



Index Frontier 5 Pro

A registered index-linked annuity



Confidently plan for your future with the Index Frontier 5 Pro

When you envision a future that fulfills you, maybe you see yourself traveling, cooking, spending time with family or discovering a new hobby. Whatever it is, our goal is to help you navigate your future with confidence.

THE INDEX FRONTIER 5 PRO REGISTERED INDEX-LINKED ANNUITY OFFERS:



Growth opportunity

You can allocate your money to indexed strategies that may help you accumulate additional savings without investing directly in the market.



Tax treatment that allows faster growth

Your money may grow at a faster rate since taxes are deferred until you take a withdrawal or annuitize your contract.



Partial protection from loss

Each indexed strategy limits your risk exposure with either a floor or buffer.



A legacy for your loved ones

In the event of your passing before the annuity benefit payout begins, your beneficiaries will receive the greater of your annuity's current account value or your initial purchase payments reduced proportionally for withdrawals.



Guaranteed income

Unlike equity and fixed income investments, the Index Frontier[®] 5 Pro provides the opportunity to turn the money you've accumulated in your annuity into a guaranteed stream of income that can last for the rest of your life.



The Index Frontier 5 Pro has a 5-year early withdrawal charge schedule and a contract fee deducted daily from each strategy. See page 20 for more information.

The Index Frontier 5 Pro is a security that can only be sold through a Broker/Dealer that is contracted with MassMutual Ascend Life Insurance Company. This material must be preceded or accompanied by a prospectus. To obtain a copy of the prospectus, visit [MassMutualAscend.com/RILArates](https://www.massmutualascend.com/RILArates).

Annuity basics

An annuity is a financial product that's designed to provide complete or partial downside protection, growth potential and a stream of guaranteed income.

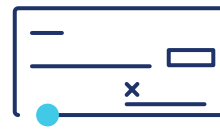
HERE'S HOW IT WORKS:



You purchase an annuity by making a payment to an insurance company.



Your annuity can grow in value over time.



When you're ready to start receiving income, your annuity can be turned into a steady stream of payments.



**Other than pensions,
annuities are the only products
that provide guaranteed
lifetime income.**

Finding the right balance with the Index Frontier 5 Pro

There's no one-size-fits-all approach to financial planning, and it's important to consider the possible outcomes of different investment options.

Investing in equities can be a lucrative way to grow your savings, but with no protection against loss of principal, a market downturn could wipe out years of savings.

Fixed income investments, such as money market or bond funds, can provide some protection against market downturns. However, such investments could provide little in return, jeopardizing your future plans.

Fortunately, there's another solution to help bring balance to your financial portfolio. The Index Frontier 5 Pro registered index-linked annuity is designed to help you take advantage of some market growth, while providing a level of protection from market loss.

A portfolio weighted heavily to equities may provide higher returns, but it could be too risky if you are nearing or in retirement.



A portfolio weighted heavily to fixed income may provide a level of protection, but it could make it difficult to grow your savings.



Growth opportunity with a level of protection

When you purchase an Index Frontier 5 Pro annuity, you have the opportunity to allocate your money to indexed strategies that can help your savings grow.

With an indexed strategy, your money earns a return based on the performance of an external index or exchange traded fund (ETF), providing a unique opportunity for market-linked growth without investing directly in the market.

Indexed strategies allow you to take advantage of positive market performance, while providing a level of protection from market losses. You can choose between two types of protection: a **buffer** and a **floor**.

On the following pages, we'll take a closer look at how these types of protection work.

With an Index Frontier 5 Pro annuity, you have the flexibility to choose the strategies that are right for you. We know your needs may change over time, so you can revisit your strategy selections at the end of each one-year term.



How the buffer strategy works

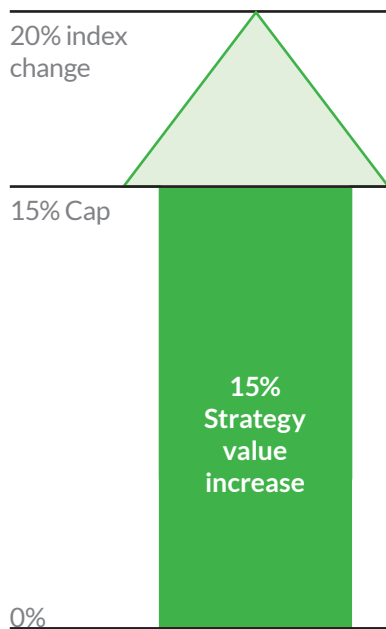
The Index Frontier 5 Pro offers a **10% buffer indexed strategy**, which provides earning potential up to a cap and protects against the first 10% of index losses each term. This strategy offers protection against small market fluctuations, so it may be a good fit if you're seeking protection against minor downturns. In exchange for taking on greater risk, this strategy typically offers the highest earning potential of the available strategies.

HERE'S HOW IT WORKS:

- If the index change is positive at the end of a term, the strategy value grows, up to a cap
- If the index change is negative at the end of a term, the strategy value is protected against the first 10% of the index loss
 - If the negative index change is between 0 and -10%, the strategy value will not decrease
 - If the negative index change is greater than -10%, the strategy value will decrease by the remaining loss in excess of -10%

Let's take a look at how the 10% buffer strategy value would have changed in the event of positive and negative index performance.

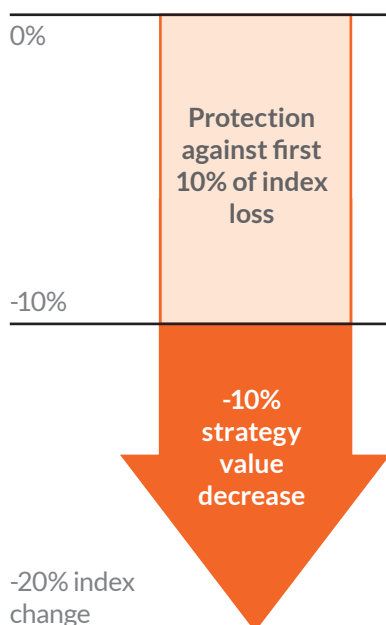
The following example illustrates hypothetical 10% buffer strategy returns when the index change is **positive** and **negative**. The example assumes the 10% buffer strategy offered a 15% cap.



The example shows how a 20% index change would result in strategy value growth, up to the 15% cap.

Different index changes would result in different strategy value changes. The table below shows alternative index changes and their resulting strategy value changes.

INDEX CHANGE	STRATEGY VALUE
20%	15%
15%	15%
10%	10%
5%	5%
0%	0%



The example shows how a -20% index change would result in strategy value loss. The buffer protected against the first 10% of the loss, and the strategy value decreased by the remaining 10%.

Different index changes would result in different strategy value changes. The table below shows alternative index changes and their resulting strategy value changes.

INDEX CHANGE	STRATEGY VALUE
-5%	0%
-10%	0%
-15%	-5%
-20%	-10%

How the floor strategies work

The Index Frontier 5 Pro also offers floor indexed strategies, which provide a set level of protection against market downturns. You have the choice between **-10% floor strategies** and **0% floor strategies**.

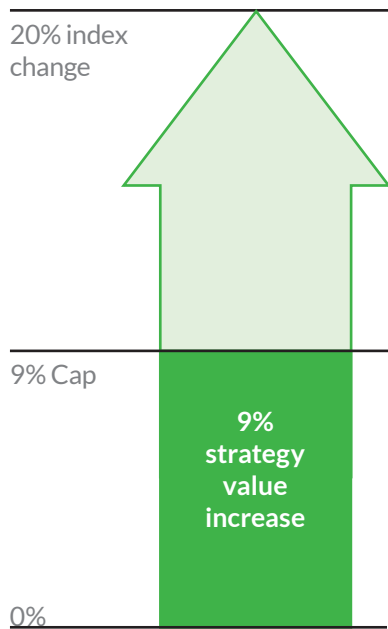
A **-10% floor indexed strategy** provides earning potential up to a cap and protects against index losses in excess of -10%. These strategies offer a set level of protection each term, so they may be a good fit if you want to limit your downside risk in the event of significant market downturns. In exchange for a set level of protection, a -10% floor strategy offers moderate earning potential.

HERE'S HOW IT WORKS:

- If the index change is positive at the end of a term, the strategy value grows, up to a cap
- If the index change is negative at the end of a term, the strategy value is protected against index losses in excess of -10%
 - If the negative index change is between 0 and -10%, the strategy value will decrease by the negative index change
 - If the negative index change is greater than -10%, the strategy value decrease is limited to -10%

Let's take a look at how a -10% floor strategy value would have changed in the event of positive and negative index performance.

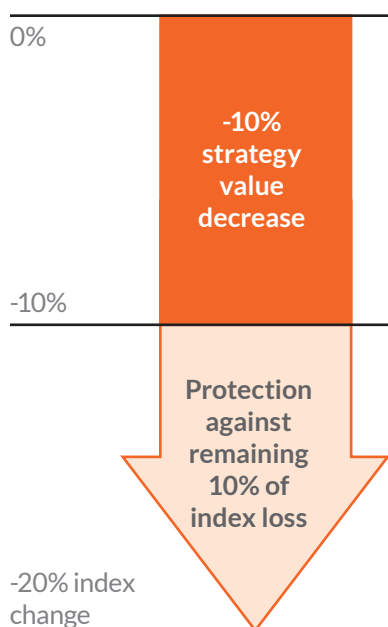
The following example illustrates hypothetical -10% floor strategy returns when the index change is **positive** and **negative**. The example assumes the -10% floor strategy offered a 9% cap.



The example shows how a 20% index change would result in strategy value growth, up to the 9% cap.

Different index changes would result in different strategy value changes. The table below shows alternative index changes and their resulting strategy value changes.

INDEX CHANGE	STRATEGY VALUE
20%	9%
15%	9%
10%	9%
5%	5%
0%	0%



The example shows how a -20% index change would result in strategy value loss. The -10% floor limited losses to -10%.

Different index changes would result in different strategy value changes. The table below shows alternative index changes and their resulting strategy value changes.

INDEX CHANGE	STRATEGY VALUE
-5%	-5%
-10%	-10%
-15%	-10%
-20%	-10%

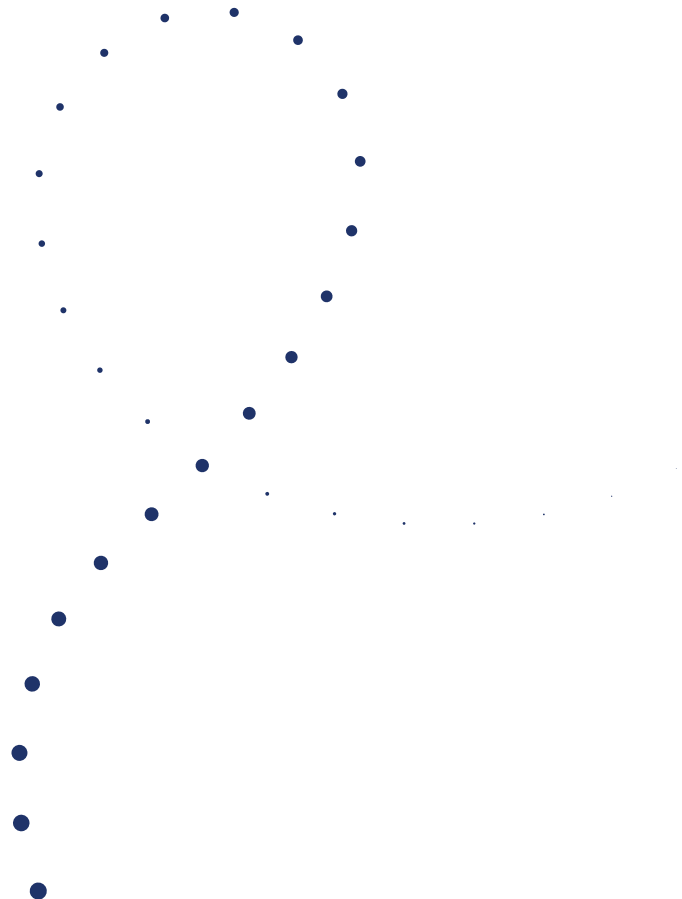
How the floor strategies work

A 0% floor indexed strategy provides earning potential up to a cap and complete protection against index losses. In exchange for complete protection, a 0% floor strategy offers more modest earning potential than other available strategies.

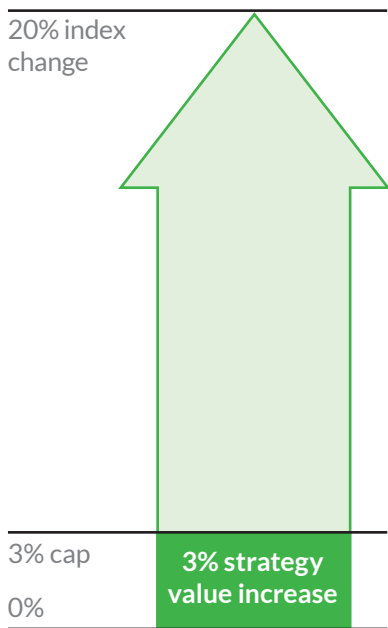
HERE'S HOW IT WORKS:

- If the index change is **positive** at the end of a term, the strategy value grows, up to a cap
- If the index change is **negative** at the end of a term, the strategy value will not decrease

Let's take a look at how a 0% floor strategy value would have changed in the event of positive and negative index performance.



The following example illustrates hypothetical 0% floor strategy returns when the index change is **positive** and **negative**. The example assumes the 0% floor strategy offered a 3% cap.



The example shows how a 20% index change would result in strategy value growth, up to the 3% cap.

Different index changes would result in different strategy value changes. The table below shows alternative index changes and their resulting strategy value changes.

INDEX CHANGE	STRATEGY VALUE
20%	3%
15%	3%
10%	3%
5%	3%
0%	0%



The example shows how a -20% index change would not impact the strategy value, because a 0% floor strategy provides complete protection against index loss.

Different index changes would result in different strategy value changes. The table below shows alternative index changes and their resulting strategy value changes.

INDEX CHANGE	STRATEGY VALUE
-5%	0%
-10%	0%
-15%	0%
-20%	0%

Diversify your earning potential

Now that you know how caps, floors and buffers are applied within indexed strategies, let's take a look at the underlying index and exchange traded funds (ETFs) that these indexed strategies are linked to:

- **S&P 500® Index:** Includes stocks issued by 500 of the top companies in leading industries of the U.S. economy
- **iShares MSCI EAFE ETF:** Seeks to track the investment results of an index composed of developed market equities, including those in Europe, Australia, Asia and the Far East, but excluding the U.S. and Canada
- **iShares U.S. Real Estate ETF:** Seeks to track the performance of the Dow Jones U.S. Real Estate Index, which is composed primarily of U.S. equities in the real estate sector and real estate investment trusts (REITs)

By allocating your money among the various strategies, you can diversify your earning potential.



The underlying index and ETFs are well-known, which means their daily value information is readily available from reliable and credible sources.



Important things to know

Consider your liquidity needs

The Index Frontier 5 Pro is intended to be a long-term product. However, you will have access to a portion of your money each year without charges.

During the first contract year, you may withdraw up to 10% of your purchase payments without an early withdrawal charge. After the first contract year, 10% of the account value as of the most recent contract anniversary may be withdrawn without an early withdrawal charge.

It's important to note withdrawals in excess of this amount will be subject to **early withdrawal charges**. Early withdrawal charges end after five years.

Annual fees

A fee is deducted from each strategy on a daily basis and compounds to an effective annual rate of 0.50%.



If you withdraw money from an indexed strategy before the end of a one-year term, it will affect your return for that term. Any gain on the withdrawal date will be limited by the cap and a vesting factor. You are not fully vested in market gains until the final day of a term. You are fully vested in market losses every day of the term, so any loss on the withdrawal date will be limited only by the applicable buffer or floor.

For annuity contracts, income earned on the contract is subject to income tax as ordinary income when withdrawn. If you are under age 59½, the taxable amount may also be subject to a 10% federal penalty tax. Generally income tax rates on ordinary income are higher than capital gains tax rates on long-term capital gains and qualified dividend income.



Photo submitted by
Ray from **Texas**,
valued annuity customer
since **2016**.



MassMutual Ascend

Taking financial futures above and beyond

At MassMutual Ascend, we are committed to going above and beyond – so when it comes to your financial future, the impossible feels possible.

As a leading provider of annuities, we see our products as more than just contracts. Our annuities are transparent and easier to understand, so you always know what to expect.

We have a long history of financial strength and stability. We've received an "A" or higher rating by AM Best for more than 40 years, so you can have confidence knowing we'll be here when you need us. We are a wholly owned subsidiary of MassMutual, one of the largest life insurance companies in the U.S., founded in 1851.

And finally, everything we do is rooted in a culture of service. From our people to our technology, we strive to always provide you with what you need, when you need it.

The status quo isn't a status we ever want. At MassMutual Ascend, we'll always be in pursuit of better – so you can navigate your future with confidence.

Learn more at [MassMutualAscend.com](https://www.massmutualascend.com).

Index Frontier 5 Pro features

ISSUE AGES	Qualified: 0–80 Non-qualified: 0–80	Inherited IRA: 0–75 Inherited non-qualified: 0–75														
PURCHASE PAYMENTS	You can purchase this annuity with an initial purchase payment of \$25,000 or more. You can add to your annuity during the first two contract months with additional purchase payments of at least \$10,000.															
FEES	A fee is deducted from each strategy on a daily basis and compounds to an effective annual rate of 0.50%.															
PENALTY-FREE WITHDRAWALS	During the first contract year, you may withdraw up to 10% of your purchase payments without an early withdrawal charge. After the first contract year, 10% of the account value as of the most recent contract anniversary may be withdrawn without an early withdrawal charge. Amounts withdrawn in excess of the penalty-free withdrawal allowance may be subject to early withdrawal charges.															
EARLY WITHDRAWAL CHARGES	During the first five contract years, an early withdrawal charge is applied to surrenders and withdrawals that exceed the 10% penalty-free withdrawal allowance. All charges end after five years. <table border="1" data-bbox="435 863 1304 940"> <thead> <tr> <th>Contract year</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6+</th> </tr> </thead> <tbody> <tr> <td>Early withdrawal charge rate</td> <td>8%</td> <td>7%</td> <td>6%</td> <td>5%</td> <td>4%</td> <td>0%</td> </tr> </tbody> </table>		Contract year	1	2	3	4	5	6+	Early withdrawal charge rate	8%	7%	6%	5%	4%	0%
Contract year	1	2	3	4	5	6+										
Early withdrawal charge rate	8%	7%	6%	5%	4%	0%										
INDEXED STRATEGIES	S&P 500® <ul style="list-style-type: none"> • 10% Buffer Indexed Strategy • -10% Floor Indexed Strategy • 0% Floor Indexed Strategy iShares U.S. Real Estate ETF <ul style="list-style-type: none"> • -10% Floor Indexed Strategy • 0% Floor Indexed Strategy <i>Available strategies may vary by state and by distribution. A cap will never be lower than 1%.</i>	iShares MSCI EAFE ETF <ul style="list-style-type: none"> • -10% Floor Indexed Strategy • 0% Floor Indexed Strategy 														
TERM	Each strategy offers a one-year term.															
BAILOUT FEATURE	The Index Frontier 5 Pro features a bailout on the indexed strategies. This feature allows you to withdraw your money from the strategy without penalty at the end of a term if the cap for the indexed strategy falls below its bailout trigger.															
INCLUDED WAIVER RIDERS	<p>Extended care waiver rider: After the first contract year, if you are confined to a nursing home or long-term care facility for at least 90 consecutive days, you have the option to withdraw up to 100% of the account value without incurring an early withdrawal charge. To qualify under this rider, a hospital, nursing home or long-term care facility must provide nursing services 24 hours a day and the confinement must be prescribed by a physician and be medically necessary, and comply with other terms and conditions set out in the rider.</p> <p>Terminal illness waiver rider: After the first contract year, if you are diagnosed by a physician as having a terminal illness, you have the option to withdraw up to 100% of the account value without incurring an early withdrawal charge. A terminal illness is defined as having a prognosis of survival of 12 months or less, or a longer period as required by state law.</p> <p><i>Extended care and terminal illness waiver riders are not available in Massachusetts. In California, the Extended Care Waiver Rider has been replaced with the Waiver of Early Withdrawal Charges for Facility Care or Home Care or Community-Based Services Rider, which provides for a waiver of early withdrawal charges under an expanded variety of circumstances.</i></p>															

VESTED GAINS AND LOSSES	<p>Each day of a term, the value of an indexed strategy includes any vested gain or loss since the start of the term.</p> <p>Vested gain: Any positive index change since the start of the term (but not exceeding the cap set for that term), multiplied by the applicable vesting factor for that day and multiplied by the remaining investment base for that term.</p> <p>Vested loss: Any negative index change since the start of the term (after taking into account the buffer or floor for each term) multiplied by the remaining investment base for that term.</p>
CAPS, BUFFERS AND FLOORS	<p>Cap: The largest positive index change for a term that is taken into account to determine the vested gain for that term. The return on an indexed strategy for a term may be less than the cap for that term. Caps will vary by indexed strategy and from term to term, but will never be less than 1%. In the Index Frontier 5 Pro contract and prospectus, a cap is referred to as a maximum gain.</p> <p>Buffer: The portion of a negative index change for a term that is disregarded when determining the vested loss for that term. The buffer varies depending on the day of the term. At the end of a term, the buffer is 10%. Before that, it is calculated daily as a prorated share of 10%.</p> <p>Floor: The largest negative index change for a term that is taken into account when determining the vested loss for that term. -10% floor strategies and 0% floor strategies are available. In the Index Frontier 5 Pro contract and prospectus, a floor is referred to as a maximum loss.</p>
INVESTMENT BASE	<p>At the start of a term, the investment base of an indexed strategy is the amount applied to the strategy. It is reduced for withdrawals. The reduction is proportional to the reduction in the strategy value due to the withdrawal and any applicable early withdrawal charge.</p>
WITHDRAWALS BEFORE TERM END	<p>A withdrawal before the end of a term may have a significant negative impact on your annuity. It locks in the vested gain or loss at the time of the withdrawal, which will affect indexed strategy values. The vesting factor used to calculate a vested gain at the time of the withdrawal may be as low as 25%.</p> <p>In addition, it reduces the investment base, which will affect any subsequent vested gains or losses for the term. Dependent on subsequent index changes, the impact of that reduction may be positive or negative.</p> <p>The prospectus contains examples that show the impact of withdrawals on the value of an indexed strategy and its investment base under various market conditions.</p>
PAYOUT OPTIONS	<p>The following payout options are available following the first contract year:</p> <p>Fixed period: You receive payments for a fixed period of time that you select.</p> <p>Life: You receive payments for life.</p> <p>Life with a minimum fixed period: You receive payments for life. If you pass away before the end of the minimum fixed period you select, the remaining payments are paid to the person you designate.</p> <p>Joint and one-half survivor: Payments are guaranteed for your life and the life of a designated joint annuitant. If you are survived by the joint annuitant, he or she will receive 50% of the payment for life.</p>
DEATH BENEFIT	<p>The death benefit amount is the greater of the account value or the amount of your purchase payments reduced proportionately for all withdrawals, but not including amounts applied to pay early withdrawal charges. It is reduced by premium tax or other taxes not previously deducted. A death benefit is payable if you die before the annuity benefit payout begins and before the contract is surrendered.</p>

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Annuities are intended to be long-term products and may not be suitable for all investors. Withdrawals from an annuity contract may have tax consequences.

The information in this brochure is not intended or written to be used as legal or tax advice. It was written solely to provide general information and support the sale of annuity products. You should seek advice on legal or tax questions based on your particular circumstances from an attorney or tax advisor.

For qualified contracts, amounts withdrawn are generally subject to income tax. For other contracts, only the gains are subject to income tax. If you are under age 59½, the taxable amount is also generally subject to a 10% federal penalty tax.

Buying an annuity within a tax-deferred retirement plan does not provide any extra tax benefits.

In the Index Frontier 5 Pro contract and prospectus, a cap is referred to as a maximum gain, and a floor is referred to as a maximum loss.

MassMutual Ascend is not an investment adviser and the information provided in this document is not investment advice. You should consult your investment professional for advice based on your personal circumstances and financial situation.

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Please note, this is a general description of the product. Please read your contract, including the endorsements, for definitions and complete terms and conditions, as this is a summary of the annuity's features. For use with contract forms P1833421NW and P1833421ID, and rider forms R1462416NW and R1462316NW (not available in Massachusetts). Contract and rider form numbers may vary by state. Products and features may vary by state, and may not be available in all states.

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