

## LeanXcale for startups

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## LeanXcale for startups

Startups need to be agile to learn as fast as they could. They need to learn about their customers, their market and competitors.

LeanXcale aims to help, thanks to its startup program, providing a world-class database for free until the startup turn into a scale-up.

LeanXcale can help startups to have a more robust architecture to everything will come, to be flexible to pivot without technical pain and develop new features fast and with easy-to-find SQL developers.

## What is LeanXcale?

LeanXcale is a new generation database that groups the characteristics of a full database stack in a single engine, managing data at any scale while fully meeting ACID properties.

It is designed to scale adapting to the workload a startup requires as it grows. It can handle any workload type at scale. This versatility makes LeanXcale the perfect option for startups where the business needs can pivot fast.

## Our Benefits

### Ready for your success

LeanXcale can manage any volume your business will have. You will not need to rebuild your architecture when your customer base increases exponentially. Because the moment you succeed is the worst moment to face any dramatic technological change.

### Agile

It is ready for any workload (operational, analytical, SQL or event oriented) allowing the development of new features as fast as your business needs.

### Simple

With LeanXcale your architecture is SQL based, you will not need to maintain different systems, and you won't need to learn a bunch of specific new APIs to each of the data challenges you may face.

## The origin: the Iguazu algorithm

NoSQL vendors have appeared under the wrong belief that the CAP theorem restricts the scalability of transactional management. Some NoSQL solutions offer scalability by trading off database consistency and at the cost of losing SQL ease of use. Around those solutions, a full portfolio of new architectures has been designed, making systems even more difficult to maintain and develop.

Dr. Ricardo Jimenez Peris, a former professor and researcher at The Technical University of Madrid (UPM) has spent the last twenty years investigating this field. Eight years ago, he decided to start from scratch, ignoring all his previous research, trying to sort out an enormous challenge: How to make a database scale out linearly with no bottleneck.

He managed to solve it thanks to a smart distributed algorithm that provides an elegant solution that runs on commodity hardware, either on-premise or in the cloud. This algorithm is called 'The Iguazu algorithm'.

Iguazu is a disruptive algorithm that allows you to launch all the potential of your business ideas, scaling as much as your company needs.

## LeanXcale's technology

LeanXcale is more than Iguazu algorithm. It is a powerful new SQL database with more than ten unique technologies that allow an extremely versatile usage.

With LeanXcale you can have just a single database engine that covers all the data management stack, from in-memory to big data queries. LeanXcale is not a set of modules, is a single database that can handle different types of requests over the same dataset

DATABASE/WORKLOAD TYPE	LEANXCALE EQUIVALENCE	SECRET SAUCE
<b>RDBMS</b>	It is a full ACID relational database.	Iguazu algorithm allows managing parallel transactions at any scale. From one to hundreds of nodes.
<b>Data warehouse</b>	It is an OLAP database.	LeanXcale allows you to perform analytical queries over the operational data. No ETLs are needed.

<b>Key-Value</b>	It has a fast insertion API that accesses directly to the storage engine.	With LeanXcale all the information is accessible through the Key-Value and SQL interfaces at the same time.
<b>Fast Aggregation</b>	It manages basic aggregation operations in updates.	Aggregations at any scale are always persisted due to the Iguazu algorithm.
<b>Documental</b>	It handles JSON documents.	

## Use cases

LeanXcale is a very flexible new SQL database; it can be used in multiple scenarios. Some of them are:

### First approach to LeanXcale: Real-time analytics

Users need to get KPI and insights from their systems, platforms, and businesses. They need to make decisions from them to act as a data-driven company.

Nevertheless, current technologies are not able to process all this information in real-time for significant volumes of data. With these technologies, the approach is to extract the row information, transform it and load it in a different system to perform the analytical operations periodically (ETLs). This option makes the customer blind for hours or days and may delay critical decisions.

Real-time analytics allow the analysis of data as soon as that data becomes available. It makes users decision faster and savvier.

LeanXcale leverages the capacity to create services running analytical queries on the operational data with no delay. No ETLs or even more complex architectures are needed anymore.

Real-time analytics capability allows companies to react promptly, create new services and reduce management costs.

This capability can add outstanding value to your company and opens new opportunities.

## Full LeanXcale value: Lambda Architecture vs Iguazu Architecture

The Lambda architecture is a data-processing architecture designed to handle massive data by taking advantage of both batch and stream-processing methods.

It is frequently implemented using components such as Cassandra, Hive, HDFS, Kafka, Storm, Spark, HBase, Impala or Druid.

This architecture has some well-known problems:

- maintenance, since its complexity
- synchronicity and consistency, since it has a couple of data sources
- development cost, since it requires a full range of knowledge and specific skills

"Iguazu Architecture" is an alternative to the complex Lambda Architectures. Since LeanXcale can handle OLTP and OLAP workloads at the same time, the solution is much simpler to maintain and develop, and there are no problems of synchronicity and consistency. With LeanXcale, there is only a single database engine to keep all the data and run transactional or analytical queries over it.

Finally, the "Iguazu" algorithm allows being ready for any scale with this simple architecture.

## LeanXcale program for startups

We want to help new ideas become true. Our contribution to this goal is to offer our database engine for free to startups.

### Pricing for startups

SEED	EARLY STAGE	GROWTH
Under 250K€ revenue and less than 1M€ investment	Under 1M€ revenue and less than 3M€ investment	More than 1M€ revenue or more than 3M€ investment
FOR FREE	50% DISCOUNT	NORMAL PRICE

## About LeanXcale

LeanXcale was founded by a group of top researchers in the field of databases. To this group has been enriched with a group of engineers with experience from several industries and a selected cabinet of advisors: Glen Osaka (PayPal advisor at the time of Elon Musk) or the distributed database guru Patrick Valduriez stand out among them.

## Resources

Visit [www.leanxcale.com](http://www.leanxcale.com) for more information, or contact us at [info@leanxcale.com](mailto:info@leanxcale.com).

Free Trial (<https://www.leanxcale.com/trial>)

Documentation and drivers (<https://www.leanxcale.com/company-resources>)

Whitepapers and videos (<https://www.leanxcale.com/company-resources>)

Get a demo (<https://www.leanxcale.com/get-a-demo>)

Talks (<https://www.leanxcale.com/talks>)

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