


The background features a dark blue hexagonal grid. Scattered across this grid are various isometric 3D geometric shapes, including rectangular prisms, triangular prisms, and L-shaped blocks. These shapes are rendered in a semi-transparent style with a color gradient ranging from dark blue to a lighter teal. Some shapes have intricate, repeating geometric patterns on their visible faces. The overall aesthetic is modern and technical.

# Assessing the urgency of state growth

Bloatnet

**@CPerezz**

Stateless team



Section 1

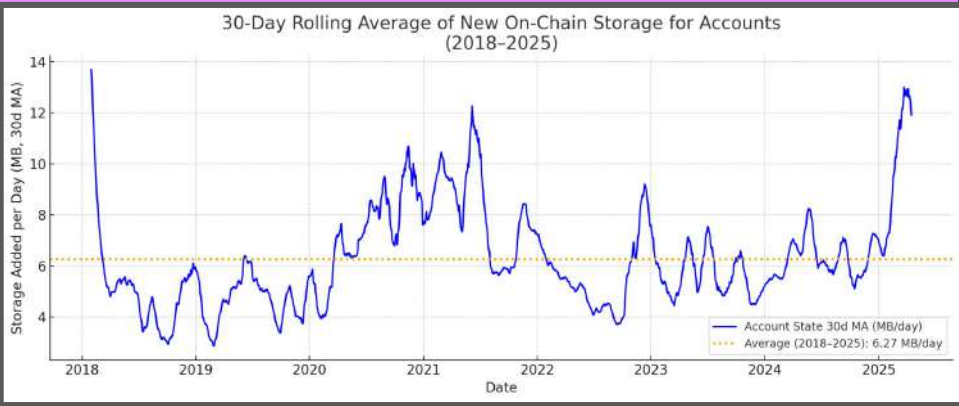
# Data Driven Decisions

## We can't be a stone on the path

We do care about statelessness. And we work everyday to make it happen. And the problems we address are eventually going to need a solution. **BUT:**

- Ethereum has lots of simultaneous priorities:
  - Throughput
  - UX
  - Data availability
- We can't go stale on these because of the “vibes” that state-growth and gas limit increases give us.






## We can't predict the future

State growth has clearly a bounded overall maximum set by the gas limit of the network and the assumption that (we can't do more SSTORE/CREATE.. than gas limit we have available per block).

With gas limit increases, we get an uncertainty, **when and how will state growth <-> gas limit become a problem?**



Section 2

**So let's collect the data, no?**

# Here's the key points for BloatNet

## When do we need to prioritize statelessness?



Know when state growth becomes a critical issue. When nodes start really suffering to keep up. And when we can't solve it by optimizing the client code more.

## Massive State testnet data



Gather extensive performance data with high gas limits. Try out how new EIP impls will behave with 10x state or do more precise research based on real data.

## Clear the path for EIP-7938



Controversial or not, this EIP challenges ethereum to become competitive. We want to support a much easier and clear decision-making when it comes to it.



[bloatnet.info](https://bloatnet.info)



**SCAN ME**

## Call for participation. SPAM00R scenarios!

Currently coding about 10-15 scenarios which combine:

- Bloating
- Attacks/node stressing
- Special interesting scenarios (XEN).

```
INFO[0183] Progress: sent 580 txs, deployed 504 contracts scenario=contract-deploy
INFO[0184] Progress: sent 590 txs, deployed 504 contracts scenario=contract-deploy
INFO[0185] Progress: sent 600 txs, deployed 528 contracts scenario=contract-deploy
INFO[0186] Block deployment summary avg_gas_per_byte=224.54 block_number=90 contracts_deployed=24 scenario=contract-deploy total_bytecode_size=528888 total_contracts=528 total_gas_used=118756776
INFO[0186] Progress: sent 610 txs, deployed 528 contracts scenario=contract-deploy
INFO[0188] Progress: sent 620 txs, deployed 528 contracts scenario=contract-deploy
INFO[0189] Block deployment summary avg_gas_per_byte=224.54 block_number=90 contracts_deployed=24 scenario=contract-deploy total_bytecode_size=528888 total_contracts=528 total_gas_used=118756776
```

**Draft** Add/state growth worst cases for BloatNet #41  
CPerez wants to merge 37 commits into ethpandaops:master from CPerez:add/state\_growth\_worst...

- feat(extcodesize-overload): add new scenario for EXTCODESIZE overload... Verified 63caffb
- update: Contract bytecode reduction to account for extra costs Verified cd23bd4
- feat(contract-deploy): improve bytecode size ratio & auto-adapt to ga... Verified 99bc827
- feat(setcodetx): support batching for max bloating mode to overcome m... Verified 1657334
- feat(setcodetx): fix funding and confirmation handling in max bloatin... Verified ✓ 83a085d
- chore(eao-delegation): Split eao delegation scenarios on bloating and... Verified 05b216e
- chore: revert changes to setcodetx Verified ✓ e3e32aa

**CPerez** commented 9 hours ago Author ...

As mentioned in Gas Limit Testing group, ZEN contracts are certainly an interesting scenario/benchmark to have due to the fact that they are A REAL WORST CASE and exist on mainnet nowadays.

Thus, will be adding scenarios to support the following:

- ☐ ZEN contract-like interactions (batchedMint in particular)
- ☐ MAX SSTORE in a block
- ☐ MAX CREATE2
- ☒ MAX CREATE

As mentioned by Storm:

would be interesting to see how execution time changes if you went fully into create or fully into create2 rather than



## ACKNOWLEDGEMENTS

**Kudos to:**



**NETHERMIND**

The background features a dark blue hexagonal grid. Scattered across this grid are various isometric 3D shapes, including rectangular prisms of different sizes and orientations, and triangular prisms. Some of these shapes have intricate, light-colored patterns on their faces. In the center of the image, the text "Thank you!" is displayed in a bright green, sans-serif font. The text is positioned slightly above a larger, more prominent triangular prism that also has a light-colored pattern on its faces.

Thank you!

## Section 2 title here.

Cras justo odio, dapibus ac facilisis in,  
egestas eget quam. Donec sed odio dui.  
Nullam quis risus eget urna mollis  
ornare vel eu leo.

- Sollicitudin
- Consectetur
  - Condimentum
    - **Magna**
    - **Ligula**



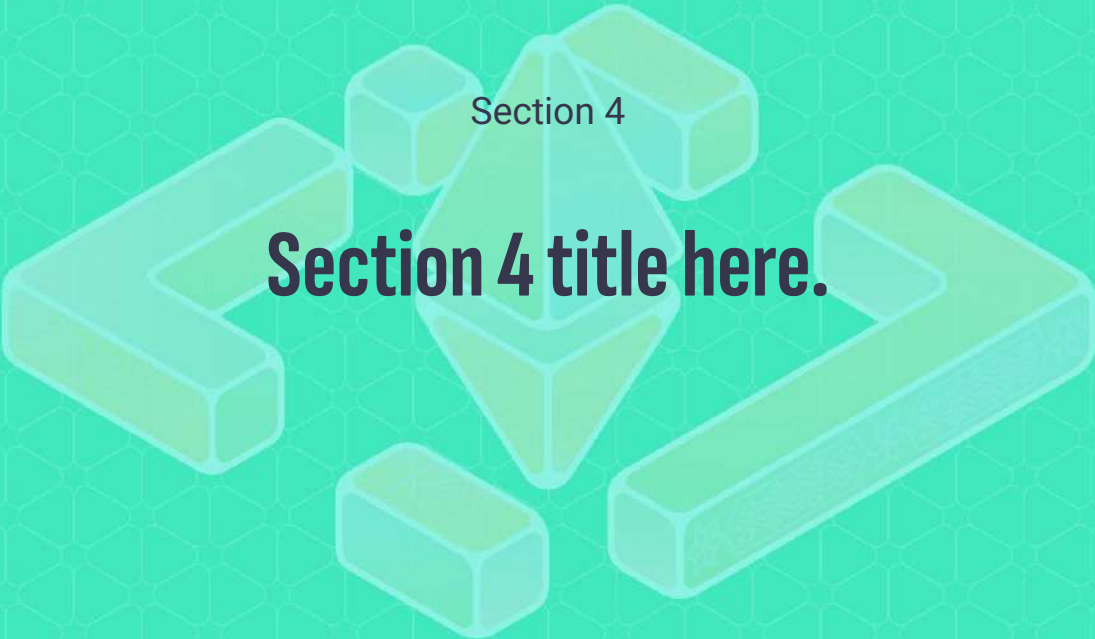
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- Sollicitudin
- Consectetur
  - Condimentum
    - **Magna**
    - **Ligula**

## Section 2 details with a main point. Enter title here.

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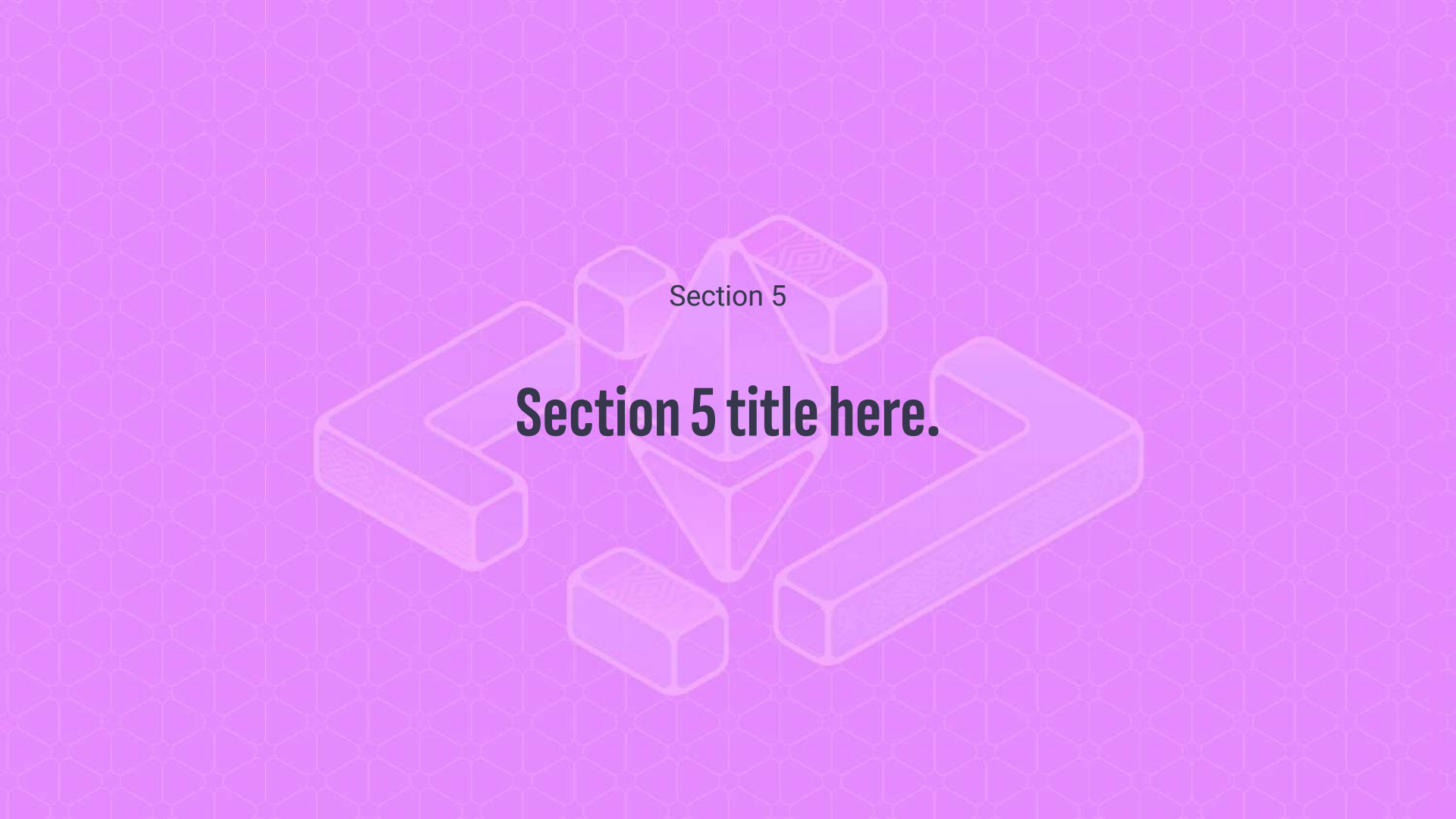
**Enter your main point / statement here.**

An abstract composition of several 3D geometric shapes, including rectangular blocks and a central pyramid, rendered in a light teal color with white outlines. The shapes are arranged in a cluster on a background of a repeating teal geometric pattern.

Section 4

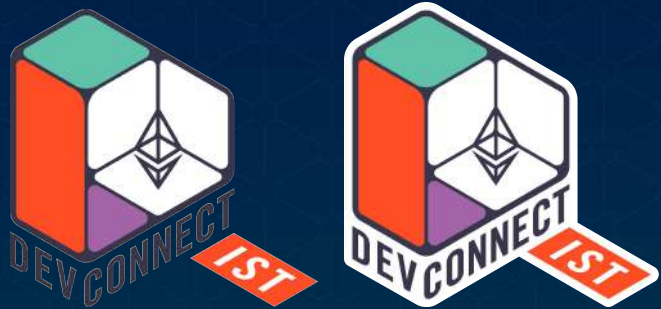
**Section 4 title here.**



The background is a solid purple color with a subtle, repeating pattern of small, light-colored geometric shapes. In the center, there is a collection of translucent, 3D geometric objects. These include a large, central, multi-faceted prism-like shape, several rectangular blocks of varying sizes, and a few smaller cubes. Some of the blocks have faint, light-colored patterns on their faces. The objects are arranged in a way that they appear to be floating or stacked, creating a sense of depth and complexity.

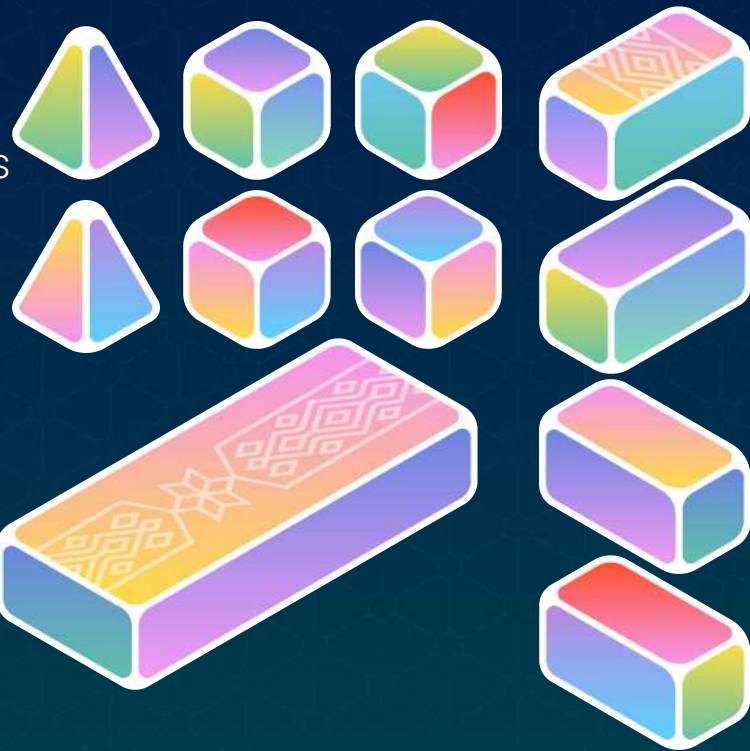
Section 5

**Section 5 title here.**



## Appendix

Some extra assets



# Appendix

Some extra assets

