

Incus & OCI

Bringing application containers to Incus

Stéphane Graber

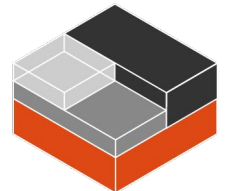
<https://stgraber.org> / stgraber@stgraber.org

[@stgraber](#) / [@stgraber@hackyderm.io](#)

Owner @ zabbly.com

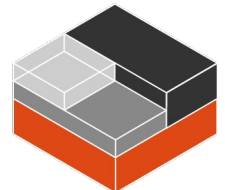
CTO @ futurfusion.io

Project leader @ linuxcontainers.org

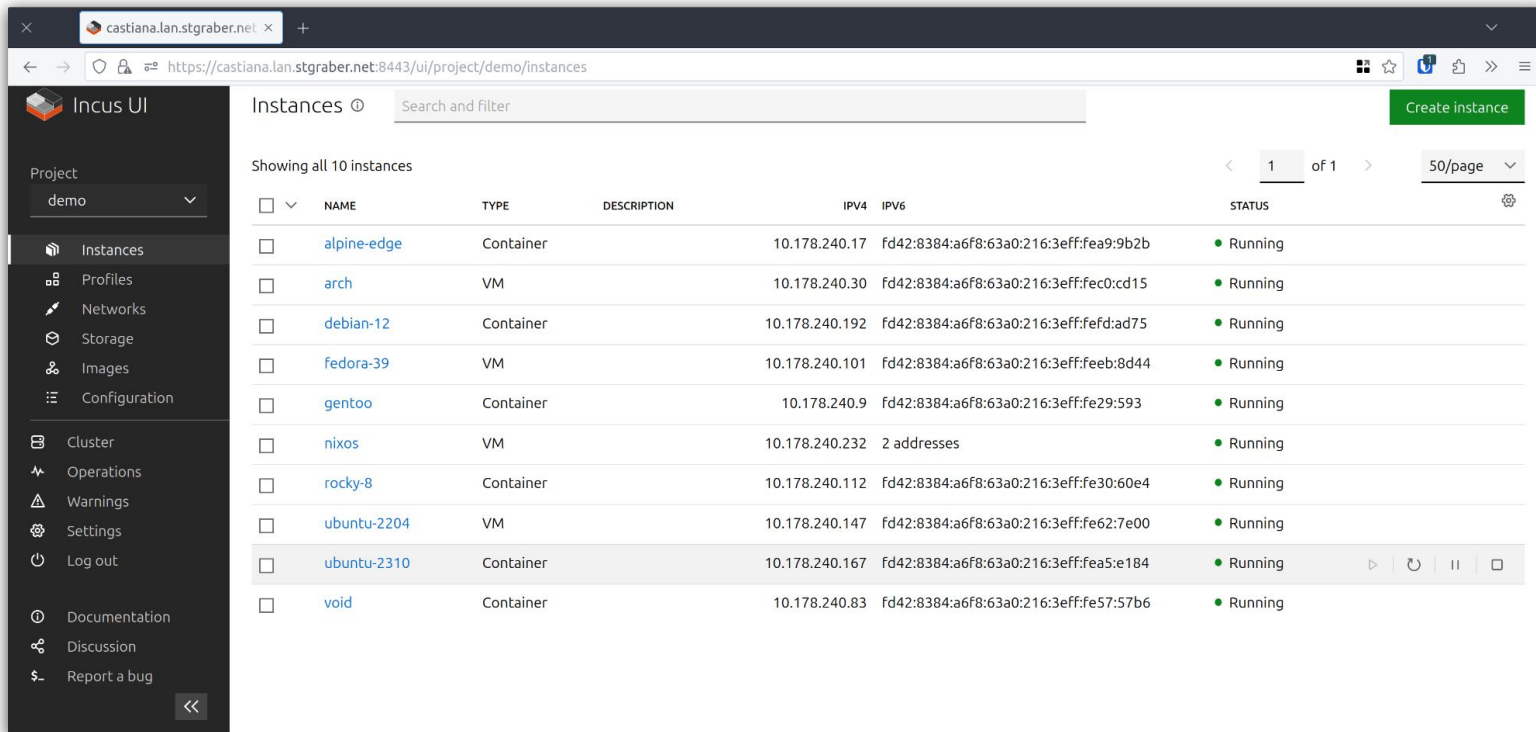


So what's Incus anyway?

```
Terminal
stgraber@castiana:~$ incus list
+-----+-----+-----+-----+-----+-----+
| NAME | STATE | IPV4 | IPV6 | TYPE | SNAPSHOTS |
+-----+-----+-----+-----+-----+-----+
| alpine-edge | RUNNING | 10.178.240.17 (eth0) | fd42:8384:a6f8:63a0:216:3eff:fea9:9b2b (eth0) | CONTAINER | 0 |
+-----+-----+-----+-----+-----+-----+
| arch | RUNNING | 10.178.240.30 (enp5s0) | fd42:8384:a6f8:63a0:216:3eff:fec0:cd15 (enp5s0) | VIRTUAL-MACHINE | 0 |
+-----+-----+-----+-----+-----+-----+
| debian-12 | RUNNING | 10.178.240.192 (eth0) | fd42:8384:a6f8:63a0:216:3eff:fed:ad75 (eth0) | CONTAINER | 0 |
+-----+-----+-----+-----+-----+-----+
| fedora-39 | RUNNING | 10.178.240.101 (enp5s0) | fd42:8384:a6f8:63a0:216:3eff:feeb:8d44 (enp5s0) | VIRTUAL-MACHINE | 0 |
+-----+-----+-----+-----+-----+-----+
| gentoo | RUNNING | 10.178.240.9 (eth0) | fd42:8384:a6f8:63a0:216:3eff:fe29:593 (eth0) | CONTAINER | 0 |
+-----+-----+-----+-----+-----+-----+
| nixos | RUNNING | 10.178.240.232 (enp5s0) | fd42:8384:a6f8:63a0:613d:8e53:eef8:9b74 (enp5s0) | VIRTUAL-MACHINE | 0 |
| | | | fd42:8384:a6f8:63a0:216:3eff:fe7d:88e5 (enp5s0) | | |
+-----+-----+-----+-----+-----+-----+
| rocky-8 | RUNNING | 10.178.240.112 (eth0) | fd42:8384:a6f8:63a0:216:3eff:fe30:60e4 (eth0) | CONTAINER | 0 |
+-----+-----+-----+-----+-----+-----+
| ubuntu-2204 | RUNNING | 10.178.240.147 (enp5s0) | fd42:8384:a6f8:63a0:216:3eff:fe62:7e00 (enp5s0) | VIRTUAL-MACHINE | 0 |
+-----+-----+-----+-----+-----+-----+
| ubuntu-2310 | RUNNING | 10.178.240.167 (eth0) | fd42:8384:a6f8:63a0:216:3eff:fea5:e184 (eth0) | CONTAINER | 0 |
+-----+-----+-----+-----+-----+-----+
| void | RUNNING | 10.178.240.83 (eth0) | fd42:8384:a6f8:63a0:216:3eff:fe57:57b6 (eth0) | CONTAINER | 0 |
+-----+-----+-----+-----+-----+-----+
stgraber@castiana:~$
```

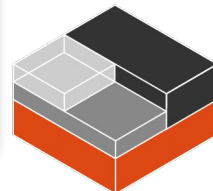


So what's Incus anyway?



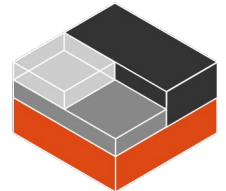
The screenshot displays the Incus UI interface. On the left is a dark sidebar with navigation options: Incus UI, Project (demo), Instances, Profiles, Networks, Storage, Images, Configuration, Cluster, Operations, Warnings, Settings, Log out, Documentation, Discussion, and Report a bug. The main area shows a table of instances under the heading 'Instances'. A search bar and a 'Create instance' button are at the top right. The table lists 10 instances, all with a 'Running' status. The 'ubuntu-2310' instance is highlighted.

<input type="checkbox"/>	NAME	TYPE	DESCRIPTION	IPV4	IPV6	STATUS	<input type="checkbox"/>
<input type="checkbox"/>	alpine-edge	Container		10.178.240.17	fd42:8384:a6f8:63a0:216:3eff:fea9:9b2b	Running	
<input type="checkbox"/>	arch	VM		10.178.240.30	fd42:8384:a6f8:63a0:216:3eff:fec0:cd15	Running	
<input type="checkbox"/>	debian-12	Container		10.178.240.192	fd42:8384:a6f8:63a0:216:3eff:fed:ad75	Running	
<input type="checkbox"/>	fedora-39	VM		10.178.240.101	fd42:8384:a6f8:63a0:216:3eff:feeb:8d44	Running	
<input type="checkbox"/>	gentoo	Container		10.178.240.9	fd42:8384:a6f8:63a0:216:3eff:fe29:593	Running	
<input type="checkbox"/>	nixos	VM		10.178.240.232	2 addresses	Running	
<input type="checkbox"/>	rocky-8	Container		10.178.240.112	fd42:8384:a6f8:63a0:216:3eff:fe30:60e4	Running	
<input type="checkbox"/>	ubuntu-2204	VM		10.178.240.147	fd42:8384:a6f8:63a0:216:3eff:fe62:7e00	Running	
<input type="checkbox"/>	ubuntu-2310	Container		10.178.240.167	fd42:8384:a6f8:63a0:216:3eff:fea5:e184	Running	<input type="checkbox"/>
<input type="checkbox"/>	void	Container		10.178.240.83	fd42:8384:a6f8:63a0:216:3eff:fe57:57b6	Running	



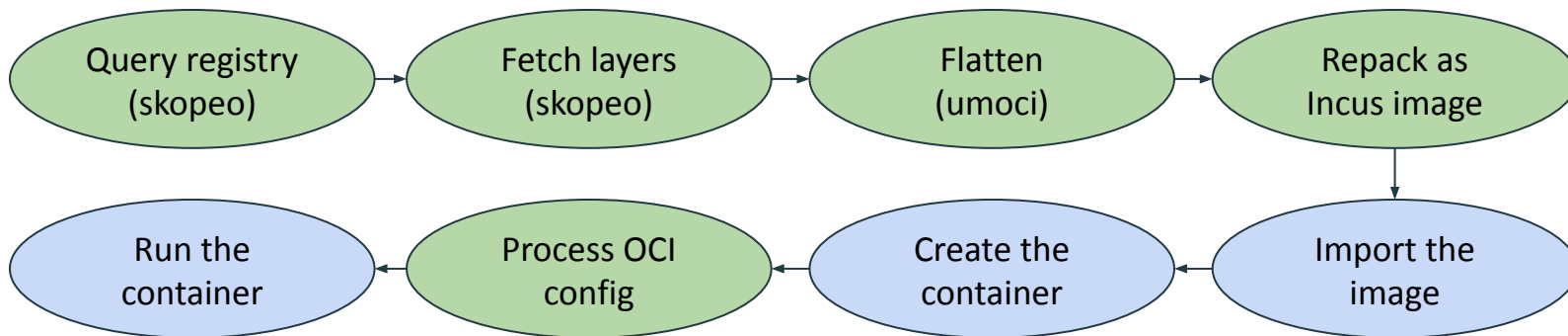
Why support application containers?

Why now?

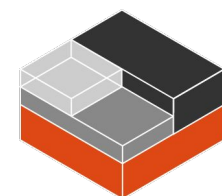


How does it work?

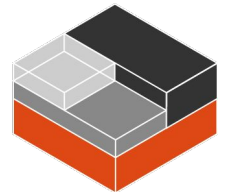
```
incus remote add docker https://docker.io --protocol=oci  
incus launch docker:nginx my-nginx
```



```
Terminal  
stgraber@castiana:~$ incus list  
+-----+-----+-----+-----+-----+-----+  
| NAME | STATE | IPV4 | IPV6 | TYPE | SNAPSHOTS |  
+-----+-----+-----+-----+-----+-----+  
| my-nginx | RUNNING | 10.178.240.179 (eth0) | fd42:8384:a6f8:63a0:216:3eff:fef3:fc9f (eth0) | CONTAINER (APP) | 0 |  
+-----+-----+-----+-----+-----+-----+  
stgraber@castiana:~$
```

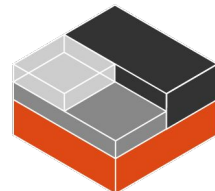


Demo time!



What's next?

- Switching to consuming umoci as a Go package
- Finding a better way to consume skopeo / interact with registries
- Handling of private registries
- Running OCI images as virtual machines



Questions?

Try Incus online:

<https://linuxcontainers.org/incus/try-it>

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