Ansible for Windows
There are no certainties these days...
@Taylord_Mshi

Awesome shirt from @ilistony & MICROSOFT at the airport wearing this I’m headed to Seattle because I’m joining...
So again, why?

Problem

❖ Linux/OSS based provisioning toolset

➢ Provided configmgmt
➢ Reproducability
➢ Automation
➢ Large scale deployment
➢ Out of band of the windows tooling
➢ Setup/Manage Windows servers

❖ Setup/Manage Windows servers

❖ Organisational problem: Linux vs Windows pillar

❖ Most impacting
❖ Different goals
❖ Different tooling

❖ DevOps
❖ Most impacting
❖ Different goals
❖ Different tooling

❖ Large scale deployment
❖ Reproducability
❖ Automation
❖ Provided configmgmt

❖ Linux/OSS based provisioning toolset
Execute tasks at a large scale

Features:
- Secure
- Scalable
- Agentless

What is Ansible?
How does it work?

- WinRM

What connection?
- Not a direct login
- WinRM
<table>
<thead>
<tr>
<th>User</th>
<th>Domain</th>
<th>Credentials</th>
<th>Delegation</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>NTLM</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Kerberos</td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Certificate</td>
</tr>
<tr>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Basic</td>
</tr>
</tbody>
</table>

**How to connect to Windows?**
How to setup?

- Not production ready
- Yes! (WSL or cygwin)
- Can I run my control machine on windows?
- PowerShell 3+
- Community based setup script for winrm
- Windows instance
- pyWinRM
- Ansible
- Control machine (Linux)
Package management on windows?

No package management OOTB

Win_package

Win_chocolatey
- Official packages
- Community packages
- Self made packages
Two things you can think of when you hear Windows
- Register a when
- Win-Reboot
  - Reboots
  - W SUS
  - Win-updates
- Updates
Simple to learn, no complexity added, the bigger you go...

- CMD
- Ansible windows modules: win-chocolatey...
- PowerShell

What can I use in a "windows" playbook?

- OS independent
- YAML composed file with instructions
- Playbooks

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PowerShell DSC - Desired state configuration

- Working across all auth types
- Execute modules/tasks as another user
- Become/Rkn as

- Performance boost for small tasks
- With pipelining
- Before pipelining

Ansible 2.3 & 2.4
Each playbook consists of different roles

- Windows
- Linux
- Openstack

Top-level playbooks

- Start of self-service
- Standardized template
- DC standard compliant Windows
- Managed VM offering

Reusable
Apply to n roles
Customer Use Case

- Isolated SCCM
- RunDeck
- Custom deployment tooling
  - Existing tooling consisted of:
    - Common YAML Language
    - System independent tooling
  - Develops choice: one toolchain for all
  - Linux pillar vs Windows pillar - join forces
  - Organizational choice

Why not SCCM?
Customer Use Case

DevOps is a culture, not related to a certain technology. DevOps on Windows involves:

- Descriptive YAML language
- Ansible Galaxy already provides some Windows-specific roles (hardening, desktop packages, ...)

Config management guarantees:

- Integrity of systems
- Automation
- Reproducibility of problems
- Same systems in TST, PRE-PROD and PROD
- Self-management

Specific versions:

```
windows_desktop_packages_version: 60.0.3112.113

- name: googlechrome
  state: present
  version: 7.4.2
  force: false

- name: notepadplusplus
  state: present
  version: 7.4.2
  force: true

windows_desktop_packages_version: ...
```

Develops on Windows, not related to a certain technology.
Windows support is under development and frequently changes.

http://docs.ansible.com/ansible/list_of_windows_modules.html

Ansible Galaxy:
http://galaxy.ansible.com/

Windows Modules:
http://docs.ansible.com/ansible/intro-windows-modules.html

Introduction to Ansible:
http://docs.ansible.com/ansible/intro-ist_of_windows_modules.html
Add Ansible to your [Linux|Windows] DevOps toolchain!