



T-Mobile™

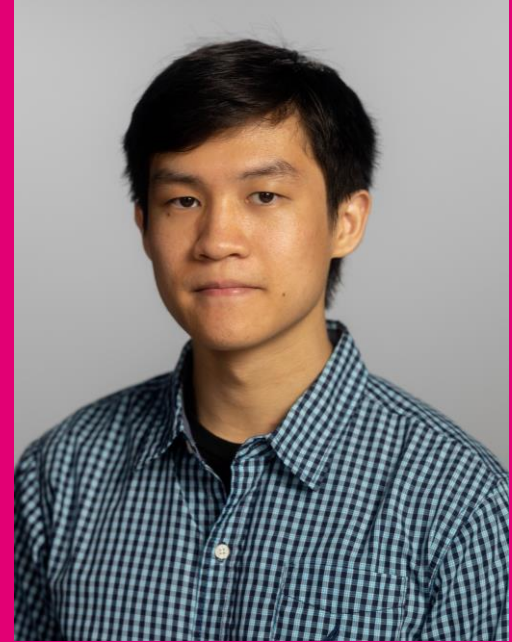
RAISE Metrics APIs

James Liu

9/8/2022

James Liu

- School: University of Washington
- Major: Computer Science
- Hobbies: Video games, powerlifting
- RAISE Metrics Team
- Reporting to Mike Shoemake

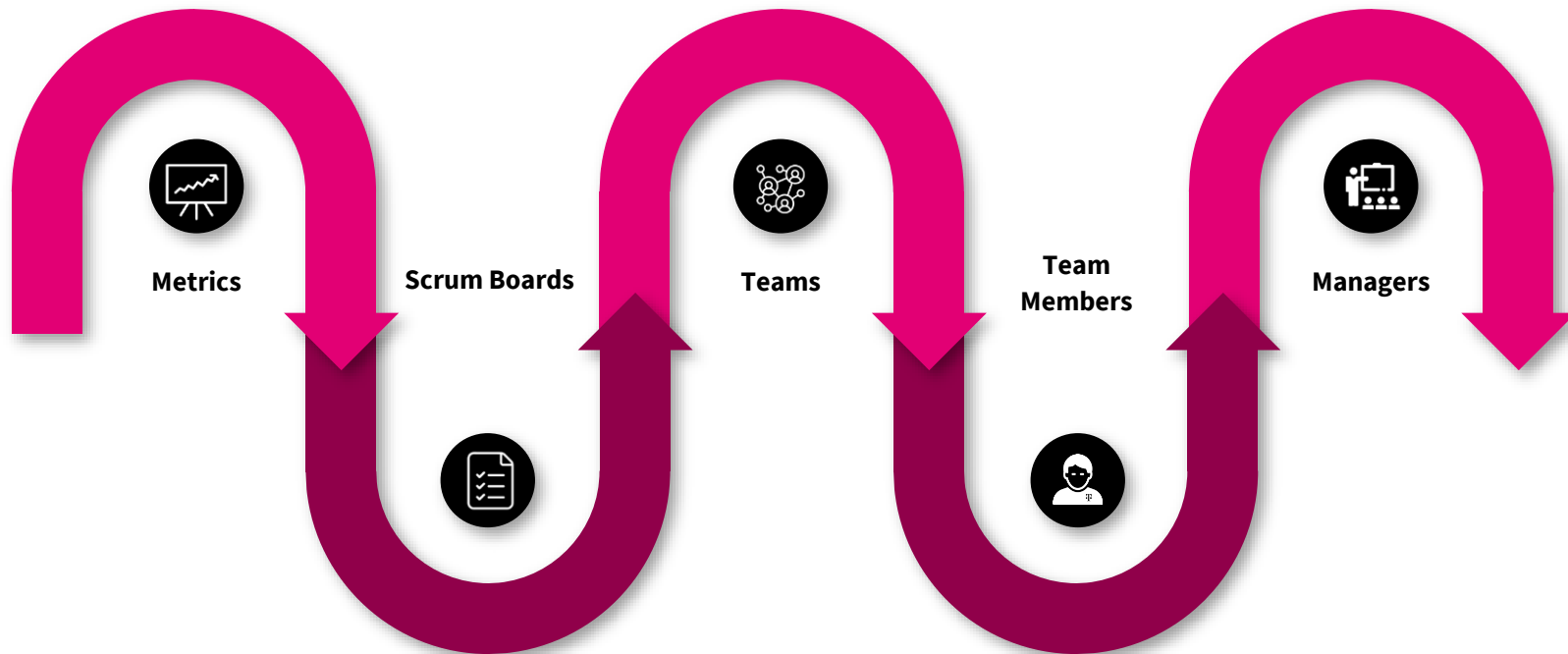


My Work This Summer

- Jira Data Microservice
 - Board Details API
 - Issue Ownership API
- Blue-Green Deployment

Pathlight

Necessary Data Associations



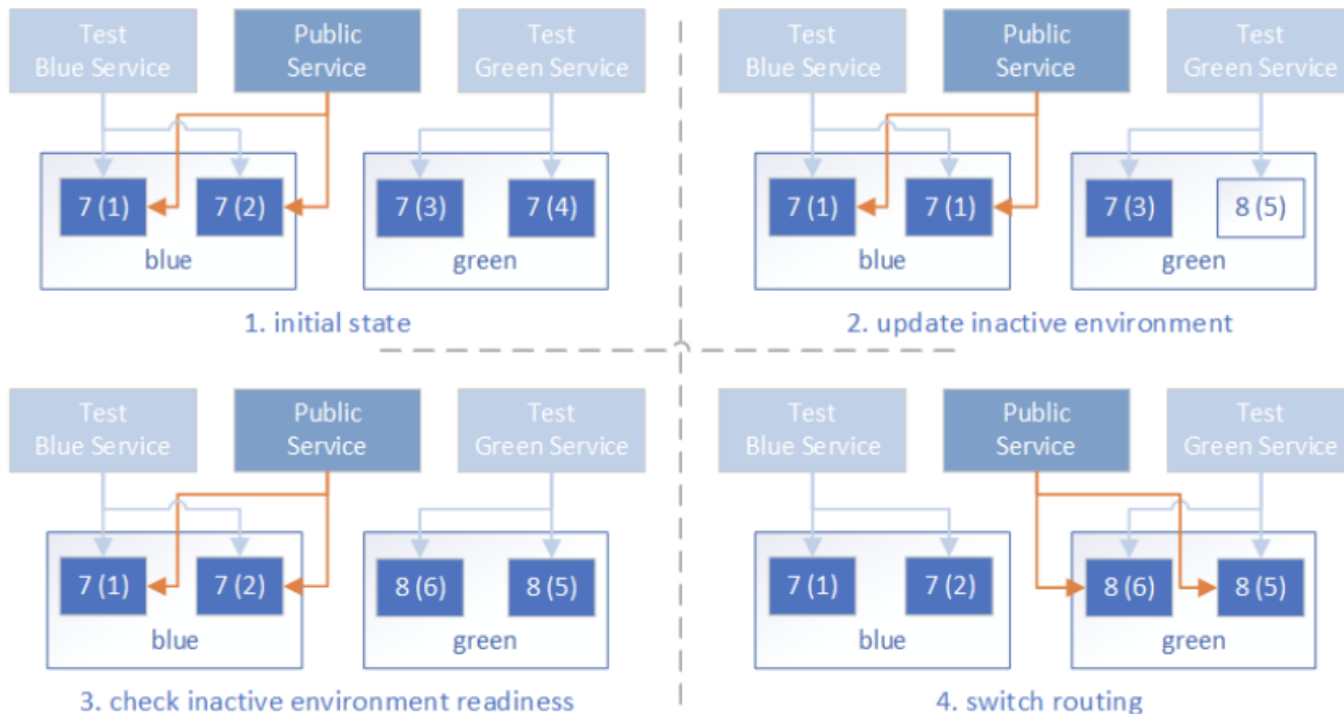
Jira Board Details API

	Board_ID	Board_Name	JQL	Projects_List	Component_List	Date_Modified
1	15184	Greg Board	project = DIGANLT AND compon...	DIGANLT	Analytics test b	2022-08-23 18:49:16.000
2	15170	For JA SCDOMTES Supply Chain...	project = SCDOMTES AND compo...	SCDOMTES	SCDOMAINTESTING	2022-08-23 18:49:15.897
3	15177	For JA BSWMBCO BTPS - Conver...	project = BSWMBCO AND compon...	BSWMBCO	Green Hat	2022-08-23 18:49:15.793
4	15175	For JA BSWMBCO BTPS - Conver...	project = BSWMBCO AND compon...	BSWMBCO	Black Hat	2022-08-23 18:49:15.687
5	15170	For JA IDSPBM EDS Device and...	project = IDSPBM AND compo...	IDSPBM	IDS SCM RTE	2022-08-23 18:49:15.580
6	15168	Checkout (1&2) Defect board	project = FBEPTD AND compone...	Invalid	Unmatched Components	2022-08-23 18:49:15.450
7	15161	For JA CDCT02 Platform Opera...	project = CDCT02 AND compone...	CDCT02	River	2022-08-23 18:49:15.343
8	15154	For JA CDCSM Purchase DG #:R...	project = CDCSM and componen...	CDCSM	Razzmatazz	2022-08-23 18:49:15.243
9	15152	For JA FBEPTD B2B (Misri) DG...	project = FBEPTD and compone...	FBEPTD	API Security Modernization -...	2022-08-23 18:49:15.140
10	15150	CDCSM SEBIM - Purchase Simpl...	project = CDCSM AND componen...	CDCSM	SEBIM	2022-08-23 18:49:15.033
11	15145	PR214915 - PR Digital Purcha...	project = BSWMSDP AND issuet...	BSWMSDP	Hewey	2022-08-23 18:49:14.927
12	15143	TeamVoyager_KB_22S18 08/24	project = FBEUP AND issuety...	FBEUP	Voyager	2022-08-23 18:49:14.820
13	15136	MExART - Rescue Rangers	project = LART11 AND issuety...	Invalid	No Components Specified	2022-08-23 18:49:14.713
14	15134	PCF2TKE-DocumentManagement	project = EFSCDME AND compon...	EFSCDME	PCF2TKE_DM	2022-08-23 18:49:14.610
15	15118	Team River DIGX Subtasks	project = DIGX AND issuetype...	Invalid	No Components Specified	2022-08-23 18:49:14.507
16	15111	LRE_Upgrade2	project = "TEQ:Performance &...	TEQPE	Platform Operations	2022-08-23 18:49:14.400
17	15109	Kanban: Release Management C...	project = AREA AND Reporter ...	Invalid	No Components Specified	2022-08-23 18:49:14.263
18	15102	Arila Sprinters 08/10	project = LART12 AND issuety...	Invalid	No Components Specified	2022-08-23 18:49:14.000

Jira Issue Ownership API

JiraID ▼	Component ▼	ProjectPrefix ▼	Assignee ▼
1610897	FBERSEJ:Kamakura	FBERSEJ	JIRAUSER38484
1621543	BSWMDBS2:Samson-Infra	TEQE2EU1	JIRAUSER35807
1654583	CDCAM:Bits and Bobs	CDCAM	jregala7@gsm1900.org
1655187	_QE Intake	NCBPTA	JIRAUSER39681
1661047	COCICFK:Ops Engineering	COCICFK	bdev7@gsm1900.org
1666222	FBERPG:Khaleesi	FBERPG	JIRAUSER32208
1666230	FBERPG:Khaleesi	FBERPG	JIRAUSER44667
1674695	IOTDTPB:Loom	TEQEQDI	JIRAUSER42704
1409470	CDCDWR2:SID_API	CDCDWR2	sremini2@gsm1900.org
1414049	ETIOT:Defenders	ETIOT	JIRAUSER29645
1427367	BSWMDBN2:Samson Wild Fire	BSWMDBN2	vsharma32@gsm1900.o...
1427658	FBECSER:Cassie	FBECSER	JIRAUSER66304
1442760	BSWMDBN2:Samson Wild Fire	BSWMDBN2	vsharma32@gsm1900.o...
1455175	NCBPTA:App	NCBPTA	JIRAUSER39393
1455263	NCBPTA:App	NCBPTA	JIRAUSER39392
1463285	BSWMSCE2:Seahawks	BSWMSCE2	JIRAUSER49242
1463636	BPFDPCH2:Promo Titans	BPFDPCH2	jkabong1@gsm1900.org
1464074	NCBPPE:Application	NCBPPE	kdoming30@gsm1900.o...

Blue-Green Deployment



Blue-Green: Initial Deploy State

```
https://helloworld-jliu37.duck-plb-w2.kube.t-mobile.com/api/deploy/info
{
  nodeName: "ip-10-65-45-37.us-west-2.compute.internal",
  commitTimeStamp: "2022-07-21T10:22:24-07:00",
  podHostip: "10.65.45.37",
  appName: "helloworld-jliu37",
  targetHosturl: "http://helloworld-jliu37.duck-plb-w2.kube.t-mobile.com",
  deployedBy: "James Liu",
  commitSha: "60050a02c027d4460b2d96d00b5258ff537a7a47b",
  deployEnv: "dev:md-duck-plb-w2:development:smoke2",
  deployedVersion: "1.0-60050a02",
  commitUser: "James Liu",
  podNamespace: "hld-plb-duck-plb-w2",
  podIp: "103.130.119.99",
  appType: "app-blue_green-n",
  deployStrategy: "BLUE_GREEN",
  podSvcAccount: "default",
  podName: "helloworld-jliu37-primary-697cf5c767-mrtp4",
  commitBranch: "dev/jliu37-checkK8sDeployment",
  status: "active"
}
```

Canary User

```
https://helloworld-jliu37.duck-plb-w2.kube.t-mobile.com/api/deploy/info
{
  nodeName: "ip-10-65-45-37.us-west-2.compute.internal",
  commitTimeStamp: "2022-07-21T10:22:24-07:00",
  podHostip: "10.65.45.37",
  appName: "helloworld-jliu37",
  targetHosturl: "http://helloworld-jliu37.duck-plb-w2.kube.t-mobile.com",
  deployedBy: "James Liu",
  commitSha: "60050a02c027d4460b2d96d00b5258ff537a7a47b",
  deployEnv: "dev:md-duck-plb-w2:development:smoke2",
  deployedVersion: "1.0-60050a02",
  commitUser: "James Liu",
  podNamespace: "hld-plb-duck-plb-w2",
  podIp: "103.130.119.00",
  appType: "app-blue_green-n",
  deployStrategy: "BLUE_GREEN",
  podSvcAccount: "default",
  podName: "helloworld-jliu37-primary-697cf5c767-mrtp4",
  commitBranch: "dev/jliu37-checkK8sDeployment",
  status: "active"
}
```

Non-Canary User

Blue-Green: New Deployment

```
https://helloworld-jlu37.duck-plb-w2.kube.t-mobile.com/api/deploy/info
{
  nodeName: "ip-10-6-37-51.corporate.t-mobile.com",
  commitTimeStamp: "2022-07-21T10:46:15-07:00",
  podHostIp: "10.6.37.51",
  appName: "helloworld-jlu37",
  targetHosturl: "http://helloworld-jlu37.duck-plb-w2.kube.t-mobile.com",
  deployedBy: "James Liu",
  commitSha: "e7542d54411253b8bc4a1cf153200f4217577b",
  deployEnv: "dev-hld-duck-plb-w2/development/smoke2",
  deployedVersion: "1.0-e7542d55",
  commitUser: "James Liu",
  podNamespace: "hld-plb-duck-plb-w2",
  podIp: "102.120.62.63",
  appType: "app-blue_green-n+1",
  deployStrategy: "BLUE_GREEN",
  podSvcAccount: "default",
  podName: "helloworld-jlu37-585ff7b9f-mm6dd",
  commitBranch: "dev/jlu37-checkK8sDeployment",
  status: "active"
}
```

Canary User

```
https://helloworld-jlu37.duck-plb-w2.kube.t-mobile.com/api/deploy/info
{
  nodeName: "ip-10-65-45-37.us-west-2.compute.internal",
  commitTimeStamp: "2022-07-21T10:22:24-07:00",
  podHostIp: "10.65.45.37",
  appName: "helloworld-jlu37",
  targetHosturl: "http://helloworld-jlu37.duck-plb-w2.kube.t-mobile.com",
  deployedBy: "James Liu",
  commitSha: "60050a02e0274460b2d96d00b5258ff537a7a47b",
  deployEnv: "dev-hld-duck-plb-w2/development/smoke2",
  deployedVersion: "1.0-60050a02",
  commitUser: "James Liu",
  podNamespace: "hld-plb-duck-plb-w2",
  podIp: "192.130.119.99",
  appType: "app-blue_green-n",
  deployStrategy: "BLUE_GREEN",
  podSvcAccount: "default",
  podName: "helloworld-jlu37-primary-697cf5c767-mrtp4",
  commitBranch: "dev/jlu37-checkK8sDeployment",
  status: "active"
}
```

Non-Canary User

Blue-Green: After Promotion

```
https://helloworld-jliu37.duck-plb-w2.kube.t-mobile.com/api/deploy/info
{
  nodeName: "ip-10-6-37-51.corporate.t-mobile.com",
  commitTimeStamp: "2022-07-21T10:46:15-07:00",
  podHostip: "10.6.37.51",
  appName: "helloworld-jliu37",
  targetHosturl: "http://helloworld-jliu37.duck-plb-w2.kube.t-mobile.com",
  deployedBy: "James Liu",
  commitSha: "e7542d554411253b8bc4af1cf153200f4217577b",
  deployEnv: "dev-mid-duck-plb-w2-development-smoke2",
  deployedVersion: "1.0-e7542d55",
  commitUser: "James Liu",
  podNamespace: "hld-plb-duck-plb-w2",
  podIp: "192.130.02.02",
  appType: "app-blue_green-n+1",
  deployStrategy: "BLUE_GREEN",
  podSvcAccount: "default",
  podName: "helloworld-jliu37-585ff7b9f-mm6dd",
  commitBranch: "dev/jliu37-checkK8sDeployment",
  status: "active"
}
```

Canary User

```
https://helloworld-jliu37.duck-plb-w2.kube.t-mobile.com/api/deploy/info
{
  nodeName: "ip-10-6-37-51.corporate.t-mobile.com",
  commitTimeStamp: "2022-07-21T10:46:15-07:00",
  podHostip: "10.6.37.51",
  appName: "helloworld-jliu37",
  targetHosturl: "http://helloworld-jliu37.duck-plb-w2.kube.t-mobile.com",
  deployedBy: "James Liu",
  commitSha: "e7542d554411253b8bc4af1cf153200f4217577b",
  deployEnv: "dev-mid-duck-plb-w2-development-smoke2",
  deployedVersion: "1.0-e7542d55",
  commitUser: "James Liu",
  podNamespace: "hld-plb-duck-plb-w2",
  podIp: "100.120.62.57",
  appType: "app-blue_green-n+1",
  deployStrategy: "BLUE_GREEN",
  podSvcAccount: "default",
  podName: "helloworld-jliu37-primary-79769b4d94-mag67",
  commitBranch: "dev/jliu37-checkK8sDeployment",
  status: "active"
}
```

Non-Canary User

Tools Used



GitLab

Version control and deployment



Spring Boot

Used to develop microservices



Azure Data Studio

Used for checking database tables and debugging my SQL



Conductor

Used to check on status of applications during deployment



Results

- Long-term projects: A step forward
 - Blue-Green
 - Pathlight
- Takeaways
 - Software engineering skills
 - Being flexible
 - Communication
 - Values in Action
 - Never Stop Growing
 - Champion Change
- Thank you to Mike, Vipin, and Adam for all the support this summer!

Let's
talk

T-Mobile™