ATHENA SEARCH

Category Navigation

Rainier Arms Case Study

SYNCIT GROUP

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About Us

Our Company

Syncit Group is a European software development company specialized in end-to-end **eCommerce solutions**.

We are a Magento Business Solution Partner and an Adobe Solution Partner.

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Our Product

Athena Search is an advanced, SaaS-based site search built for **eCommerce** stores.

It is constantly self-improving thanks to Machine Learning and Artificial Intelligence.

Problem

A **slow loading speed** on a web page can lead to a lack of sales, conversions, and a general loss of traffic.

Modern consumers would prefer to search for a new page than spend time waiting for a page to load.
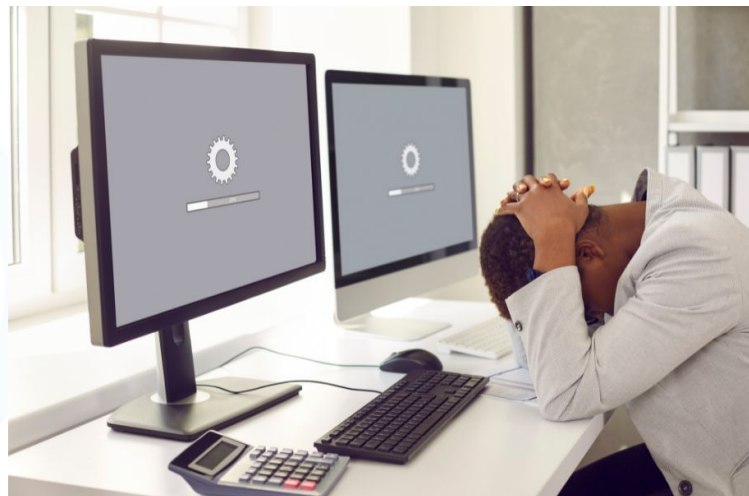
Why is the Page Load Time Important?

It is a primary ranking factor and is important for SEO.

It is important for potential leads and customer losses.

It keeps customers happy and brings profit to the company.

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Why is the Page Load Time Important?

The speed of your site dramatically impacts your site's SEO and bounce rate. A high number of zero-second page hits means that **people don't wait** for your site to load before **they leave**.

The **one-second delay** resulted in a **4.9%** drop in the number of articles a visitor reads. The **three-second delay** resulted in a **7.9%** drop. Visitors read less when delays occur.

On average, if your website takes longer than **3 seconds** to load, approximately **40%** of your visitors will **abandon your site**. This means a slow website will drive customers away.

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Solution

There are a few actionable steps business owners can take to improve the speed of their website.

Using **Athena Category Navigation**, we are now able to boost the loading speed of the Category Navigation page.
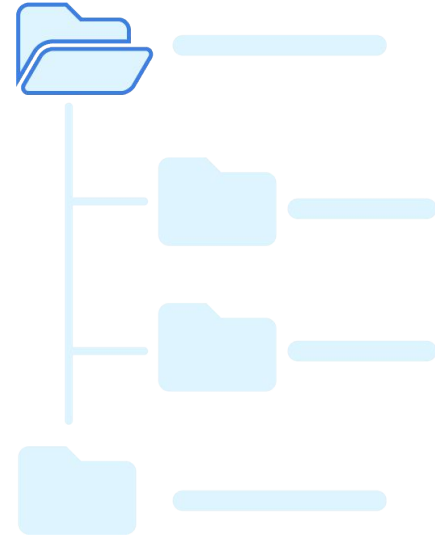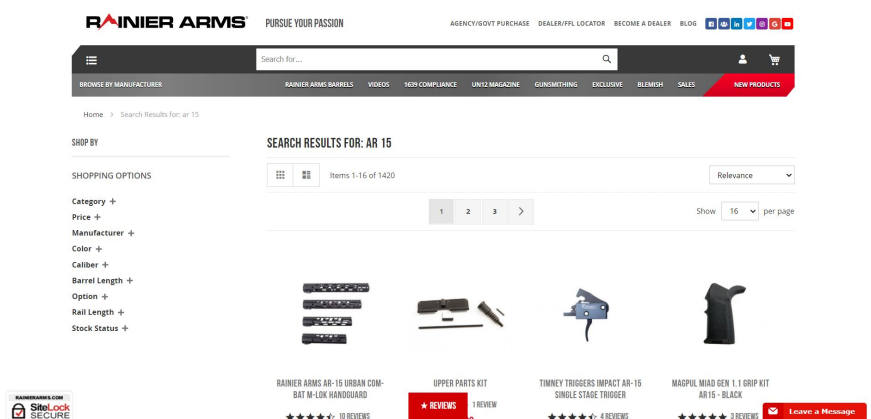
Solution

All the changes that occur on the data are usually handled by the eCommerce platform itself.

We have transferred this job to Athena Category Search, thus making eCommerce platform **servers less impacted** by the volume of the customers.

So, we get a much **higher speed** of the website and a lot **cheaper servers**.

Case Study

This Case Study will present handling categories through Athena Category Search on the Magento platform where we achieved outstanding performance compared to default Magento category handling.

It will point out the speed of and the server power for the Rainier Arms eCommerce store before and after the implementation of the Athena Category Navigation.
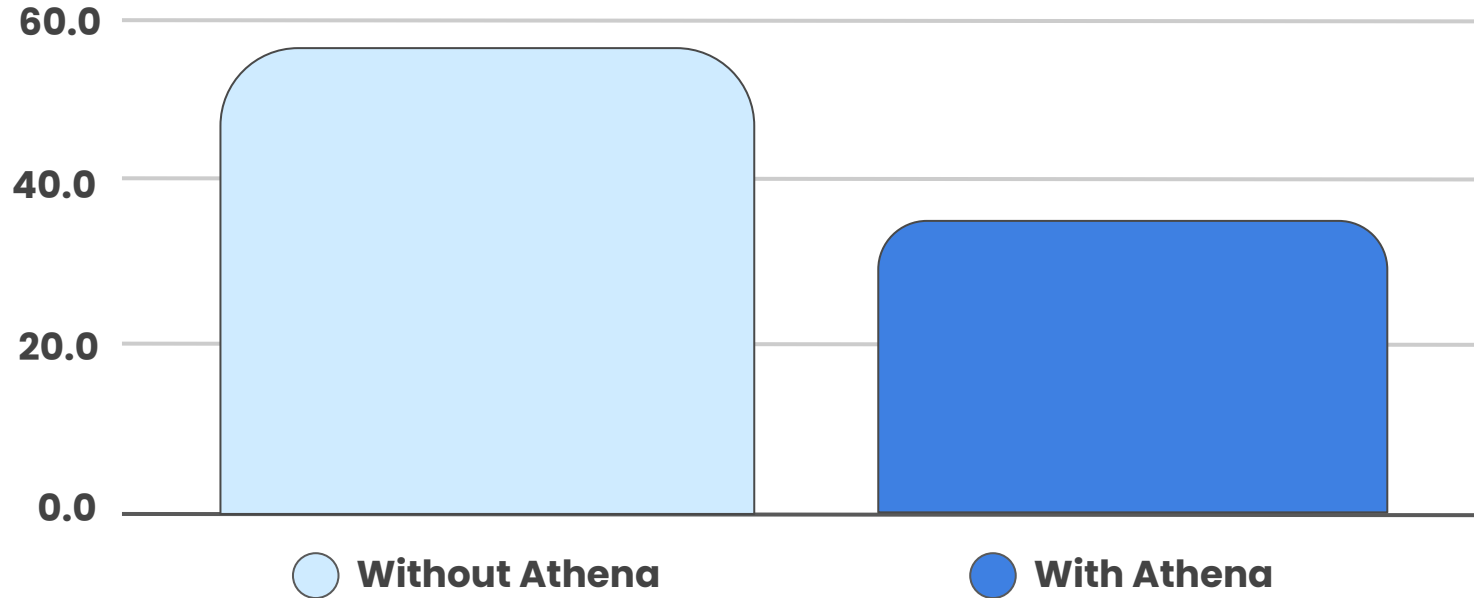
Number of Servers *
50% Improvement

Without Athena

With Athena
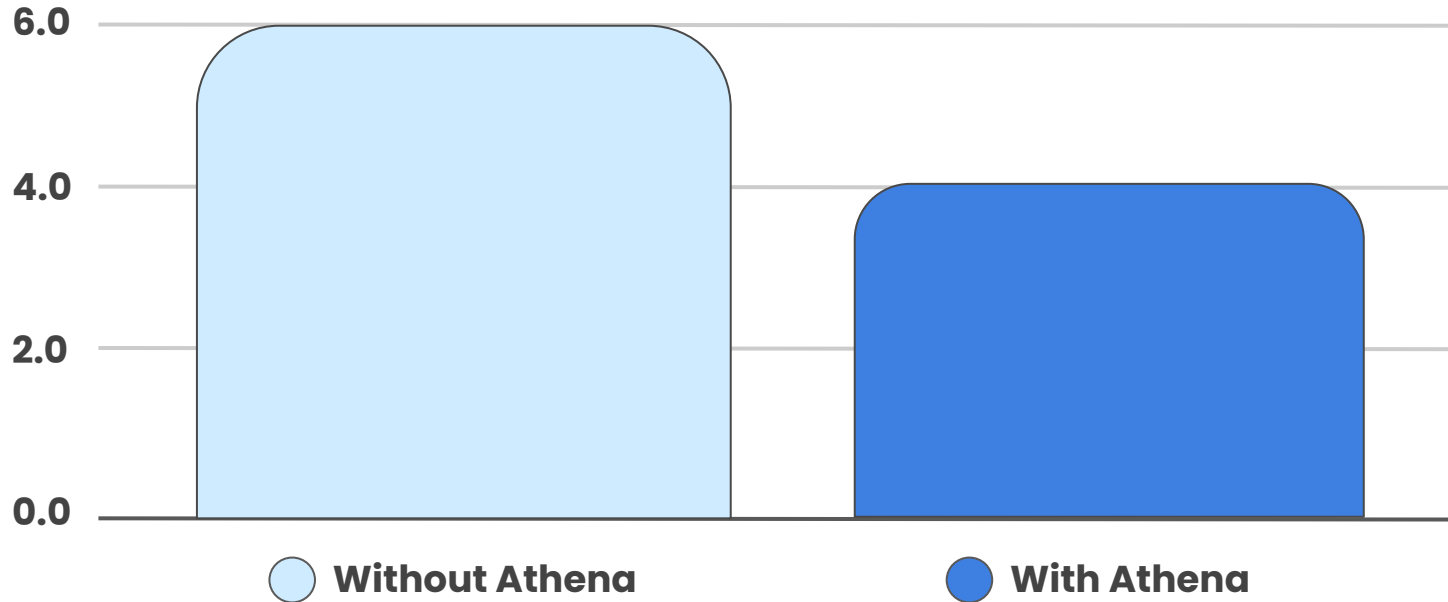
* servers are Amazon AWS EC2

Number of vCPU Cores**
64.7% Improvement

Without Athena   **With Athena**

** vCPU are AWS virtual cores

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Quantity of vRAM (GB)***
50.4% Improvement
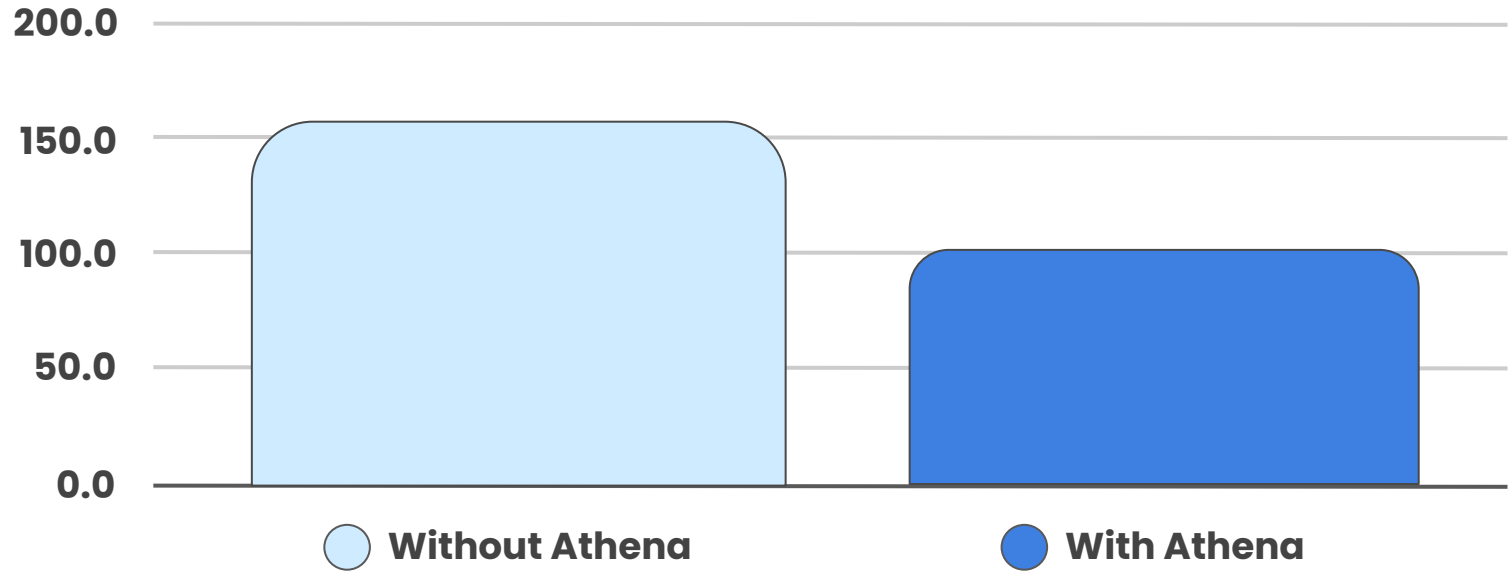
*** vRAM is AWS virtual RAM

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What We Have Achieved

- **33.3%** reduction in the number of **servers** used,

- **39.3%** reduction in the number of **CPU cores** used,

- **33.5%** reduction in the amount of **RAM** used.

Magento controlling PLP			
Date	Number of Servers	Number of vCPU	Quantity of vRAM
26.04.2021	6.0	56.0	154.0
28.04.2021	6.0	56.0	154.0
05.05.2021	6.0	56.0	154.0
07.05.2021	6.0	56.0	154.0
10.05.2021	6.0	56.0	154.0
18.06.2021	6.0	56.0	154.0
Average	**6.0**	**56.0**	**154.0**
Athena Category Search controlling PLP			
Date	Number of Servers	Number of vCPU	Quantity of vRAM
05.07.2021	4.0	34.0	102.4
06.07.2021	4.0	34.0	102.4
07.07.2021	4.0	34.0	102.4
Average	**4.0**	**34.0**	**102.4**
Hardware resource reduction in %	**33.3**	**39.3**	**33.5**
Improvement in hardware utilisation in %	**50.0**	**64.7**	**50.4**

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58% Reduction in the Server Cost
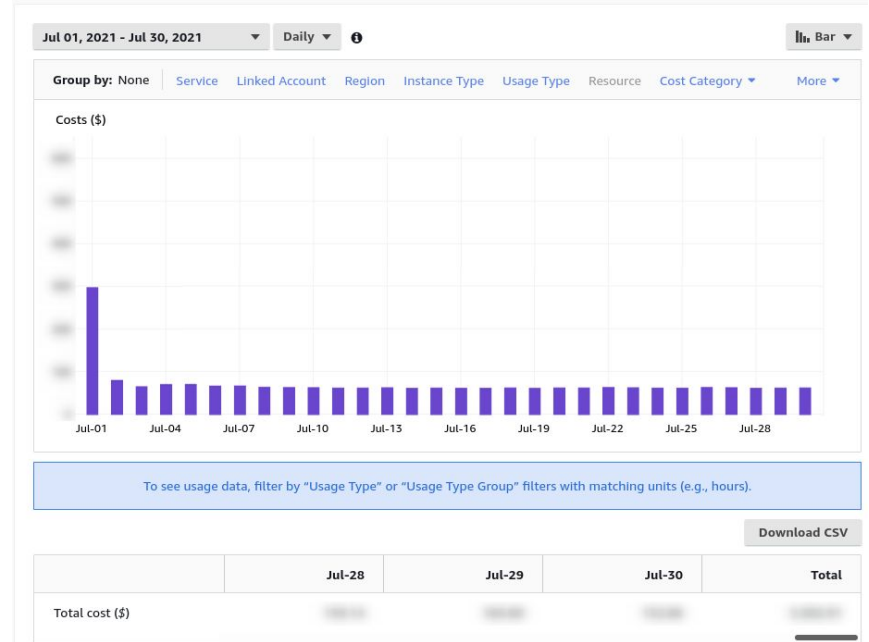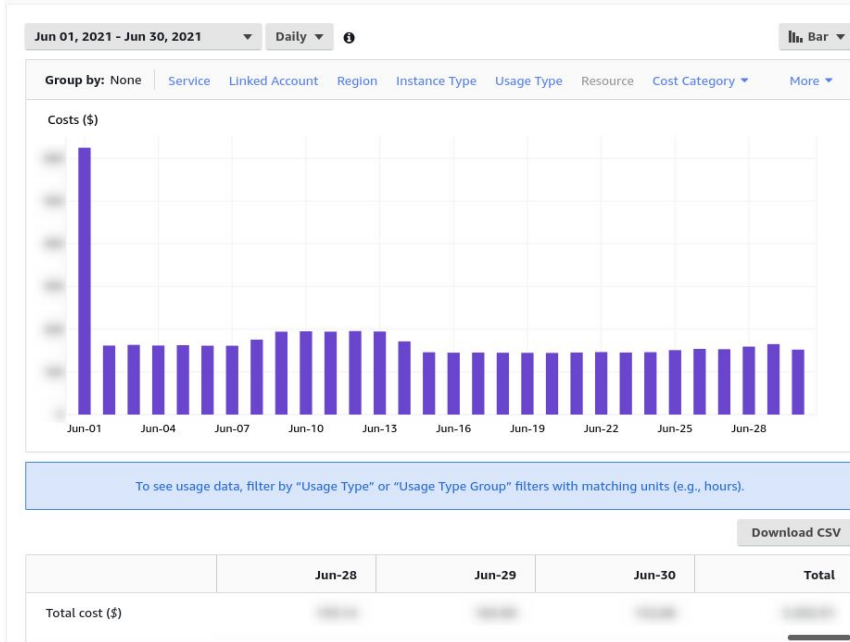
Magento vs. Athena Category Navigation

| GTmetrix						
Magento controlling PLP	Users *	Sessions *	TTFB (sec) - no filter	TTFB (sec) - 1st filter	TTFB (sec) - 2nd filter	TTFB (sec) - 3rd filter
26.04.2021	66	79	1.900	0.116	0.174	0.106
28.04.2021	63	74	0.170	0.107	1.200	1.300
05.05.2021	71	86	0.388	0.104	0.098	1.200
07.05.2021	59	72	0.111	1.200	1.300	1.300
10.05.2021	60	70	0.172	0.104	1.300	0.101
18.06.2021	50	60	0.104	0.100	0.101	0.113
Average			**0.474**	**0.289**	**0.696**	**0.687**
Athena Category Search controlling PLP	Users *	Sessions *	TTFB - no filter	TTFB (sec) - 1st filter	TTFB (sec) - 2nd filter	TTFB (sec) - 3rd filter
05.07.2021	52	62	0.112	0.090	0.125	0.125
06.07.2021	47	56	0.063	0.111	0.118	0.064
07.07.2021	47	56	0.108	0.107	0.110	0.103
Average			**0.094**	**0.103**	**0.118**	**0.097**
Objective speed improvement in %			**402.7**	**181.0**	**491.1**	**605.5**
Cumulative effect of performance improvement with hardware reduction in %						**651.2**

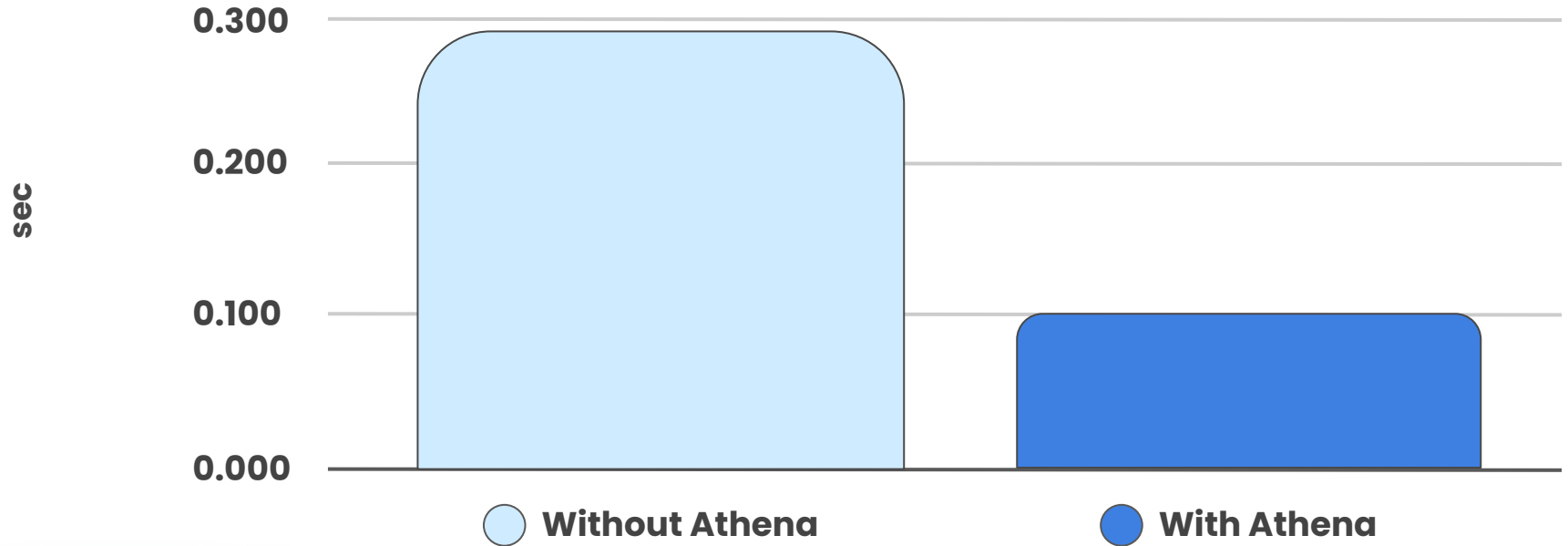TTFB - Time To First Byte   * Values gathered using Google Analytics

TTFB (No Filter)
Speed Improvement 402.7%
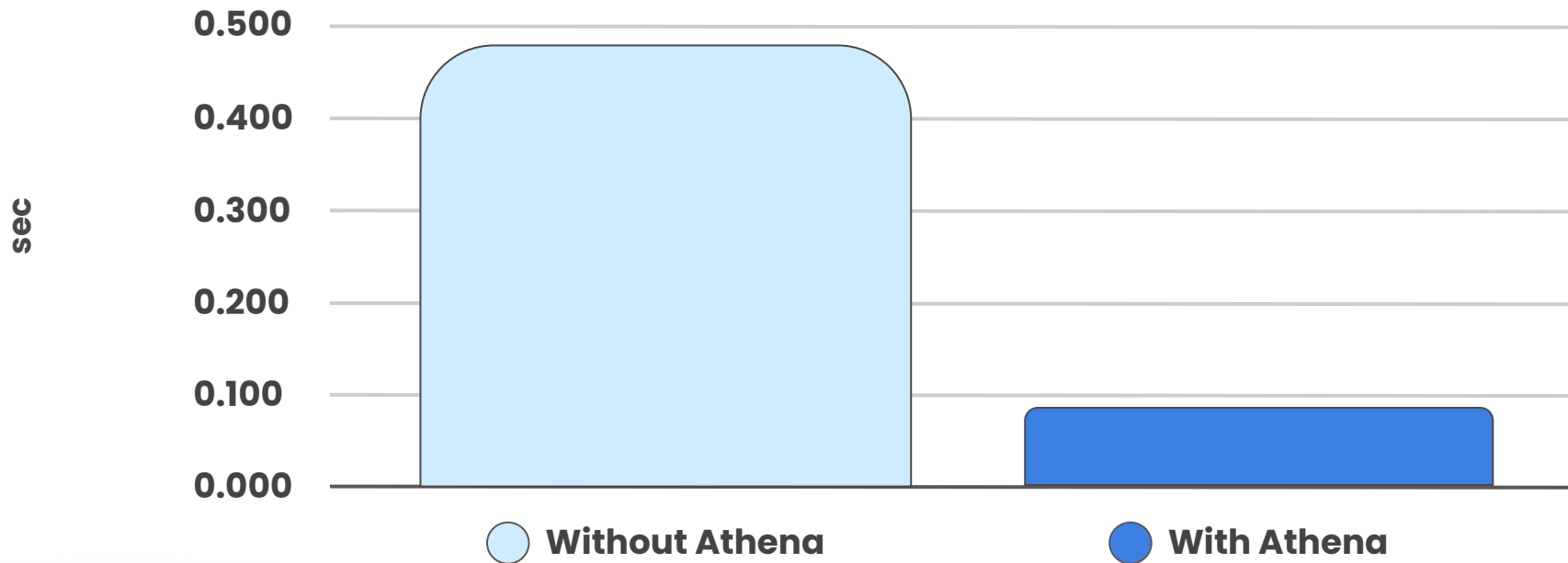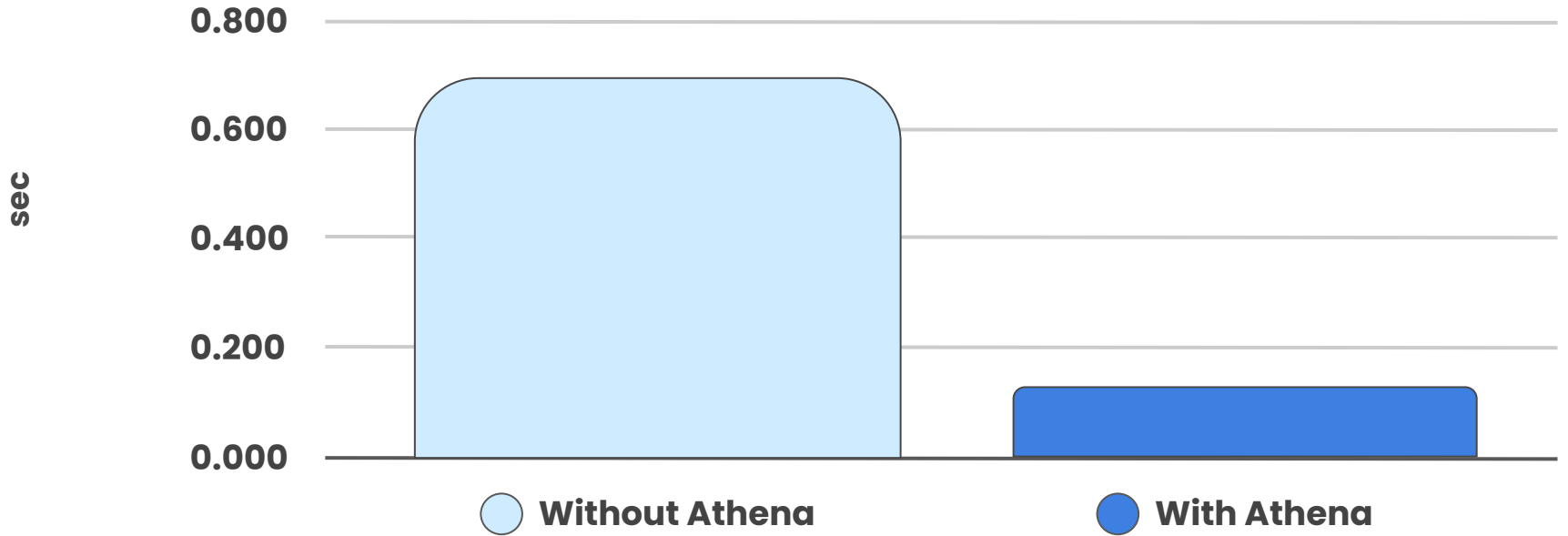
TTFB (1 Filter)
Speed Improvement 181%
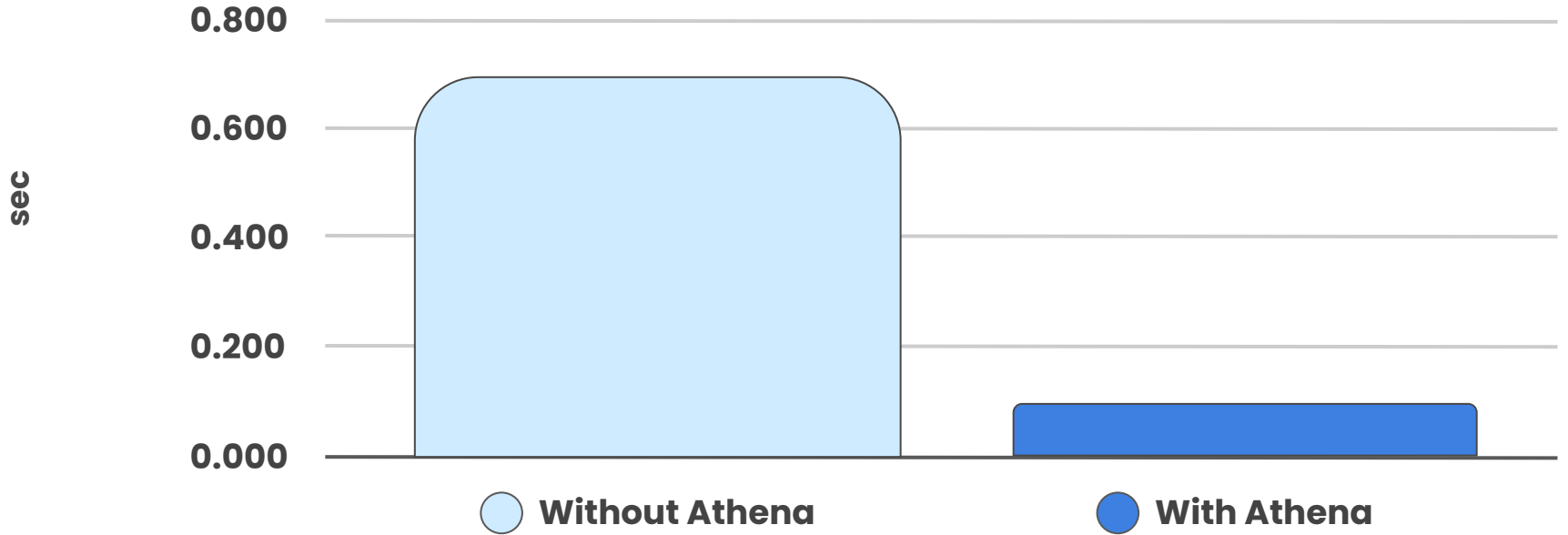
TTFB (2 Filters)
Speed Improvement 491.1%

TTFB (3 Filters)
Speed Improvement 605.5%

sec

0.800
0.600
0.400
0.200
0.000

Without Athena   With Athena

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Conclusion

We have noticed a remarkable improvement in the response speed with **Athena Category Navigation.**

Not only have we reduced the load on the Magento servers by transferring part of the job to the Athena Category Search, but we also have greatly reduced the response time of the website on the category pages when Athena Category Search controls them.
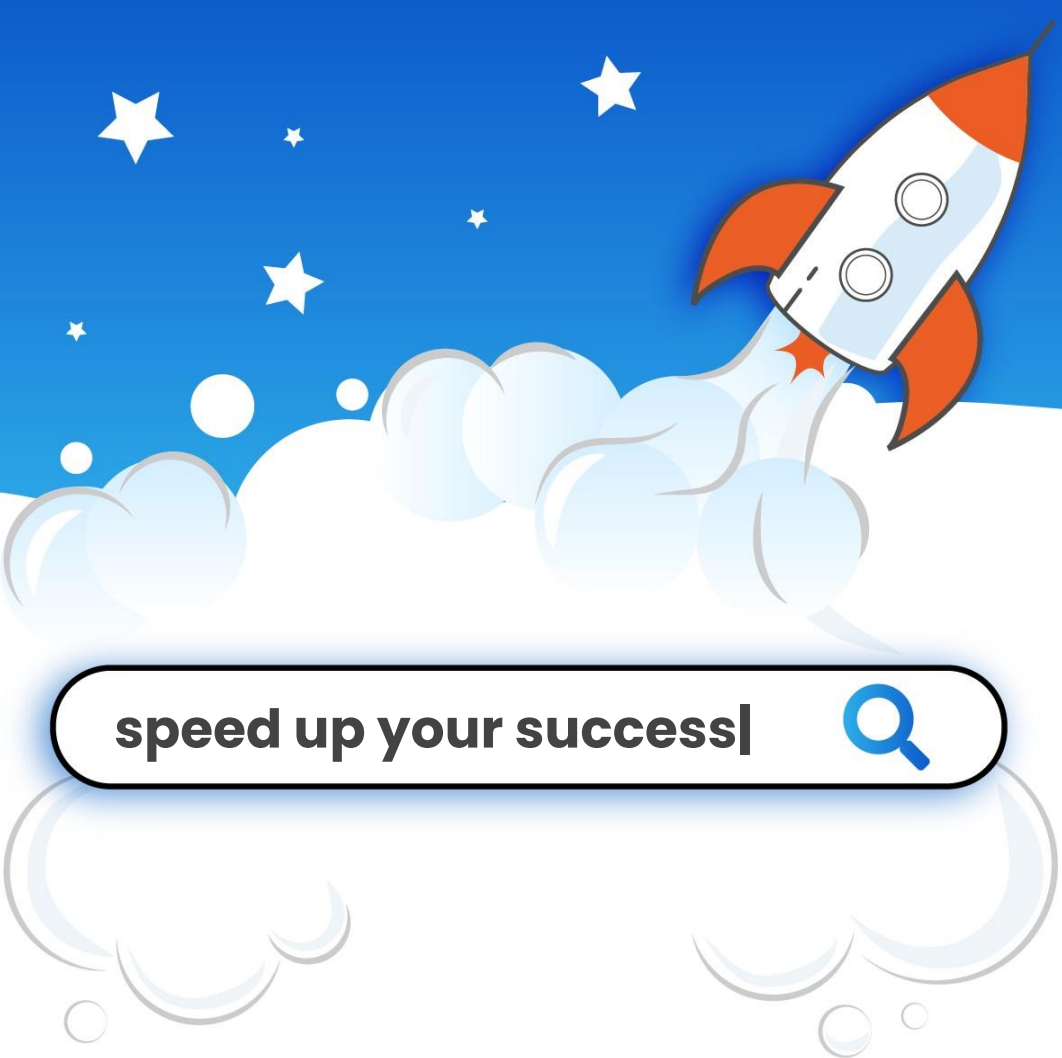
Save time, save money.

Client's Words

*"We've seen a significant increase in **site speed** compared to pre-Athena, and have fielded significantly fewer complaints from customers regarding website speed."*

Rainier Arms Website

Scott Wagner
Customer Support Manager
Rainier Arms LLC, USA

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Useful Links

- *Athena Search Website*
- *Athena Search DEMO site*
- *Case Studies*
- *Magento 2 extension*
- *WordPress Plugin*
- *Schedule a DEMO*
- *Contact Us*

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Thank you for your attention!

Should you have any questions, feel free to contact us.

office@syncitgroup.com

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