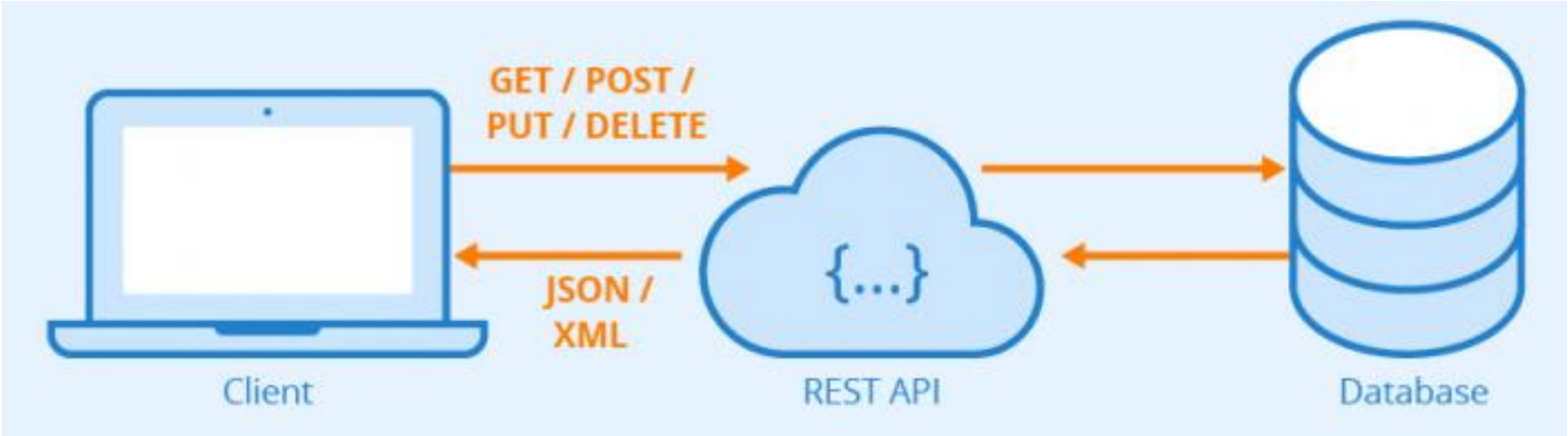


CTAP Test Automation

Images



Abbreviations

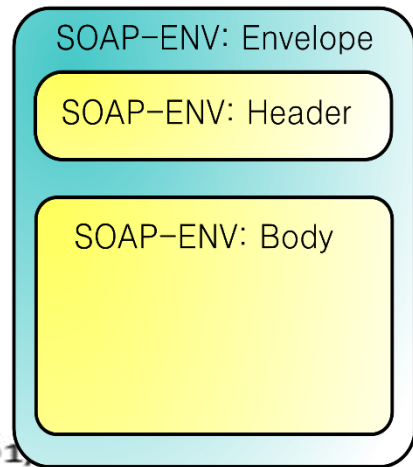
- [API](#): Application Programming Interface
- [XML](#): Extensible Markup Language
- [JSON](#): JavaScript Object Notation
- [REST](#): REpresentational State Transfer
- [SOAP](#): Simple Object Access Protocol

Examples of a web service

SOAP

```
POST /GetStock HTTP/1.1
Host: www.example.org
Content-Type: application/soap+xml
```

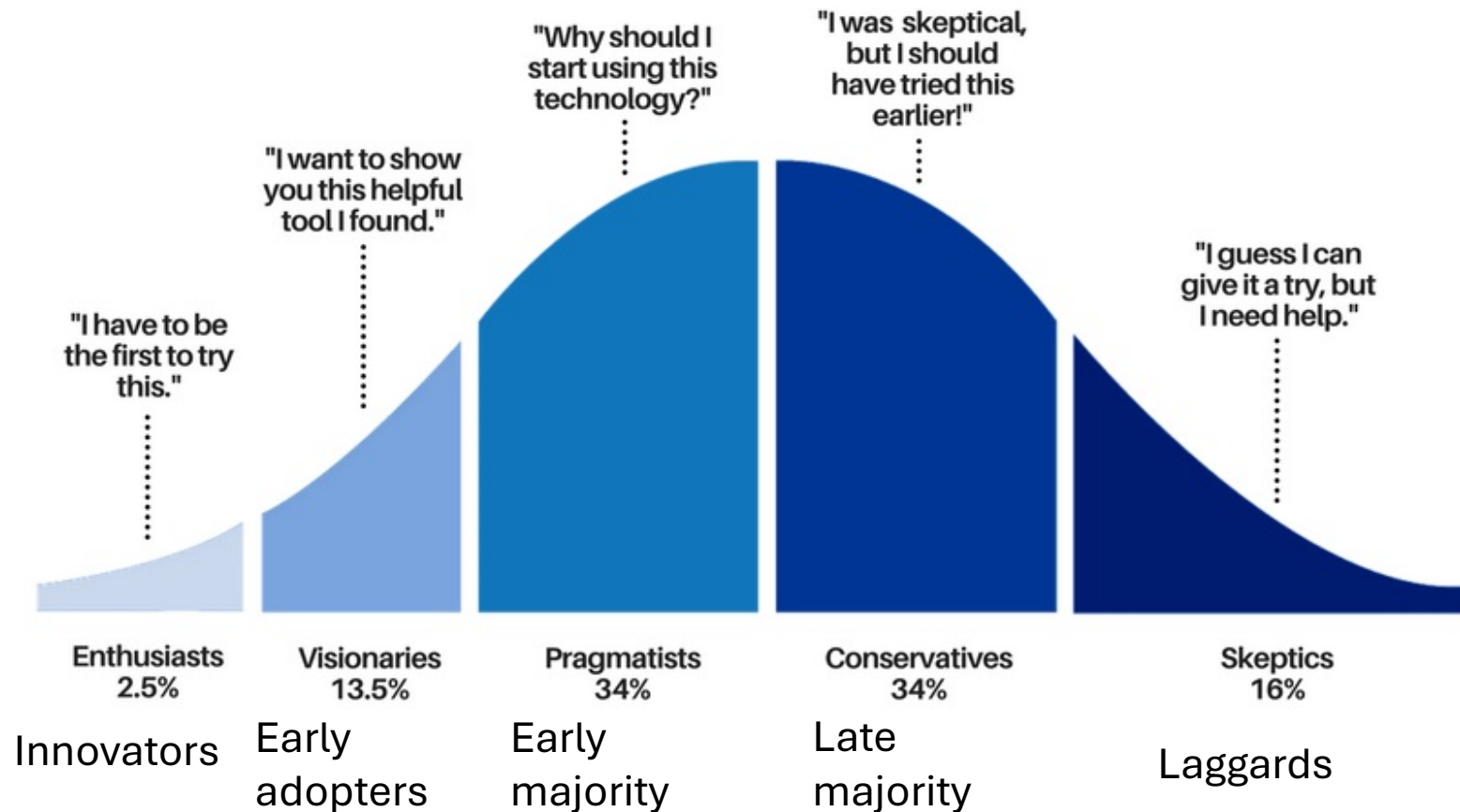
```
<?xml version="1.0"?>
<soap:Envelope
xmlns:soap="http://www.w3.org/2001/12/soap-envelope"
soap:encodingStyle="http://www.w3.org/2001/12/soap-encoding">
  <soap:Body xmlns:m="http://www.example.org/stock">
    <m:GetStockPrice>
      <m:StockName>IBM</m:StockName>
    </m:GetStockPrice>
  </soap:Body>
</soap:Envelope>
```



```
GET http://example.org/stock/IBM
```

Test tool selection

Tool adoption & tool selection



How to find the right tool?

PERIODIC TABLE OF DEVOPS TOOLS (V3) [EMBED](#) [DOWNLOAD](#) [ADD](#)

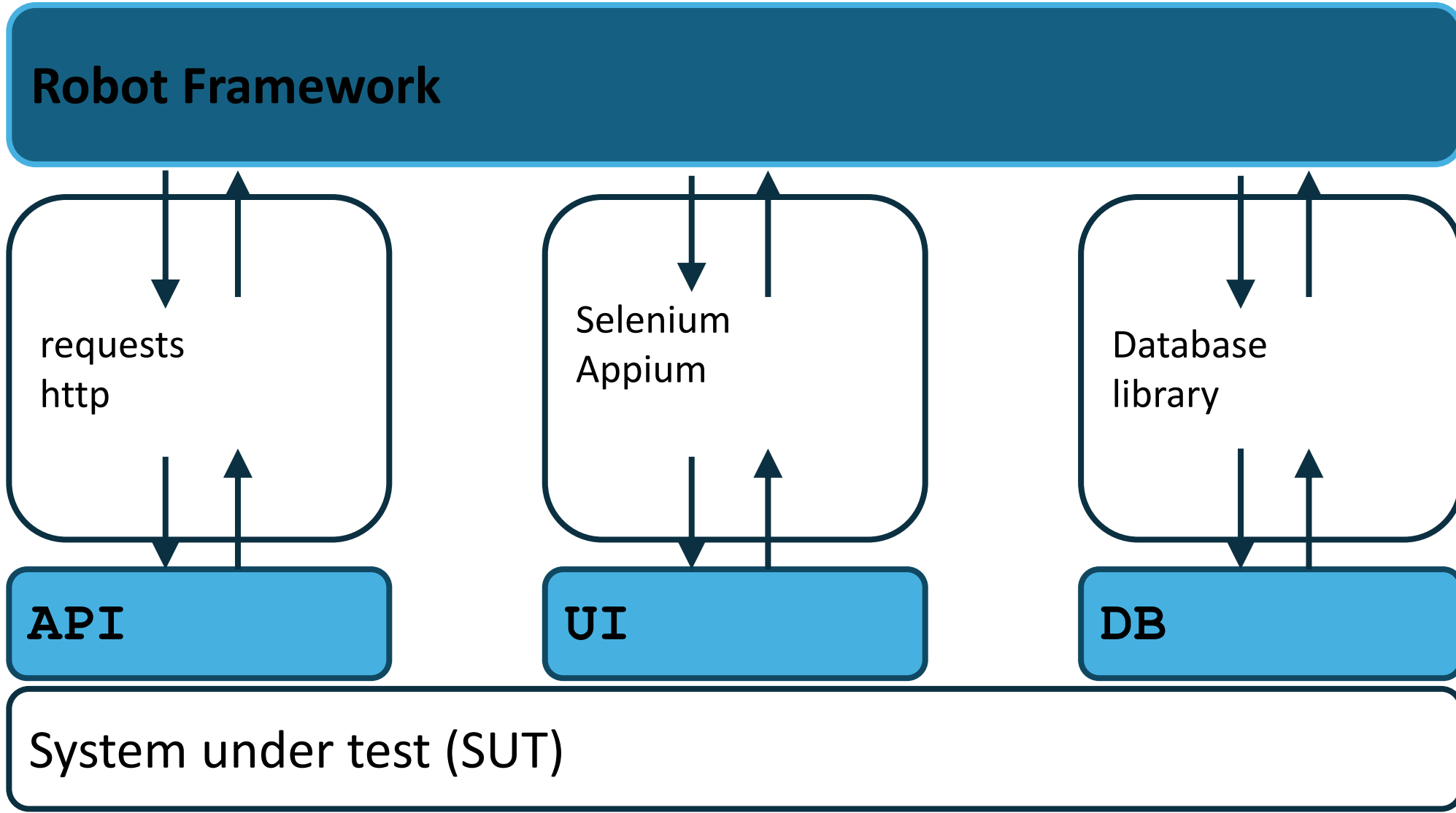
| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|--------------------------|-----------------|---------------------|----------------|--------------|-------------------|-----------------------|---------------|-----------------|----------------------------|------------------------|-------------------------|----------------------|-----------------------|-------------------------|------------------------|------------------|--|--------------|-----------------------------|-------------------------|-----------------------|--------------------|-----------------|------------------|
| 1 O.s | | | | | | | | | | | | | | | | | | | 2 En | | | | | | |
| GI GitLab | | | | | | | | | | | | | | | | | | | Sp Splunk | | | | | | |
| 3 Fm | 4 En | | | | | | | | | | | | | | | | | | | 5 En | 6 Fm | 7 Pd | 8 En | 9 En | 10 Fm |
| Gh GitHub | Dt Datadog | | | | | | | | | | | | | | | | | | | Xlr XebiaLabs XL Release | Aws AWS | Az Azure | Gc Google Cloud | Op OpenShift | SI Sumo Logic |
| 11 O.s | 12 En | | | | | | | | | | | | | | | | | | | 13 O.s | 14 En | 15 Pd | 16 Pd | 17 Fm | 18 O.s |
| Sv Subversion | Db DBMaestro | | | | | | | | | | | | | | | | | | | Dk Docker | Ur UrbanCode Release | Af Azure Functions | Ld Lambda | Ic IBM Cloud | Fd Fluentd |
| 19 En | 20 En | 21 O.s | 22 Fm | 23 O.s | 24 Fr | 25 Fr | 26 O.s | 27 En | 28 Fr | 29 En | 30 En | 31 O.s | 32 Fm | 33 En | 34 Pd | 35 O.s | 36 O.s | | | | | | | | |
| Cw ISPW | Dp Delphix | Jn Jenkins | Cs Codata | Fn FitNesse | Ju JUnit | Ka Karma | Su SoapUI | Ch Chef | Tf Terraform | Xld XebiaLabs XL Deploy | Ud UrbanCode Deploy | Ku Kubernetes | Cc CA CD Director | Pr Plutora Release | Al Alibaba Cloud | Os OpenStack | Ps Prometheus | | | | | | | | |
| 37 O.s | 38 En | 39 Pd | 40 Fm | 41 Fr | 42 Fr | 43 O.s | 44 Pd | 45 O.s | 46 O.s | 47 En | 48 O.s | 49 O.s | 50 Pd | 51 Fm | 52 Pd | 53 O.s | 54 En | | | | | | | | |
| At Artifactory | Rg Redgate | Ba Bamboo | Vs VSTS | Se Selenium | Jm JMeter | Ja Jasmine | SI Sauce Labs | An Ansible | Ru Rudder | Oc Octopus Deploy | Go GoCD | Ms Mesos | Gke GKE | Om OpenMake | Cp AWS Code Pipeline | Cy Cloud Foundry | It ITRS | | | | | | | | |
| 55 O.s | 56 O.s | 57 O.s | 58 Fm | 59 O.s | 60 Fr | 61 Fm | 62 Pd | 63 En | 64 O.s | 65 Fm | 66 En | 67 O.s | 68 Pd | 69 O.s | 70 O.s | 71 Pd | 72 Pd | | | | | | | | |
| Nx Nexus | Fw Flyway | Tr Travis CI | Tc TeamCity | Ga Gatling | Tn TestNG | Tt TribesTosca | Pe Perfecto | Pu Puppet | Pa Packer | Cd AWS CodeDeploy | Ec ElectricCloud | Ra Rancher | Aks AKS | Rk Rkt | Sp Spinnaker | Ir Iron.b | Mg Moogsoft | | | | | | | | |
| 73 Fm | 74 En | 75 Fm | 76 Pd | 77 Fr | 78 O.s | 79 O.s | 80 En | 81 O.s | 82 O.s | 83 En | 84 En | 85 En | 86 Pd | 87 Fm | 88 O.s | 89 O.s | 90 O.s | | | | | | | | |
| Bb BitBucket | Pf Perforce HelixCore | Cr Circle CI | Cb AWS CodeBuild | Cu Cucumber | Mc Mocha | Lo Locust.io | Mf Micro Focus UFT | SI Salt | Ce CFEngine | Eb ElasticBox | Ca CA Automate | De Docker Enterprise | Ae AWS ECS | Cf Codefresh | Hm Helm | Aw Apache OpenWhisk | Ls Logstash | | | | | | | | |

| | | | | | | | |
|-----|-------------|--|------------------------|--|-----------------------|--|---------------|
| O.s | Open Source | | Source Control Mgmt. | | Deployment | | Analytics |
| Fr | Free | | Database Automation | | Containers | | Monitoring |
| Fm | Freemium | | Continuous Integration | | Release Orchestration | | Security |
| Pd | Paid | | Testing | | Cloud | | Collaboration |
| En | Enterprise | | Configuration | | AIOps | | |



| | | | | | | | | | | | | | | |
|----------------------------|--------------|-----------------|-----------------|---------------|----------------------------|---------------------|---------------------|----------------|-----------------|----------------------|-----------------------|-----------------------|-----------------|-----------------------|
| 91 En | 92 O.s | 93 Fm | 94 En | 95 En | 96 Fm | 97 O.s | 98 O.s | 99 O.s | 100 En | 101 En | 102 En | 103 En | 104 O.s | 105 O.s |
| Xli XebiaLabs XL Impact | Ki Kibana | Nr New Relic | Dt Dynatrace | Dd Datadog | Ad AppDynamics | EI ElasticSearch | Ni Nagios | Zb Zabbix | Zn Zenoss | Cx Checkmarx SAST | Sg Signal Sciences | Bd BlackDuck | Sr SonarQube | Hv HashiCorp Vault |
| 106 En | 107 Pd | 108 Fm | 109 Fm | 110 Fm | 111 En | 112 En | 113 En | 114 Pd | 115 Pd | 116 O.s | 117 O.s | 118 En | 119 En | 120 En |
| Sw ServiceNow | Jr Jira | TI Trello | SI Slack | St Stride | Cn CollabNet VersionOne | Ry Remedy | Ac Agile Central | Og OpsGenie | Pd Pagerduty | Sn Snort | Tw Tripwire | Ck CyberArk Conjur | Vc Veracode | Ff Fortify SCA |

Architecture



The structure for ordering test cases

```
*** Settings ***
Documentation
Library

*** Variables ***
${MESSAGE}

*** Test Cases ***
My Test

Another Test

*** Keywords ***
My Keyword
```

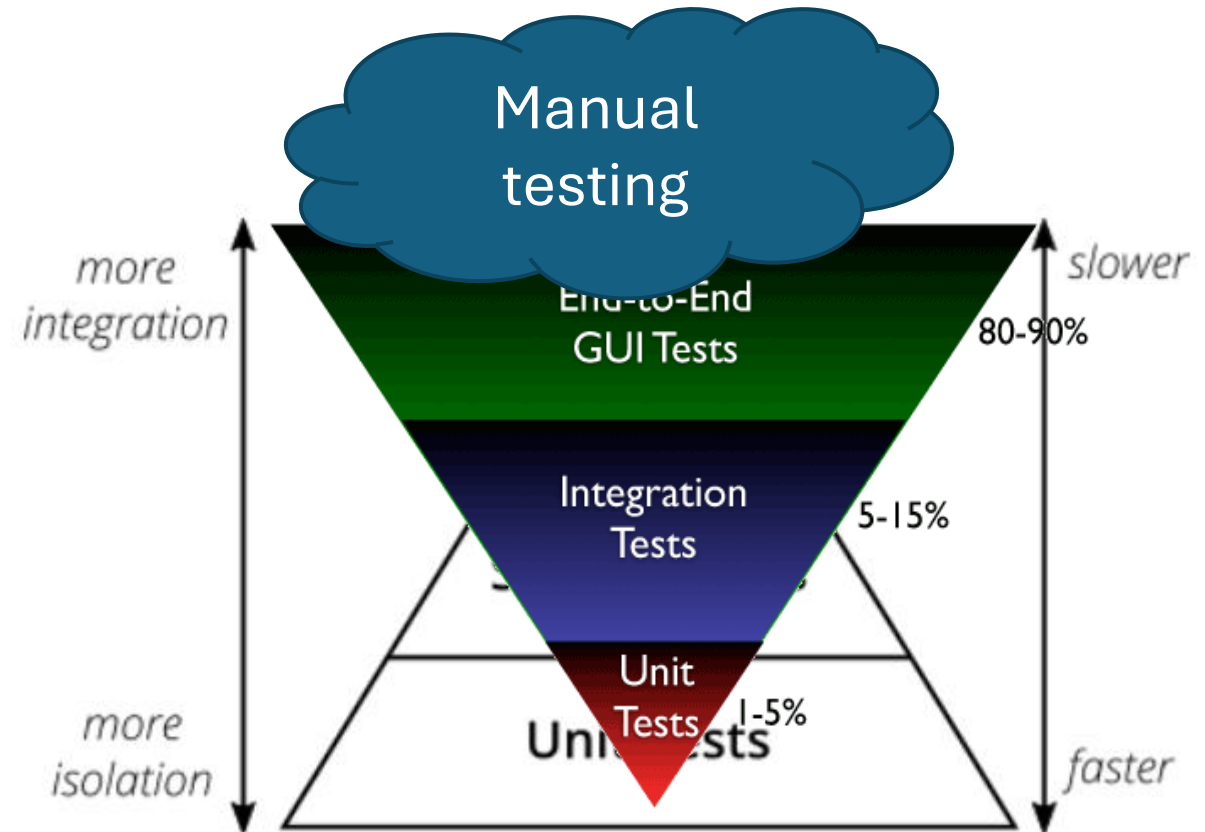
| Sections | To be used for |
|------------|--|
| Settings | 1) Importing test libraries , resource files and variable files 2) Defining metadata for test suites and test cases |
| Variables | Defining variables that can be used elsewhere in the test data |
| Test Cases | Creating test cases based on available keywords |
| Tasks | Creating tasks using available keywords. |
| Keywords | Creating user keywords based on existing keywords |
| Comments | Additional comments or information. Ignored by Robot Framework |

Test roles

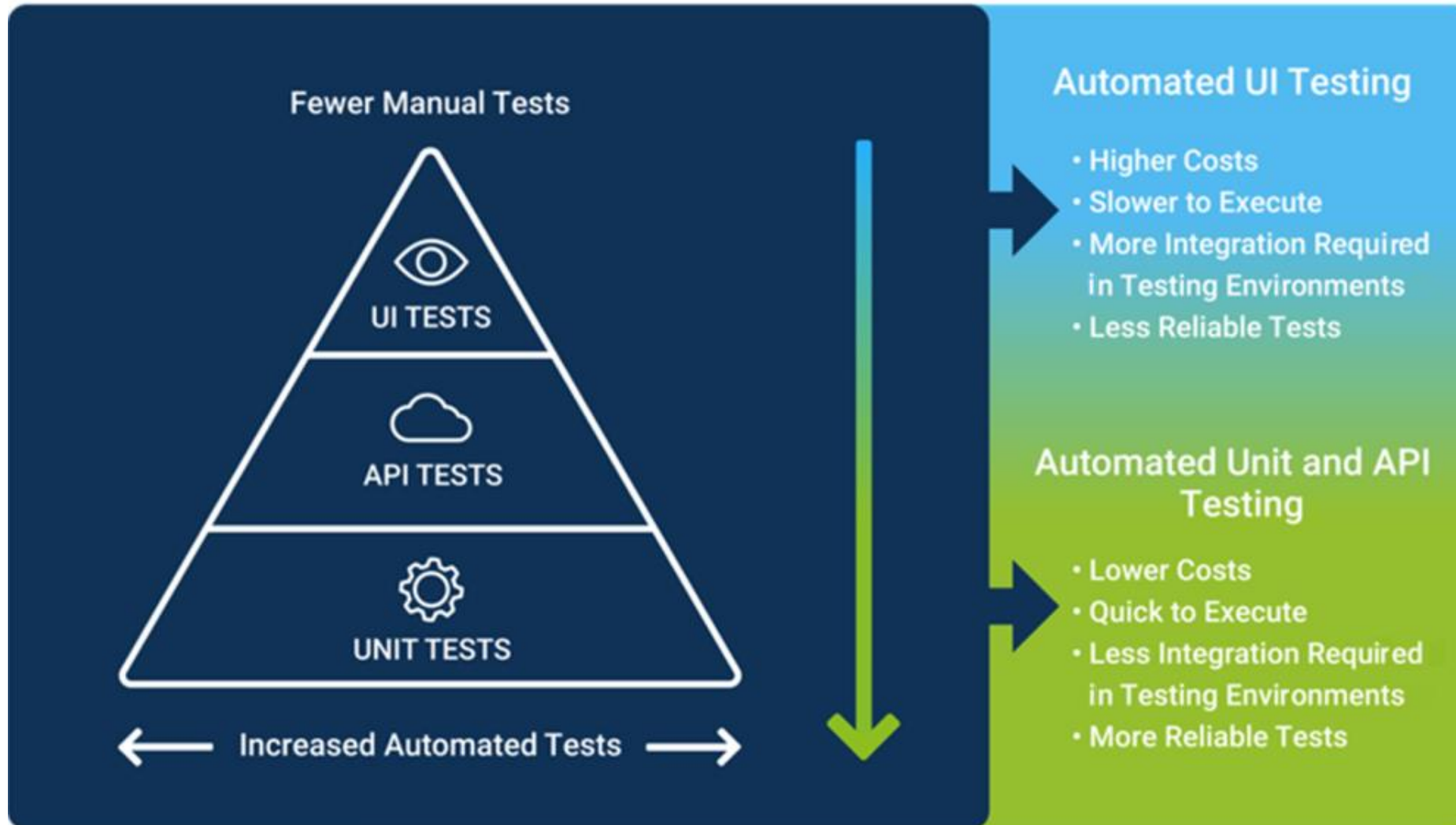


What is a testing pyramid?

- Testing pyramid is a framework that can facilitate both developers and testers in building high-quality software
- The testing pyramid describes the test types that the development and QA teams should incorporate in an automated test suite

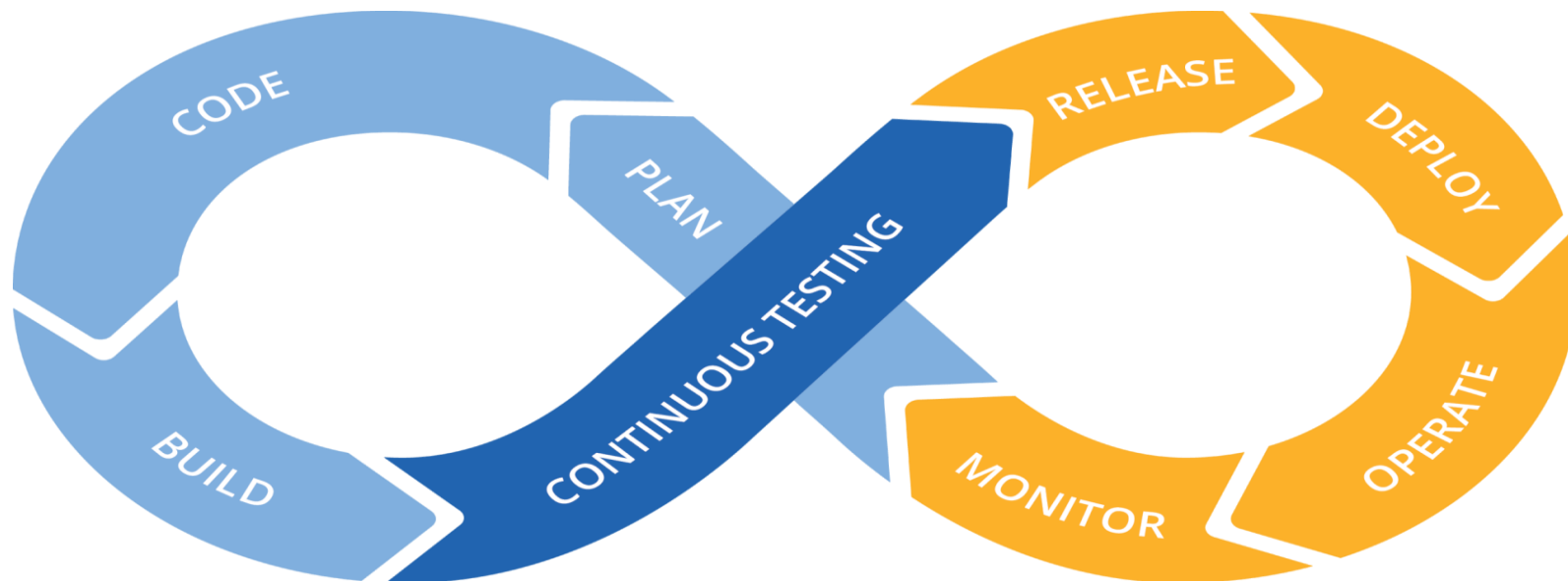


Testing pyramid



What is continuous testing?

Continuous testing is the process of running automated tests as part of the software delivery pipeline in order to get feedback on the business risks of a delivery as quickly as possible

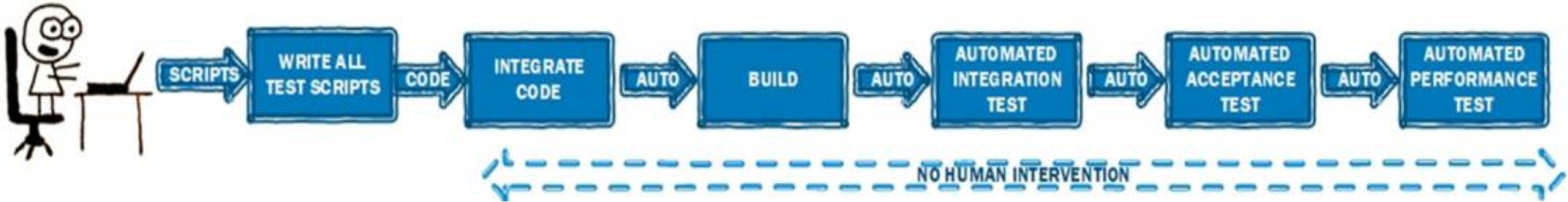


Continuous testing

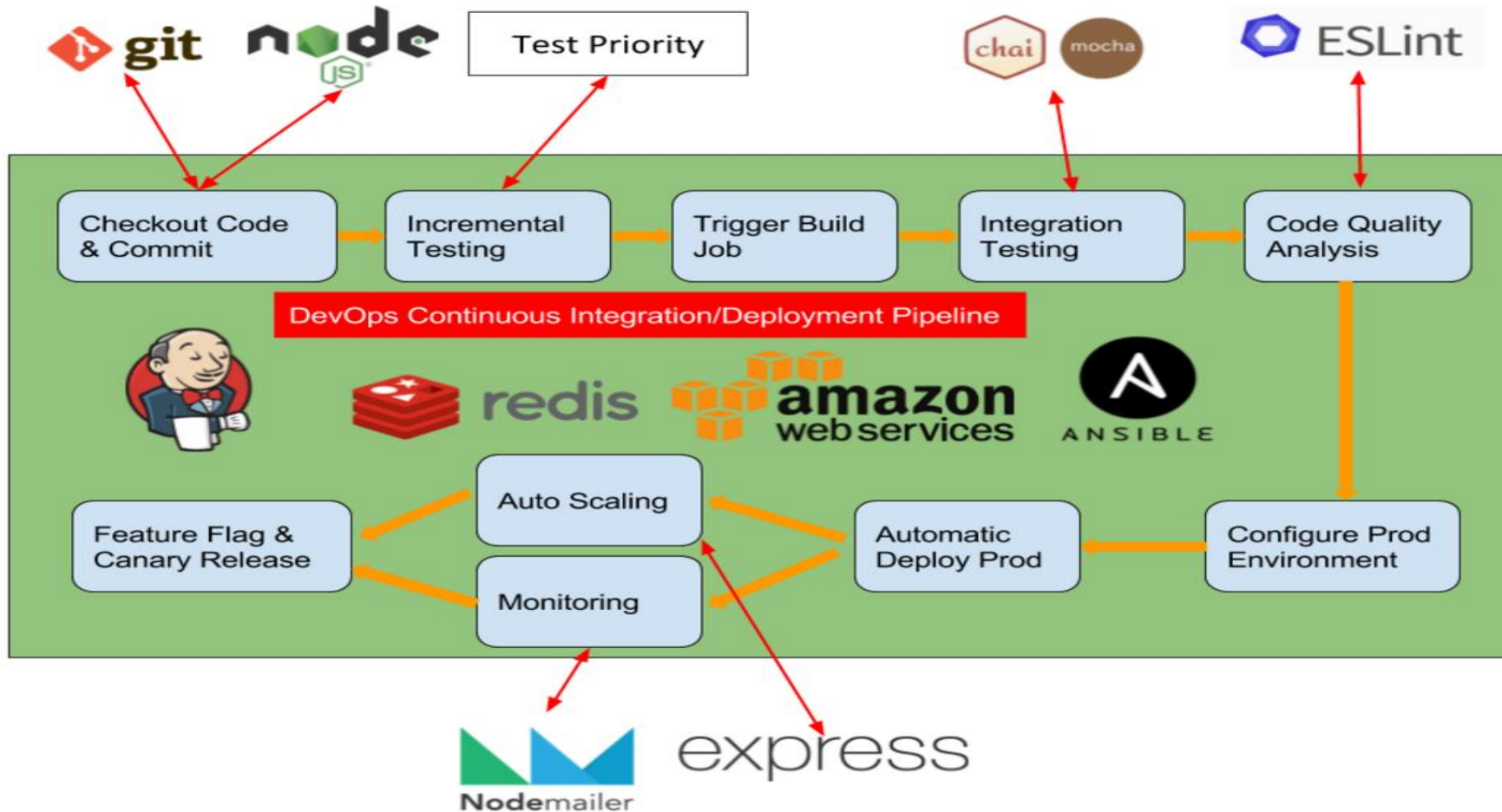
AUTOMATED TESTING



CONTINUOUS TESTING



Deployment pipeline



Deployment pipeline

