Integrating GNOME Boxes with oVirt

oVirt Workshop
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What is GNOME Boxes?

- From https://live.gnome.org/Boxes:
  
  A simple GNOME 3 application to access remote or virtual systems

- Creates and manages local KVM virtual machines using libvirt
- Automatic installation of Windows and Fedora systems
- Remote machine access through SPICE or VNC
- First release in GNOME 3.4 (March 2012)
GNOME Boxes
oVirt REST API

- API to access and control oVirt through HTTP GET/POST/PUT requests
- list VMs managed by an ovirt instance: GET https://ovirt.example.com/api/vms
- start a VM: POST https://ovirt.example.com/api/vms/4e7da383-307f-4a65-9cca-e46fd475fb75/start
- and much more...
Introducing govirt

- C library to access the oVirt REST API
- uses GObject and gobject-introspection
  - gobject-introspection gives us Javascript, Python, Vala, ... bindings
- synchronous and asynchronous API
govirt features

- get list of oVirt VMs
- start, stop oVirt VMs
- get connection information
  - connection type (SPICE, VNC)
  - display IP address, port
  - SPICE password (ticket)
  - CA certificate
- graphical display handled by spice-gtk/gtk-vnc
govirt example

```c
proxy = ovirt_proxy_new (REST_URI);
ovirt_proxy_fetch_vms(proxy, &error);
vm = ovirt_proxy_lookup_vm(proxy, VM_NAME);
ovirt_vm_get_ticket(vm, proxy, &error);
ovirt_proxy_fetch_ca_certificate(proxy, &error);
g_object_get(G_OBJECT(proxy),
    "ca-cert", &ca_cert,
    NULL);
g_object_get(G_OBJECT(vm), "display", &display, NULL);
g_object_get(G_OBJECT(display),
    "type", &type,
    "address", &host,
    "port", &port,
    "secure-port", &secure_port,
    "ticket", &ticket,
    NULL);
```
Things to know

- authentication
- CA certificate
- password (ticket) needed for SPICE connections
- 2 different access modes: admin VS user
Current status

- govirt 0.0.2 to be released very soon
- oVirt virtual machines appear in GNOME Boxes main view
- can start oVirt VMs if needed and connect to them
- Boxes patches to be merged upstream after review (bgo #681747)
- virt-viewer patches in progress
Implementation issues

- missing SSL subject prefix in REST API (rhbz #867513)
- polling is needed for up to date state of the VMs
- very limited coverage of the REST API by govirt
Questions?

GNOME Boxes: https://live.gnome.org/Boxes
oVirt: http://www.ovirt.org/
govirt: http://cgit.freedesktop.org/~teuf/govirt/
IRC channel: irc://irc.gnome.org/#boxes
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