



salesforce



Release Management Strategies

Jeff Hilyard
trailblazer.me/id/jhilyard
Irina Khomyakova
Nick Lindberg
@nickersuniverse



Let's succeed together!



Jeff Hilyard



Irina Khomyakova



Nick Lindberg



"Safe harbor" Statement

- Forward -looking statements?
- Jeff is not an MVP :-)
- YMMV



Application Lifecycle and Development Models



Take the Trail

- Determine Which Application Lifecycle Management Model is Right for You



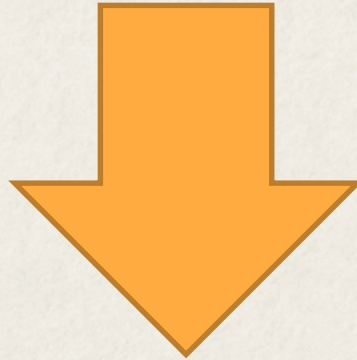


Idea



Do some work...

- Collect User Stories
- Build
- Test
- Release





Work Becomes Metadata

- Metadata
 - Objects - Contact
 - Fields - Name
 - Automation – Process Builders
- Data
 - Values – Jenny Walker – 612-867-5309



Phase 1



 Contact
Nick Lindberg 

Phone
612-564-8423

Email
lind1207@umn.edu

Primary Business Organization
[Carlson School of Management](#)

Title
Salesforce Admin


Contact Owner
 [Nick Lindberg](#) 



Related

Details

News

Tutorials










 **Affiliated Contacts for Parent Account**

New

Change Owner

10+ items • Sorted by Affiliation Key • Updated a few seconds ago

☐ Affiliation...   Contact  Primary  Affiliation T...  Primary Bus...  Title  Start Date  End Date  Sta

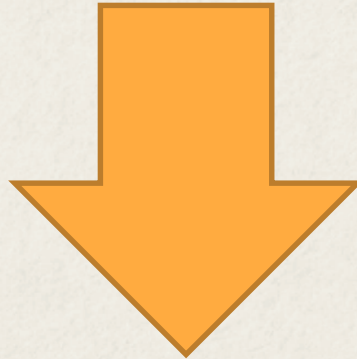


Idea



Do more work...

- Collect User Stories
- Build
- Test
- Release



Iterate

Contact

Nick Lindberg

External Systems

1 item • Updated a minute ago

☐ External System Recor...

System Name

System ID

Date of Last Sync

Link to System

1

☐ [ES-33656](#)

Hubspot

3123901

12/13/2019

[View All](#)

Affiliated Accounts

6 items • Updated a few seconds ago

☐ Affiliation K...

Organization

Primary

Affiliation T...

Title

Status

Start Date

End Date

Pri

1

☐ [AF-001056](#)

Application De...

☒

University Dep...

Senior Salesfor...

Current

8/27/2018

2

☐ [AF-001091](#)

North Branch A...

☐

Educational Ins...

High School Gr...

Current

9/7/1999

6/11/2003

3

☐ [AF-007742](#)

Carlson School ...

☒

Educational Ins...

Salesforce Ad...

Current

9/2/2003

5/15/2007

4

☐ [AF-007932](#)

Students Today...

☐

Business Organ...

Director of Fine...

Former

9/18/2003

11/30/2012

5

☐ [AF-007933](#)

Redpath Consu...

☐

Business Organ...

Former

12/17/2012

8/24/2018

6

☐ [AF-007934](#)

Ameriprise Fin...

☐

Business Organ...

Financial Analyst

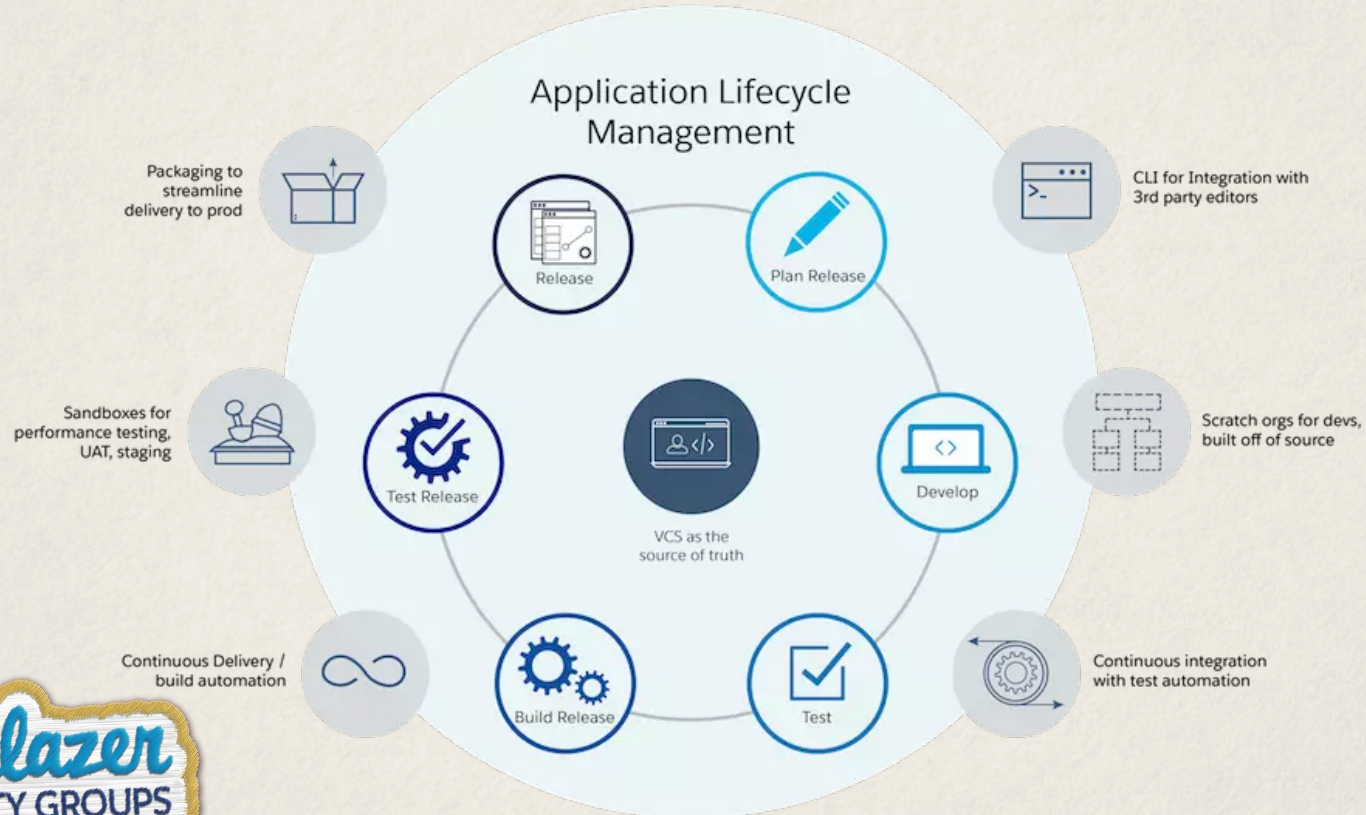
Former

7/9/2007

12/26/2008




Typical Lifecycle




Project Management to Track Changes

Backlog Share ...































 Only My Issues Recently Updated

VERSIONS ▼ **EES2 Sprint 8** 16 issues 3.5 1 3 Plan sprint ▼ ...

03/Feb/20 4:56 PM • 14/Feb/20 4:56 PM

 ...

EPICS

Include students recently enrolled in DORS course, no matter their last modified date	 EES2-343  0.25
Unable to delete placeholder enrollments	 EES2-340  -
As a sales user, create an opportunity from contact page in Salesforce	 EES2-242  0.5
How does EE want to segment group sales?	EES2-324  -
As a sales user track when a custom course will be delivered	 EES2-238  -
As a sales manager, allocate revenue of the deal by fiscal year	 EES2-239  -
Custom dashboard for custom opportunities (courses, financials, accounts, status)	 EES2-335  0.5
As a Sales Manager, track which oppty are new, existing or expanded within company	 EES2-309  -
Data Cleanup Work in Salesforce	EES2-259  -
Create training videos/documentation	 EES2-222  -
As EE user, see how many courses a contact has completed within the course enrollment report	 EES2-258  2
As a Sales Manager, see how many enrollments are on a particular course	 EES2-302  0.5
As a integration user, filter out course offerings created in error (Boomi work)	 EES2-243  0.25
Create one pager listing all ongoing data cleanup tasks	 EES2-332  0.25
Flatbridge data import	 EES2-333  3
Create Notifications when Opportunity is Closed Won place	 EES2-182  0.25



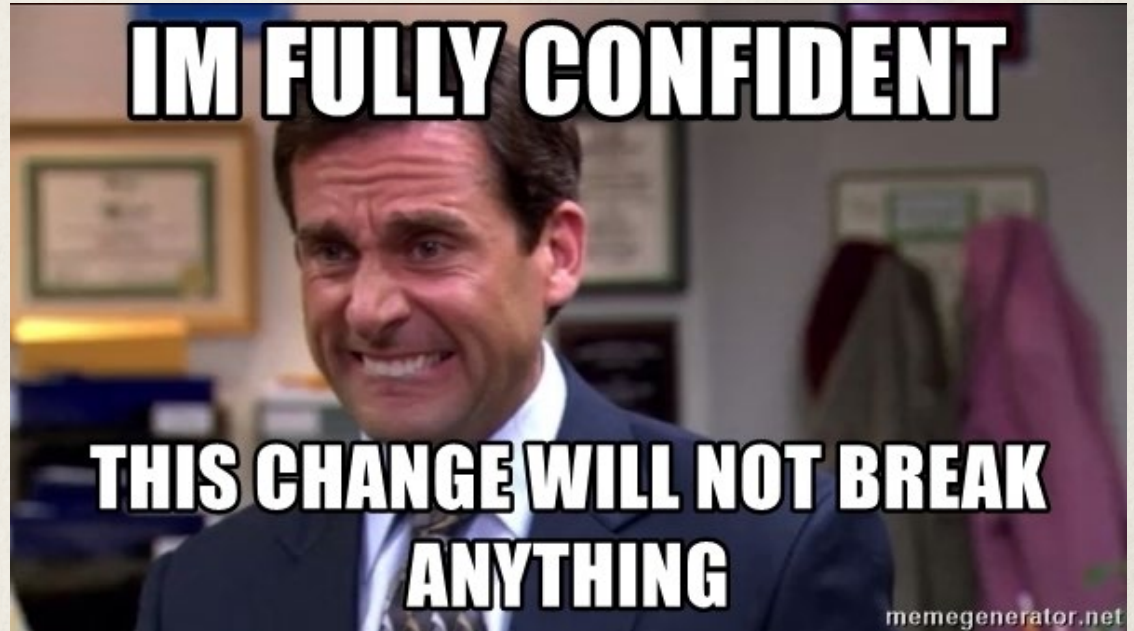
Places to Develop




Production Development

What's Safe?

- Reports
- Dashboards
- Email templates?



Sandbox Development

 **SETUP**
Sandboxes

Sandboxes

Sandboxes are special organizations that are used to test changes or new apps without risking damage to your production data or configuration. Sandbox Templates are used to create new Sandboxes containing specific data sets.

Available Sandbox Licenses

Developer 90 Available (10 in use)	Developer Pro 2 Available (3 in use)	Partial Copy 0 Available (1 in use)	Full 0 Available (1 in use)
--	--	---	---------------------------------------

Sandboxes | Sandbox Templates | Sandbox History

New Sandbox

Action	Name	Type	Status	Location	Current Org Id	Completed On	Description
Clone Del Refresh Log In sal		Developer	Completed	CS17	00Dg0000006IFIX	3/14/2019 11:57 AM	Carlson Global Institute Sandbox
Clone Del Refresh Log In ggi		Developer	Completed	CS17	00Dg0000006NIJ	3/14/2019 11:55 AM	Carlson Global Institute Sandbox
Clone Del Refresh Log In Chan		Developer	Completed	CS19	00D2900000090JT	4/17/2018 4:52 PM	
Clone Del Refresh Log In Craig		Developer	Completed	CS20	00Dm0000000DiaP	4/20/2018 5:28 PM	
Clone Del Refresh Log In dev		Developer Pro	Completed	CS14	00Dc0000003kp51	3/6/2019 2:36 PM	



Scratch Orgs

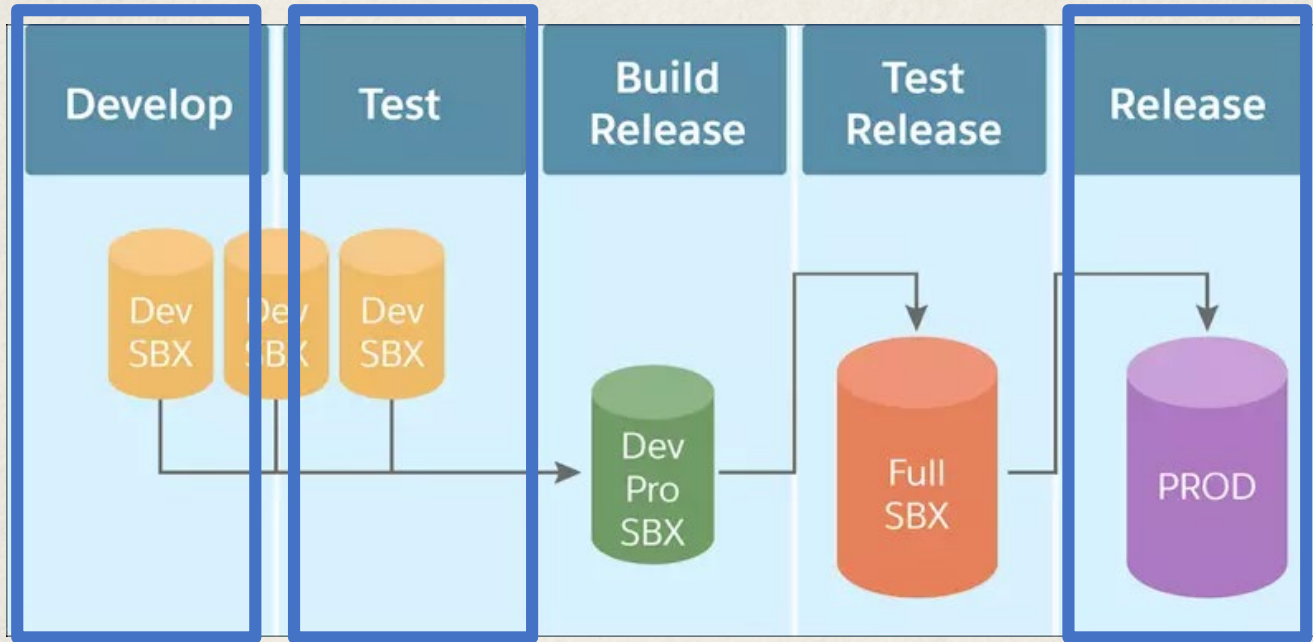
- Stay Tuned...



Releases



Release Metadata Flow



Types of Releases

Patch

As needs arise, fixing an issue, deploy when done

Minor

Day to day updates, align with sprint cadence

Major

Center around large initiative with go live dates for functionality/team



Frequency of Releases

- How often are you all deploying changes?





Consistency



Change Set Development



Change Sets

- For deployments between a production org and its sandboxes
- No separate development tools needed
- Admin -oriented, short learning curve
- Metadata only
- Only include specified components



Where Development is Done

- Salesforce UI
- "Clicks not Code" (and Code?)
- Developer Sandbox related to production org



Tracking Changes

- Make a list!
 - Track changes through environments – who/what/where/when
- Indicate which changes require manual migration
 - Setup Audit Trail
 - [Metadata Coverage Report](#)



Test Changes Locally

- Test in Developer Sandbox before deployment
- "Measure twice, cut once"



Staging (DevPro SB) Deployment

- Create Outbound Change Set
- Check Dependencies!
- Create Deployment Connection
- Upload Change Set
- Deploy Change Set
- Test for:
 - Completeness of change set / desired features present
 - Undesired overlap with other change sets in Staging (integration testing)



QA (Partial/Full SB) Deployment

- Create Outbound Change Set (from Staging; for release cadence)
- Check Dependencies!
- Create Deployment Connection
- Upload Change Set
- Deploy Change Set
- Test for:
 - Completeness of change set
 - Validity of changes with a copy of live data (User Acceptance Testing)



Production Deployment

- Clone Outbound Change Set (Staging)
- Check Dependencies!
- Create Deployment Connection
- Upload Change Set
- Validate Change Set
- Deploy Change Set
- Production Testing for:
 - Validity of changes in production (production users & profiles, etc.)



Change Set Demo Video

- Trailhead: Change Set Development Model scenario
- Can't use Developer Edition or Trailhead Playground orgs!



Change Sets In Real Life

Ideas



Clone inbound change sets

248 comments · 18680 Points · Status: Up for Prioritization



Improved filter/sort options for components in outbound change set creation

106 comments · 13940 Points · Status: Open



Change set include Quote PDF Templates

133 comments · 6170 Points · Status: Open



Change Picklist's assigned Global Value Set

128 comments · 5880 Points · Status: Open



Change Sets should allow for Rollback

51 comments · 3560 Points · Status: Open



Deploy: Outbound change sets: Please send notification email when deployment IS

27 comments · 3250 Points · Status: Open



Allow the Duplicate Rules to be included in change sets.

40 comments · 2520 Points · Status: Delivered in Winter 17



Make Sales Path available as a component for Change Set configuration

29 comments · 2410 Points · Status: Open



Deploy Flow Triggers (Headless Flows) via Change Sets

37 comments · 2260 Points · Status: Open



Ability to do a quick Search on Change Set Components

19 comments · 2210 Points · Status: Open



Quick Add To Change Set

22 comments · 1980 Points · Status: Open



Change Sets: Allow page layouts on Managed Packages to added to a Change Set

37 comments · 1950 Points · Status: Open



Change Sets: Merge multiple change sets into one

21 comments · 1700 Points · Status: Open



Ability to add Lightning Email Templates to Changes Sets and Deploy from Sandbox

24 comments · 1590 Points · Status: Open



Deployment of Territory Assignment Rules across Orgs. using Change Sets

48 comments · 1570 Points · Status: Open



Provide the ability to push macros through change sets

29 comments · 1500 Points · Status: Open



Checkbox to select while removing multiple items from a Change Set

21 comments · 1480 Points · Status: Open



Vendor Solutions Exist!*

- ClickDeploy.io
- Copado
- Flosum
- GearSet
- Panaya
- ... and more
- OwnBackup (metadata restore, sandbox data seeding with anonymizer)
- What are your favorite tools to help with Change Sets?

* Random sampling of ALM tools vendors in alphabetical order

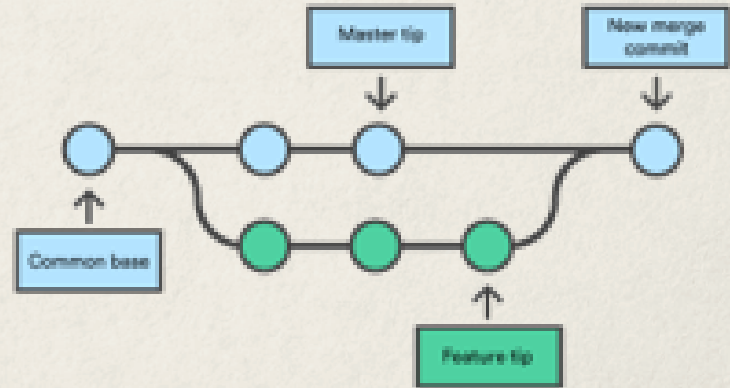


Org Based Development



Org Based Model Defined

- Source control repository to store changes and project files
 - Greater flexibility and scalability
 - New ways to track and manage change
 - Version Control

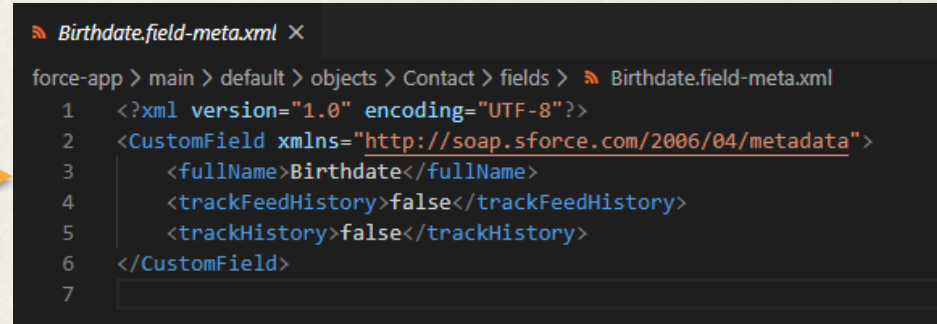
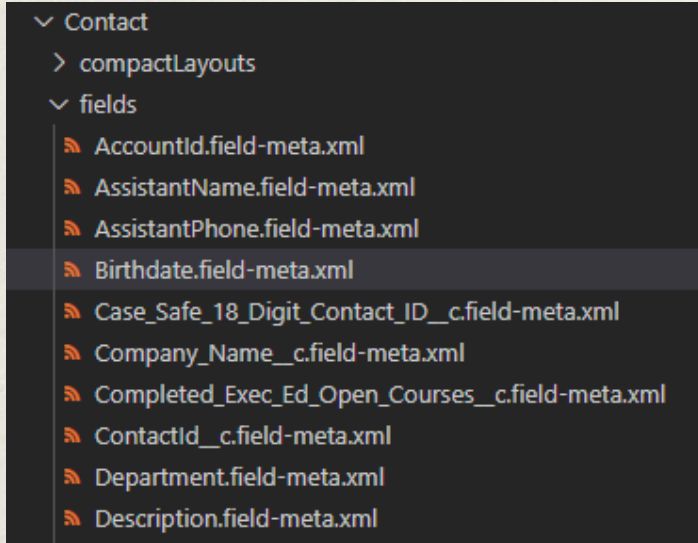


"Repository"

applications	2/10/2020 10:38 AM	File folder
assignmentRules	11/14/2019 11:59 AM	File folder
aura	2/7/2020 9:56 AM	File folder
brandingSets	2/15/2019 2:24 PM	File folder
contentassets	7/2/2019 12:35 PM	File folder
customMetadata	2/10/2020 10:38 AM	File folder
customPermissions	12/6/2019 2:41 PM	File folder
dashboards	9/27/2019 1:00 PM	File folder
flexipages	2/10/2020 10:38 AM	File folder
flows	2/10/2020 10:38 AM	File folder
globalValueSets	12/6/2019 2:41 PM	File folder
groups	11/26/2019 3:15 PM	File folder
layouts	2/10/2020 10:38 AM	File folder
LeadConvertSettings	11/26/2019 3:15 PM	File folder
lightningExperienceThemes	2/15/2019 2:24 PM	File folder
notificationtypes	11/26/2019 3:15 PM	File folder
objects	2/10/2020 10:38 AM	File folder
objectTranslations	7/5/2019 11:42 AM	File folder
pathAssistants	11/26/2019 3:15 PM	File folder
permissionsets	2/10/2020 10:38 AM	File folder
profiles	2/10/2020 10:38 AM	File folder
quickActions	2/10/2020 10:49 AM	File folder
remoteSiteSettings	12/6/2019 2:41 PM	File folder



Metadata as a file



Tracking Changes

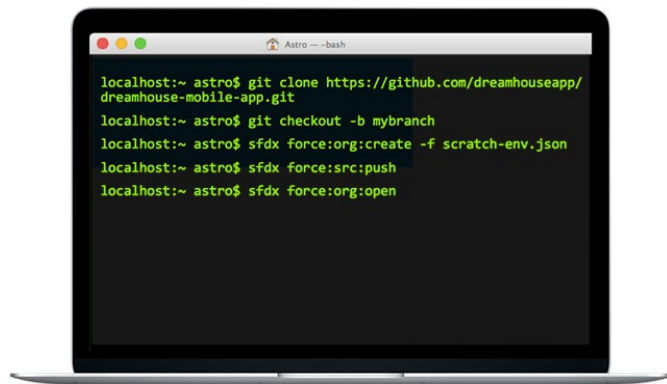
- See changes over time via Github

340	333		</platformActionListItems>
	334	+	<platformActionListItems>
	335	+	<actionName>Edit</actionName>
	336	+	<actionType>StandardButton</actionType>
	337	+	<sortOrder>0</sortOrder>
	338	+	</platformActionListItems>
341	339		<platformActionListItems>
342	340		<actionName>SendEmail</actionName>
343	341		<actionType>QuickAction</actionType>
✱	@@	-349,59 +347,74 @@	
349	347		<sortOrder>7</sortOrder>
350	348		</platformActionListItems>
351	349		<platformActionListItems>
352	-		<actionName>Contact.Create_Affiliation</actionName>
	350	+	<actionName>Contact.New_Exec_Ed_Individual_Oppty</actionName>
353	351		<actionType>QuickAction</actionType>
354	352		<sortOrder>8</sortOrder>
355	353		</platformActionListItems>
356	354		<platformActionListItems>
357	-		<actionName>FeedItem.LinkPost</actionName>
	355	+	<actionName>Contact.New_Exec_Ed_BulkSale_Oppty</actionName>
358	356		<actionType>QuickAction</actionType>
359	357		<sortOrder>9</sortOrder>
360	358		</platformActionListItems>



SalesforceDX

- Source-driven development
 - Version control code, metadata and org configuration
- Rapid testing and development
 - Scratch orgs for dev and test
- Open and standard developer experience
 - Build with tools including Git, Selenium, Eclipse, Sublime and more





Admin Use Cases

Segment
Work

Proof of
Concept

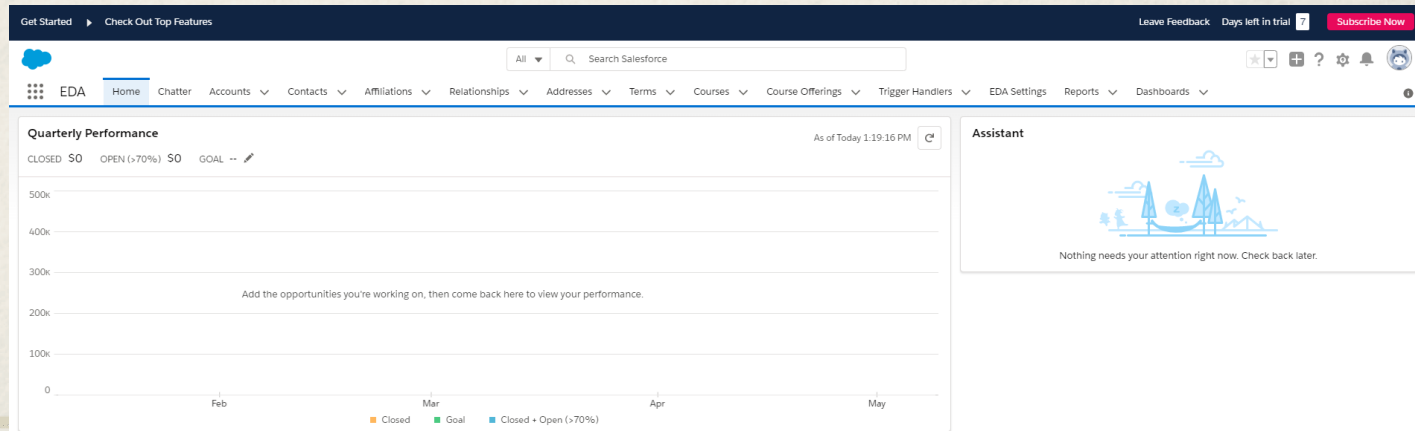
Version
Control

Testing



Where Development is Done – Scratch Org

- Fully configurable Salesforce instance
 - Emulate different editions, features, preferences
 - Create/delete at anytime
- Personal Environments



Typical Development Flow

Push metadata scratch org

Make Changes in the Scratch Org



[Geico Commercial](#)

Setup

Home

Object Manager

SETUP

Object Manager

49+ Items, Sorted by Label

Quick Find

Schema Builder

Create

LABEL	API NAME	DESCRIPTION	LAST MODIFIED	DEPLOYED	CUSTOM
Account	Account				
Active Scratch Org	ActiveScratchOrg				

Pull changes made in Salesforce to repository



Tracking Changes

- See changes in real time

```
2020-02-10 13:51:02: Running command: sfdx force:source:status -u test-ddjqbi6tbeym@example.com
2020-02-10 13:51:02: Beginning task: SFDXOrgTask
2020-02-10 13:51:02:     As user: test-ddjqbi6tbeym@example.com
2020-02-10 13:51:02:     In org: 00DJ0000003Rqmo
2020-02-10 13:51:02: Running command: sfdx force:source:status -u test-ddjqbi6tbeym@example.com
2020-02-10 13:51:05: === Source Status
2020-02-10 13:51:05: STATE          FULL NAME                                TYPE          PROJECT PATH
2020-02-10 13:51:05: _____          _____                                _____          _____

2020-02-10 13:51:05: Remote Changed  Contact-Contact Layout                  Layout        force-app\main\default\layouts\Contact-Contact Layout.
layout-meta.xml
2020-02-10 13:51:05: Remote Changed  Contact.New_Exec_Ed_BulkSale_Oppty      QuickAction   force-app\main\default\quickActions\Contact.New_Exec_E
d_BulkSale_Oppty.quickAction-meta.xml
2020-02-10 13:51:05: Remote Changed  Contact.New_Exec_Ed_Custom_Oppty        QuickAction   force-app\main\default\quickActions\Contact.New_Exec_E
d_Custom_Oppty.quickAction-meta.xml
2020-02-10 13:51:05: Remote Changed  Contact.New_Exec_Ed_Individual_Oppty    QuickAction   force-app\main\default\quickActions\Contact.New_Exec_E
```

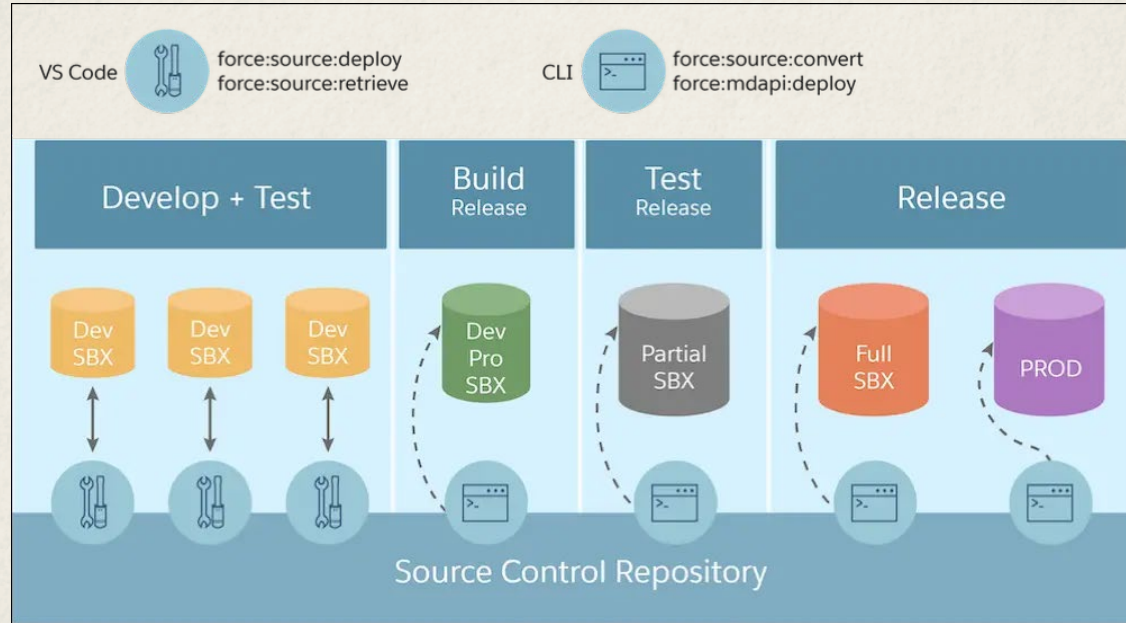


Deployment

- Command to deploy build to org of your choosing

```
PS C:\Users\lind1207\GitHub\SF-GRSO> cci task run deploy --org prod
2020-02-10 13:57:14: Org info updated, writing to keychain
2020-02-10 13:57:14: Beginning task: Deploy
2020-02-10 13:57:14:   As user: lind1207@umn.edu.grso
2020-02-10 13:57:14:   In org: 0001I000001Y4P3UAK
2020-02-10 13:57:14:
2020-02-10 13:57:15: Cleaning meta.xml files of packageVersion elements for deploy
2020-02-10 13:57:15: Cleaned package versions from 1 meta.xml files
2020-02-10 13:57:15: Payload size: 517724 bytes
2020-02-10 13:57:15: Pending
2020-02-10 13:57:16: [Pending]: next check in 1 seconds
2020-02-10 13:57:17: [InProgress]: Processing Type: Group
2020-02-10 13:57:18: [InProgress]: Processing Type: CustomObject
2020-02-10 13:57:19: [InProgress]: Processing Type: CustomObject
2020-02-10 13:57:20: [InProgress]: Processing Type: CustomObject
2020-02-10 13:57:22: [InProgress]: Processing Type: CustomObject
2020-02-10 13:57:23: [InProgress]: Processing Type: CustomObject
2020-02-10 13:57:24: [InProgress]: Processing Type: CustomObject
2020-02-10 13:57:25: [InProgress]: Processing Type: CustomObject
2020-02-10 13:57:26: [InProgress]: Processing Type: CustomObject
2020-02-10 13:57:28: [InProgress]: next check in 1 seconds
2020-02-10 13:57:29: [InProgress]: next check in 1 seconds
2020-02-10 13:57:30: [InProgress]: next check in 1 seconds
2020-02-10 13:57:31: [InProgress]: next check in 1 seconds
2020-02-10 13:57:33: [InProgress]: next check in 1 seconds
2020-02-10 13:57:34: [InProgress]: next check in 1 seconds
2020-02-10 13:57:35: [InProgress]: next check in 1 seconds
2020-02-10 13:57:36: [InProgress]: next check in 1 seconds
2020-02-10 13:57:37: [InProgress]: next check in 1 seconds
2020-02-10 13:57:39: [InProgress]: next check in 1 seconds
2020-02-10 13:57:40: [InProgress]: next check in 1 seconds
2020-02-10 13:57:41: [InProgress]: Processing Type: ReportType
2020-02-10 13:57:42: [InProgress]: Processing Type: ReportType
2020-02-10 13:57:44: [InProgress]: Processing Type: Report
2020-02-10 13:57:45: [InProgress]: Processing Type: Report
```





Why Go This Route?

Multiple Sandboxes with different use cases

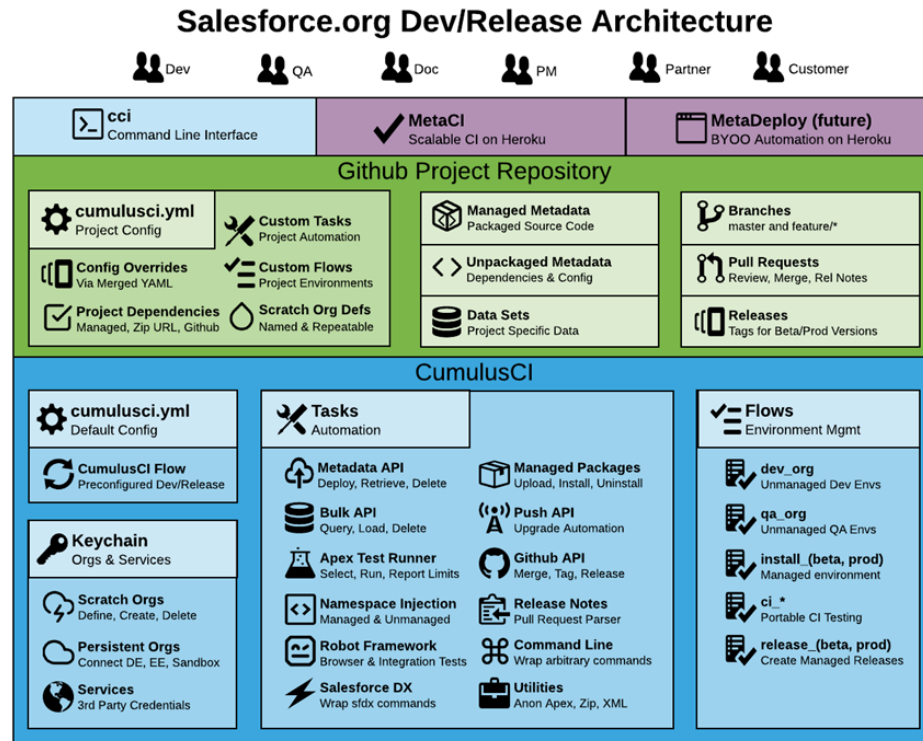
Limited Test Data in sandboxes

Sandboxes are not in sync

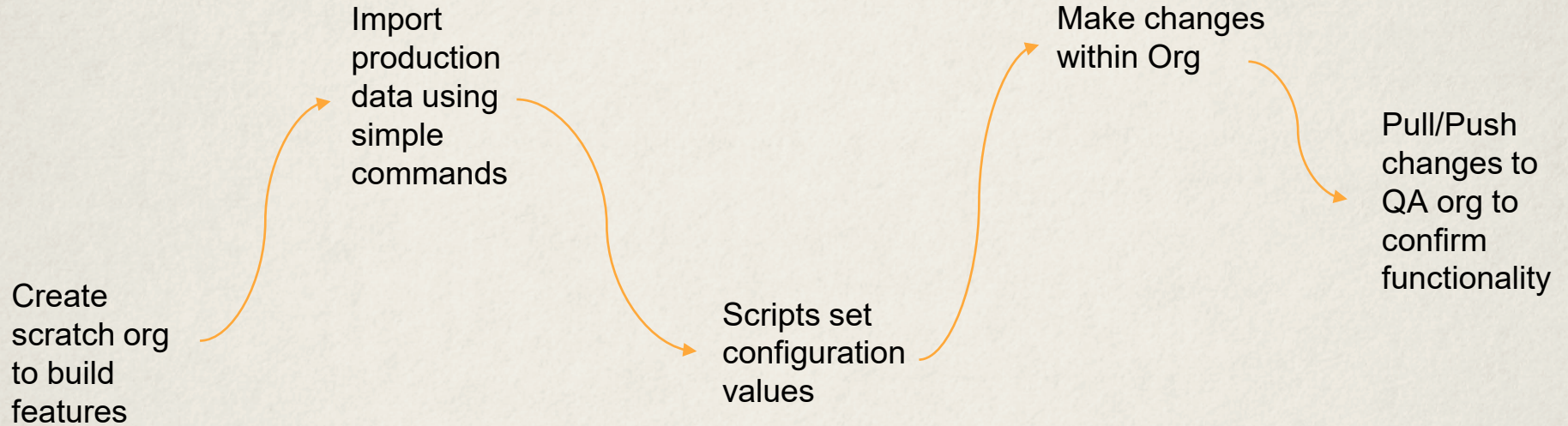
Separate sandbox for testing



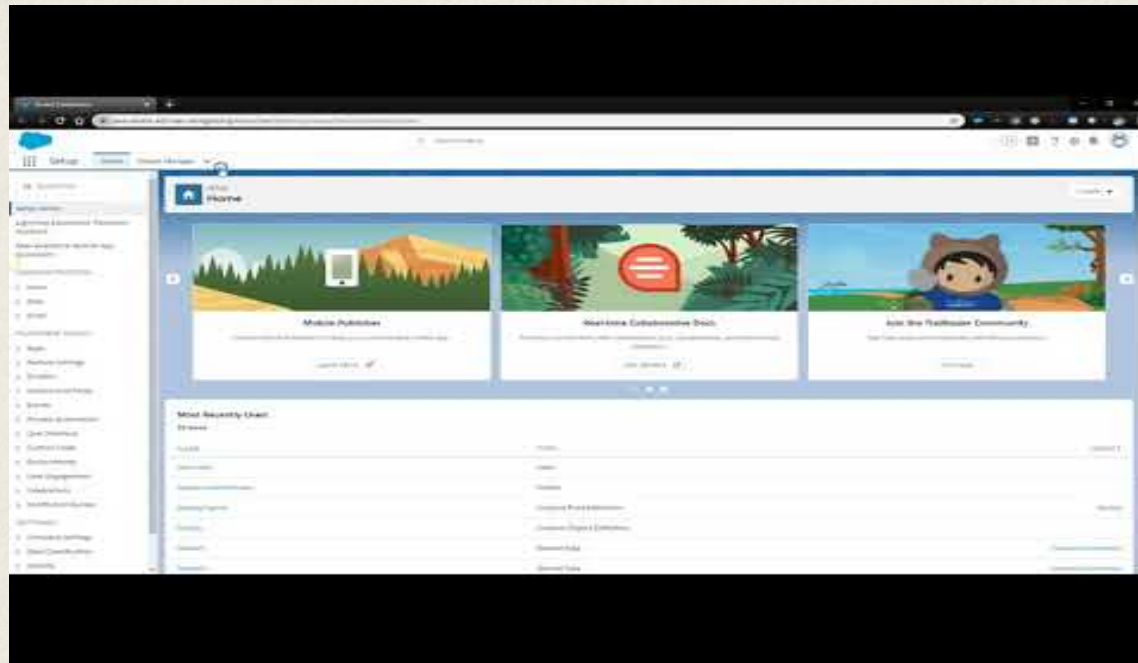
CumulusCI Extends SFDX



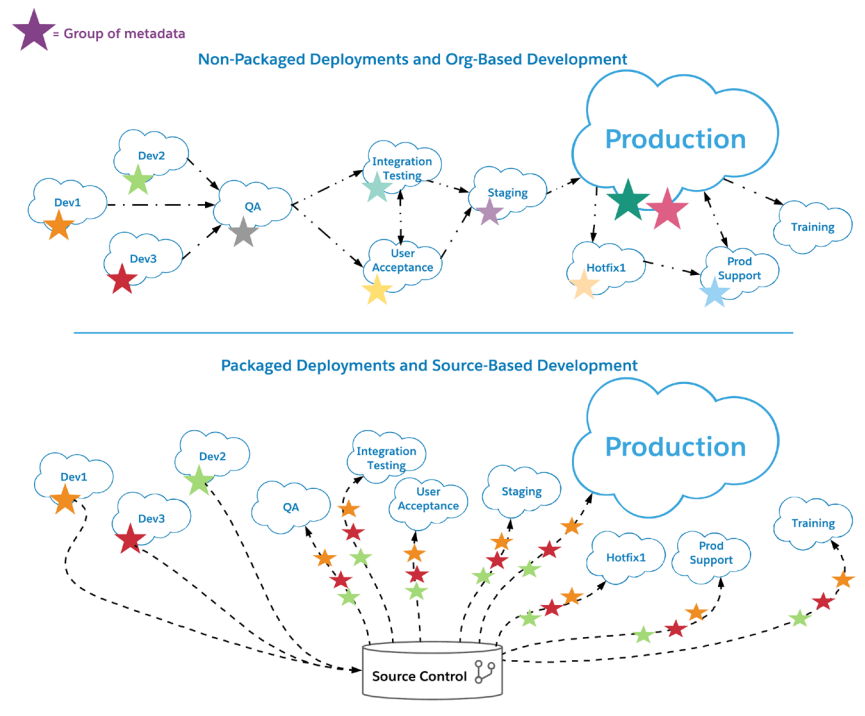
Automation Flow



Demo of CumulusCI in Action



Package Based Development



Get Involved

Vote up Ideas

- [Prioritization](#)

Attend [User Groups](#)

[Post on the Hub](#)



Resources

- <https://trailhead.salesforce.com/en/content/learn/trails/determine-which-application-lifecycle-management-model-is-right-for-you>
- https://resources.docs.salesforce.com/224/latest/en-us/sfdc/pdf/deploy_sandboxes.pdf
- [Considerations for Permission Sets and Profiles](#)



SFDX/CumulusCI Resources

Understanding of metadata

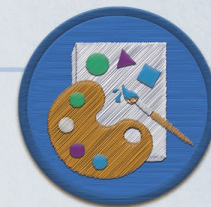
- Salesforce metadata is a collection of files with underlying code
- Limited needs to touch files unless you feel confident

Additional Tools to Learn/Use

- [Git and GitHub](#), [Visual Studio](#) and [Continuous Integration](#)
- [Postgresql](#) for import/export of data
- [Trailhead Trail on SFDX](#)
- [Cumulus CI Tutorial](#) & [Training at Higher Ed Summit](#)



Discussion Time



Where are you on your Salesforce journey?

What tools are you using for release management?

What is the next thing you plan to do to make your release management better?





Thank
You!

