'Oliver von Kleist'. Below the header, the main navigation bar includes 'Applications > Ubuntu Server Test 1.1', 'Settings', 'VMs', 'Canvas', 'Network', 'Log', and 'Data is saved.'. A secondary bar contains '+ Actions', 'Save as Blueprint', 'Publish', a search field, and '0 VMs'. On the right side of this bar, there are status indicators for 'Not Published', 'Design Warnings', and 'Cloud Errors'. The left sidebar features 'Applications', '2 Recent Apps', 'Library', and 'Admin'. The central area is a grid-based canvas. An 'Import VM' dialog box is open, showing a search field and a list of 'Available VMs (25)'. The list includes 'Ubuntu Server 16.04', two 'CXentos Test' entries (both 100%), 'Ubuntu Server 16...', 'Empty ESX', 'Xubuntu Desktop 14...', 'Ubuntu Server 14.04...', another 'Ubuntu Server 14.04...', 'Empty Cloud Image', 'Empty', 'UI-Grid-NODE-Linux-1', and 'UI-Grid-NODE-Linux-2'. An 'Other' section at the bottom of the dialog shows a 'Group' option. A 'Learn' link is at the bottom left of the sidebar.

# Meine Applikation

The screenshot displays the Ravello Systems web interface. At the top left, the Ravello logo and an 'Upgrade' button are visible. The top right shows 'Ravello Repo', 'Help & Support', and the user 'Oliver von Kleist'. The main navigation bar includes 'Applications - Ubuntu Server Test', 'Settings', 'VMs', 'Canvas', 'Network', 'Log', and 'Data is saved'. Below this, a toolbar contains '+', 'Actions', 'Save as Blueprint', 'Upgrade', a search bar, and '3 VMs'. On the right side of the toolbar, there are status indicators: 'Published in: US East 1', 'Stopped', 'Design Warnings', and 'Cloud Errors'. The central canvas area features a grid with three vertically stacked Ubuntu Server 16.04 VMs. The top VM is labeled 'Ubuntu Server 16.04-1' and has an 'SSH' icon. The middle VM is labeled 'Ubuntu Server 16.04-2' and has 'SSH' and 'HTT' icons. The bottom VM is labeled 'Ubuntu Server 16.04-3' and has 'SSH' and 'HTT' icons. A 'Learn' button with a lightbulb icon is located in the bottom left corner of the interface.

# Veröffentlichen der Applikation

## Cost

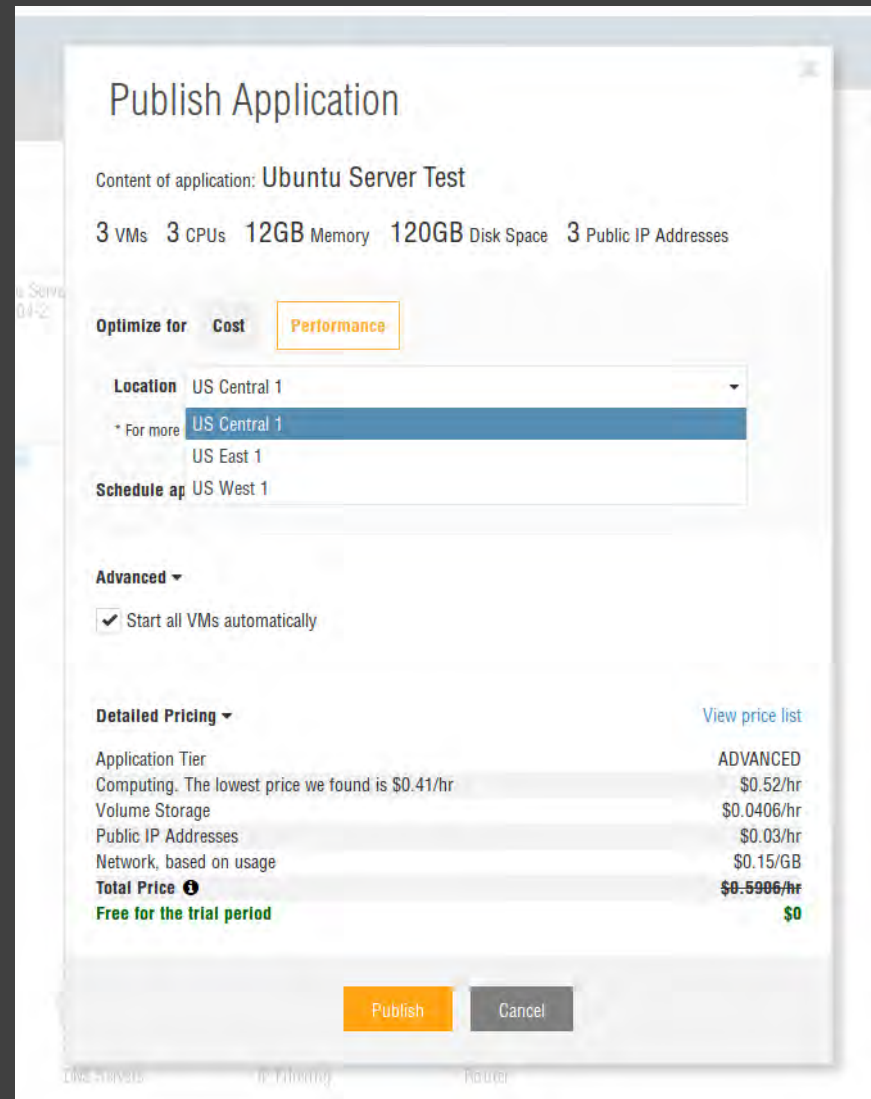
- Keine Auswahl der Region

## Performance

- Auswahl der Region

## Detailed Pricing

- Übersichtliche Kosten Darstellung



**Publish Application**

Content of application: **Ubuntu Server Test**

3 VMs 3 CPUs 12GB Memory 120GB Disk Space 3 Public IP Addresses

Optimize for **Cost** **Performance**

Location **US Central 1**

\* For more **US Central 1**  
US East 1

Schedule app **US West 1**

Advanced **▼**

Start all VMs automatically

Detailed Pricing **▼** [View price list](#)

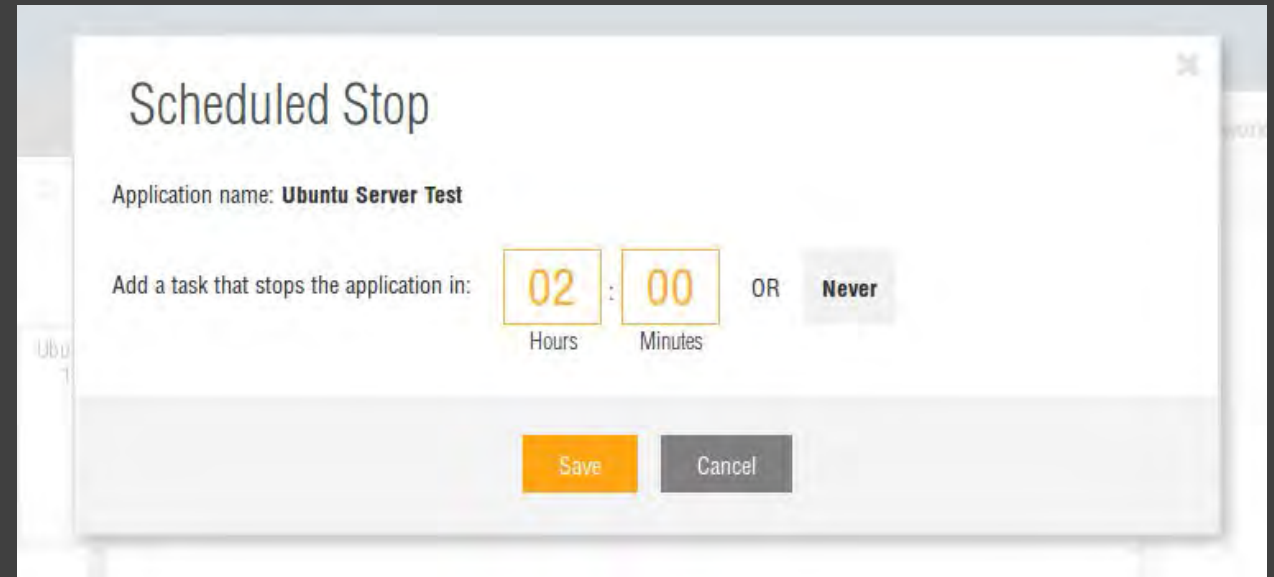
Application Tier	ADVANCED
Computing. The lowest price we found is \$0.41/hr	\$0.52/hr
Volume Storage	\$0.0406/hr
Public IP Addresses	\$0.03/hr
Network, based on usage	\$0.15/GB
<b>Total Price</b> ⓘ	<b><del>\$0.5906/hr</del></b>
<b>Free for the trial period</b>	<b>\$0</b>

**Publish** **Cancel**

# Laufzeiten

Granulare Planung der Laufzeit

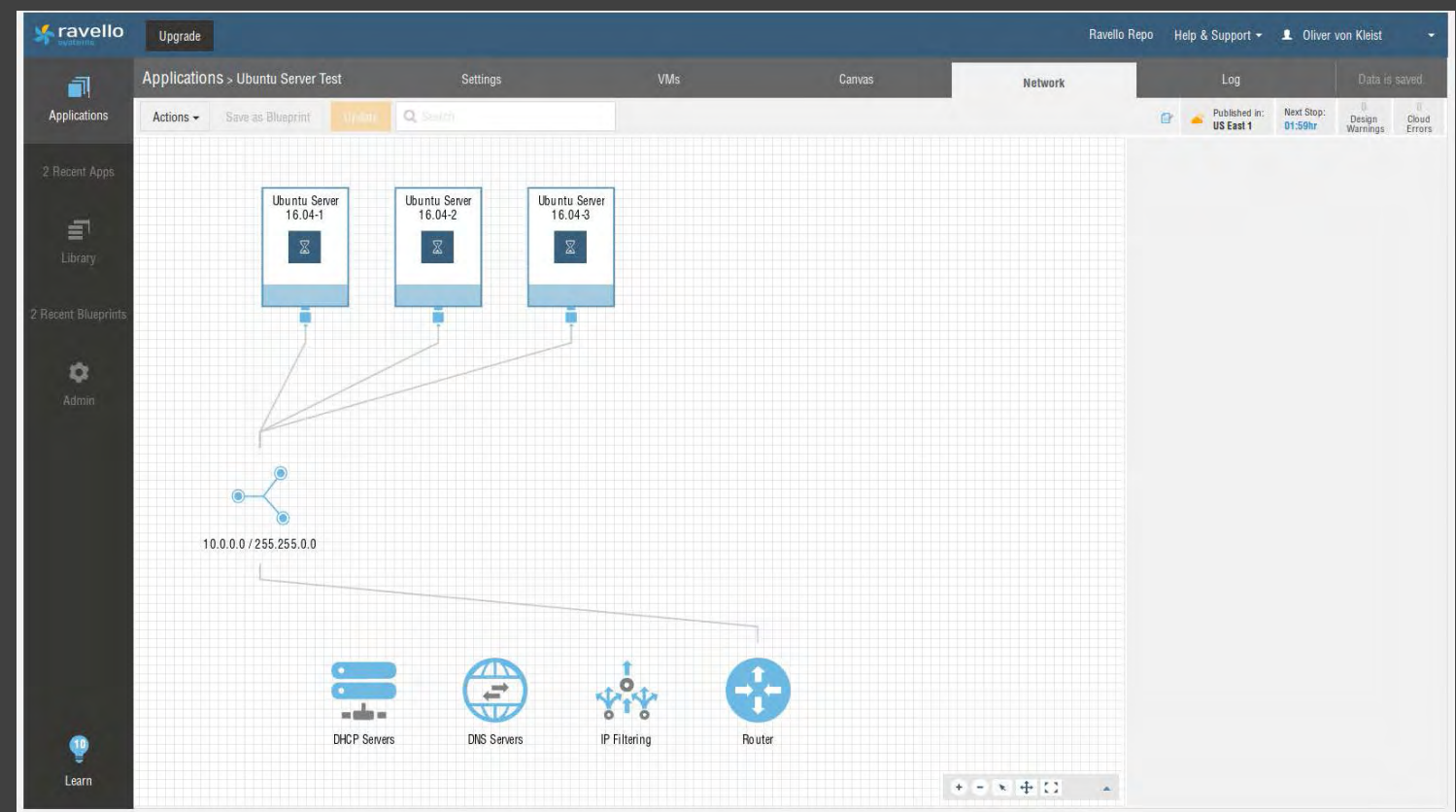
- Begrenzt
- Unbegrenzt
- Änderung noch während dem Betrieb möglich





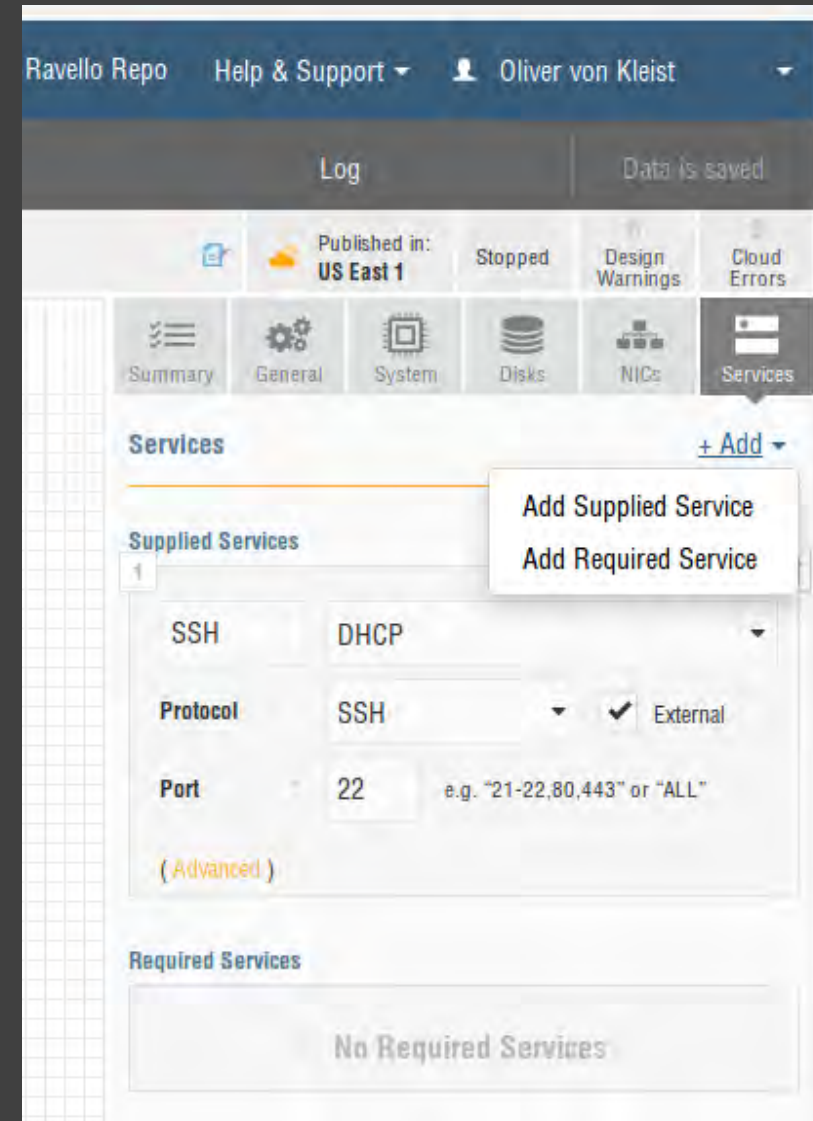
# Veröffentlichung

- Zustand der VMs
- Dauert beim ersten Publishing etwas länger (ca. 10 min)



# Services

- Services
- Freischaltung einzelner Ports / Portranges
- Vorgefertigt Services



The screenshot shows the 'Services' configuration page in the Ravello Repo. The page is titled 'Ravello Repo' and includes a user profile 'Oliver von Kleist'. The main navigation bar contains 'Log' and 'Data is saved'. Below this, there are tabs for 'Published in: US East 1', 'Stopped', 'Design Warnings', and 'Cloud Errors'. The 'Services' tab is active, showing a list of services. A dropdown menu is open, offering 'Add Supplied Service' and 'Add Required Service'. The 'Supplied Services' section shows a single service with the following details:

SSH	DHCP
Protocol	SSH <input checked="" type="checkbox"/> External
Port	22 e.g. "21-22,80,443" or "ALL"

(Advanced)

The 'Required Services' section is currently empty, displaying 'No Required Services'.

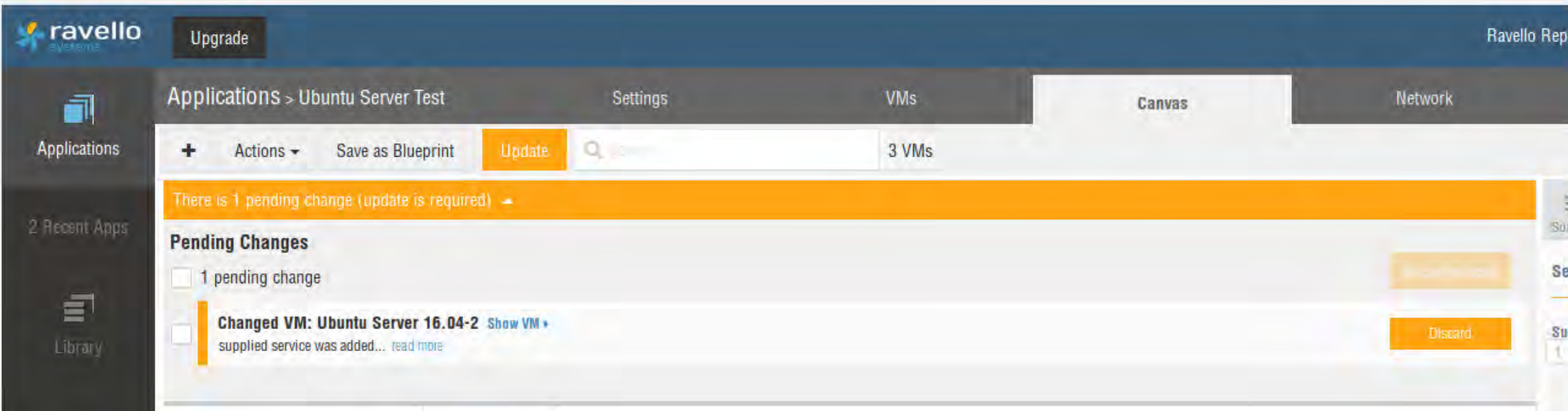
# Services Templates

- SSH standardmäßig bei allen VMs
- Service Vorlagen mit Ports

The screenshot shows a configuration window for a service template. At the top, there is a tab labeled 'sup' and a dropdown menu set to 'DHCP'. Below this, the 'Protocol' is set to 'HTTP' and the 'External' checkbox is checked. The 'Port' field is empty, with a search icon and the text '443" or "ALL"' next to it. A dropdown menu is open, listing various protocols: HTTP (highlighted), HTTPS, SSH, RDP, TCP, UDP, AH, ESP, SCTP, and IP. Below the protocol list, there is a section for 'Required Services' which is currently empty. At the bottom of the window, there are 'Save' and 'Cancel' buttons.

# Applikation Update

- Änderung an laufender / ruhender Umgebung per Update
- Erneute Anzeige der Preise

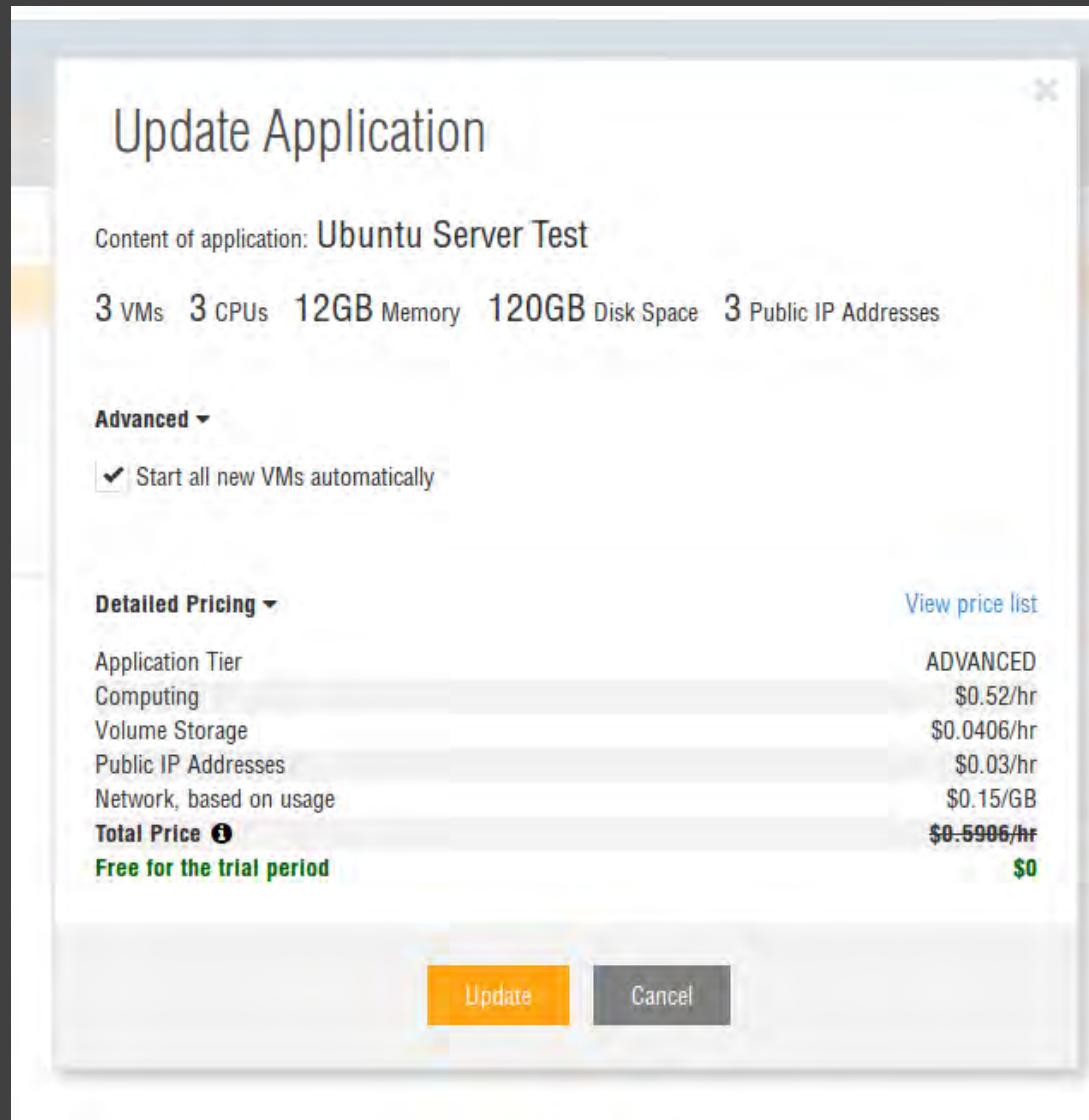


The screenshot shows the Ravello Systems web interface. At the top left is the Ravello logo and the word "Upgrade". The main navigation bar includes "Applications > Ubuntu Server Test", "Settings", "VMs", "Canvas", and "Network". Below this, there are buttons for "+ Actions", "Save as Blueprint", and "Update", along with a search bar and "3 VMs". A prominent orange banner states "There is 1 pending change (update is required)". Underneath, a "Pending Changes" section lists "1 pending change" and a specific entry: "Changed VM: Ubuntu Server 16.04-2" with a "Show VM" link and a note that "supplied service was added... read more". Buttons for "Approve" and "Discard" are visible on the right side of the change entry.

# Applikation Update

Änderungen während der Laufzeit

- CPU / Memory Änderungen nur nach Herunterfahren
- Services und NICs benötigen beim Hinzufügen einen kurzen Neustart
- Services können ohne Neustart entfernt werden



The screenshot shows a dialog box titled "Update Application" with a close button in the top right corner. The content of the application is "Ubuntu Server Test". Below this, the configuration is listed: 3 VMs, 3 CPUs, 12GB Memory, 120GB Disk Space, and 3 Public IP Addresses. There is an "Advanced" section with a dropdown arrow and a checked checkbox for "Start all new VMs automatically". A "Detailed Pricing" section is also present with a dropdown arrow and a "View price list" link. The pricing table is as follows:

Category	Price
Application Tier	ADVANCED
Computing	\$0.52/hr
Volume Storage	\$0.0406/hr
Public IP Addresses	\$0.03/hr
Network, based on usage	\$0.15/GB
<b>Total Price ⓘ</b>	<b><del>\$0.5906/hr</del></b>
<b>Free for the trial period</b>	<b>\$0</b>

At the bottom of the dialog, there are two buttons: "Update" (highlighted in orange) and "Cancel".

# Blueprint Library

- Anzeige aller Blueprints
  - Vorgefertigt
  - Eigene
- Erstellung einer Applikation auf Knopfdruck

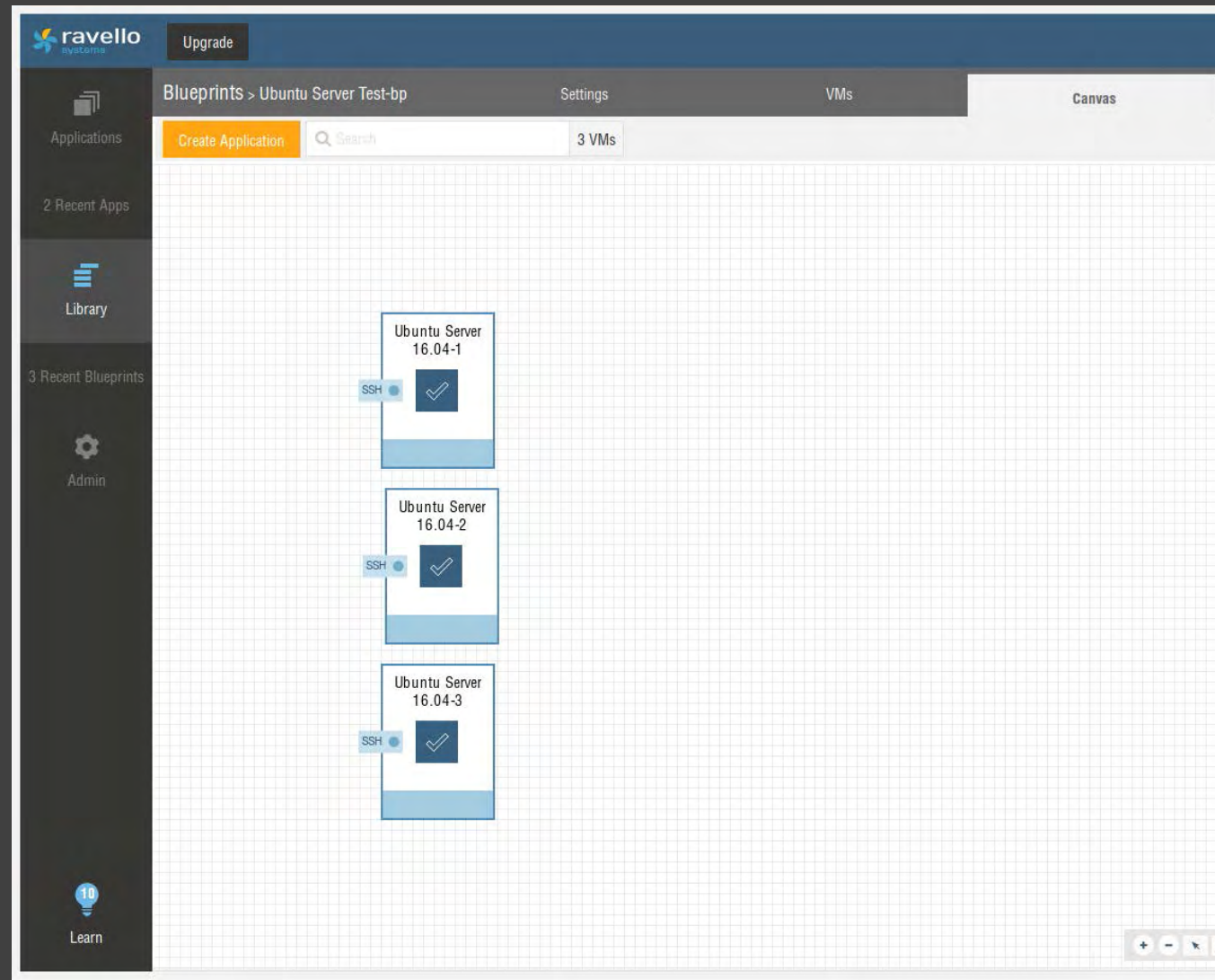


The screenshot shows the Ravello Systems Blueprint Library interface. The top navigation bar includes the Ravello logo, an 'Upgrade' button, and user information for 'Oliver von Kleist'. The main content area is titled 'Library > Blueprints' and features a search bar and filters for 'My Blueprints' and 'Shared with Me'. A table lists 7 blueprints with columns for Name, Description, Created, and Owner.

Name	Description	Created	Owner
✓ <a href="#">Ubuntu Server Test-bp</a>		5/24/17 9:23 AM	Oliver von K...
✓ <a href="#">OracleDB-Test-bp</a>	Test Umgebung einer Oracle DB	5/23/17 2:00 PM	Oliver von K...
<a href="#">🔗 <b>i</b> <a href="#">nginx-tomcat6-mysql</a></a>	Nginx, Tomcat 6 and MySQL. A blueprint for developing Java applications. Log-in (to the VMs) with the user rav...	10/21/14 2:20 AM	Ravello Syst...
<a href="#">🔗 <b>i</b> <a href="#">nginx-tomcat7-postgres</a></a>	Nginx, Tomcat 7 and postgres. A blueprint for developing Java applications. Log-in (to the VMs) with the user r...	10/21/14 2:18 AM	Ravello Syst...

# Blueprint 3x Ubuntu Server

- Ansicht aller VMs der Applikation
- Übersicht des Netzwerkes



# Kostenbetrachtung

- Preisübersicht
- Networking Tiers
- Preise und Zusatzkosten
- Rechenbeispiel Cost Optimized



# Preis Übersicht

- Building Blocks
  - „Bauklotz“ Prinzip
- Max 4GB RAM pro vCPU

## ① The size of your application

### Ravello building blocks: R1 and R2

As mentioned, Ravello fits the total compute size of your application on a combination of two types of building blocks:

- R1: 2 vCPU, 4GB RAM
- R2: 2 vCPU, 8GB RAM

Thus, if your application consists of 2 VMs with 4 vCPU and 16GB RAM, 3 VMs with 2 vCPU and 8GB RAM and 2 VMs with 1 vCPU and 4GB RAM, Ravello sees a 16 vCPU, 60GB RAM application. These resources are best-fitted on a combination of the two types of building blocks. For this example this means 7 R2 blocks and 1 R1 block, for a total resource pool of 16 vCPU and 60GB RAM.

The prices of our R1 and R2 building blocks vary depending on the underlying cloud (AWS or Google Cloud) and on the complexity of your application which dictates the tier your application falls in - Advanced tier vs. Enterprise tier.

# Networking Tiers

Advanced	Enterprise
Private application Network	
Application blueprints	
Unlimited users / sharing	
Upload VMware / KVM VMs	
	Multiple Private IPs per VM
	Multiple Subnets
	L2 networking appliances

# Preise und Zusatzkosten

	Advanced	Enterprise
R1 (2 vCPUs 4GB RAM) Cost	USD 0.140/hr	USD 0.210/hr
R2 (2 vCPUs 8GB RAM) Cost	USD 0.270/hr	USD 0.400/hr
R1 (2 vCPUs 4GB RAM) Performance	USD 0.180/hr	USD 0.240/hr
R2 (2 vCPUs 8GB RAM) Performance	USD 0.340/hr	USD 0.450/hr
Storage	USD 0.118/GB/month	
IP Adressen	USD 0.010/VM/hour	
Networking	USD 0.150/GB	

## Rechenbeispiel Cost Optimized

### Applikations Voraussetzungen

- 2x 4 vCPU + 16GB RAM
  - 3x 2 vCPU + 8GB RAM
  - 2x 1 vCPU + 4GB RAM
- = 16 vCPU + 60GB RAM

### Building Blocks

- R1 2vCPU 4GB RAM
- R2 2vCPU 8GB RAM

= 7 x R2 + 1 x R1

=USD 2.03/hr oder

USD 3.01/hr

# Rechenbeispiel Cost Optimized

## Applikations Voraussetzungen

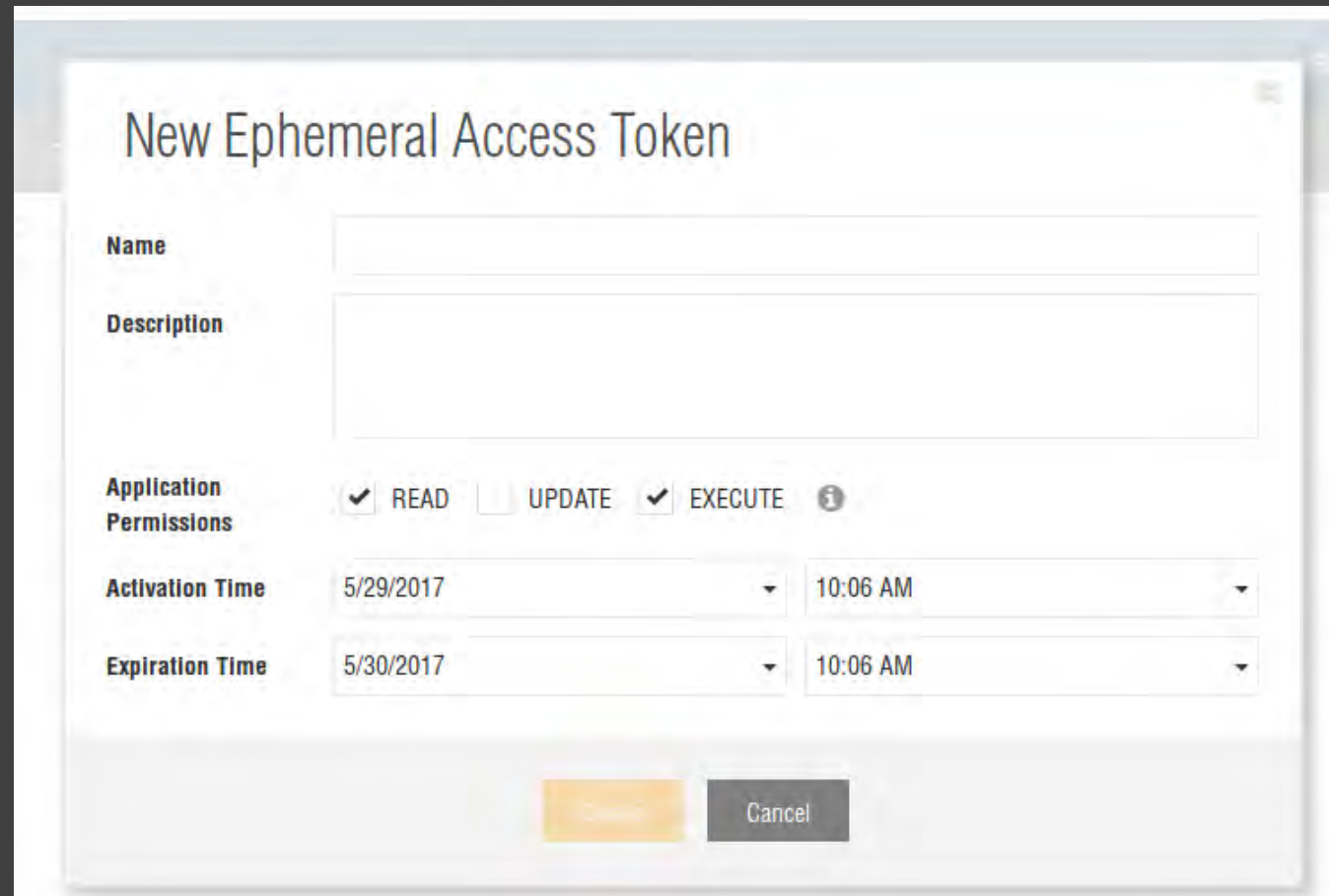
- 2x 4 vCPU + 16GB RAM
  - 3x 2 vCPU + 8GB RAM
  - 2x 1 vCPU + 4GB RAM
- = 16 vCPU + 64GB RAM

## Building Blocks

- R1 2vCPU 4GB RAM
  - R2 2vCPU 8GB RAM
- = 8 x R2
- =USD 2.16/hr oder  
USD 3.20/hr

# Ephemeral Access Token

- Permission
  - Read
  - Update
  - Execute
- Activation Time
- Expiration Time

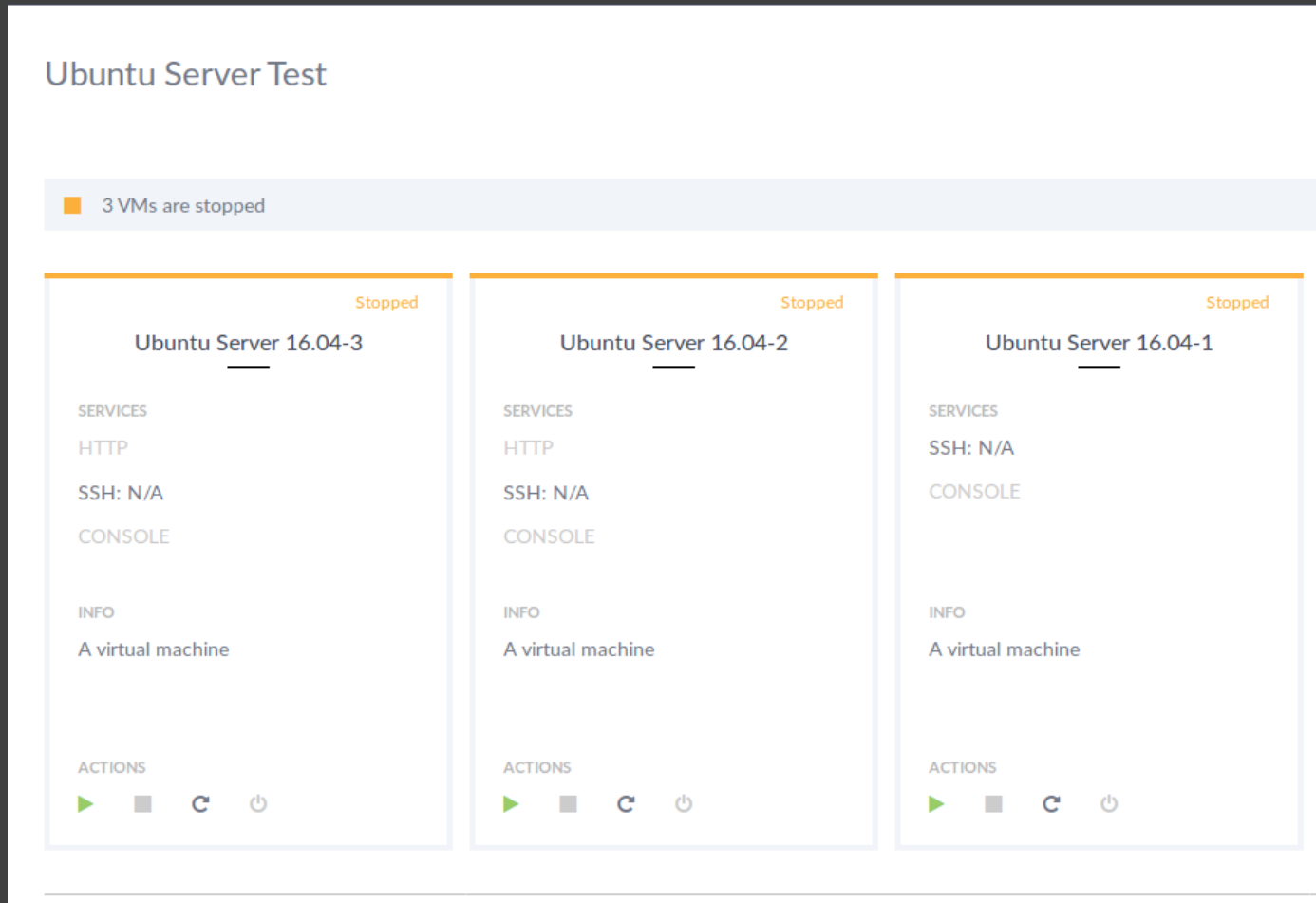


The screenshot shows a dialog box titled "New Ephemeral Access Token". It contains the following fields and controls:

- Name:** A text input field.
- Description:** A larger text input field.
- Application Permissions:** Three checkboxes:  READ,  UPDATE, and  EXECUTE. An information icon (i) is located to the right of the EXECUTE checkbox.
- Activation Time:** A date and time selector showing 5/29/2017 and 10:06 AM.
- Expiration Time:** A date and time selector showing 5/30/2017 and 10:06 AM.
- Buttons:** A yellow "Create" button and a grey "Cancel" button at the bottom.

# Zugriff per Ephemeral Access

- Starten und Stoppen einzelner oder aller VMs
- Service Anzeige



The screenshot shows a management interface for three virtual machines. At the top, the title is "Ubuntu Server Test". Below the title, a status bar indicates "3 VMs are stopped" with an orange square icon. The interface displays three VM cards, each representing a stopped Ubuntu Server 16.04 instance. Each card has a "Stopped" status label in orange at the top right. The cards are arranged horizontally and contain the following sections:

- Ubuntu Server 16.04-3:** SERVICES (HTTP, SSH: N/A, CONSOLE), INFO (A virtual machine), and ACTIONS (Start, Stop, Refresh, Power Off icons).
- Ubuntu Server 16.04-2:** SERVICES (HTTP, SSH: N/A, CONSOLE), INFO (A virtual machine), and ACTIONS (Start, Stop, Refresh, Power Off icons).
- Ubuntu Server 16.04-1:** SERVICES (SSH: N/A, CONSOLE), INFO (A virtual machine), and ACTIONS (Start, Stop, Refresh, Power Off icons).

# Test Zugang

REPO RESOURCES SUPPORT REST API LOGIN

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Vielen Dank für Ihre  
Aufmerksamkeit!

