MIQ Code Management and Promotion with special guests Ansible and Git

Jason Cornell, Daniel Garcia and JD Calder

Agenda

- Introductions
- Challenge and Solution
- Design
- Demos
- Current State and Next Steps

Who is Cox Automotive?

Our Vision
To transform the way the world buys, sells and owns cars.

Our Mission
To provide key solutions that create greater efficiencies in the automotive ecosystem.

Our Values
Our employees drive the growth of our business and strengthen our leadership position in the industry.

Our Heritage
A subsidiary of 116-year-old Cox Enterprises Inc., one of the world's largest privately owned communications, media and automotive services companies.

Challenges to Automation Development

- Code (methods, dialogs, buttons, etc) are not in a repository
- Developer must cut-n-paste code from IDE into the UI
- Difficult to track development
- Easy to step on another developer's changes if not careful
- Difficult to keep code synchronized between multiple environments
- No easy method to promote code from development into production

Solution

Introducing the ManageIQ Developer Deployment Toolkit (DDT). The toolkit includes custom developed helper tools as well as integrations with:

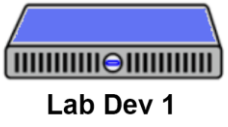
- Git: all code/configuration data
- Deployment Automation: Ansible
- IDE: RubyMine

DDT High Level Overview

Average Automation Developer

COX AUTOMOTIVE TECHNOLOGY

Production



Lab Dev 1

Lab Dev 2

Lab Dev 3

What is the Developer Deployment Toolkit?

Quick demo of basic edit and push to developer's lab appliance

What are the benefits of DDT

- Ability to follow software development practices
- Develop local via your favorite IDE
- Commit and push your changes
- Ruby gem cf_ddt updates the MIQ server on push
- Can run unit test right after MIQ updates
- Ability to rapidly revert back if issues

Demo of creating a new branch

COX AUTOMOTIVE TECHNOLOGY

- Bring MIQ customizations into code management with Git
- 7 different stores, Datastore (automate), Buttons, Dialogs, Service Catalogs, Customization Templates, Roles

Rapid Code Promotion or Rollback

- Merge is done at the Git level
- Process is no different from daily dev
- Merge/promote/push to master branch
- cf_ddt updates MIQ Production server with master branch
- Rollback (restore from Git) if needed

Review Challenges to Automation Development

- Code (methods, dialogs, buttons, etc) are not in a repository
- Developer must cut-n-paste code from IDE into the UI
- Difficult to track development
- Easy to step on another developer's changes if not careful
- Difficult to keep code synchronized between multiple environments
- No easy method to promote code from development into production

Conclusion

- DDT brings ManageIQ customization components into code management
- Maintain state with branches
- Code locally, deploy to targeted ManageIQ server
- Code rollback and regression testing
- Rapid code promotion with low risk

Current and Future State

- Development and testing ~80% completed
- Want to perform unit testing via integration testing
- Want to enable nightly/weekly automation builds
- Plan to publish to the MIQ Depot very soon
- How does this align with MIQ vision?
- Is anyone interested in helping complete/expand these capabilities?
- What else can we enable with this functionality?

Thank you!

JD Calder

JD.Calder (at) coxautoinc.com

Jason Cornell

Jason.Cornell (at) coxautoinc.com

Daniel Garcia

Daniel.Garcia (at) coxautoinc.com