Roadmap to Continuous Deployment
Nathan Dye
Microsoft Ads R&D
A
B
C
D
E
Missoula
Helena
Butte
Anaconda
Georgetown Lake
Rock Creek
Big Hole
Garnet Range
Flint Creek Range
Helena National Forest
Anaconda Pintlar Wilderness
Blackfoot
Clearwater
Ovando
Lincoln
Wolf Creek
Gates of the Mountains Wilderness
Bonner
Potomac
Helmville
Sieben
Canyon Creek
Nelson
Silver City
Gloster
Marysville
Gearing
Bald Butte
York
Iron
Weed
Birdseye
Skyline
Austin
East Helena
Clasoil
Winston
Springtown
Beartown
Coloma
Finn
Iris
Byrne
Bradman
Drummond
Haskell
New Chicago
Jens
Brock Creek
Avon
Hall
Quigley
Florence
Carlton
Lolo
Kenspur
Welcome Creek
Bitterroot
Bing
Tucker
Quast
Corvallis
Riverside
Hamilton
Grantsdale
Gird Point
Harlos Heights
Conner
Sula
Porters Corner
Rumsey
Philipsburg
Granite
Danielsville
Leadville
Hassel
Warm Springs
Stump Town
West Valley
Staton
Durant
Walkerville
Woodville
Elk Park
Columbia Gardens
Buxton
French Town
Newcomb
Homestake
Highview
Pipestone
Sunlight
Jefferson Island
Whitehall
Three Forks
Eustis
Vendome
Renova
Grace
Wise River
Dewey
Moose Town
Divide
Highland Mountains
Waterloo
Jefferson
Summit Valley
Sappington
Beals
Harrison
Harrison Mill
Willow Cr
Parker
Radersb
Mt Highway 69
93
200
141
287
12
55
43
2
69
90

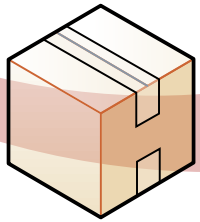
"It is not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change." - Charles Darwin

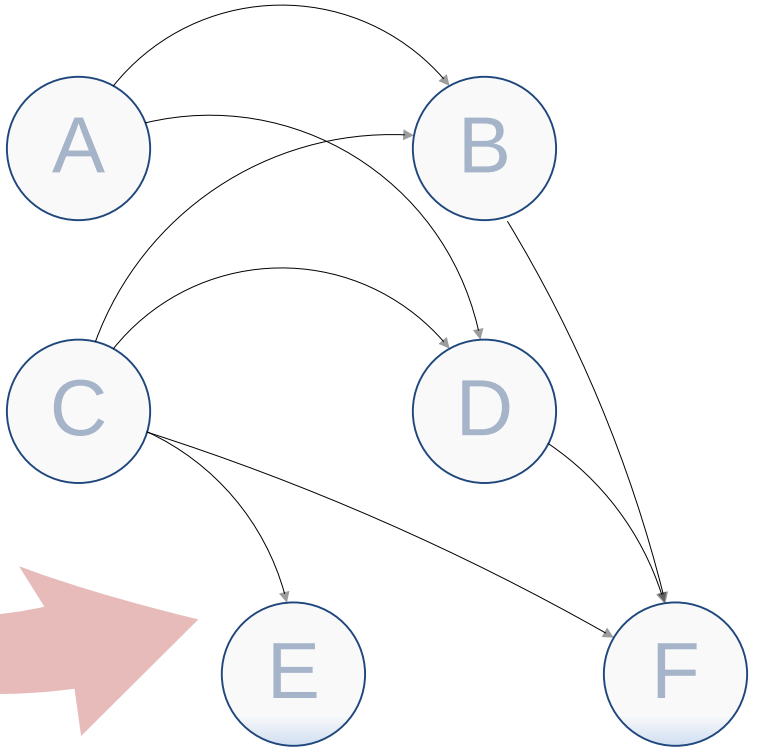
Agenda

- Complexity in Deployment
- Patterns & Practices
- aQuantive Experience

Problem

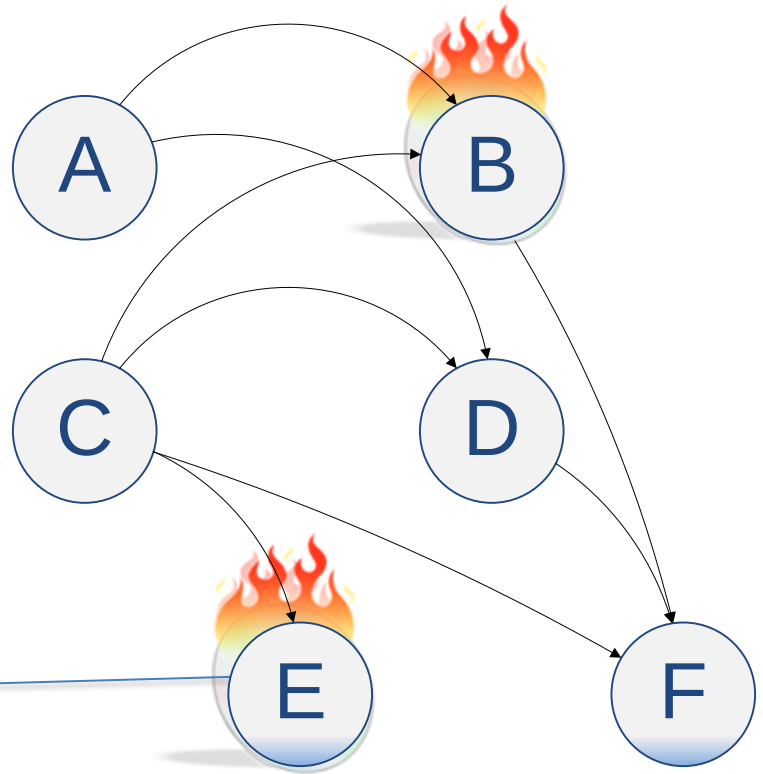
Clearwater
Ovando
Wolf Creek
Lincoln
Blackfoot
141
Helmville
Yreka
Sieben
287
Gates of the Mountains Wilderness
Nelson
Canyon Creek
Silver City
Piltzville
Bonner
Coloma
Springtown
Beartown
Garnet
Finn
Gloster
Lolo
93
A




A
B
C
D
E
F

Problem

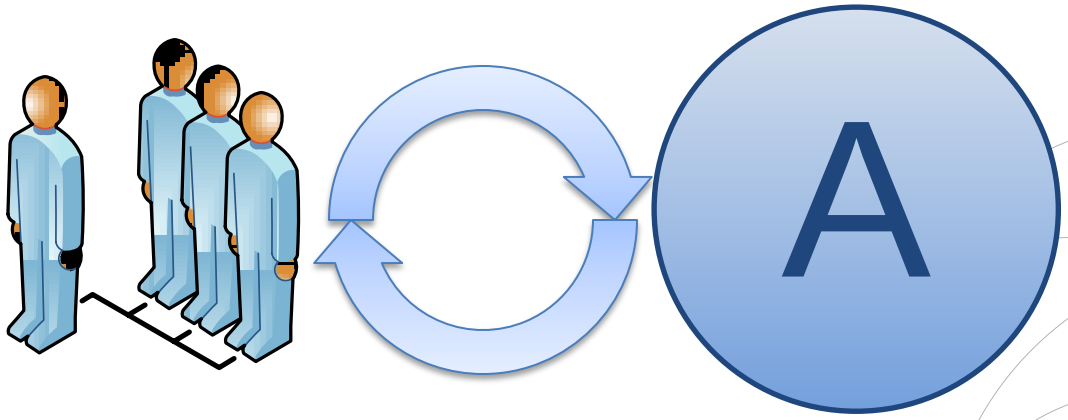
Not Really Done

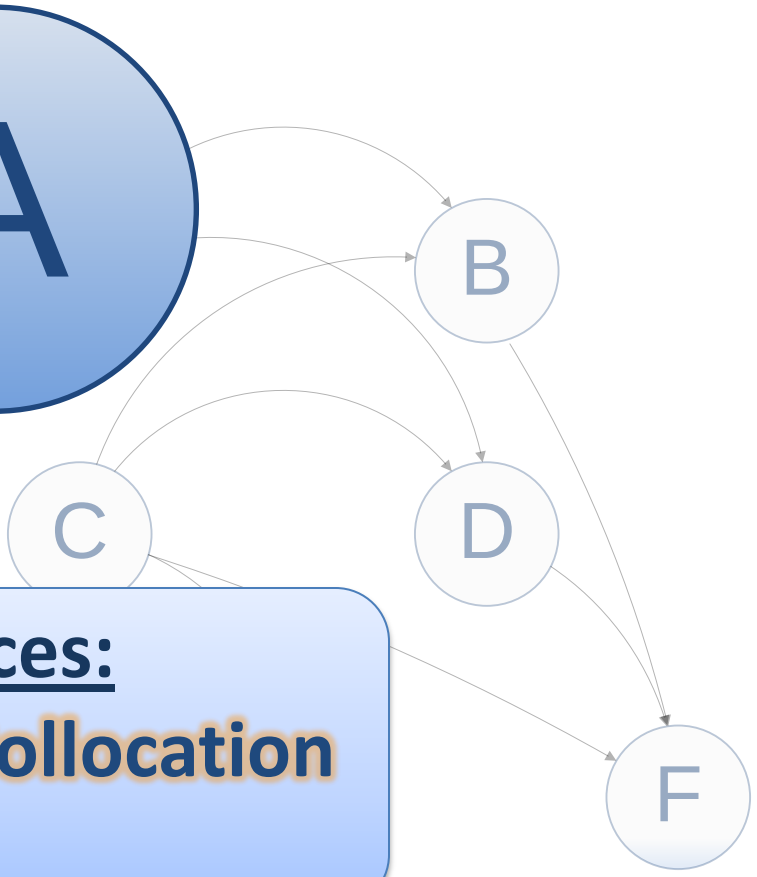


Unknowable Circumstances

Service Team
Continuous Deployment
Isolation
Rollback
Detection
A
B
C
D
E
Helena
Butte
Helena National Forest
Garnet Range
Rock Creek
Georgetown Lake
Anaconda Pintlar Wilderness
Big Hole
Welcome Creek Wilderness
Highland Mountains
Clearwater
Ovando
Lincoln
Helmville
Yreka
Coloma
Springtown
Beartown
Finn
Iris
Byrne
Bradman
Drummond
Haskell
New Chicago
Hall
Jens
Brock Creek
Avon
Garrison
Stone
Philipsburg
Granite
Danielsville
Leadville
Porters Corner
Rumsey
Georgetown
Warm Springs
Stump Town
West Valley
Anaconda
Staton
Opportunity
Crackerville
Durant
Silver Bow
Buxton
Newcomb
Feely
French Town
Wise River
Dewey
Divide
Moose Town
Highview
Pipestone
Sunlight
Jefferson Island
Whitehall
Renova
Vendome
Grace
Waterloo
Elk Park
Clancy
East Helena
Clasoil
Winston
Birdseye
Weed
Skyline
Austin
Wolf Creek
Sieben
Gates of the
Lolo
Carlton
Florence
Kenspur
Quigley
Stevensville
Bing
Tucker
Quast
Corvallis
Riverside
Hamilton
Grantsdale
Gird Point
Conner
Sula
Eustis
Three Forks
Sappington
Harrison Mill
Harrison
Beals
Summit Valley
Parker
Mt High
Jefferson
Willow Cre
Bitterroot
Sapphire Mountains
Anaconda Range
US-93
93
141
12
287
90
55
43
2

Service Team





Patterns and Practices:

- **Cross-Functional Collocation**
- **Service Inventory**

Service Name	Ops Owner	Dev Owner	PM Owner
AdCaster	Nathan	Cory	Obaid
AtlasDB	Nathan	Cory	Obaid
ScheduledTaskRunner	Nathan	Cory	Obaid
IDBroker	Nathan	Cory	Obaid
DMLoadBalancer	Nathan	Cory	Obaid

Patterns and Practices:

- **Cross-Functional Collocation**
- **Service Inventory**

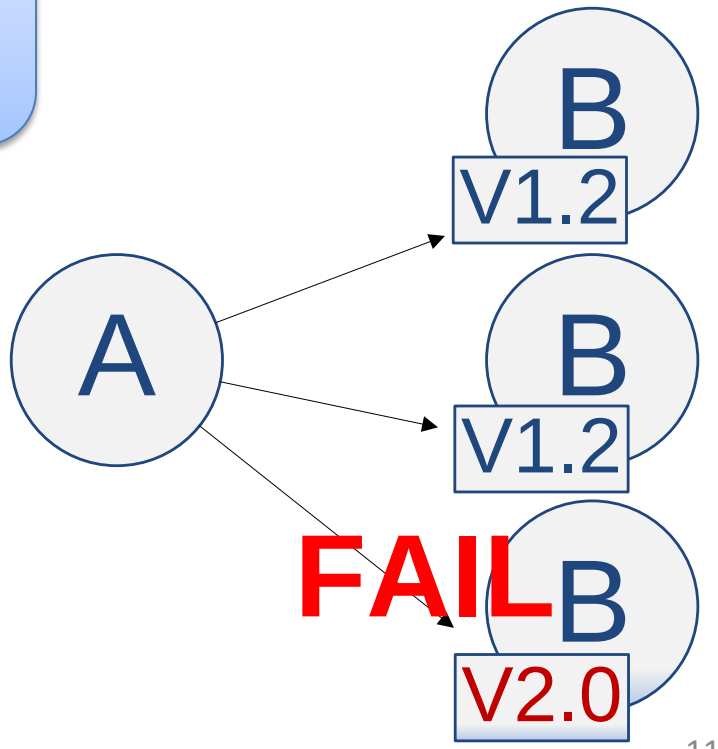
Isolation

Florence
Drummond
Avon
Garrison
12
B
Flint
Creek
Range
Sapphire
Mountains
Hamilton
Warm Springs
Anaconda
Deerlodge
National
E
East Helena
Winston
Clancy
287
Townsend
D
Boulder
Radersburg
Toston
Helena National Forest
White Sulphur
Springs
Castle
Mountains
Martinsdale
Twodot
Harlowton
191
12
Ringling
Crazy
Melville

EXIT

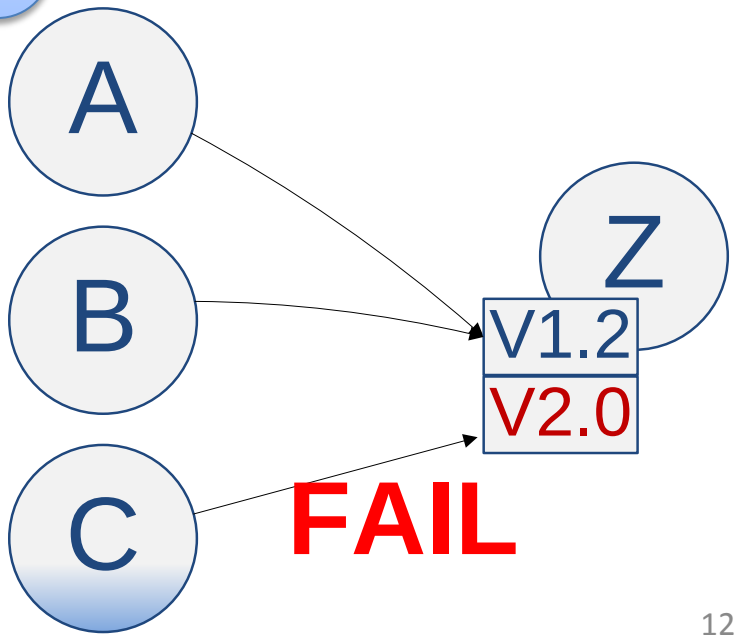
Patterns and Practices:

- **Scale-Out**
- **Versioned Interfaces**



Patterns and Practices:

- Scale-Out
- Versioned Interfaces

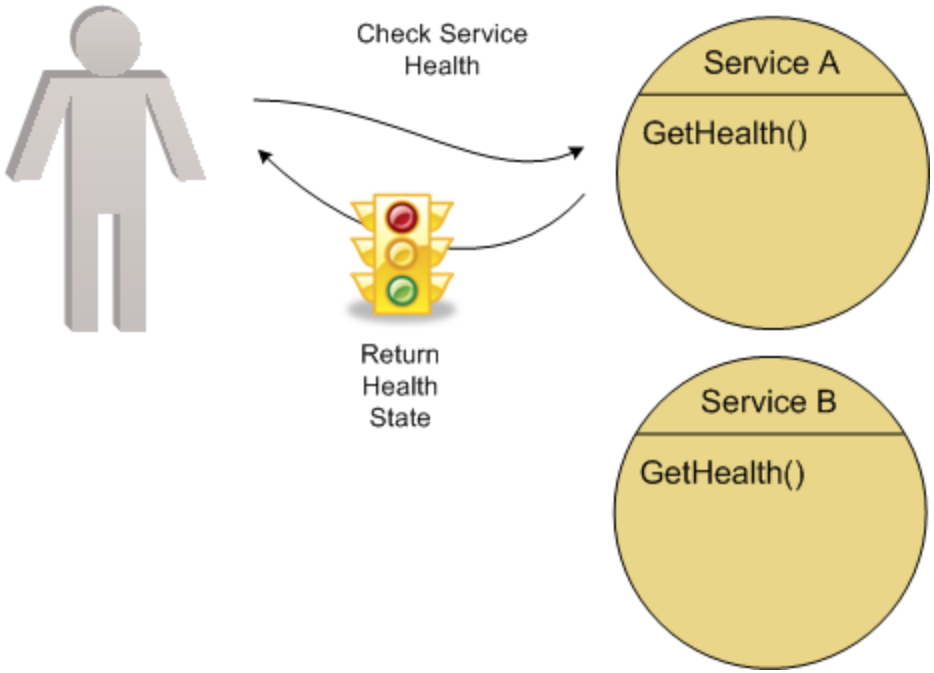


Detect
Hamilton
Sapphire
Mountains
Range
Warm Springs
Boulder
Radersburg
Toston
Crazy
Mountains
Melville
Kamiah
Wilsall
Butte
Wilderness
Big Hole
Sula
Wise River
Divide
Whitehall
Three Forks
Bridger
Range
Clyde Park
Shields
Big Timber
Manhattan
Tobacco
Root
Mountains
Jefferson
Harrison
Belgrade
Bozeman
Livingston
Greycliff
Grangeville
Madison
Missouri
90
191
93

CHECK
BRAKE

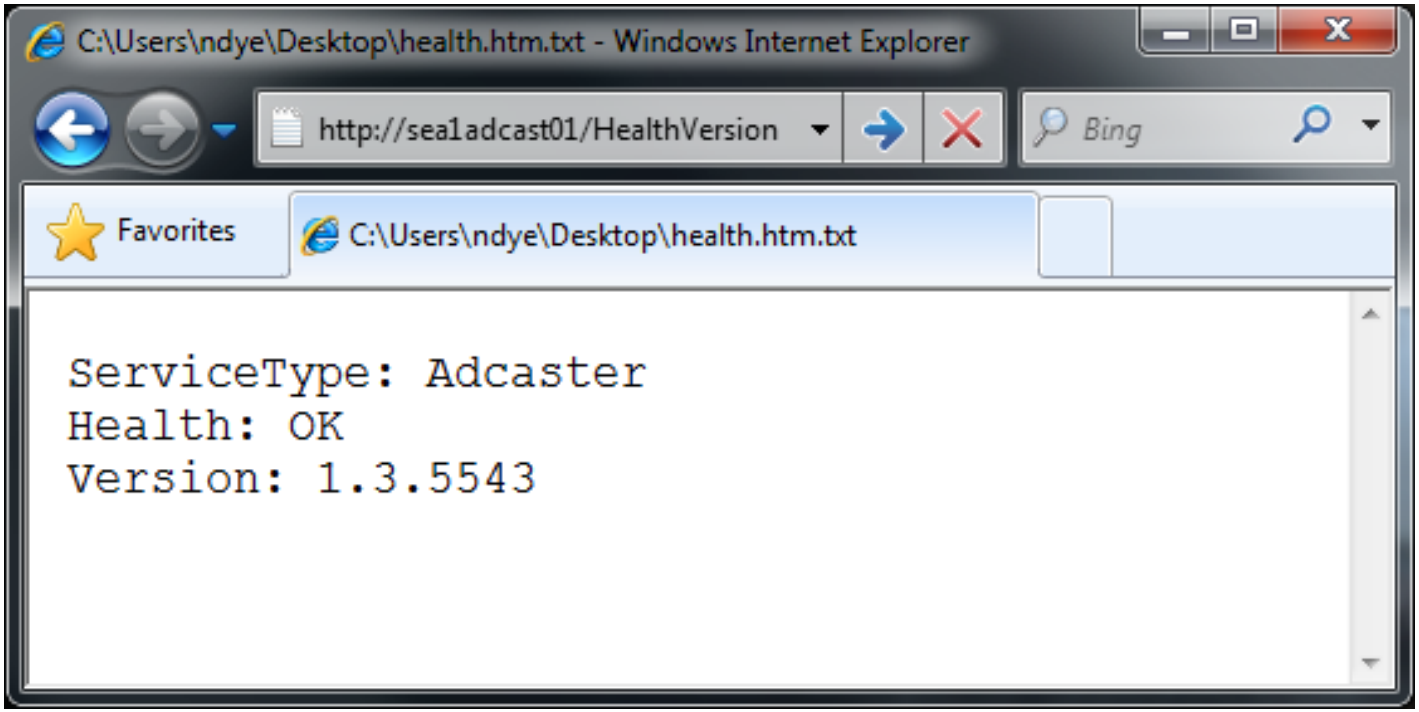
Patterns and Practices:

- Service Health & Version
- Environment Portal



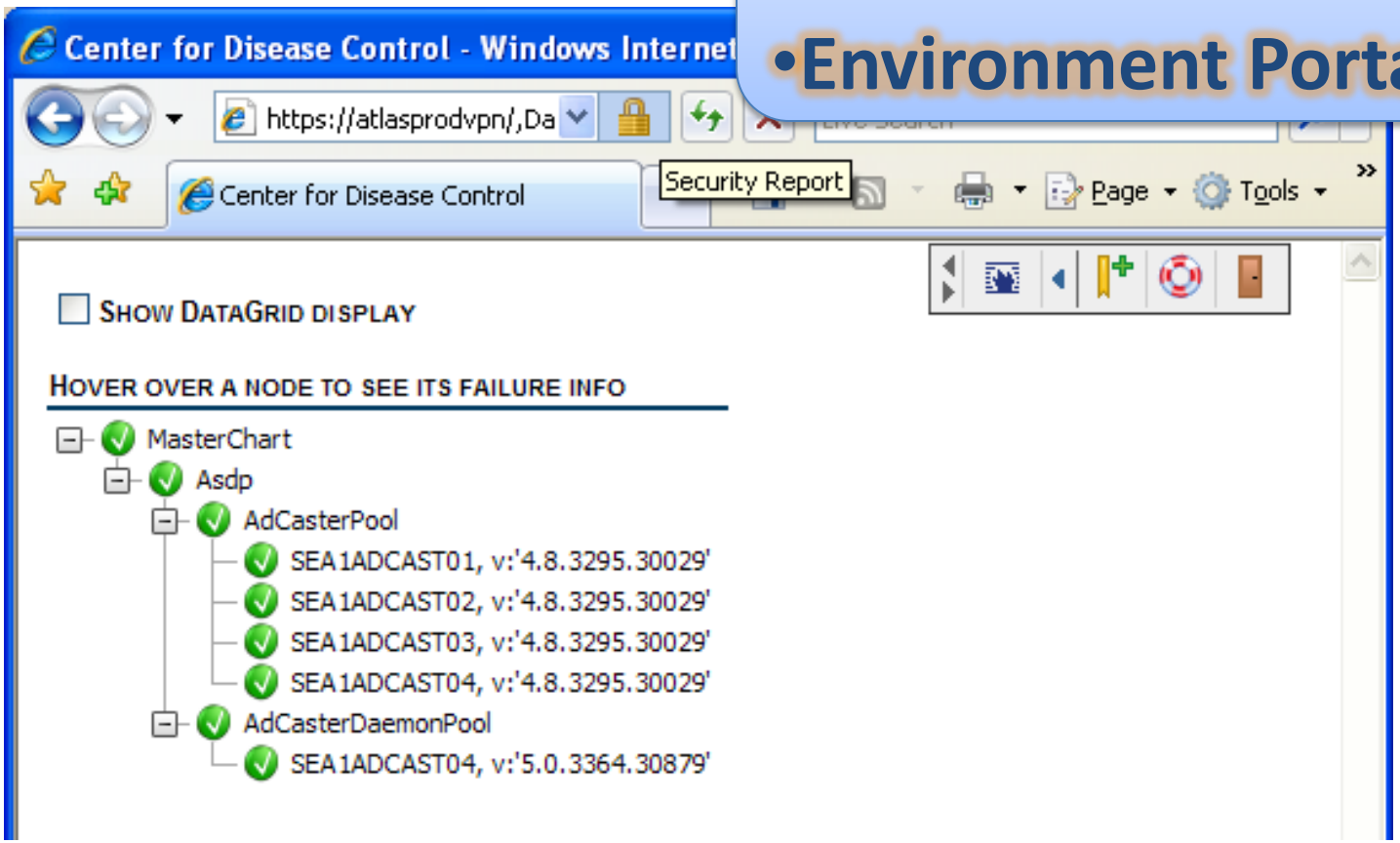
Patterns and Practices:

- Service Health & Version
- Environment Portal

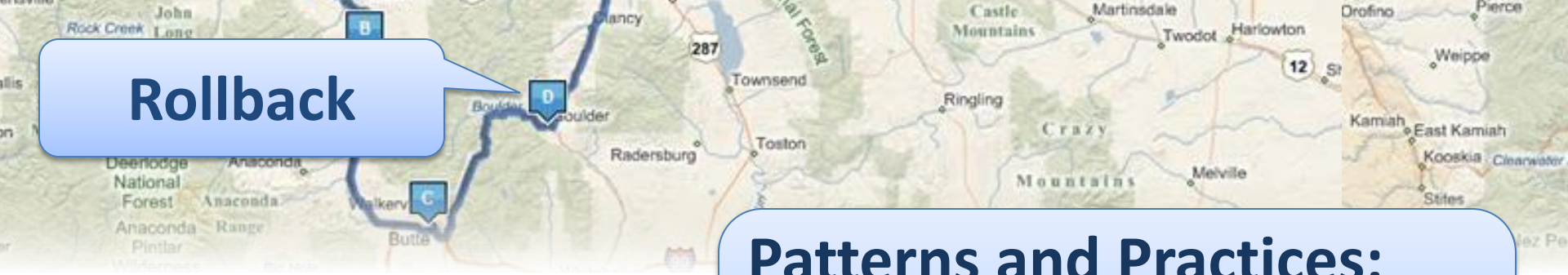


Patterns and Practices:

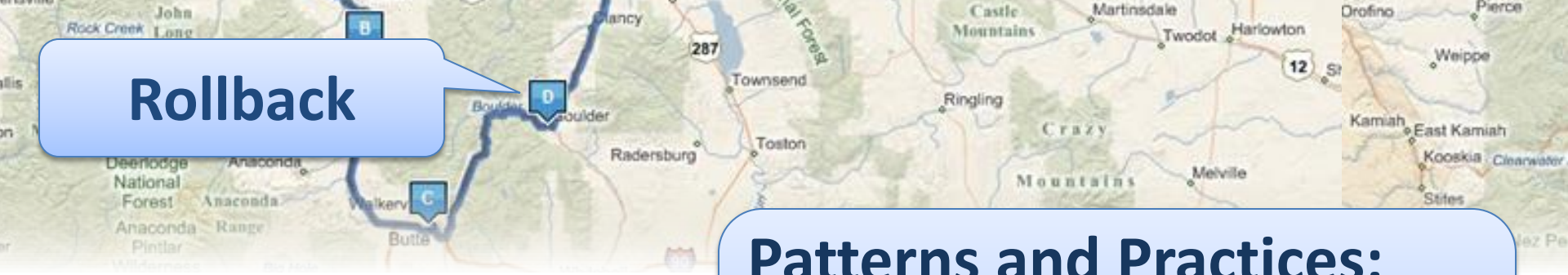
- Service Health & Version
- Environment Portal



Rollback

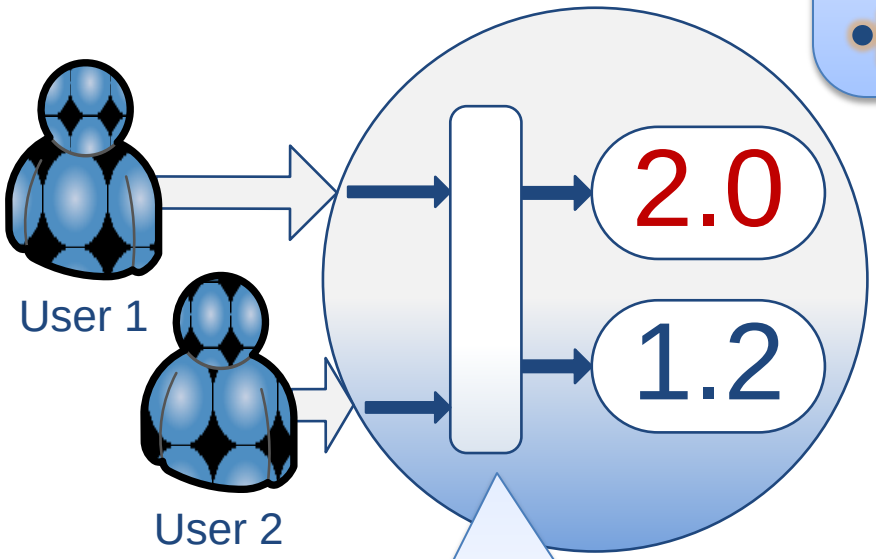

Rollback
Patterns and Practices:
•KillStart Instant Rollback
•Exposure Control

A
.\Asvc\1.2\a.exe
.\Asvc\2.0\a.exe



Patterns and Practices:

- KillStart Instant Rollback
- Exposure Control



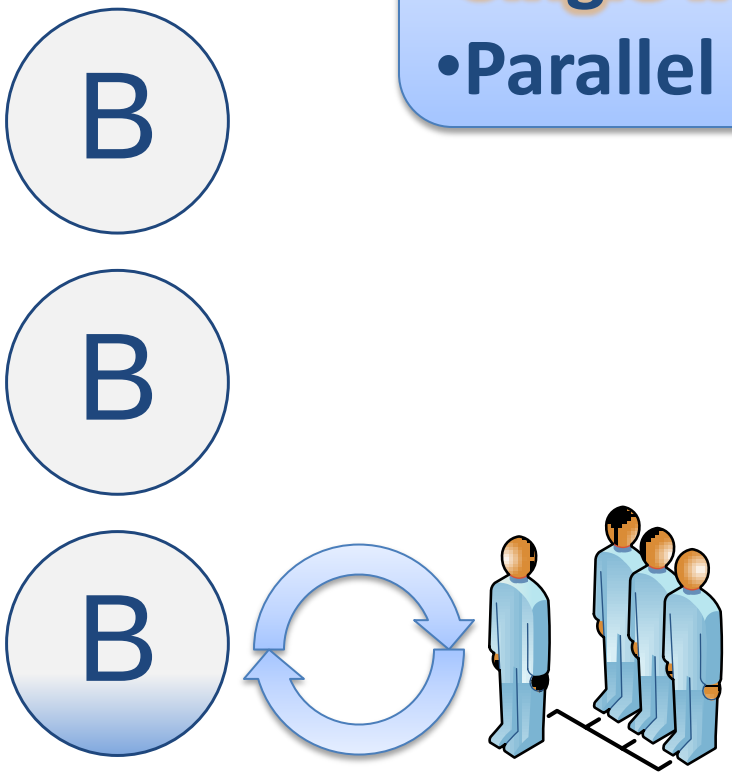
User	Version
User 1	2.0
User 2	1.2
User 3	1.2

Continuous Deployment

Continuous Deployment

Patterns and Practices:

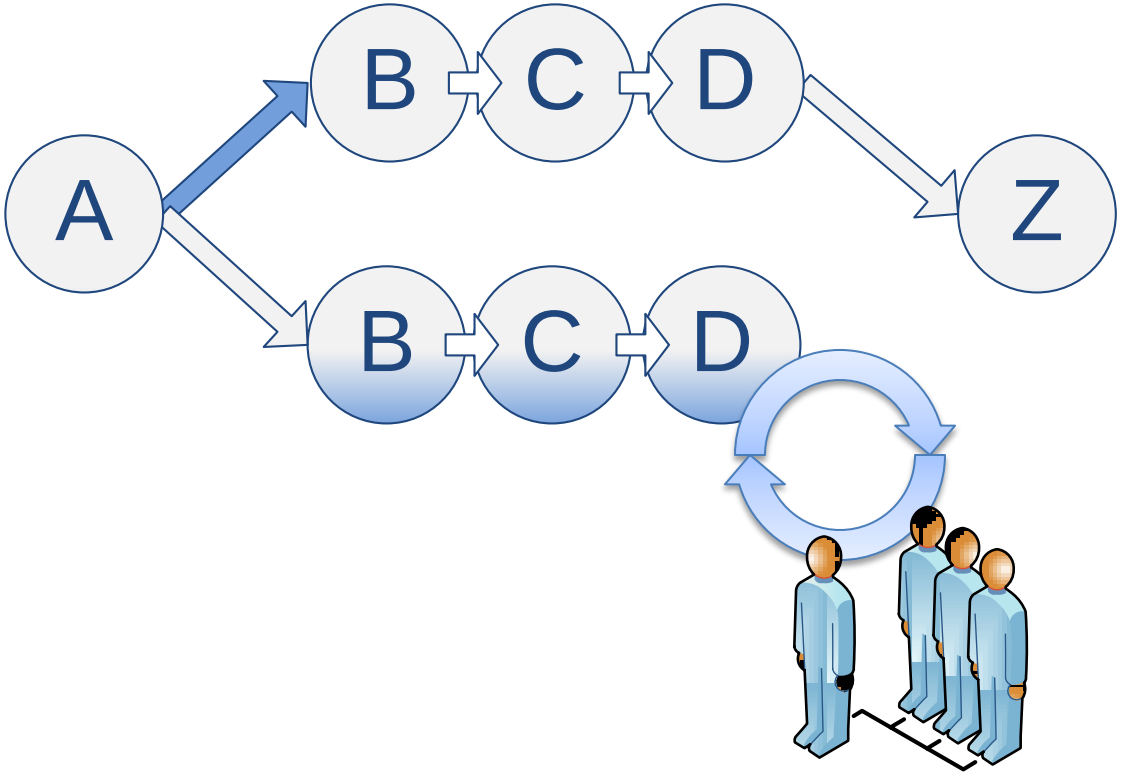
- Single Instance
- Parallel Chain



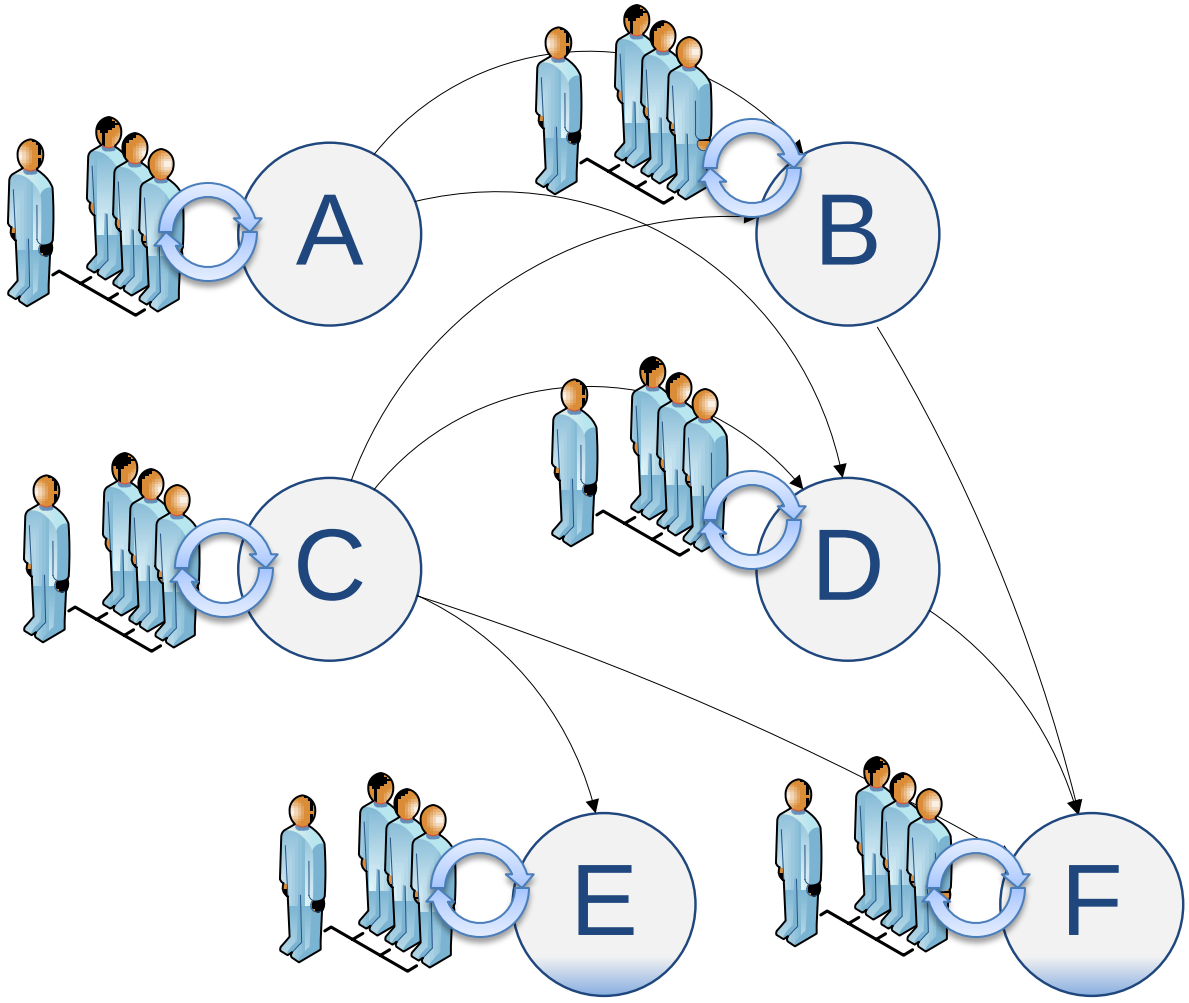
Continuous Deployment

Patterns and Practices:

- Single Instance
- Parallel Chain



Outcome



Service Team

Isolation

Detection

Rollback

Continuous Deployment

References

Timothy Fitz – IMVU, Continuous Deployment
http://timothyfitz.wordpress.com/

Nathan Dye - Service Deployment Pattern Wiki
http://servicedeployment.net/