Test execution results (detailed)

Test Cycle

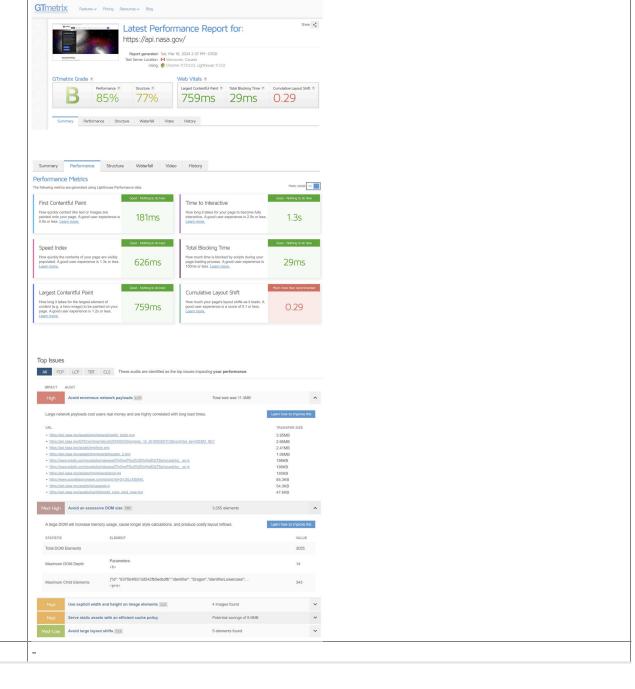| Key	NP-R1	Name	Performance Testing		
Description	OBJECTIVE: To identify performance bottlenecks and optimize their websites for faster loading times and improved user experience. GTMetrix analyzes the performance of a web page by loading it in a controlled environment and measuring various performance metrics.				
Planned start date	16/Mar/24 11:30 pm	**Planned end date**	16/Mar/24 11:30 pm	**Iteration**	no iteration
Status	DONE	**Release version**	-		

Test Executions

Key	NP-T1	Status	PASS	Name	Evaluate the performance of the https://api.nasa.gov/ website using the GTMetrix tool.
Objective	To assess the performance of the https://api.nasa.gov/ website using GTMetrix performance indicators, ensuring that it meets or exceeds the specified benchmarks for • Performance Score, • First Contentful Paint, • Speed Index, • Largest Contentful Paint, • Time to Interactive, • Total Blocking Time, • Cumulative Layout Shift.				
Precondition	• Access to the GTMetrix tool: https://gtmetrix.com/ • A stable internet connection.				
Coverage (issues)	NP-3				
Coverage (web links)					
Actual end date	16/Mar/24 11:58 pm	**Estimated Time**	00:00:00	**Actual time**	00:20:00
Assigned to	Sergei Orlov	**Environment**	System and Device Specification	**Type**	Manual execution
Executed by	Sergei Orlov				
Issues	-				

Test Script

1	Status	**PASS**
	Details	Navigate to the GTMetrix website.
	Test Data	https://gtmetrix.com/
	Expected Result	The website is accessible.
	Actual Result	Result as expected.
	Issues	-
2	Status	**PASS**
	Details	Enter the URL "https://api.nasa.gov/" in the provided input field.
	Test Data	-
	Expected Result	The entered URL is visible in the input field.
	Actual Result	Result as expected.
	Issues	-
3	Status	**PASS**
	Details	Initiate the performance test.
	Test Data	-
	Expected Result	The test is running.
	Actual Result	Result as expected.
	Issues	-
4	Status	**PASS**
	Details	Observe the performance indicators.
	Test Data	-
	Expected Result	"Performance Score" is 80% or above it; "First Contentful Paint" is 0.9s or less; "Speed Index" is 1.3s or less; "Largest Contentful Paint" is 1.2s or less; "Time to Interactive" is 2.5s or less; "Total Blocking Time" is 150ms or less; "Cumulative Layout Shift" score is 0.1 or less.
	Actual Result	- Performance Score = 85% - First Contentful Paint = 11ms - Speed Index = 626ms - Largest Contentful Paint = 759ms - Time to Interactive = 1.3s - Total Blocking Time = 29ms **Cumulative Layout Shift = 0.29 > 0.1.**

GTmetrix

Features Pricing Resources Blog

Latest Performance Report for:
https://api.nasa.gov/

Share

Report generated: Sat, Mar 16, 2024 2:37 PM -0700
Test Server Location: Vancouver, Canada
Using: Chrome 117.0.0.0, Lighthouse 11.0.0

GTmetrix Grade

B

Performance	Structure
85%	77%

Web Vitals

Largest Contentful Paint	Total Blocking Time	Cumulative Layout Shift
759ms	29ms	0.29

Summary Performance Structure Waterfall Video History

Summary Performance Structure Waterfall Video History

Performance Metrics

The following metrics are generated using Lighthouse Performance data.

Metric details ON

First Contentful Paint
How quickly content like text or images are painted onto your page. A good user experience is 0.9s or less. Learn more.
Good - Nothing to do here
181ms

Time to Interactive
How long it takes for your page to become fully interactive. A good user experience is 2.5s or less. Learn more.
Good - Nothing to do here
1.3s

Speed Index
How quickly the contents of your page are visibly populated. A good user experience is 1.3s or less. Learn more.
Good - Nothing to do here
626ms

Total Blocking Time
How much time is blocked by scripts during your page loading process. A good user experience is 150ms or less. Learn more.
Good - Nothing to do here
29ms

Largest Contentful Paint
How long it takes for the largest element of content (e.g. a hero image) to be painted on your page. A good user experience is 1.2s or less. Learn more.
Good - Nothing to do here
759ms

Cumulative Layout Shift
How much your page's layout shifts as it loads. A good user experience is a score of 0.1 or less. Learn more.
Much more than recommended
0.29

Top Issues

All FCP LCP TBT CLS   These audits are identified as the top issues impacting **your performance**.

IMPACT   AUDIT

High **Avoid enormous network payloads** LCP   Total size was 11.3MB

Large network payloads cost users real money and are highly correlated with long load times.

Learn how to improve this

URL	TRANSFER SIZE
https://api.nasa.gov/assets/img/general/insight_photo.png	3.95MB
https://api.nasa.gov/EPIC/archive/natural/2019/05/30/png/epic_1b_20190530011359.png?api_key=DEMO_KEY	2.66MB
https://api.nasa.gov/assets/img/hero.png	2.41MB
https://api.nasa.gov/assets/img/general/houston_2.png	1.06MB
https://www.gstatic.com/recaptcha/releases/07o0moPGukTo20VqKa8GbT8w/recaptcha__en.js	199KB
https://www.gstatic.com/recaptcha/releases/07o0moPGukTo20VqKa8GbT8w/recaptcha__en.js	199KB
https://api.nasa.gov/assets/img/general/apod.jpg	193KB
https://www.googletagmanager.com/gtag/js?id=G-C8LL4ZEK4L	85.3KB
https://api.nasa.gov/assets/js/nasawds.js	54.3KB
https://api.nasa.gov/assets/insight/insight_mars_wind_rose.png	47.6KB

Med-High **Avoid an excessive DOM size** TBT   3,055 elements

A large DOM will increase memory usage, cause longer style calculations, and produce costly layout reflows.

Learn how to improve this

STATISTIC	ELEMENT	VALUE
Total DOM Elements		3055
Maximum DOM Depth	Parameters <b>	14
Maximum Child Elements	{"id": "6375b4f8313d542fb5edbdfb","identifier": "Dragon","identifierLowercase":... <pre>	343

Med **Use explicit width and height on image elements** CLS   4 images found

Med **Serve static assets with an efficient cache policy**   Potential savings of 9.9MB

Med-Low **Avoid large layout shifts** CLS   5 elements found

Issues   –