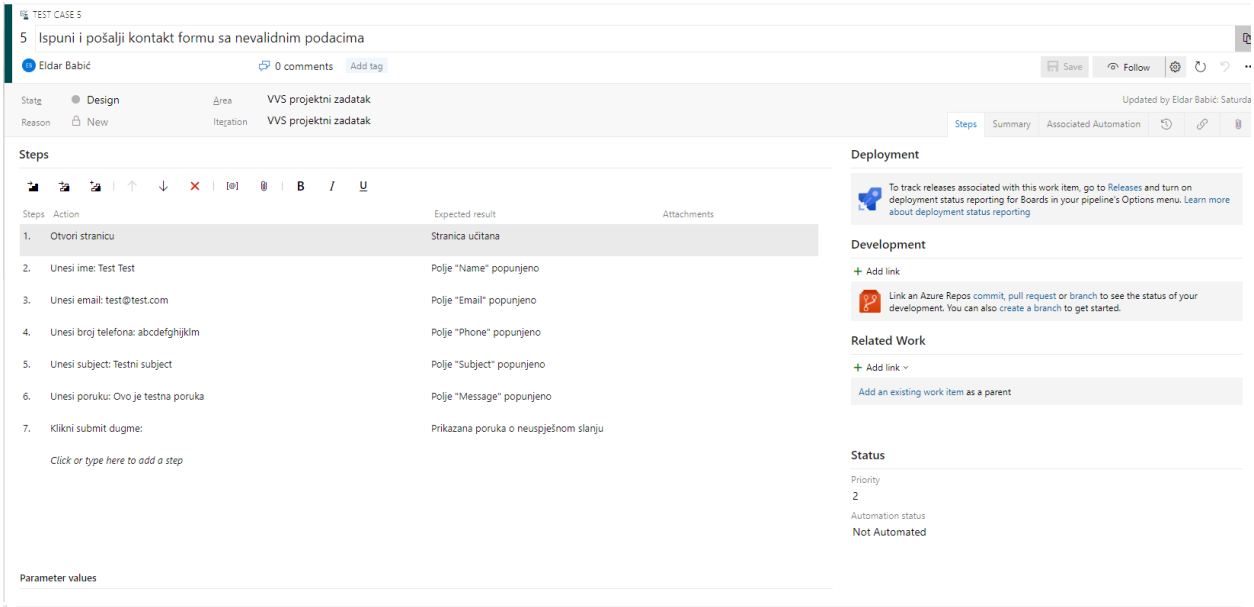
Za testiranje sam koristio https://automationintesting.online/ jer sam na ovoj aplikaciji mogao testirati i Web UI i ima dobro dokumentovan API na: https://restful-booker.herokuapp.com/apidoc/index.html

Zadatak 1. Testni slučajevi:



TEST CASE 5

5 Ispuni i pošalji kontakt formu sa nevalidnim podacima

Eldar Babić | 0 comments | Add tag | Save | Follow

State: Design | Reason: New | Area: VVS projektni zadatak | Iteration: VVS projektni zadatak

Updated by Eldar Babić: Saturda

Steps | Summary | Associated Automation

Steps

Steps	Action	Expected result	Attachments
1.	Otvori stranicu	Stranica učitana	
2.	Unesi ime: Test Test	Polje "Name" popunjeno	
3.	Unesi email: test@test.com	Polje "Email" popunjeno	
4.	Unesi broj telefona: abcdefghijklm	Polje "Phone" popunjeno	
5.	Unesi subject: Testni subject	Polje "Subject" popunjeno	
6.	Unesi poruku: Ovo je testna poruka	Polje "Message" popunjeno	
7.	Klikni submit dugme:	Prikazana poruka o neuspješnom slanju	

Click or type here to add a step

Parameter values

Deployment

To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting

Development

+ Add link

Link an Azure Repos commit, pull request or branch to see the status of your development. You can also create a branch to get started.

Related Work

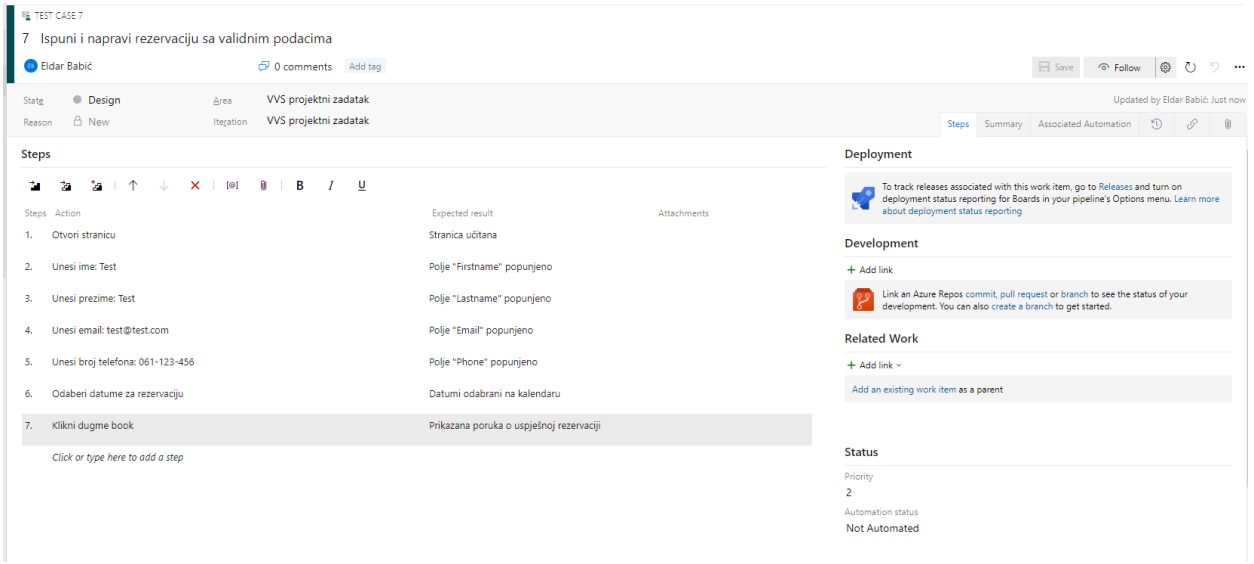
+ Add link

Add an existing work item as a parent

Status

Priority: 2

Automation status: Not Automated



TEST CASE 7

7 Ispuni i napravi rezervaciju sa validnim podacima

Eldar Babić | 0 comments | Add tag | Save | Follow

State: Design | Reason: New | Area: VVS projektni zadatak | Iteration: VVS projektni zadatak

Updated by Eldar Babić: Just now

Steps | Summary | Associated Automation

Steps

Steps	Action	Expected result	Attachments
1.	Otvori stranicu	Stranica učitana	
2.	Unesi ime: Test	Polje "Firstname" popunjeno	
3.	Unesi prezime: Test	Polje "Lastname" popunjeno	
4.	Unesi email: test@test.com	Polje "Email" popunjeno	
5.	Unesi broj telefona: 061-123-456	Polje "Phone" popunjeno	
6.	Odaberi datume za rezervaciju	Datumi odabrani na kalendaru	
7.	Klikni dugme book	Prikazana poruka o uspješnoj rezervaciji	

Click or type here to add a step

Deployment

To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting

Development

+ Add link

Link an Azure Repos commit, pull request or branch to see the status of your development. You can also create a branch to get started.

Related Work

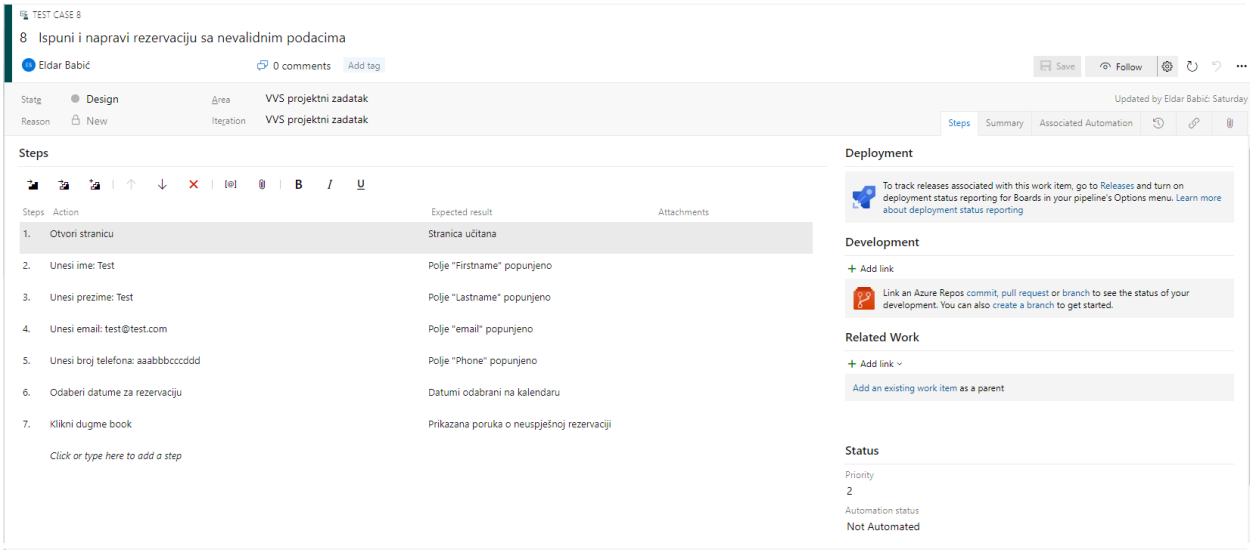
+ Add link

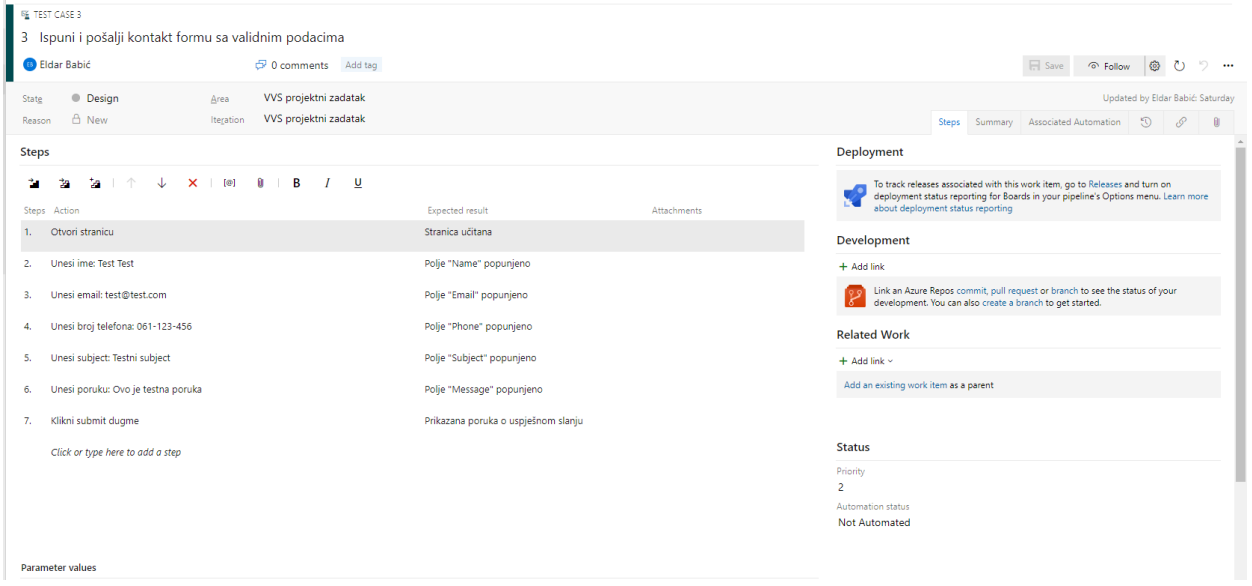
Add an existing work item as a parent

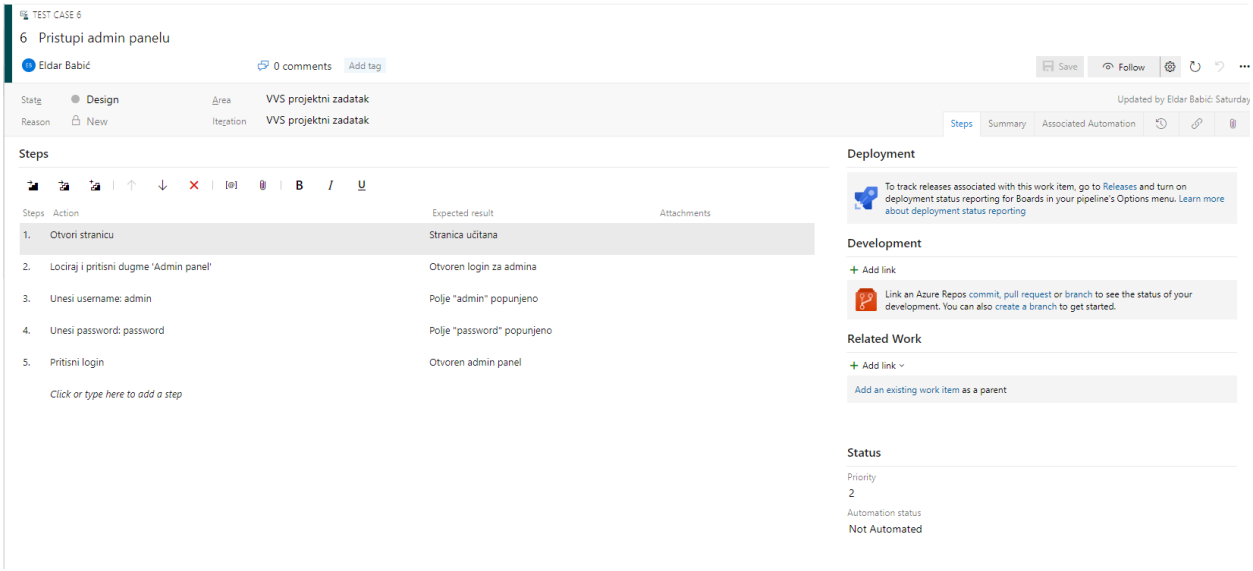
Status

Priority: 2

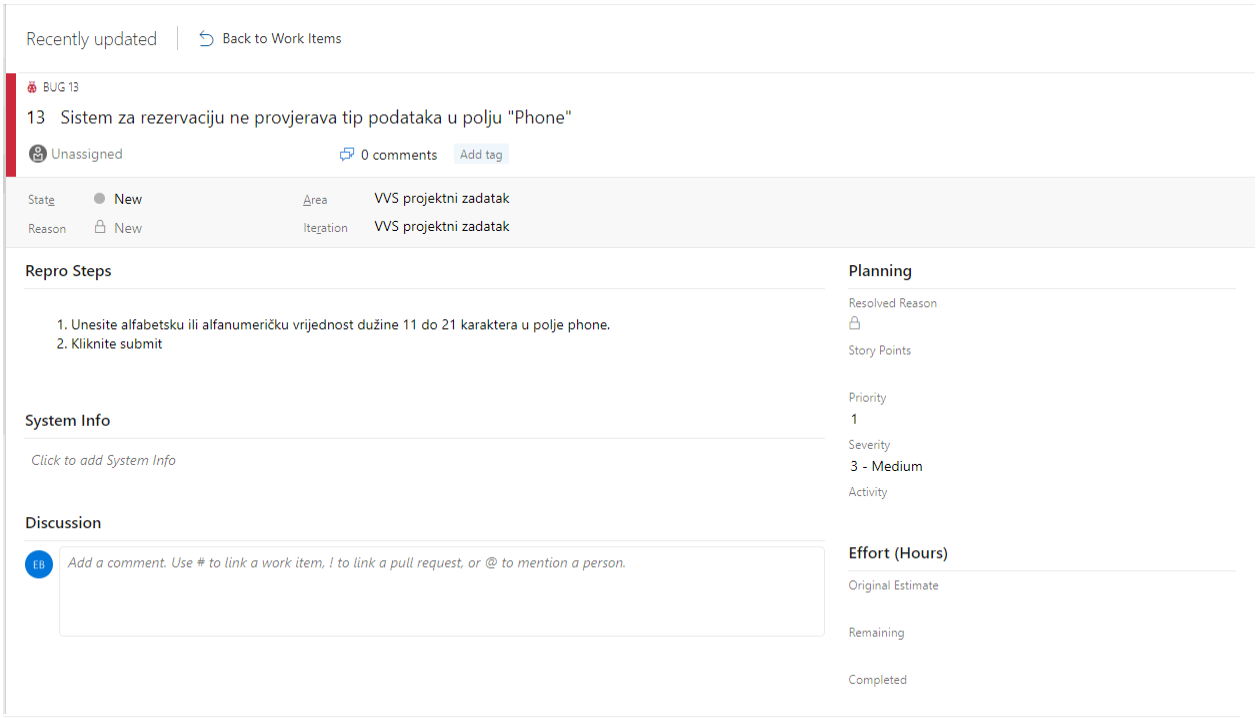
Automation status: Not Automated

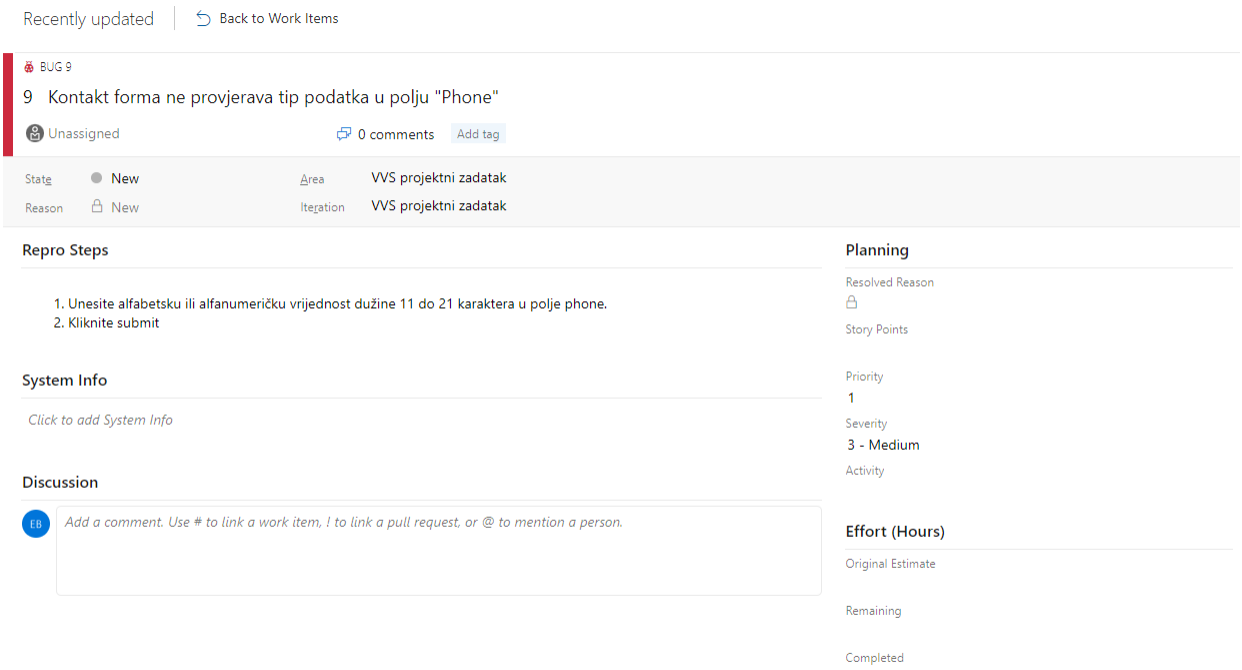

TEST CASE 8
8 Ispuni i napravi rezervaciju sa nevalidnim podacima
Eldar Babić
0 comments
Add tag
Save
Follow
State
Design
Area
VVS projektni zadatak
Reason
New
Iteration
VVS projektni zadatak
Updated by Eldar Babić Saturday
Steps
Summary
Associated Automation
Steps
Steps Action Expected result Attachments
1. Otvori stranicu Stranica učitana
2. Unesi ime: Test Polje "Firstname" popunjeno
3. Unesi prezime: Test Polje "Lastname" popunjeno
4. Unesi email: test@test.com Polje "email" popunjeno
5. Unesi broj telefona: aaabbbcccddd Polje "Phone" popunjeno
6. Odaberi datume za rezervaciju Datumi odabrani na kalendaru
7. Klikni dugme book Prikazana poruka o neuspješnoj rezervaciji
Click or type here to add a step
Deployment
To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting
Development
Add link
Link an Azure Repos commit, pull request or branch to see the status of your development. You can also create a branch to get started.
Related Work
Add link
Add an existing work item as a parent
Status
Priority
2
Automation status
Not Automated

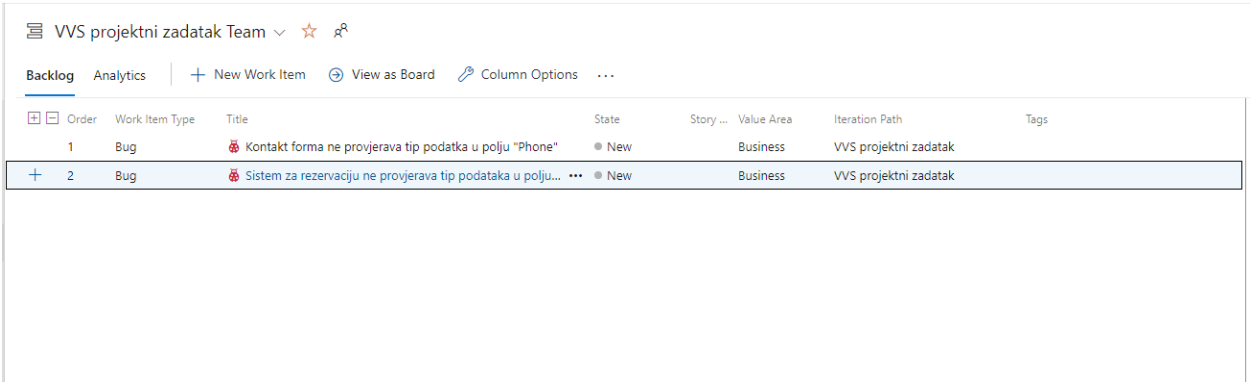

TEST CASE 3
3 Ispuni i pošalji kontakt formu sa validnim podacima
Eldar Babić
0 comments
Add tag
Save
Follow
State
Design
Area
VVS projektni zadatak
Reason
New
Iteration
VVS projektni zadatak
Updated by Eldar Babić Saturday
Steps
Summary
Associated Automation
Steps
Steps Action Expected result Attachments
1. Otvori stranicu Stranica učitana
2. Unesi ime: Test Test Polje "Name" popunjeno
3. Unesi email: test@test.com Polje "Email" popunjeno
4. Unesi broj telefona: 061-123-456 Polje "Phone" popunjeno
5. Unesi subject: Testni subject Polje "Subject" popunjeno
6. Unesi poruku: Ovo je testna poruka Polje "Message" popunjeno
7. Klikni submit dugme Prikazana poruka o uspješnom slanju
Click or type here to add a step
Parameter values
Deployment
To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting
Development
Add link
Link an Azure Repos commit, pull request or branch to see the status of your development. You can also create a branch to get started.
Related Work
Add link
Add an existing work item as a parent
Status
Priority
2
Automation status
Not Automated


TEST CASE 6
6 Pristupi admin panelu
Eldar Babić
0 comments
Add tag
Save
Follow
State
Design
Reason
New
Area
VVS projektni zadatak
Iteration
VVS projektni zadatak
Updated by Eldar Babić: Saturday
Steps
Summary
Associated Automation
Steps
Steps
Action
Expected result
Attachments
1. Otvori stranicu
Stranica učitana
2. Lociraj i pritisni dugme 'Admin panel'
Otvoren login za admina
3. Unesi username: admin
Polje "admin" popunjeno
4. Unesi password: password
Polje "password" popunjeno
5. Pritisni login
Otvoren admin panel
Click or type here to add a step
Deployment
To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting
Development
Add link
Link an Azure Repos commit, pull request or branch to see the status of your development. You can also create a branch to get started.
Related Work
Add link
Add an existing work item as a parent
Status
Priority
2
Automation status
Not Automated

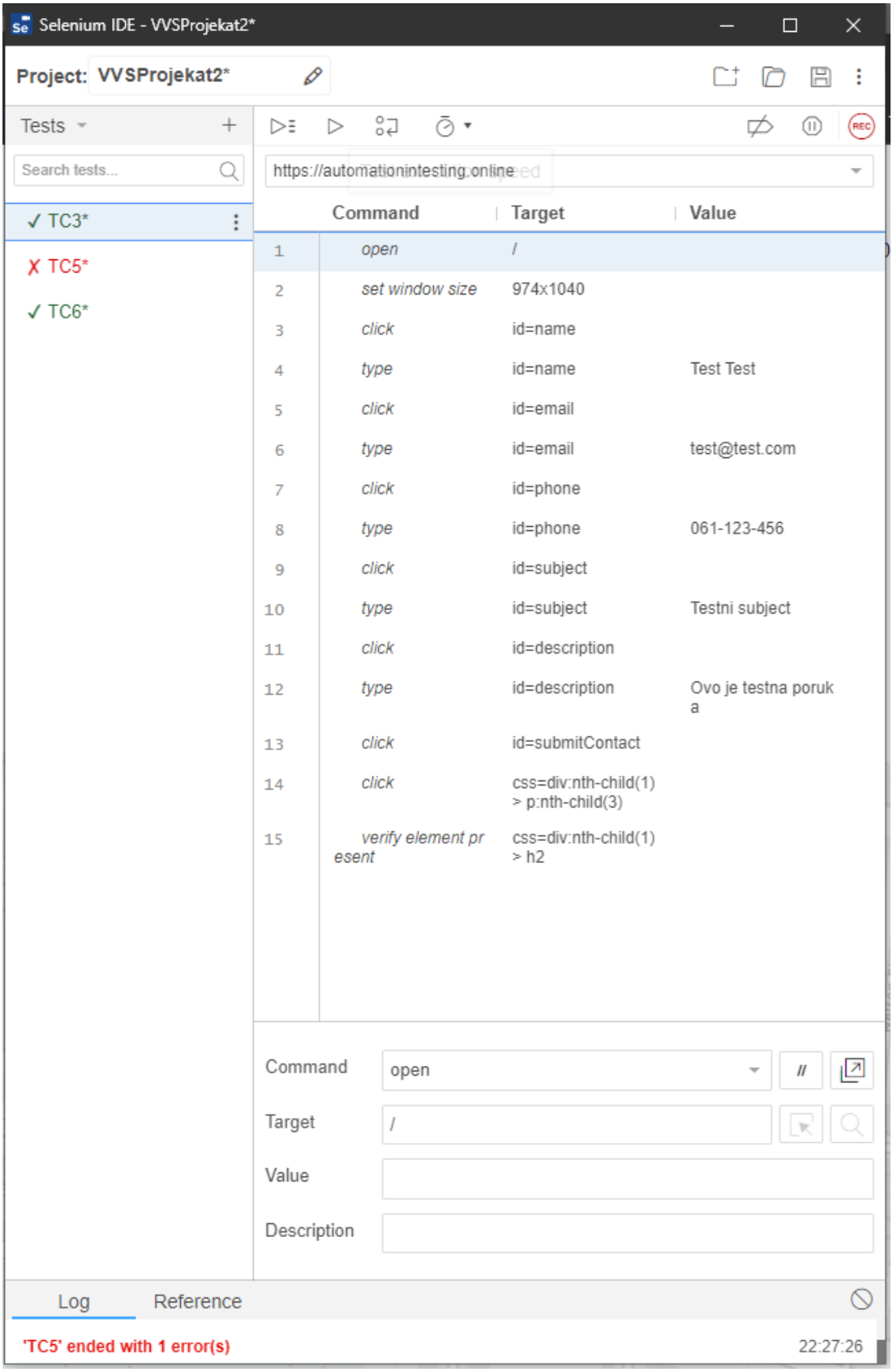
Evidentirani bugovi

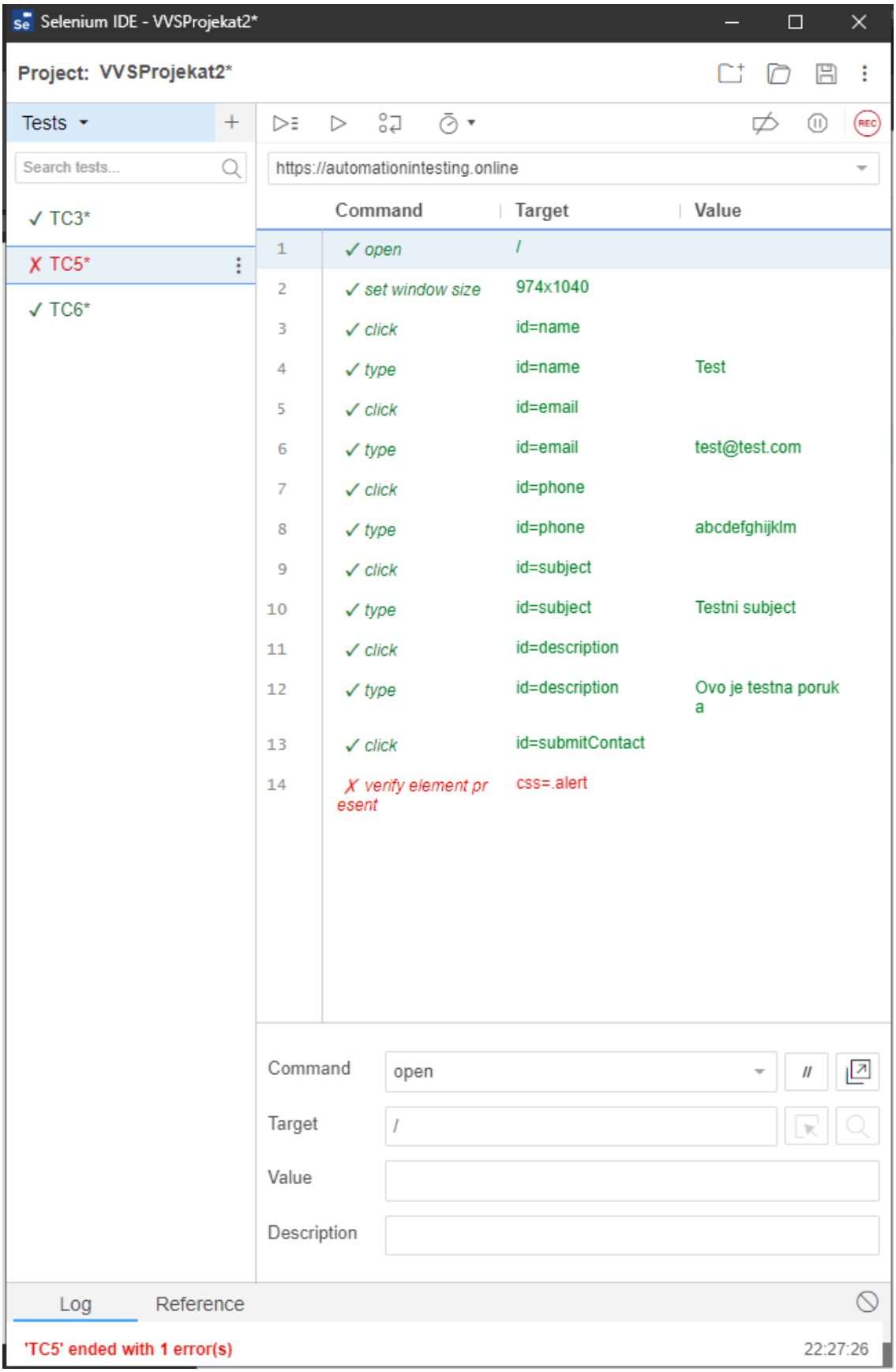


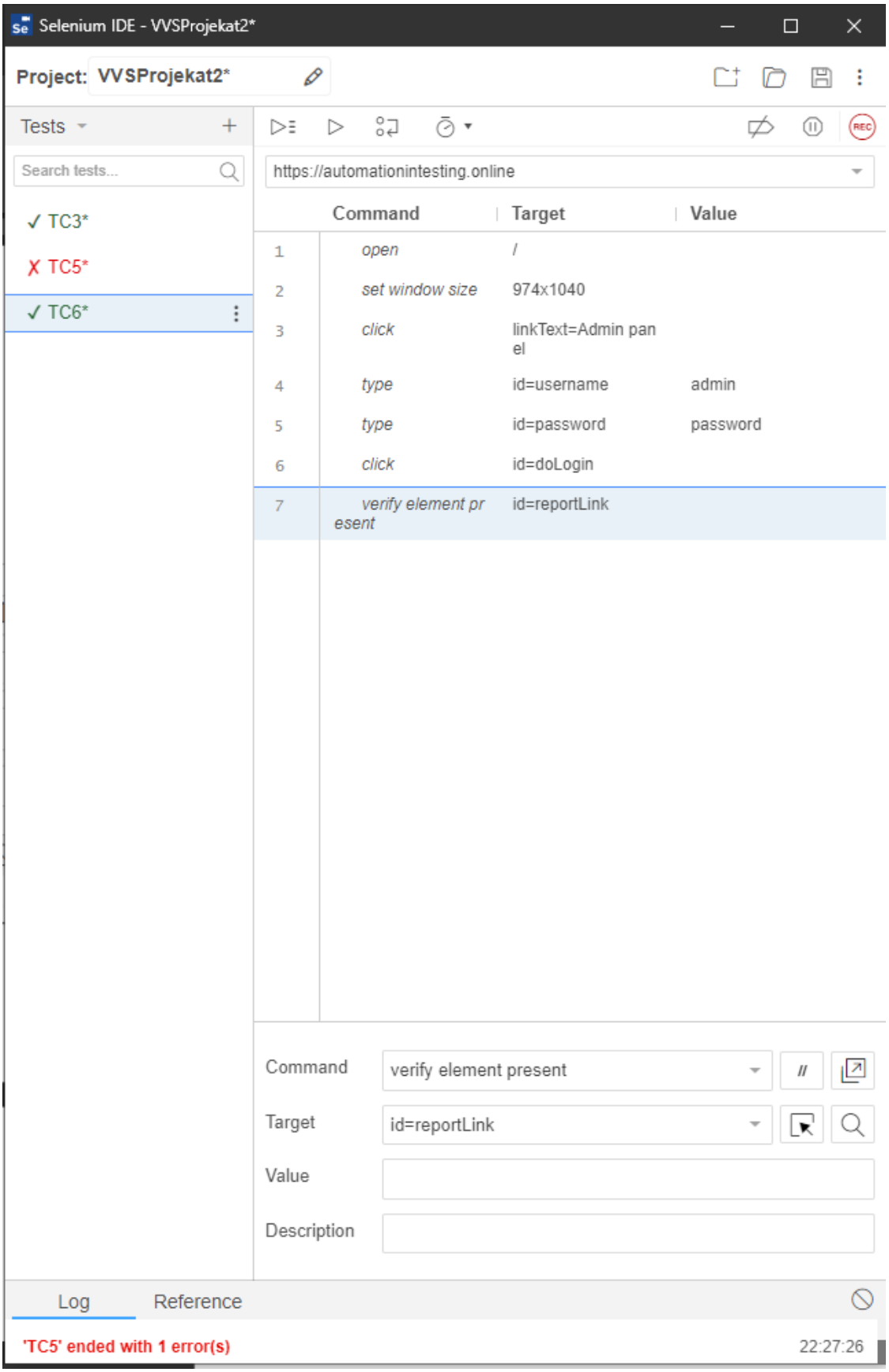



VVS projektni zadatak Team
Backlog
Analytics
New Work Item
View as Board
Column Options
Order
Work Item Type
Title
State
Story ...
Value Area
Iteration Path
Tags
1
Bug
Kontakt forma ne provjerava tip podatka u polju "Phone"
New
Business
VVS projektni zadatak
2
Bug
Sistem za rezervaciju ne provjerava tip podataka u polju...
New
Business
VVS projektni zadatak

Automatizacija pomoću Selenium IDE:




Selenium IDE - VVSProjekat2*
Project: VVSProjekat2*
Tests
Search tests...
TC3*
TC5*
TC6*
https://automationintesting.online
Command
Target
Value
1 open /
2 set window size 974x1040
3 click id=name
4 type id=name Test
5 click id=email
6 type id=email test@test.com
7 click id=phone
8 type id=phone abcdefghijklm
9 click id=subject
10 type id=subject Testni subject
11 click id=description
12 type id=description Ovo je testna poruka
13 click id=submitContact
14 verify element present css=.alert
Command open
Target /
Value
Description
Log
Reference
'TC5' ended with 1 error(s)
22:27:26

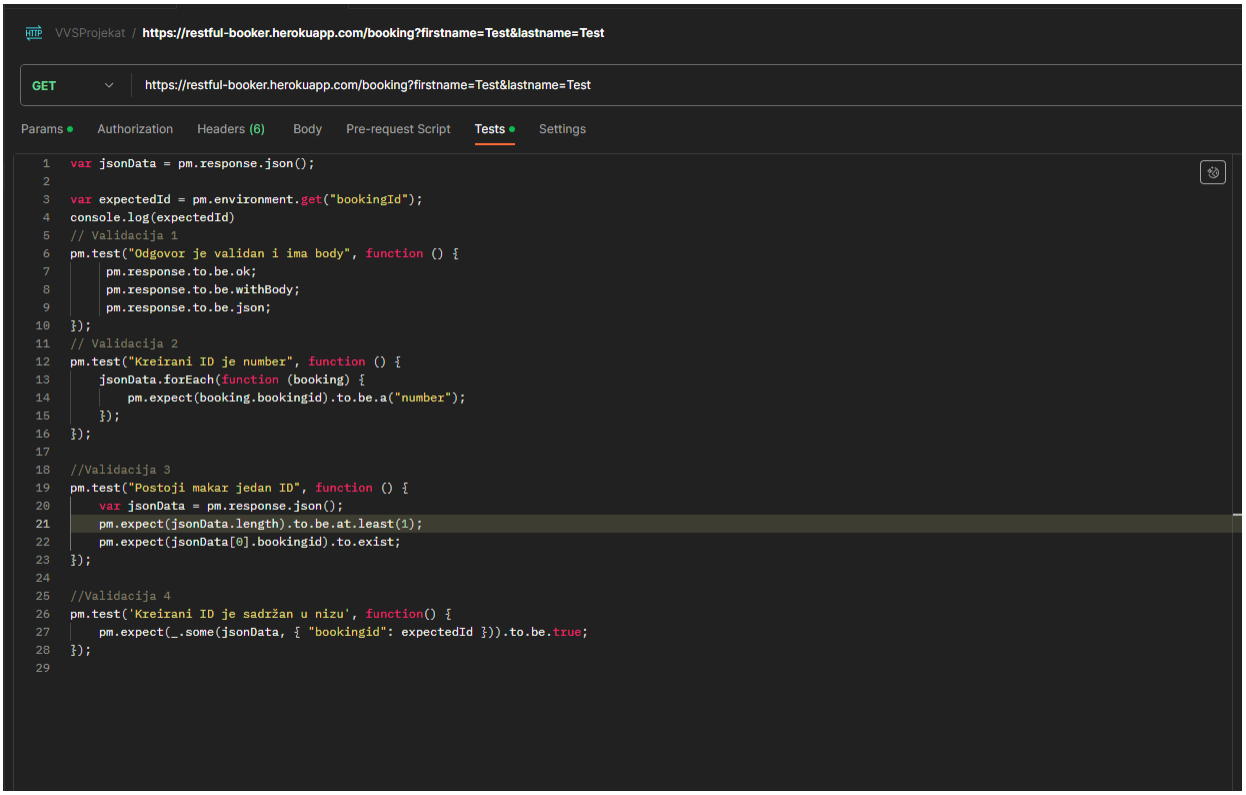

Selenium IDE - VVSProjekat2*
Project: VVSProjekat2*
Tests
Search tests...
TC3*
TC5*
TC6*
https://automationintesting.online
Command
Target
Value
1 open /
2 set window size 974x1040
3 click linkText=Admin panel
4 type id=username admin
5 type id=password password
6 click id=doLogin
7 verify element present id=reportLink
Command verify element present
Target id=reportLink
Value
Description
Log
Reference
'TC5' ended with 1 error(s)
22:27:26

```
public void TC8()
{
    driver.Navigate().GoToUrl("https://automationintesting.online/");
    driver.Manage().Window.Size = new System.Drawing.Size(974, 1040);
    driver.FindElement(By.CssSelector(".btn:nth-child(5)")).Click();
    driver.FindElement(By.CssSelector("button:nth-child(3)")).Click();
    {
        var dragged = driver.FindElement(By.XPath("//button[text()=\'02\']"));
        var dropped = driver.FindElement(By.XPath("//button[text()=\'16\']"));
        Actions builder = new Actions(driver);
        builder.DragAndDrop(dragged, dropped).Perform();
    }
    Thread.Sleep(2000);
    driver.FindElement(By.Name("firstname")).Click();
    driver.FindElement(By.Name("firstname")).SendKeys("Test");
    driver.FindElement(By.Name("lastname")).SendKeys("Test");
    driver.FindElement(By.Name("email")).SendKeys("test@test.com");
    driver.FindElement(By.Name("phone")).SendKeys("aaabbbcccddd");
    driver.FindElement(By.CssSelector(".btn:nth-child(6)")).Click();
    var successButton = driver.FindElement(By.CssSelector(".btn:nth-child(1)"));
    successButton.Click();
    Thread.Sleep(4000);
    var success = driver.FindElement(By.CssSelector(".alert"));
    Thread.Sleep(4000);
}
```

```
[Test]
0 references | Please sign-in to New Relic CodeStream to see Code Level Metrics
public void TC7()
{
    driver.Navigate().GoToUrl("https://automationintesting.online/");
    driver.Manage().Window.Size = new System.Drawing.Size(974, 1040);
    driver.FindElement(By.CssSelector(".btn:nth-child(5)")).Click();
    driver.FindElement(By.CssSelector("button:nth-child(3)")).Click();
    {
        var dragged = driver.FindElement(By.XPath("//button[text()=\'11\']"));
        var dropped = driver.FindElement(By.XPath("//button[text()=\'25\']"));
        Actions builder = new Actions(driver);
        builder.DragAndDrop(dragged, dropped).Perform();
    }
    Thread.Sleep(2000);
    driver.FindElement(By.Name("firstname")).Click();
    driver.FindElement(By.Name("firstname")).SendKeys("Test");
    driver.FindElement(By.Name("lastname")).SendKeys("Test");
    driver.FindElement(By.Name("email")).SendKeys("test@test.com");
    driver.FindElement(By.Name("phone")).SendKeys("061-123-456");
    driver.FindElement(By.CssSelector(".btn:nth-child(6)")).Click();
    var successButton = driver.FindElement(By.CssSelector(".btn:nth-child(1)"));
    successButton.Click();
    Thread.Sleep(4000);
    var success = driver.FindElement(By.XPath("//*[contains(text(), 'Booking Successful!')]"));
    Thread.Sleep(4000);
}
```

Test	Duration	Traits	Error Message
VVSProjekat2 (2)	24.4 sec		
<Empty Namespace> (2)	24.4 sec		
ReservationTest (2)	24.4 sec		
TC7	14.1 sec		
TC8	10.4 sec		OpenQA.Selenium.NoSuchElementException : no such element: Unable to locate element: {"method":"css selector","selector...

Test 8 i treba da pada jer aplikacija nema validaciju za broj telefona. Trebao bi se pojaviti element sa selektorom .alert.



VVSProjekat / **booking by id**

GET https://restful-booker.herokuapp.com/booking/{{bookingId}}

Params Authorization Headers (6) Body Pre-request Script Tests Settings

```
var jsonData = pm.response.json();

// Očekivane vrijednosti
var ocekivanoIme = "Test";
var ocekivanoPrezime = "Test";
var ocekivanaUkupnaCijena = 111;
var ocekivanPlacenDepozit = true;
var ocekivaniDatumDolaska = "2018-01-01";
var ocekivaniDatumOdlaska = "2019-01-01";

// Validacija 1: Ime je tačno
pm.test('Ime je tačno', function() {
    pm.expect(jsonData.firstname).to.eql(ocekivanoIme);
});

// Validacija 2: Prezime je tačno
pm.test('Prezime je tačno', function() {
    pm.expect(jsonData.lastname).to.eql(ocekivanoPrezime);
});

// Validacija 3: Ukupna Cijena je tačna
pm.test('Ukupna Cijena je tačna', function() {
    pm.expect(jsonData.totalprice).to.eql(ocekivanaUkupnaCijena);
});

// Validacija 4: Status plaćenog depozita je tačan
pm.test('Status plaćenog depozita je tačan', function() {
    pm.expect(jsonData.depositpaid).to.be.true;
});

// Validacija 5: Datum Dolaska je tačan
pm.test('Datum Dolaska je tačan', function() {
    pm.expect(jsonData.bookingdates.checkin).to.eql(ocekivaniDatumDolaska);
});

// Validacija 6: Datum Odlaska je tačan
pm.test('Datum Odlaska je tačan', function() {
    pm.expect(jsonData.bookingdates.checkout).to.eql(ocekivaniDatumOdlaska);
});
```

VVSProjekat / **https://restful-booker.herokuapp.com/booking**

POST https://restful-booker.herokuapp.com/booking

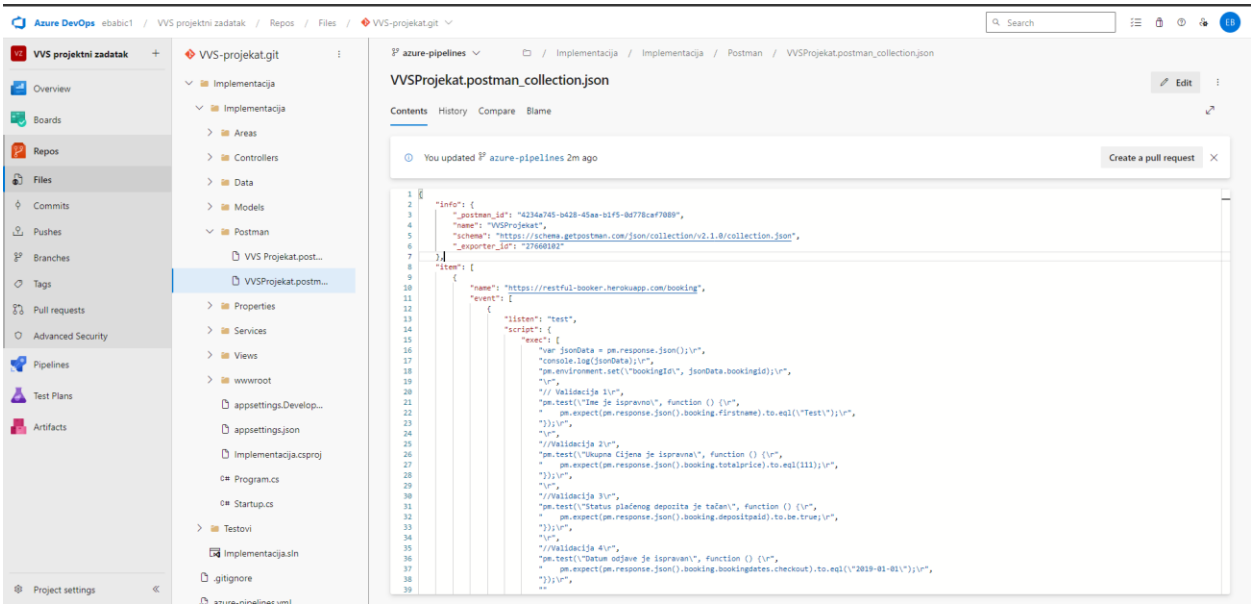
Params Authorization Headers (8) Body Pre-request Script Tests Settings

```
var jsonData = pm.response.json();
console.log(jsonData);
pm.environment.set("bookingId", jsonData.bookingid);

// Validacija 1
pm.test("Ime je ispravno", function () {
    pm.expect(pm.response.json().booking.firstname).to.eql("Test");
});

//Validacija 2
pm.test("Ukupna Cijena je ispravna", function () {
    pm.expect(pm.response.json().booking.totalprice).to.eql(111);
});

//Validacija 3
pm.test("Status plaćenog depozita je tačan", function () {
    pm.expect(pm.response.json().booking.depositpaid).to.be.true;
});

//Validacija 4
pm.test("Datum odjave je ispravan", function () {
    pm.expect(pm.response.json().booking.bookingdates.checkout).to.eql("2019-01-01");
});
```

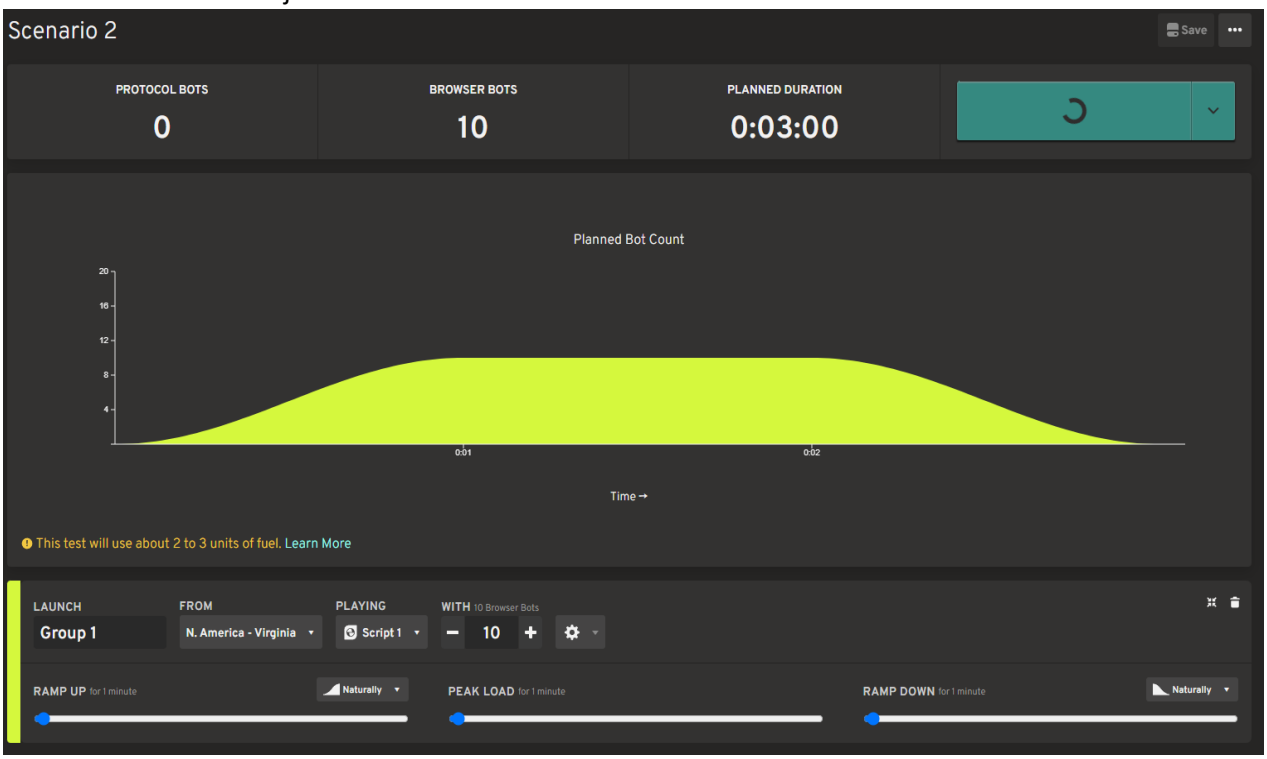
```
VVSProjekat

→ https://restful-booker.herokuapp.com/booking
  POST https://restful-booker.herokuapp.com/booking [200 OK, 943B, 587ms]
  [
    {
      bookingid: 1687,
      booking: {
        firstname: 'Test',
        lastname: 'Test',
        totalprice: 111,
        depositpaid: true,
        bookingdates: { checkin: '2018-01-01', checkout: '2019-01-01'
  m },
        additionalneeds: 'Breakfast'
      }
    }
  ]

  √  Ime je ispravno
  √  Ukupna Cijena je ispravna
  √  Status plaćenog depozita je tačan
  √  Datum odjave je ispravan

→ booking by id
  GET https://restful-booker.herokuapp.com/booking/1687 [200 OK, 922B, 133ms]
  √  Ime je tačno
  √  Prezime je tačno
  √  Ukupna Cijena je tačna
  √  Status plaćenog depozita je tačan
  √  Datum Dolaska je tačan
  √  Datum Odlaska je tačan

→ https://restful-booker.herokuapp.com/booking?firstname=Test&lastname=Test
  GET https://restful-booker.herokuapp.com/booking?firstname=Test&lastname=Test [200 OK, 773B, 133ms]
  [
    1687
  ]

  √  Odgovor je validan i ima body
  √  Kreirani ID je number
  √  Postoji makar jedan ID
  √  Kreirani ID je sadržan u nizu
```

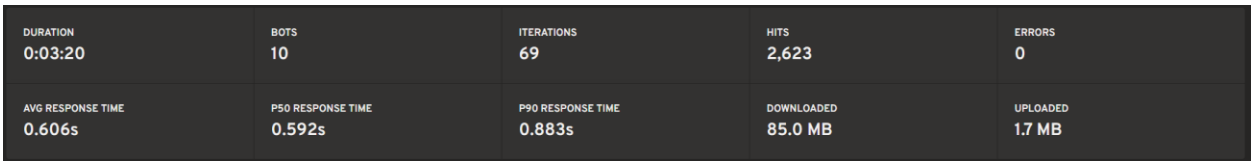
	executed	failed
iterations	1	0
requests	3	0
test-scripts	3	0
prerequest-scripts	0	0
assertions	14	0
total run duration: 1142ms		
total data received: 385B (approx)		
average response time: 284ms [min: 133ms, max: 587ms, s.d.: 214ms]		

Testovi su dokumentovani ovdje:

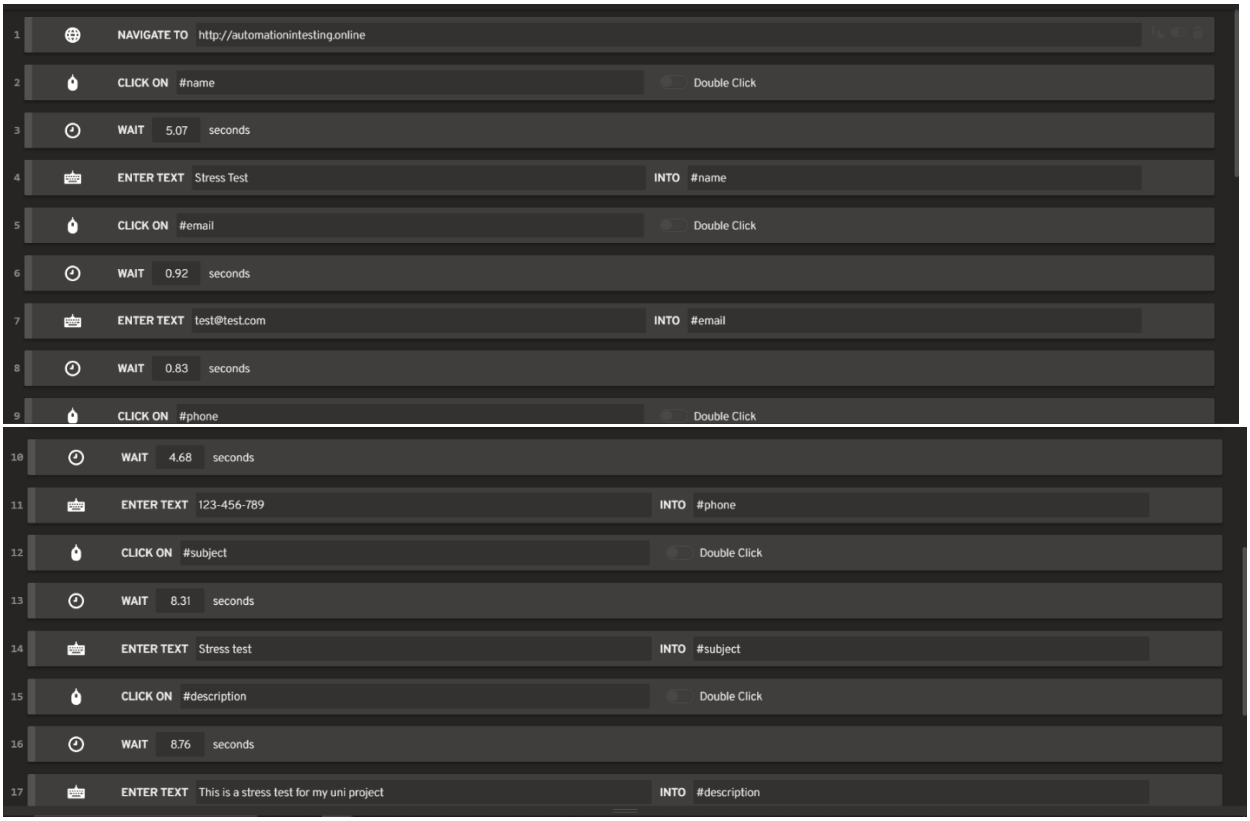


Zadatak 3: load testiranje

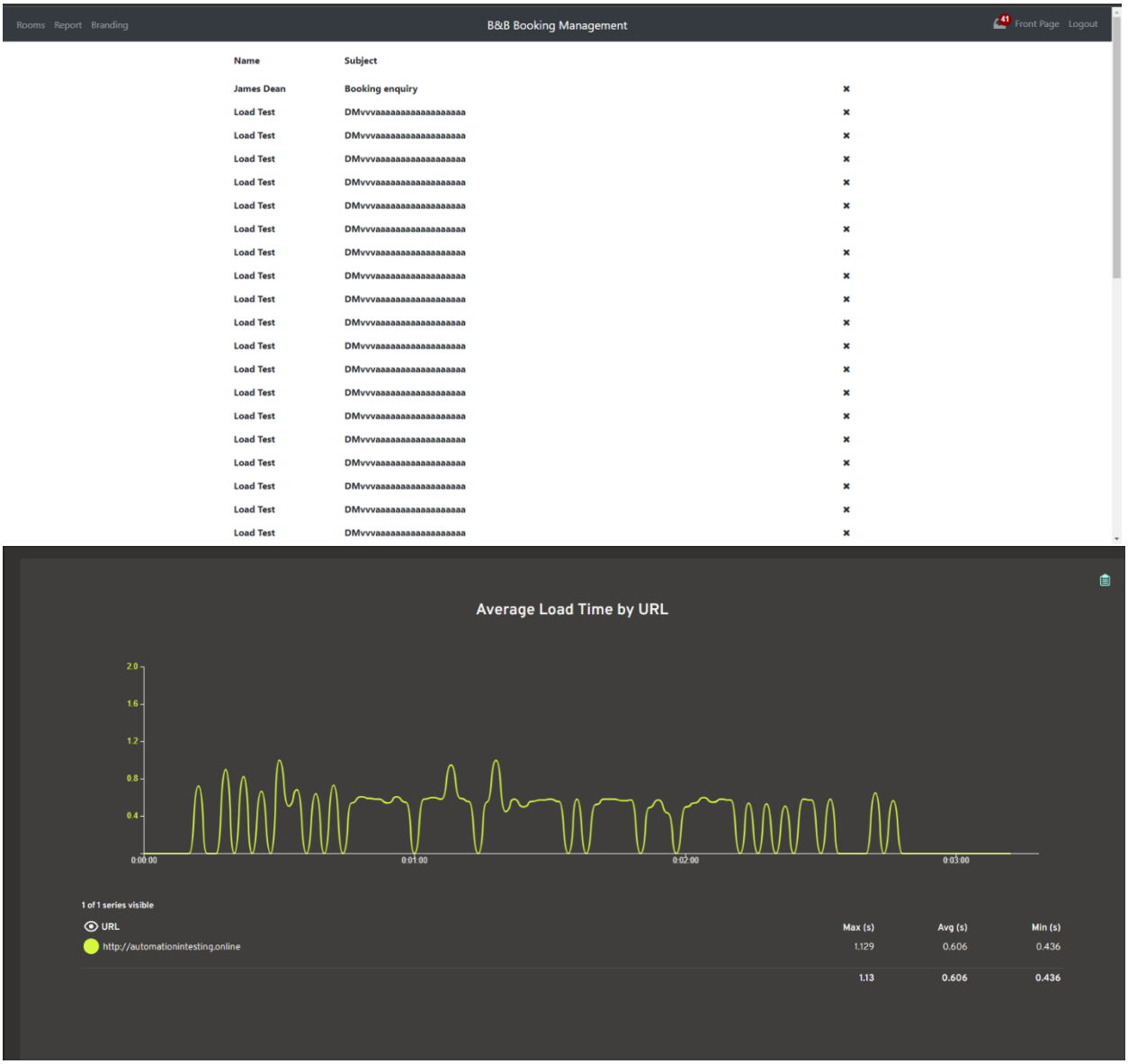




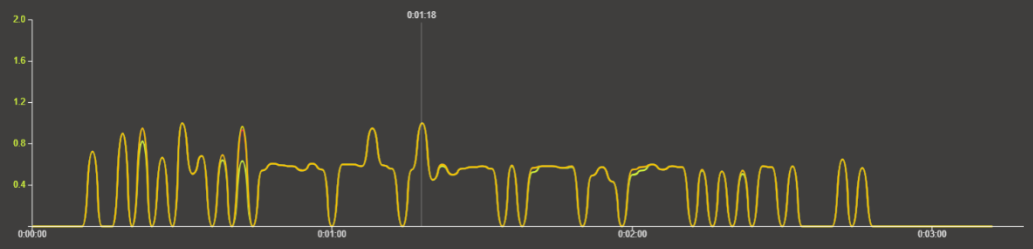
Korištena je ova skripta koja je snimljena upotrebom Loadster recorder plugina.


1 NAVIGATE TO http://automationintesting.online
2 CLICK ON #name Double Click
3 WAIT 5.07 seconds
4 ENTER TEXT Stress Test INTO #name
5 CLICK ON #email Double Click
6 WAIT 0.92 seconds
7 ENTER TEXT test@test.com INTO #email
8 WAIT 0.83 seconds
9 CLICK ON #phone Double Click
10 WAIT 4.68 seconds
11 ENTER TEXT 123-456-789 INTO #phone
12 CLICK ON #subject Double Click
13 WAIT 8.31 seconds
14 ENTER TEXT Stress test INTO #subject
15 CLICK ON #description Double Click
16 WAIT 8.76 seconds
17 ENTER TEXT This is a stress test for my uni project INTO #description

Na admin panelu aplikacije vidimo da su se kreirali zahtjevi:



Response Time Percentiles

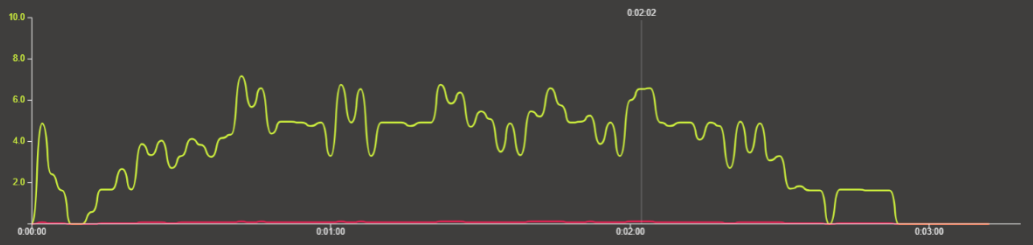


4 of 5 series visible

Percentile	Max (s)	Avg (s)	Overall (s)
p50	1.002	0.602	0.592
p80	1.002	0.627	0.705
p90	1.002	0.628	0.883
p95	1.002	0.628	0.991
p99	1.002	0.628	1.121

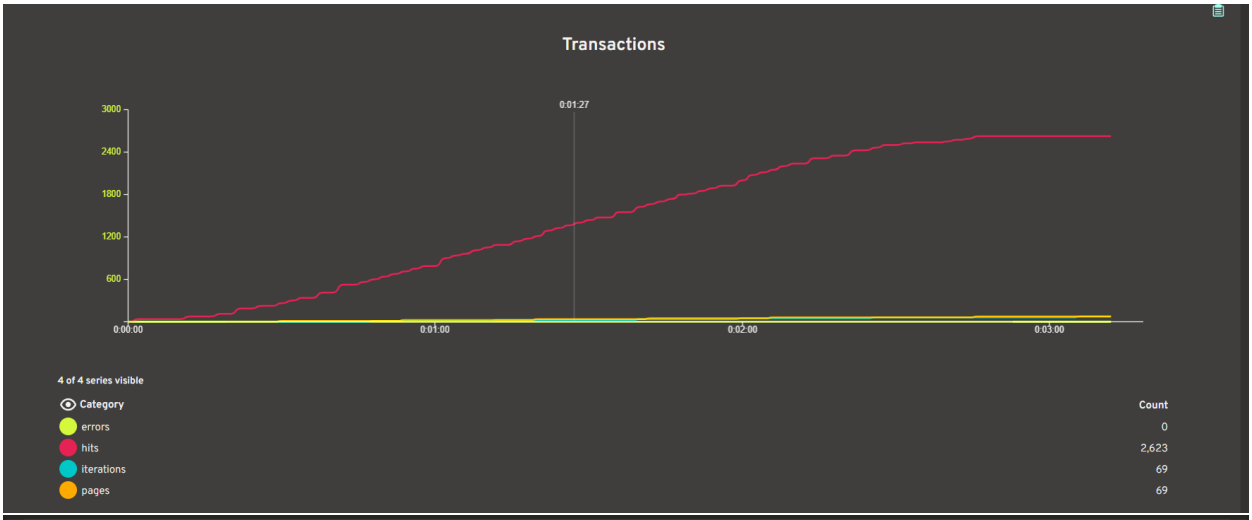
NETWORK

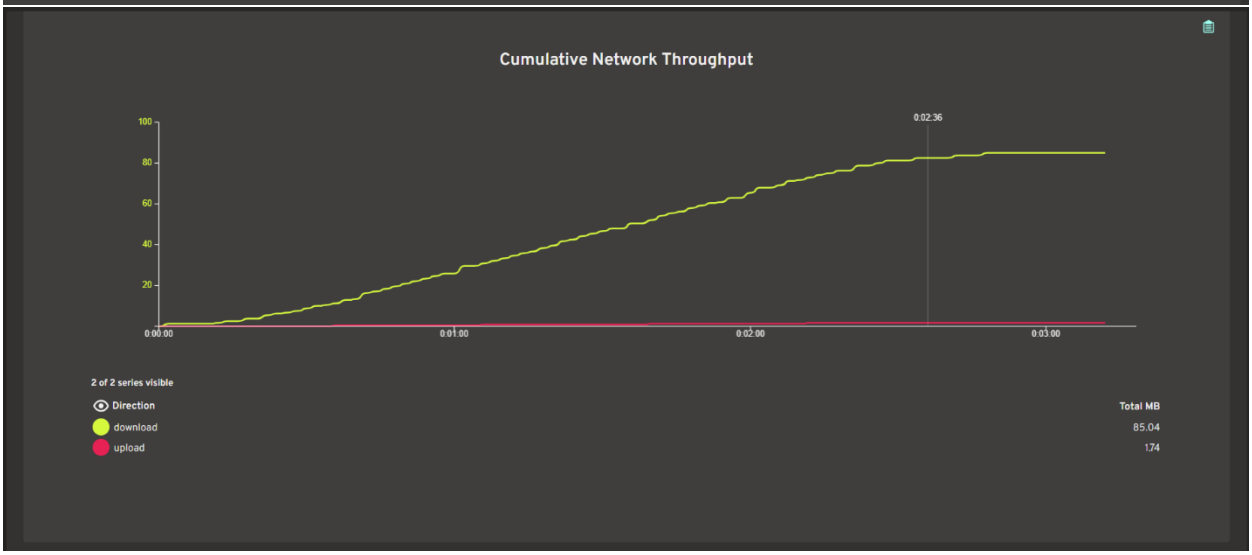
Network Throughput



2 of 2 series visible

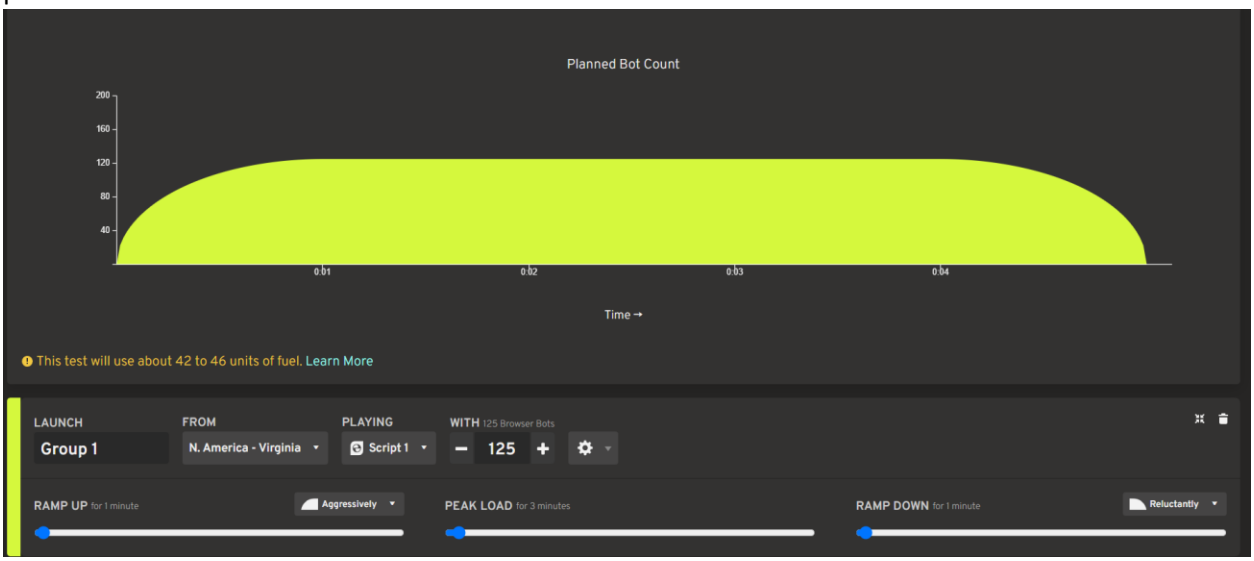
Direction	Max (Mbps)	Avg (Mbps)
download	7.17	3.55
upload	0.14	0.07


Transactions
0:01:27
3000
2400
1800
1200
600
0:00:00
0:01:00
0:02:00
0:03:00
4 of 4 series visible
Category
Count
errors
0
hits
2,623
iterations
69
pages
69

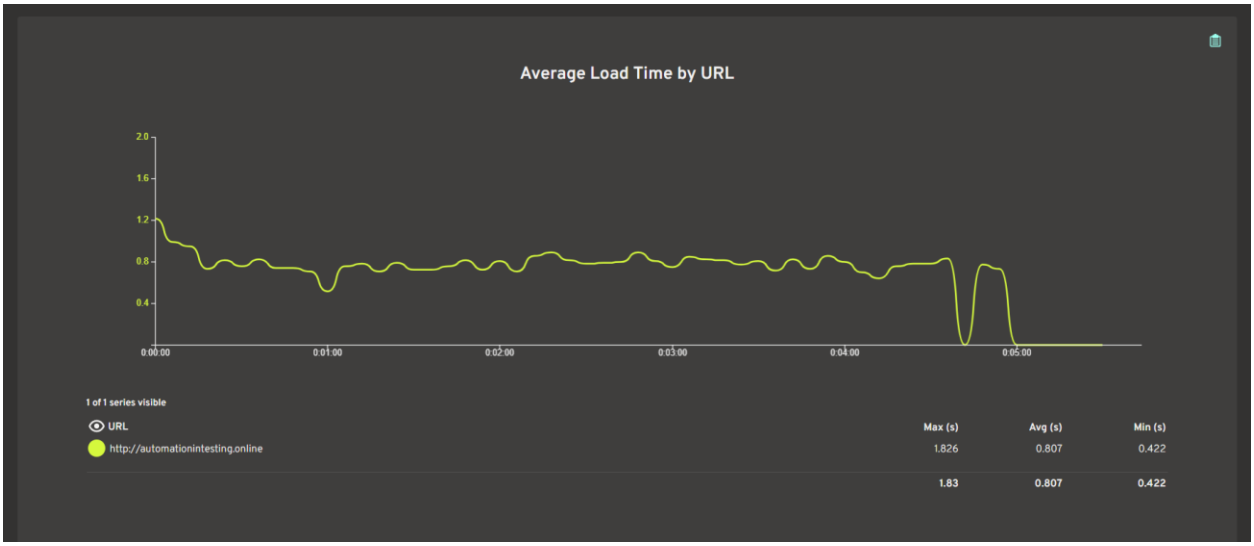

Cumulative Network Throughput
0:02:36
100
80
60
40
20
0:00:00
0:01:00
0:02:00
0:03:00
2 of 2 series visible
Direction
Total MB
download
85.04
upload
1.74

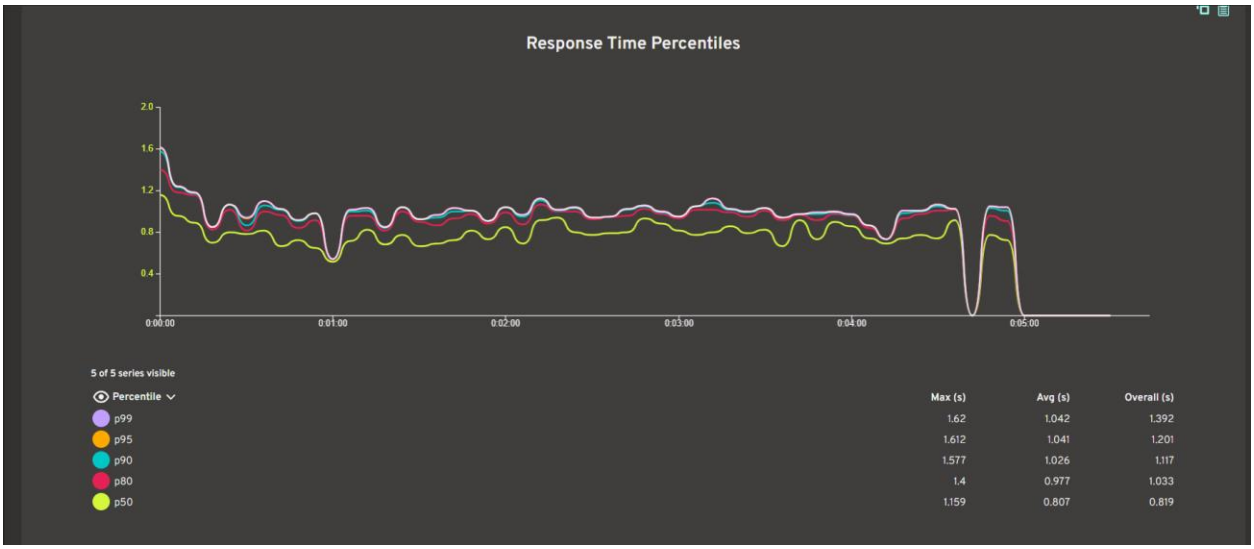
Možemo vidjeti da web stranica nije padala u slučaju load testa.

S obzirom da sa besplatnim planom imamo ograničene resurse, ovo je najveći stres test koji sam mogao pokrenuti.

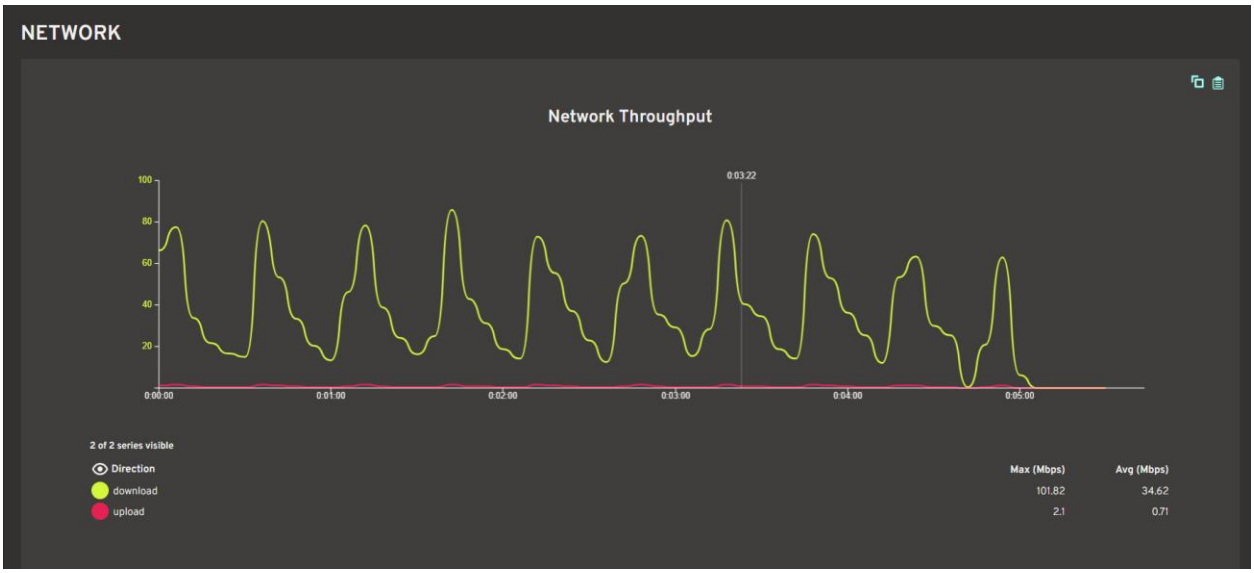


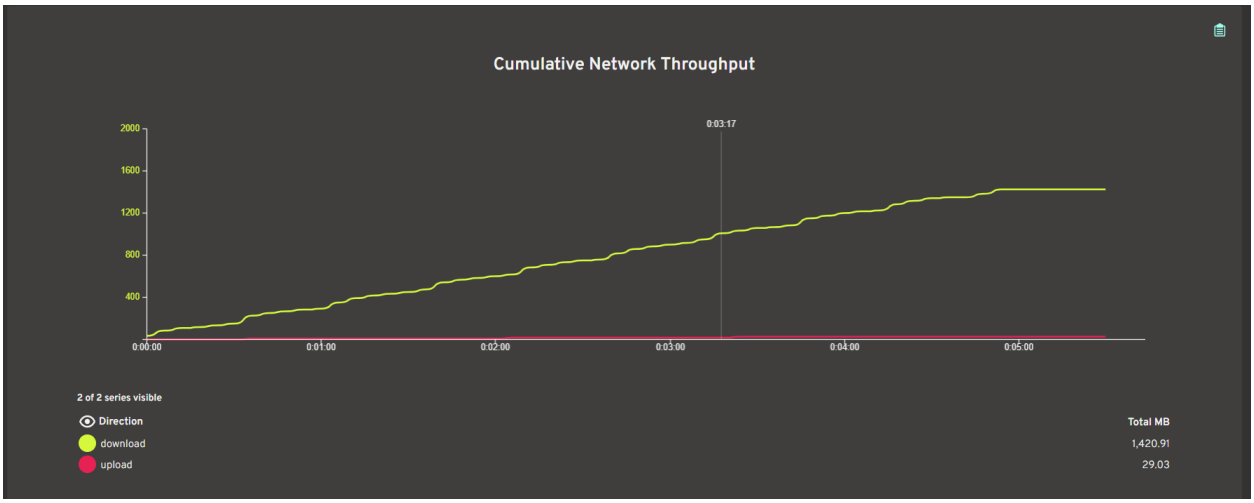
DURATION	BOTS	ITERATIONS	HITS	ERRORS
0:05:42	125	1,145	43,537	1
AVG RESPONSE TIME	**P50 RESPONSE TIME**	**P90 RESPONSE TIME**	**DOWNLOADED**	**UPLOADED**
0.807s	0.819s	1.12s	1.4 GB	29.0 MB

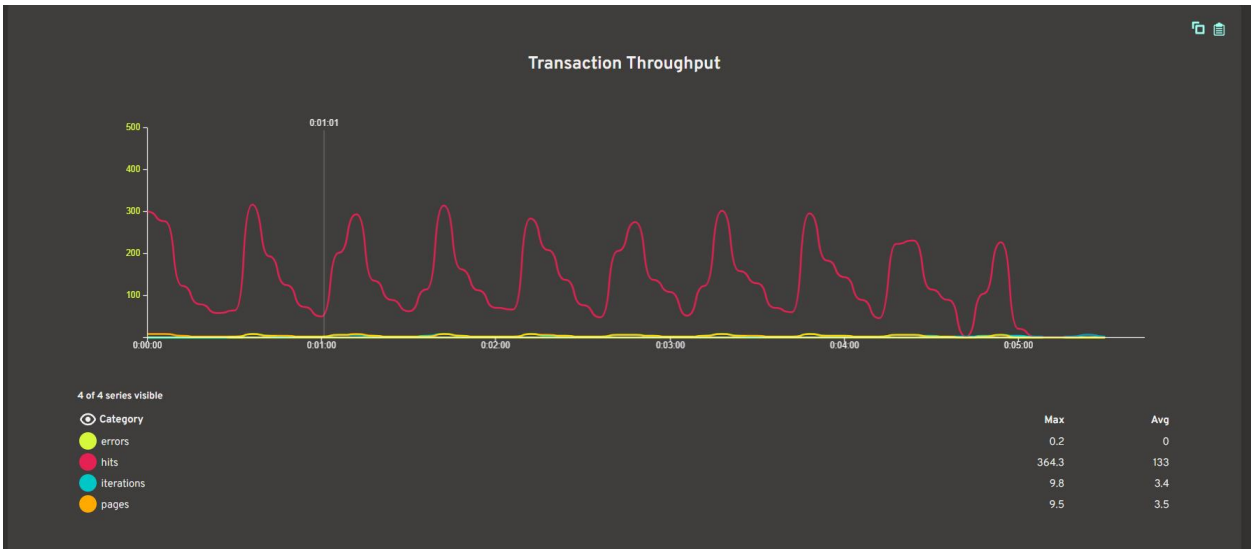


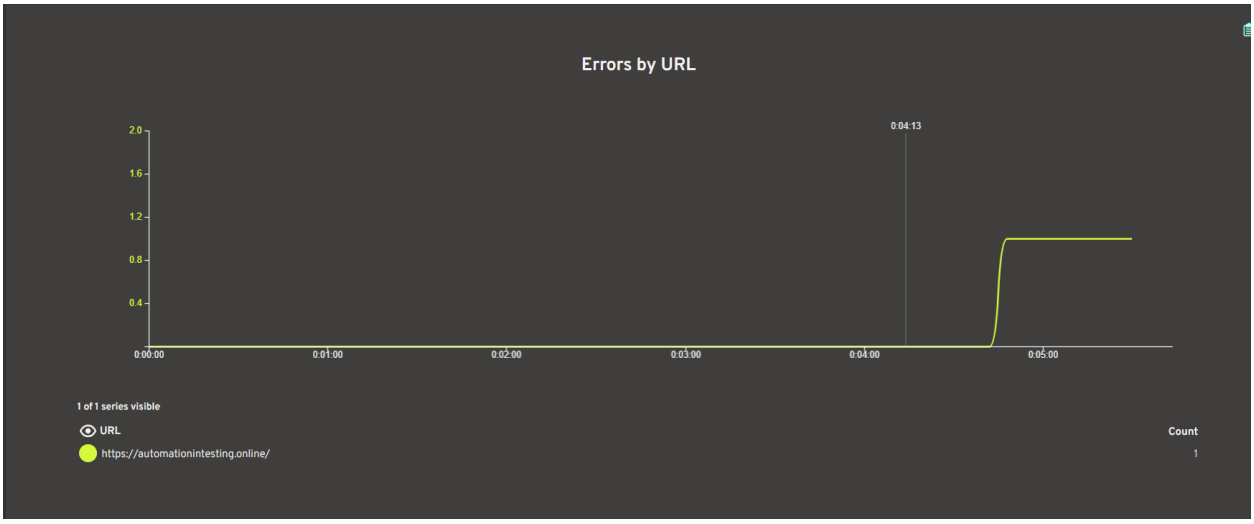

Response Time Percentiles
2.0
1.6
1.2
0.8
0.4
0:00:00
0:01:00
0:02:00
0:03:00
0:04:00
0:05:00
5 of 5 series visible
Percentile
p99
p95
p90
p80
p50
Max (s)
Avg (s)
Overall (s)
1.62
1.042
1.392
1.612
1.041
1.201
1.577
1.026
1.117
1.4
0.977
1.033
1.159
0.807
0.819

NETWORK

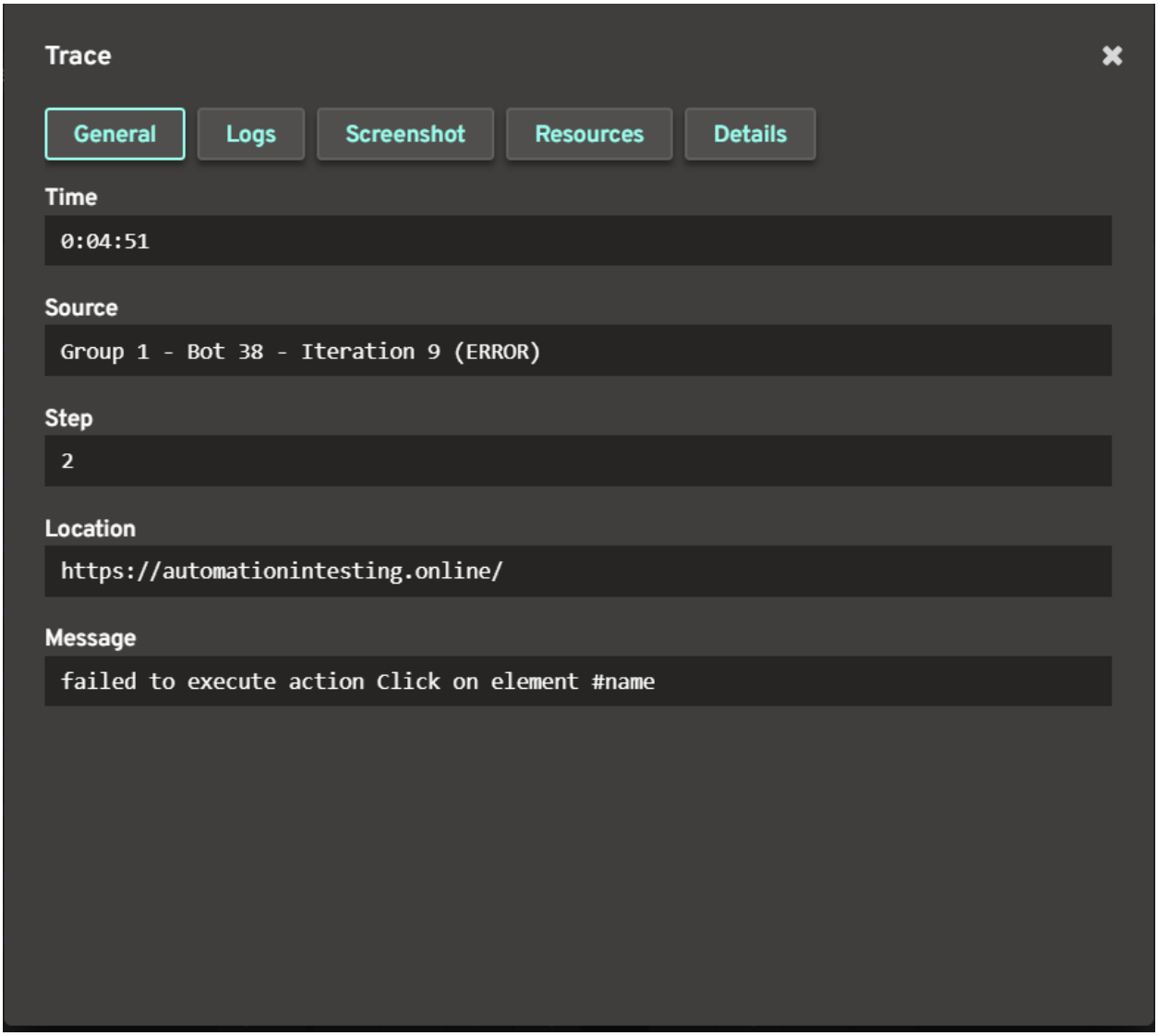
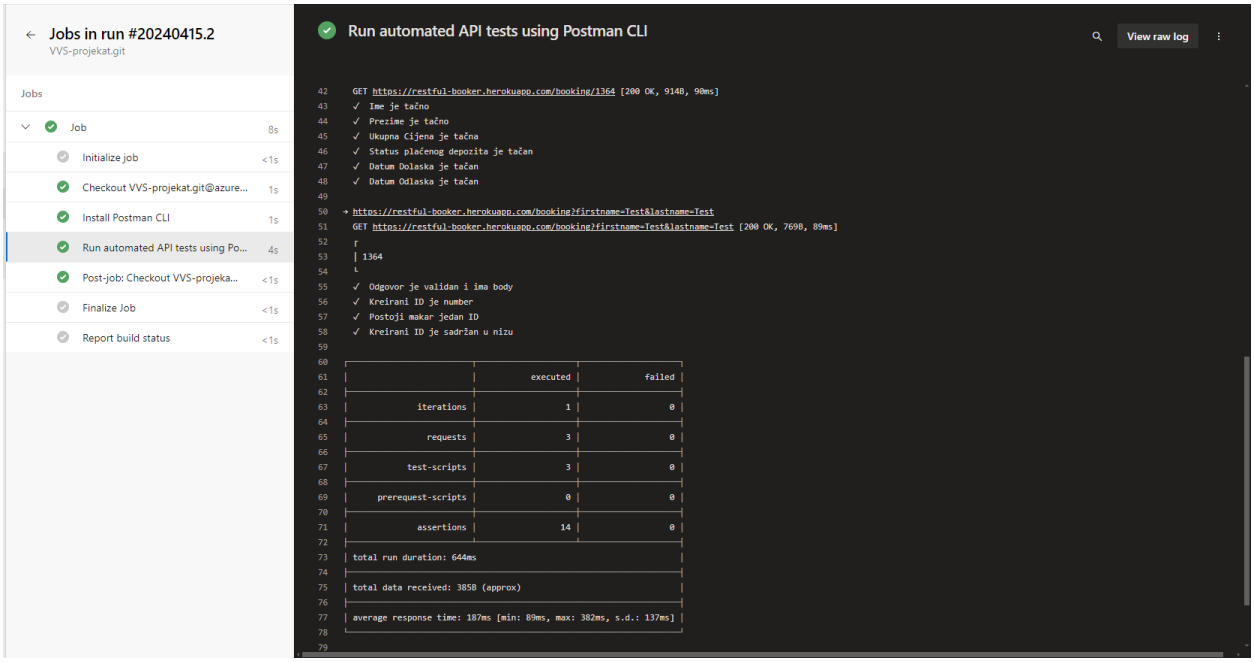

Network Throughput
100
80
60
40
20
0:03:22
0:00:00
0:01:00
0:02:00
0:03:00
0:04:00
0:05:00
2 of 2 series visible
Direction
download
upload
Max (Mbps)
Avg (Mbps)
101.82
34.62
2.1
0.71


Cumulative Network Throughput
2000
1600
1200
800
400
0:03:17
0:00:00
0:01:00
0:02:00
0:03:00
0:04:00
0:05:00
2 of 2 series visible
Direction
download
upload
Total MB
1,420.91
29.03





Pri kraju se desila jedna. To, uz pad response timea u vrijeme greške nam govori da je web stranica imala poteškoće sa stres testom:


Trace
General
Logs
Screenshot
Resources
Details
Time
0:04:51
Source
Group 1 - Bot 38 - Iteration 9 (ERROR)
Step
2
Location
https://automationintesting.online/
Message
failed to execute action Click on element #name

Azure pipelines Postman integration: