4th UCAAT User Conference on Advanced Automated Testing

ETSI World Class Standards

CONTINUOUS TESTING STARTS WITH SMART ARCHITECTURAL DECISIONS

Presented by Branka Rakic

levi nine

Presenter

Branka Rakic
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Biography

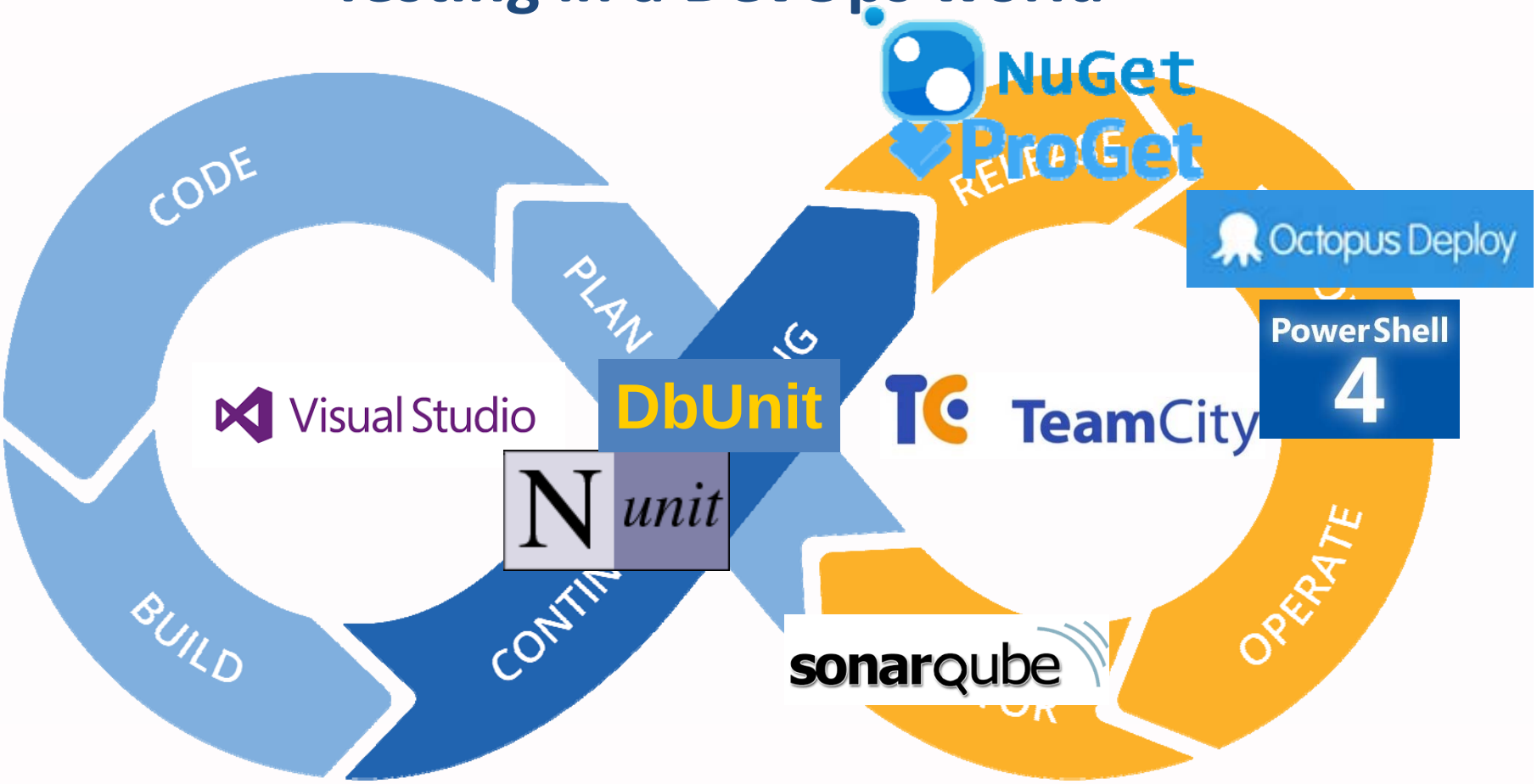
- M.Sc. degree in Computer Engineering
- Test Architect at Levi9
- Over 9 years of experience in Testing

AGENDA

- Public Transport Management system
- Test automation in a DevOps world
- Testing challenges and how to overcome them
- What MUST you take away from this session?

Public Transport Management system

Testing in a DevOps world



TeamCity

FlashNext :: Backend :: D… | FlashNext :: Backend :: D… | Project: Development-B…

teamcity.nextdomain.local/project.html?projectId=FlashNext_DevelopmentBackend

Projects | Changes | Agents 5 | Build Queue 0 | Branka Rakic | Administration

[redacted] > Backend > Development-Backend (Development branch where all Sprint magic happens on.) | Hide Successful Configurations

Overview | Change Log | Statistics | Current Problems | Investigations | Muted Problems | Build Chains | Flaky Tests 27

Build Test and Analyze				Run …
#1.0.0.1505	Tests passed: 2146, ignored: 6	No artifacts	Vanja Tesin (1)	15 minutes ago (19m:54s)
Development-Backend-Integration	Development branch where all integration magic happens on.			
Build Analyze and Publish			Pending (1)	Run …
#1.0.0.794	Success	No artifacts	No changes	16 hours ago (8m:32s)
Provisioning				Run …
#523	Success	No artifacts	No changes	15 hours ago (18m:16s)
Deployment			Pending (1)	Run …
#541	Success	No artifacts	No changes	15 hours ago (3m:56s)
Integration Tests			Pending (1)	Run …
#402	Tests failed: 4 (1 new), passed: 131, ignored: 26; "Overall result: Failed" text appeared in build l…	No artifacts	No changes	15 hours ago (15m:59s)
Integration Tests External			Pending (1)	Run …
#270	Execution timeout; tests failed: 12 (2 new), passed: 22, ignored: 10; snapshot dependency failed: …..	No artifacts	No changes	14 hours ago (30m:02s)
Marker Test			Pending (1)	Run …
#78	Tests failed: 2, passed: 0, ignored: 2; snapshot dependency failed: … Integration Tests External; …	No artifacts	No changes	14 hours ago (1m:23s)
Remove Environment			Pending (95)	Run …
#39	Success	No artifacts	Changes (12)	3 months ago (20s)
MapMatching				3 successful
[redacted]				1 failing

Help | Feedback | TeamCity Enterprise 10.0.1 (build 42078) | Get new version! | License agreement

Win10_1607_Englis….iso | MediaCreationTool.exe Canceled | Show all

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HOW DID WE START?

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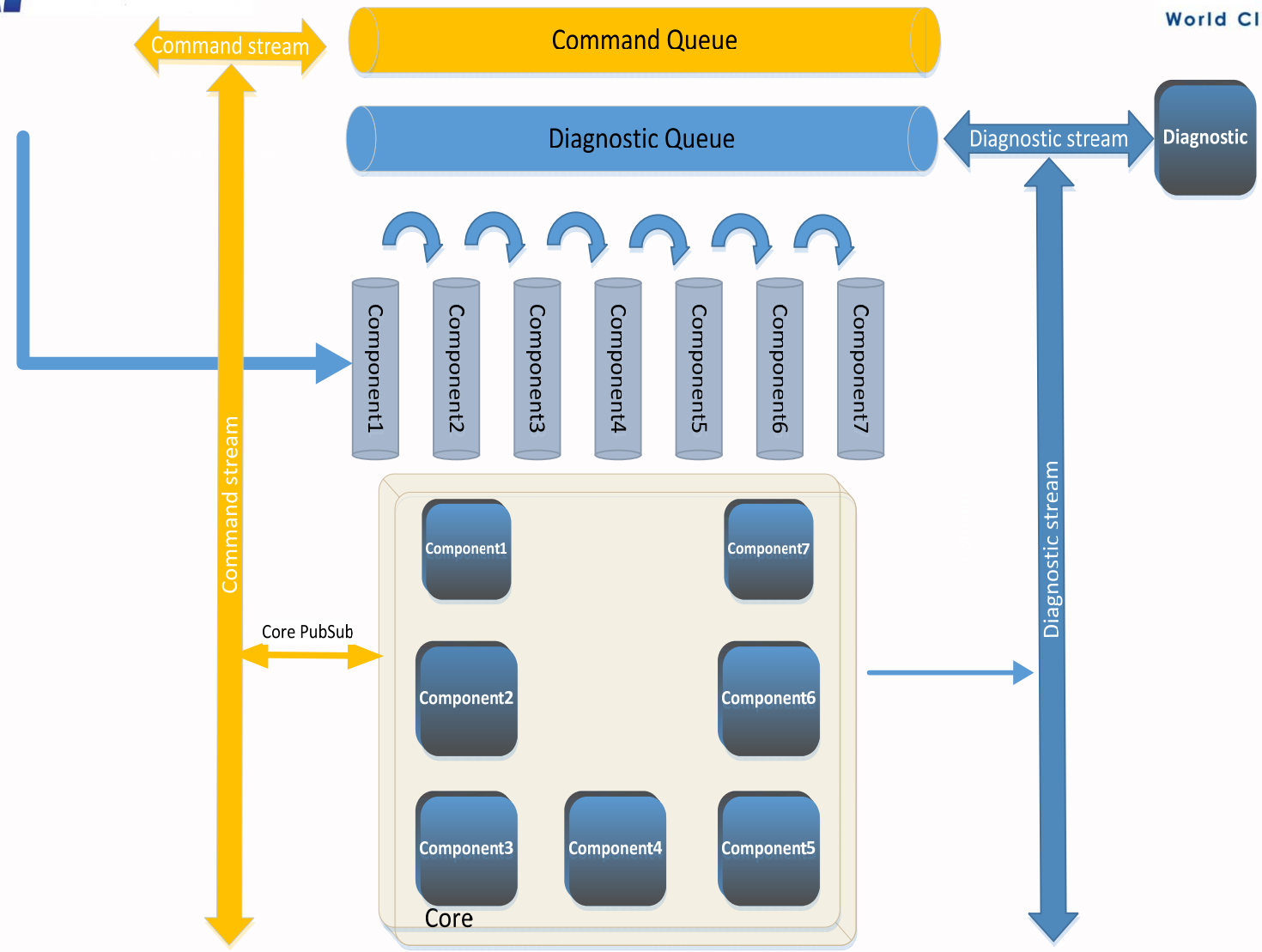

Which challenges have been faced?

- Asynchronous communication
- Provading test data
- Simulating real scenarios
- Test environment per client configuration
- Managing independent database state for each test

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HOW TO OVERCOME THE CHALLENGES?

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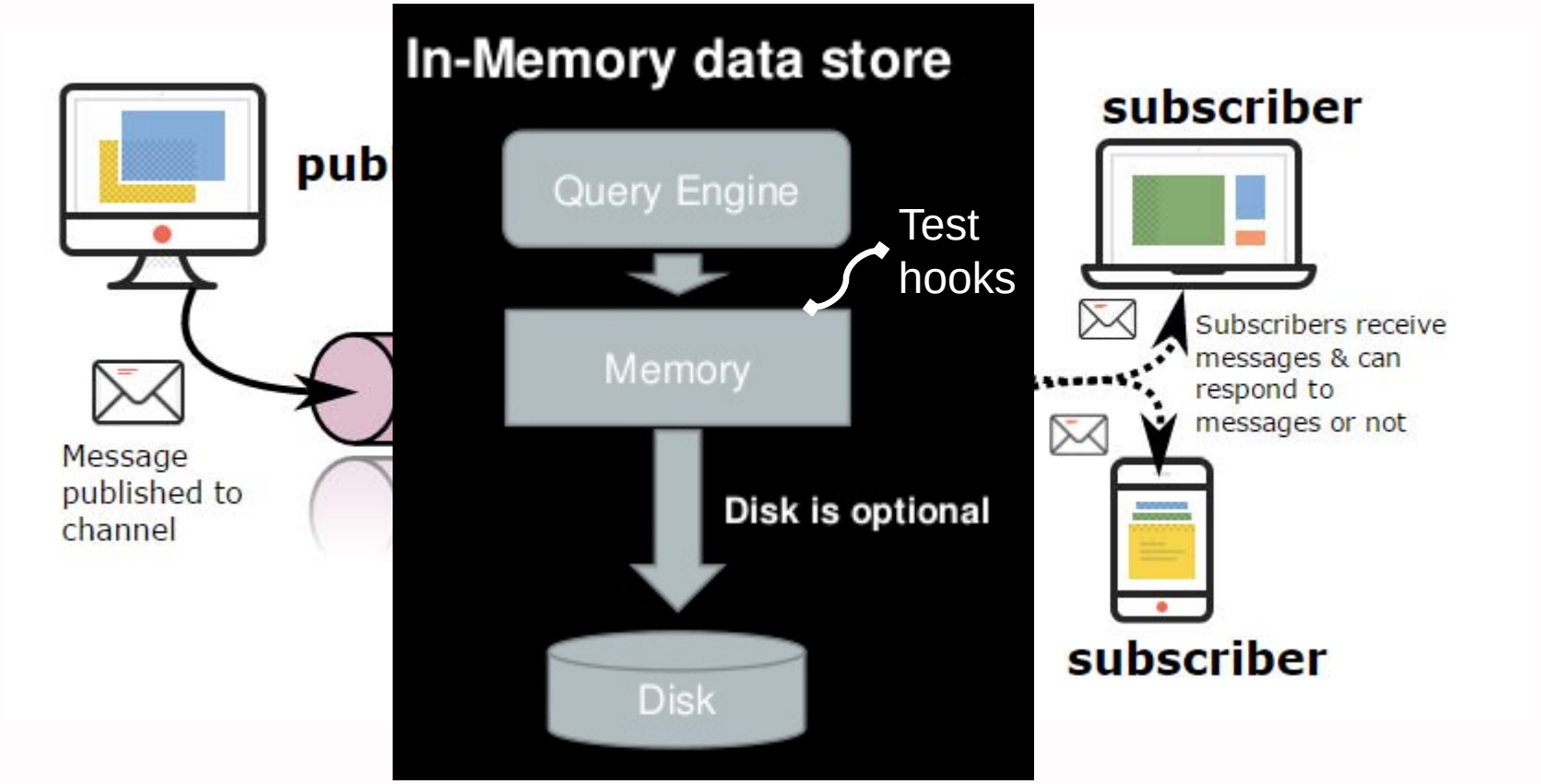
Asynchronous communication



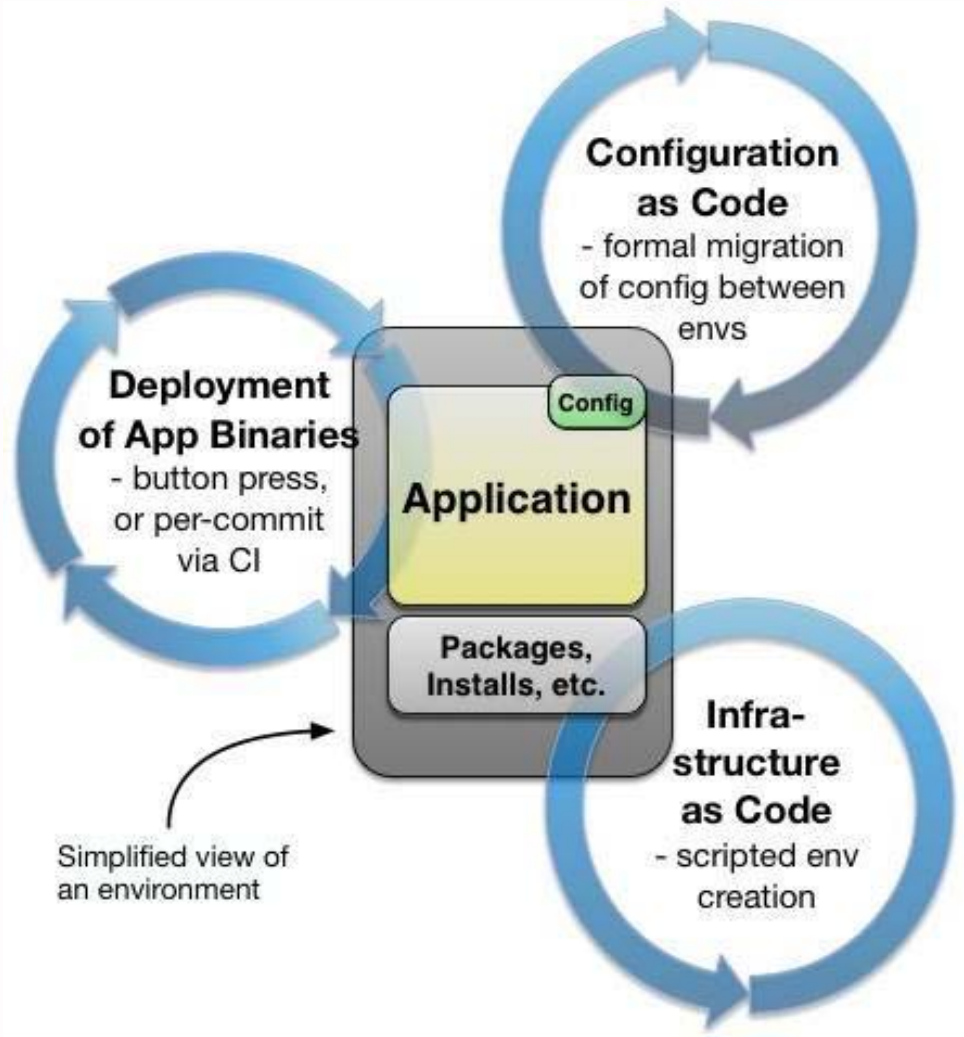
Provading test data

- Message generator
- Data player
- Ideal trip simulator
- OBU Simulator

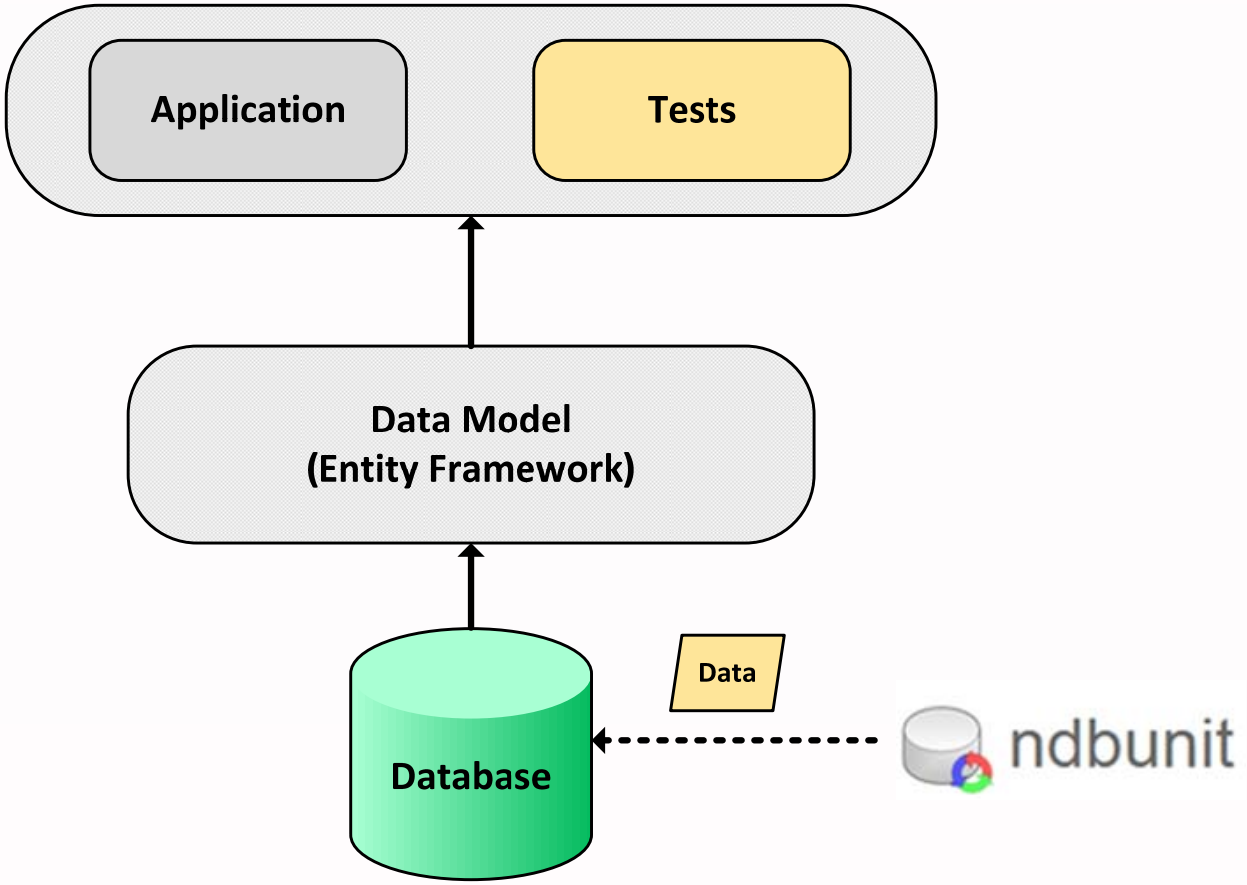
But wait … real life is dynamic

- Using live streaming
- Virtual networke adapters on TeamCity

Test environment per client configuration



Managing independent database state for each test



What MUST you take away from this session?

- DevOps is the industry direction
- The quality of software is based on the synergy of all involved parties
- The software testing process starts before the first line of code is written
- Only a stable test is beneficial
- Real life situation should be simulated as eraly as possible

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QUESTIONS?

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