

[MPLaunch@IM] Experience The Fastest and Most Optimized Graph Search 3.0

3 messages

Ashutosh Singh <ashutosh.singh@indiamart.com>

Thu, Apr 7, 2022 at 10:25 AM

To: Marketplace Launch <marketplacelaunch@indiamart.com>, Dinesh Agarwal <da@indiamart.com>, Amarinder S Dhaliwal <amarinder@indiamart.com>

Cc: Vikram Varshney <vikram.varshney@indiamart.com>, Abhishek Bhartia <abhishek@indiamart.com>, Samarendra Pratap <samarendra.pratap@indiamart.com>, Ayush Gupta <ayush.gupta@indiamart.com>, Neha Singh <neha.singh2@indiamart.com>, Rohan Verma <verma.rohan@indiamart.com>, Ravi Kumar <kumar.ravi5@indiamart.com>, Himanshu Jain <himanshu.jain2@indiamart.com>, Paras Lehana <paras.lehana@indiamart.com>, Akshansh Narula <akshansh.narula@indiamart.com>, cat_internal <cat_internal@indiamart.com>

Hi All,

We are pleased to inform you that **Graph Search 3.0** has been made live for MCAT Prediction.

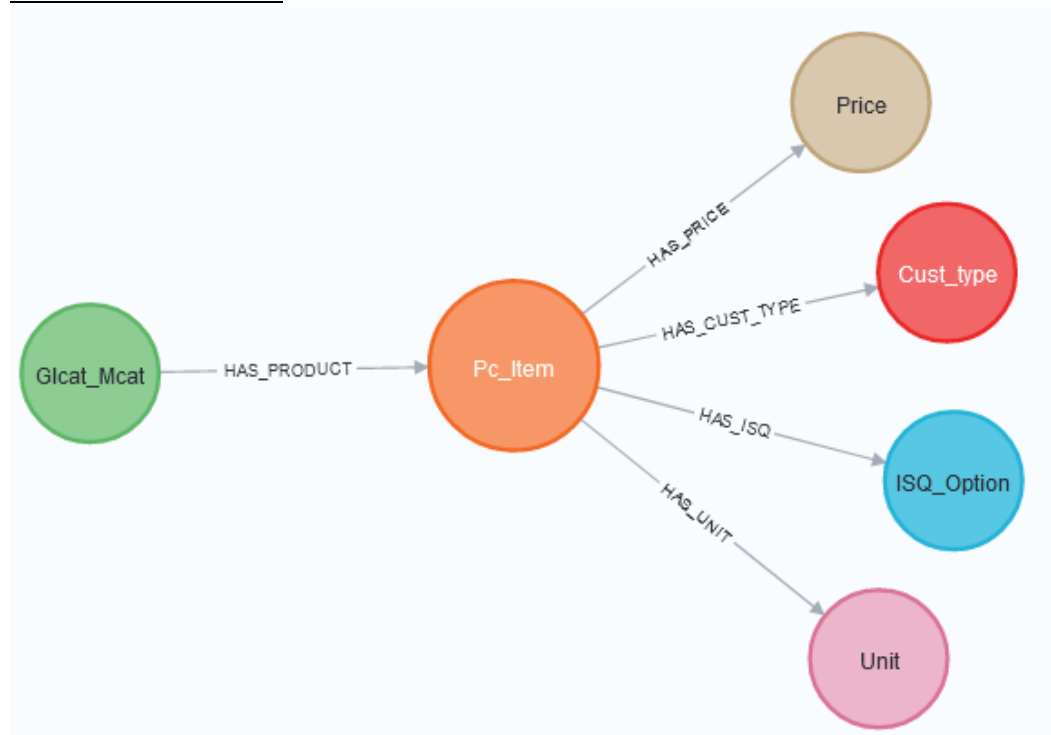
In this major update, Graph Search 3.0 has been optimized with a **new schema architecture** that promises a **blazing fast speed**, scale, and performance.

What has been Done?

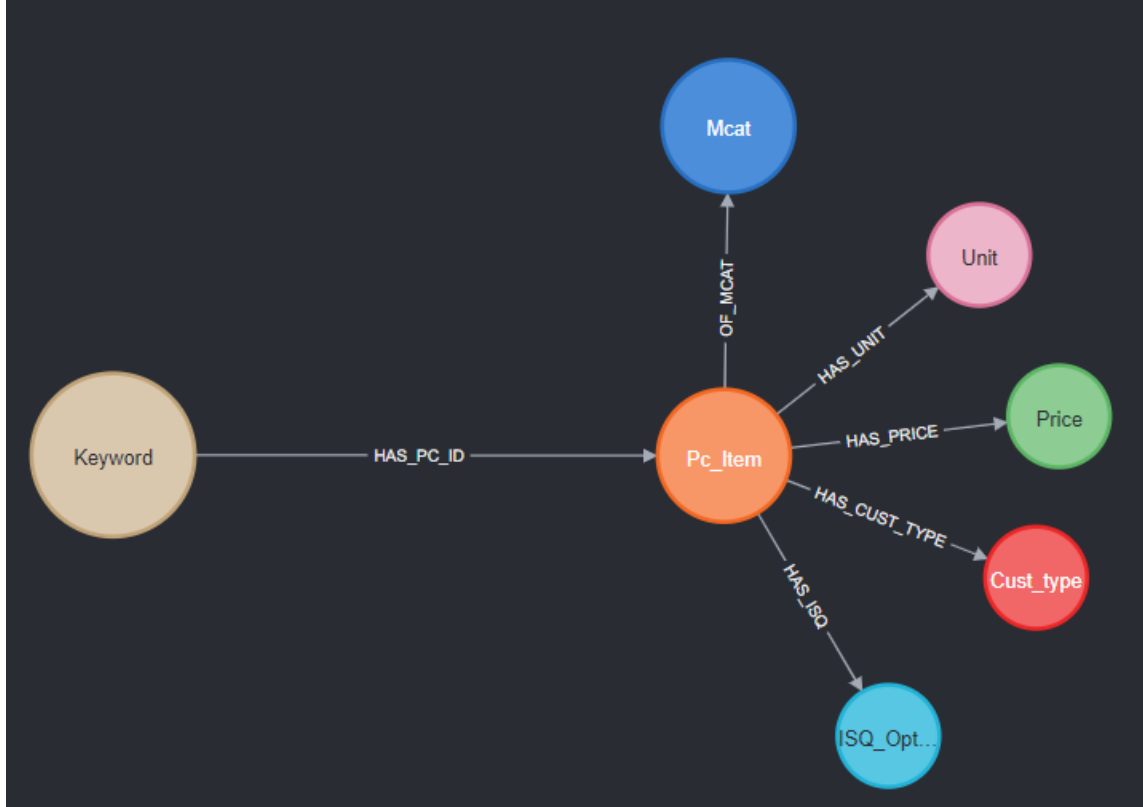
We have refactored the Current Graph Schema by separating the Keyword property from the Product Node and revamped the queries for traversing the Graph Model and Index.

PFB the previous and new schema of the Graph Search Model

Previous Schema



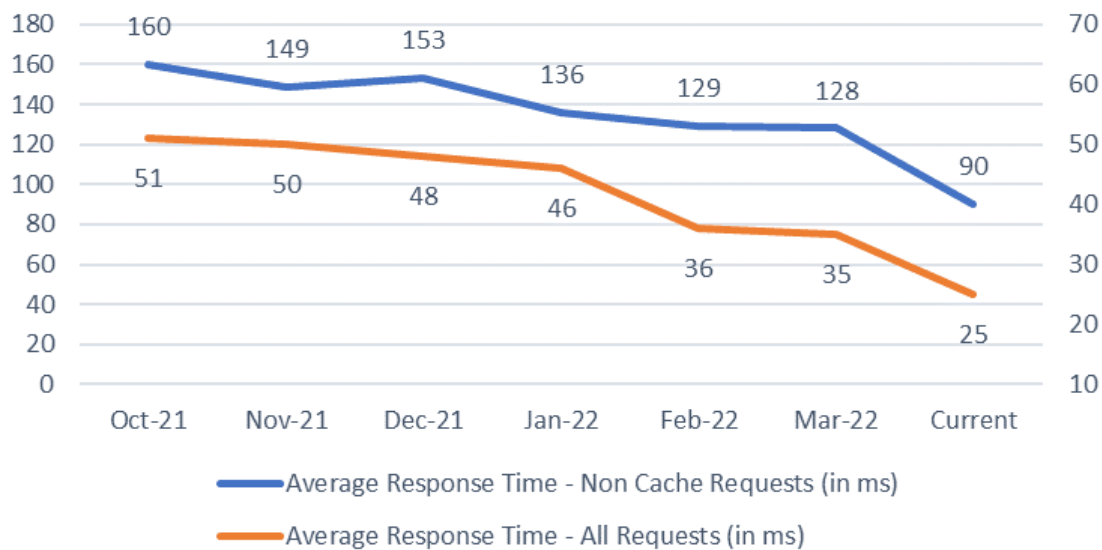
New Schema



Key Areas of Impact

1. Reduction in Average Response Time

Response Time Trend



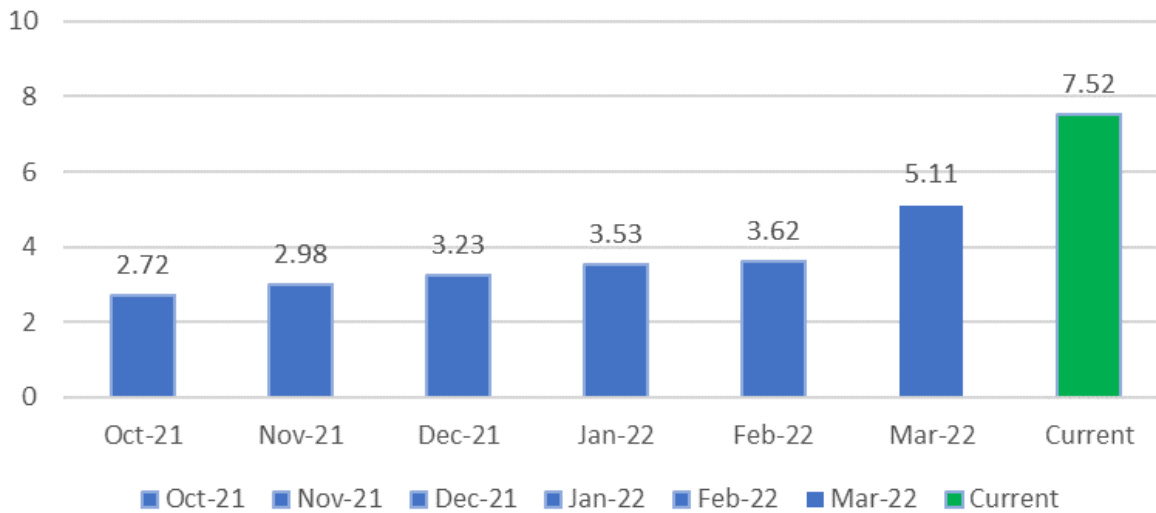
2. Optimization in Graph Index size and traversal logic

- The Graph FTS Index size has been reduced from **10.7 cr** to **3.5 cr** without any impact on the training dataset.
- Better Graph traversal leads to achieving better results at a faster speed.

3. Ability to handle additional training data and more user requests

- The graph is now capable of handling additional training data from multiple sources like ISQs, BL, Site Search, etc. without any impact on load and response time which will help to achieve the future roadmaps for Graph Search.

Number of Requests Served by Graph Search (in Cr)



Performance and MCAT Prediction Accuracy

Graph 3.0 also promises an improved accuracy.

Comparison of unique 11577 records as Audited by two Auditors

Parameters	Graph Search 2.0	Graph Search 3.0	Change
Total Keywords	11577	11577	0.00%
Accuracy (wrt 2 Auditors)	88.96%	89.57%	0.68%

Comparison of 1st Predicted MCAT wrt manual product approval

Parameters	Graph Search 2.0	Graph Search 3.0	Change
Total Keywords	44196	44194	0.00%
Selected MCAT = 1st MCAT	24925	25443	2.04%
% Selection in Manual Approval	56.40%	57.57%	2.04%

Link to access the Audit [Dataset](#)

Link to access [Kibana Dashboard](#)

Note - We have made the aforementioned changes live at 4:16 PM 6th April'2022

Token of Appreciation

Special Thanks to [@Rohan Verma](#) , [@Ravi Kumar](#) for their help in the optimization of Graph Schema and making the API Live.
[@Neha Singh](#) [@Shubhi Jain](#) , [@Dhiraj Bhangale](#) , [@Satwik Mani Tripathi](#) for extensive Audit of the model results.
[@Vikram Varshney](#), [@Ayush Gupta](#) for their continuous guidance and support.

Vikram Varshney <vikram.varshney@indiamart.com>

Thu, Apr 7, 2022 at 11:13 AM

To: Ashutosh Singh <ashutosh.singh@indiamart.com>, Alok Kumar Shukla <shukla.alok@indiamart.com>

Cc: Marketplace Launch <marketplacelaunch@indiamart.com>, Dinesh Agarwal <da@indiamart.com>, Amarinder S Dhaliwal <amarinder@indiamart.com>, Abhishek Bhartiya <abhishek@indiamart.com>, Samarendra Pratap <samarendra.pratap@indiamart.com>, Ayush Gupta <ayush.gupta@indiamart.com>, Neha Singh <neha.singh2@indiamart.com>, Rohan Verma <verma.rohan@indiamart.com>, Ravi Kumar <kumar.ravi5@indiamart.com>, Himanshu Jain <himanshu.jain2@indiamart.com>, Paras Lehana <paras.lehana@indiamart.com>, Akshansh Narula <akshansh.narula@indiamart.com>, cat_internal <cat_internal@indiamart.com>

Very very good work on performance !!

++ [+Alok Kumar Shukla](#) - training paid off :) .. We should organize the second batch.

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Vikram Varshney

9810700307

ext - 1106

Vikram Varshney <vikram.varshney@indiamart.com>

Thu, Apr 7, 2022 at 11:48 AM

To: Ashutosh Singh <ashutosh.singh@indiamart.com>, Alok Kumar Shukla <shukla.alok@indiamart.com>, Alok Kumar Mubai

<alok.mubai@indiamart.com>

Cc: Marketplace Launch <marketplacelaunch@indiamart.com>, Dinesh Agarwal <da@indiamart.com>, Amarinder S Dhaliwal <amarinder@indiamart.com>, Abhishek Bhartiya <abhishek@indiamart.com>, Samarendra Pratap <samarendra.pratap@indiamart.com>, Ayush Gupta <ayush.gupta@indiamart.com>, Neha Singh <neha.singh2@indiamart.com>, Rohan Verma <verma.rohan@indiamart.com>, Ravi Kumar <kumar.ravi5@indiamart.com>, Himanshu Jain <himanshu.jain2@indiamart.com>, Paras Lehana <paras.lehana@indiamart.com>, Akshansh Narula <akshansh.narula@indiamart.com>, cat_internal <cat_internal@indiamart.com>

Sorry for typo ...