Anton Martyniuk • Following

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2w • 🌐

I wasted a week implementing a feature with EF Core

Until I realized this ...

That I am re-inventing a wheel. People have already done what I am wasting time for.

I was implementing an import of a big number of rows into a database. I needed a smart import: some data needed to be inserted, some updated and some even deleted.

I had to process about a half of a million records.

I tried different solutions to make this important fast, but it didn't work.

SqlBulkCopy didn't fit my needs as I used a Postgres database. Other libraries didn't offer ready features for the smart import.

Here is where I found **EF Core Extensions** library. With its help, I was able to examine docs and implement the import within a few hours. It saved me more than 10x of development time. With its help, I was able to import my data in less than a minute.

EF Core Extensions library has the following features:

- Fast bulk inserts with a single line of code

- Bulk inserts of a graph of child entities

- BulkUpdate, BulkDelete

- Bulk Merge and Bulk Synchronize (the method I used)

- Supports: SQL Server, Postgres, MySQL, Oracle, MariaDB, SQLite

- It has tens or maybe enve hunderns of customization options

Give **EF Core Extensions** a try, and it might be your best investment this year for fast saving of thousands and millions of records to the database:

https://lnkd.in/ee8tHPis

I partnered with the authors of **EF Core Extensions** and wrote a detail guide for you on using the library:

https://lnkd.in/eiwcFXa6

Share about the problems you faced with slow inserts in EF Core. What solutions did you use to fix the problems?

Leave a comment down below 👇

M Mizanur Rahman and 287 others

76 comments · 32 reposts

Like

Comment

Repost

Send

Very helpful

Great advice

I agree

Interesting

Love thi

Most relevant

Milan Jovanović in • Following   2w
Practical .NET and Software Architecture Tips | Microsoft MVP

How does it work under the hood? What's the generated SQL?

Like   😊 8 | Reply   3 replies

See previous replies

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Folabi, Thierry AHOUNOU I explained in the "reply" above

Like | Reply

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | Techn...

Get started with EF Core Extensions:

https://entityframework-extensions.net/?

utm_source=antondevtips&utm_medium=newsletter&utm_campaign=april-2025

Entity Framework Extensions

Optimize EF Core and EF6 with Entity Framework Extensions. Use the fastest Bulk Extensions to perform Bulk

Insert, Bulk Update, Bulk Delete, Bulk Merge, and Bulk Upsert operations with compatibility across all EF...

Like   💡 1 | Reply

Adnan Maqbool Khan • 2nd   2w
50k+ LinkedIn | Engineering Lead | .NET | Microservices | Azure | Vue | React | Angular | Typescript | Rab...

Thoughtful post, thanks Anton

Like   👏 1 | Reply   1 reply

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Adnan Maqbool Khan thank you

Like | Reply

Stefan Đokić • Following   2w
➡️ I help you to improve your .NET knowledge! | Microsoft MVP

Love Bulks with EF Core Extensions. I'm running Benchmarks currently to check performance.

Like 👍 1 | Reply **1 reply**

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Stefan Đokić they also have benchmarks in dotnetfiddle, you can play around with in your browser

Like | Reply

Folabi, Thierry AHOUNOU • 2nd   2w
Building efficient web and mobile solutions | Freelance | Full remote | Angular, Ionic, C#, .NET | Sharing ...

Interesting post. Do the features rely on raw SQL or magic :) ?

Like 👍 1 | Reply **1 reply**

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Folabi, Thierry AHOUNOU they rely on SQL without any magic

Like 👍 1 | Reply

Andrea Garofoli • 2nd   2w
💻 Full Stack Developer | .NET & PHP | System Administrator 🚀

Best tools, but is not free.

Like 👍 1 | Reply **1 reply**

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Andrea Garofoli it's worth the money

Like | Reply

Dzmitry Karelin • 3rd+   2w
Senior Full-Stack Developer @ Vention | .NET+React

I had the same issue before. I solved it by using a single genericRepo.Update after mapping the
incoming collection to the existing entities with AutoMapper including nested collections.

Like 👍 1 | Reply   1 reply

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Dzmitry Karelin interesting

Like | Reply

Isha Fatima • 2nd   2w
Full Stack Software Engineer | .NET Core & Angular Specialist | Blazorise, MVC, Web API | Solving Real-...

Insightful

Like 👍 1 | Reply   1 reply

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Isha Fatima thanks

Like | Reply

Othmane Teffahi • 2nd   2w
Software Engineer | .NET C# Backend / Mobile | Building scalable, high-performance applications.

Really interesting. I faced many problems with these use cases, such as tracking entity issues, and it led
to writing raw SQL. but this extension is life-saving.

thanks for sharing

Like 👍 1 | Reply   1 reply

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Othmane Teffahi you're welcome

Like | Reply

Emad Khan • 2nd

2w

.NET Architect & Technical Lead | Driving Innovative & Scalable Cloud Solutions | Available for Remote ...

It's good but it's paid.

Like 👍 1 | Reply   1 reply

Anton Martyniuk   Author

2w

Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Emad Khan it's worth the every cent

Like | Reply

Asim Noor • 2nd

2w

10k+| Sr. Software Engineer (.NET) | 200+ Satisfied Clients | TOP Rated Upwork Freelancer | 🌐 ASP.NET ...

We love reinventing the wheel until it burns us 😅

Like 👍 1 | Reply   1 reply

Anton Martyniuk   Author

2w

Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Asim Noor exactly

Like | Reply

Nikola Knežević • 2nd

2w

Daily Insights, Features, and fresh knowledge about .NET, Software Engineering, and Software Architect...

Thanks for sharing, Anton

Like 👍 1 | Reply   1 reply

Anton Martyniuk   Author

2w

Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Nikola Knežević you're welcome

Like | Reply

Pavlo Varava • 3rd+

(edited) 2w

.Net developer

Good to mention that it is not a free library

Like 🔵 4 | Reply 3 replies

See previous replies

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Pavlo Varava you can explore the available options of the library and judge what time you need to

implement this yourself and time to fix all the bugs. You will find out that library really will cost

much less, especially for the company. What I like about EF Extensions - is their amazing support

Like | Reply

Petar Ivanov • 2nd   2w
Practical React, Node, and Software Architecture Tips 🔥 | Author of "The Conscious React" book 🛸

Looks awesome, Anton Martyniuk! 🙌

Like 🔵 1 | Reply 1 reply

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Petar Ivanov thank you

Like | Reply

Alireza Najarnezhad • 2nd   2w
Software Developer (.Net Core | C# | Blazor | Oracle | SQL | Angular | Kafka | ActiveMQ)

Thanks for sharing

Like 🔵 1 | Reply 1 reply

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Alireza Najarnezhad you're welcome

Like | Reply

Sina Riyahi • 2nd   2w
Software Developer | Software Architect | SQL Server Developer | .Net Developer | .Net MAUI | Angular ...

Very helpful **Anton Martyniuk**

Like   👍 1 | Reply   1 reply

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Sina Riyahi thank you

Like | Reply

Do Cuong • 3rd+   2w
Software Engineer

For the BulkSync method, looks like we truncate the whole table then add the newly list

Like   👍 1 | Reply   2 replies

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Softw...

Do Cuong no, it's not

Like   👍 1 | Reply

Do Cuong • 3rd+   2w
Software Engineer

Anton Martyniuk ah yep it just sync the selected items.

Like | Reply

Collapse replies

Pervaiz Akhtar • 2nd   2w
Helping SMEs transform software into workable & scalable solutions | Founder @Vizzon | Senior Softwa...

Been there! It's wild how much time we can save by finding the right tool at the right time. EF Core

Extensions sounds like a lifesaver. **Anton Martyniuk**

Like   👍 1 | Reply   1 reply

Anton Martyniuk Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

> **Pervaiz Akhtar** thanks

Like | Reply

Poorna Soysa • 2nd   2w
Tech Enthusiast | .NET | C# | Azure | AWS | SAP

Nice tip **Anton**. How do they improve SQL than other tools?

Like 👍 1 | Reply **1 reply**

Anton Martyniuk Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

> **Poorna Soysa** they use temporary tables under the hood for fast write operations

Like | Reply

Aman kumar • 3rd+   2w
Focused. Fast. JavaScript Only || @aman_kkumar on X || We don't do everything. We do JavaScript

Saved hours of work with the right tool!

Like 👍 1 | Reply **1 reply**

Anton Martyniuk Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

> **Aman kumar** exactly

Like | Reply

Pavle Davitković • 2nd   2w
Software Engineer @TraceOne

Where are the benchmarks? 😁

Like 👍 1 | Reply **1 reply**
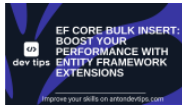
Anton Martyniuk Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Pavle Davitković you can find links to benchmarks in my blog post:

https://antondevtips.com/blog/ef-core-bulk-insert-boost-your-performance-with-entity-framework-extensions?utm_source=linkedin&utm_medium=social&utm_campaign=16-04-2025

EF Core Bulk Insert: Boost Your Performance With Entity Framework Extensions

Explore the best solution on the market for fast Bulk Inserts in EF Core with Entity Framework Extensions Library. BulkInsert, BulkUpdate, BulkDelete, BulkMerge,...

Like 👍 2 | Reply

Aram Tchekrekjian • 2nd   2w
Microsoft MVP | Follow me to get better in .NET, C#, and ASP.NET Core | codingsonata.com | Technical ...

Bulk Merge and Bulk Synchronize are new methods to me, really interesting to know such details.

Thanks for sharing.

Like 👍 1 | Reply   1 reply

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Aram Tchekrekjian you're welcome

Like | Reply

Siddhartha S • 2nd   2w
Senior Software Engineer & Application Architect | Expert in Building Scalable, Reliable, High-Performan...

This is gold! Did you explore performance differences between BulkMerge and BulkSynchronize? When would you pick one over the other?

Like 👍 1 | Reply   1 reply

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Siddhartha S performance really depends on the shape of data. Actually BulkMerge is faster as it

does less things. Based on the use cases I decide which method to use:

- insert or update (upsert): BulkMerge

- insert, update and delete (unexisting records): BulkSynchronize

Like | Reply

Alexandre Zajac • 2nd   2w
SDE & AI @Amazon | Building Hungry Minds to 1M+ | Daily Posts on Software Engineering, System Des...

Look like a great tip!

Like 👍 1 | Reply   **1 reply**

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Alexandre Zajac thank you

Like | Reply

BABATUNDE ESANJU • 2nd   2w
Senior Software Engineer | Global Tech Hero | Cloud-Native Applications | .NET Specialist | Microservices...

Thanks for sharing, Anton

Like 👍 1 | Reply   **1 reply**

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

BABATUNDE ESANJU you're welcome

Like | Reply

Ahmed Yezdane • Following   2w
Back-End Developer | ASP.NET Core | Back end Developer Dotnet | .Net Enthusiastic | Software Engineer...

Good tip Anton 👍

Like 👍 1 | Reply   **1 reply**

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Ahmed Yezdane thanks

Like | Reply

Elliot One • 2nd   2w
AI-Powered SaaS Builder | Founder @ XANT & Monoversity | Entrepreneur

Thanks for sharing, Anton

Like   👍 1 | Reply   **1 reply**

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Elliot One you're welcome

Like | Reply

Raul Junco • Following   2w
Simplifying System Design

👀

SaveChanges vs Bulk Insert

Operations	1,000 Entities	2,000 Entities	5,000 Entities
SaveChanges	1,200 ms	2,400 ms	6,000 ms
BulkInsert	50 ms	55 ms	75 ms

Like   👍 1 | Reply   **1 reply**

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Raul Junco this is the way

Like | Reply

Felic Komarno • 2nd   2w
Experienced .NET Developer | Specializing in C#, ASP.NET Core | 3.5+ Years On Software Developer

It saved so much time and the code is clean. thanks for sharing this **Anton**

Like   👍 1 | Reply   **1 reply**

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Felic Komarno you're welcome

Like | Reply

Muhammad Babar • 2nd   2w
Helping 35k+ Software Engineers | Senior .NET Fullstack Engineer | @ Systems Limited | Microservices | ...

Thanks for sharing

Like 👍 1 | Reply **1 reply**

Anton Martyniuk Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Muhammad Babar you're welcome

Like | Reply

Karam Khoury • 2nd   2w
Lead Software Engineer | Certified Team Leader & Scrum Master (PSM I) | Architecting Scalable .NET & ...

What a great find, thanks for sharing!

Like 👍 1 | Reply **1 reply**

Anton Martyniuk Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Karam Khoury you're welcome

Like | Reply

Dale P. • 3rd+   2w
SaaS Owner | Servant Leader | Entrepreneur | Private Pilot (SEL) | Gamer (Mobile, PC) | Soccer Player/Ref ...

Oh wow bulk sync would have saved me some craziness as well.

I implemented it using ExceptBy and IntersectBy to get my collections to update, delete, insert and

then act accordingly on each collection.

Like 👍 1 | Reply **1 reply**

Anton Martyniuk Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | ...

Dale P. yes, it saves a lot of time

Like | Reply

Pedro Constantino • 2nd   2w
.NET Software Engineer | Full Stack Developer | C# | Angular | AWS | Blazor

I've encountered similar challenges with bulk inserts in EF Core, especially when working with huge

datasets, new good methods for me, thanks Anton

Like 👍 1 | Reply   **1 reply**

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | …

Pedro Constantino you're welcome

Like | Reply

Romain Ottonelli Dabadie • Following   2w
Author of Mastering Visual Studio | 👨‍👩 Proud husband & dad | 💻 Senior Software Engineer | .NET Ent…

I investigated to used it few years ago for bulk insert, but we finally do it in another way.

Are those extensions free?

Like 👍 2 | Reply   **1 reply**

Anton Martyniuk   Author   2w
Microsoft MVP | Helping 30K+ Software Engineers Improve .NET Skills and Craft Better Software | …

Romain Ottonelli Dabadie it's not free. but it's worth the money

Like | Reply

Amir Sadati • 2nd   (edited) 2w
Software Engineer | Blockchain Enthusiast | .NET | Golang | Solidity

Thanks for sharing, **Anton Martyniuk**

Like | Reply

Manish Gour • 2nd   2w
Senior .NET Developer | ASP.NET Core | Microservices | REST API Integration | PostgreSQL | Dapper | Ent…

Thanks for sharing, Anton

Like | Reply

Hoang Le • 2nd   2w
Software Engineer

Thanks for sharing, Anton

Like 👍 1 | Reply

Kumar Aryan • 3rd+   2w
--

Thanks for sharing, Anton

Like | Reply