





Existing Strategy: TSAR

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(no Visual Studio support)

• Requires separate running

- Mutually exclusive with other sanitisers (ASan, UBSan etc.)

• Only as good as test coverage

• *Fuzzzing can help*

• Extremely heavy weight



• 5-15xxslowoverexposure

• 5-10x increase in memory usage

•  $2-3x$  increased size in binary size

- Moderate increase in compilation time

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- Only as good as test coverage
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- Extremely heavyweight
  - 5-15x slower execution
  - 5-10x increase in memory usage
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  - Moderate increase in compilation time



# Lightweight Data Race Detection

	No Readers No Writers	Active Reader	Active Writer
Read Enter	No race	No race	DATA RACE
Write Enter	No race	DATA RACE	DATA RACE