

Grain Optimization

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pluralsight 
hardcore dev and IT training

Temperature
Sensor
Device



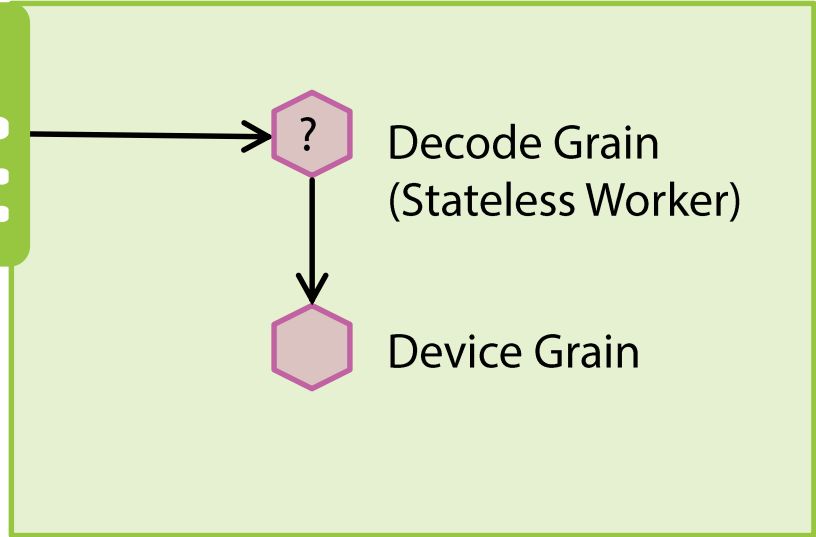
WebAPI



Orleans



Silo



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Stateless Worker

Multiple activations per Silo
Activated in every Silo
Normally stateless

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Why Use Stateless Workers?

Overcome bottlenecks

Scaled out and deactivated by
Orleans

Still single threaded and async

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How Do You Create a Stateless Worker?

A normal grain

[StatelessWorker] on the
Grain Interface

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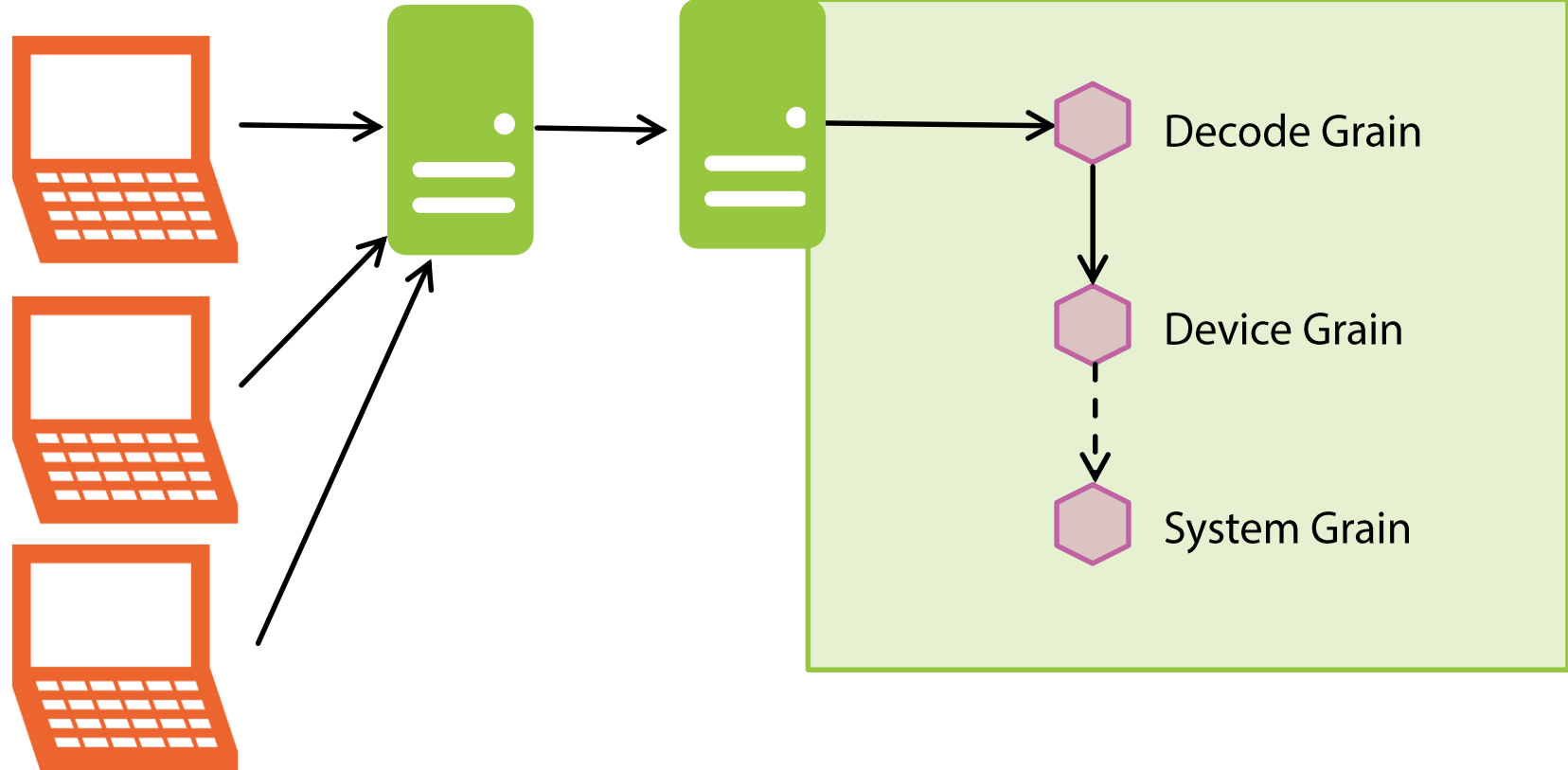
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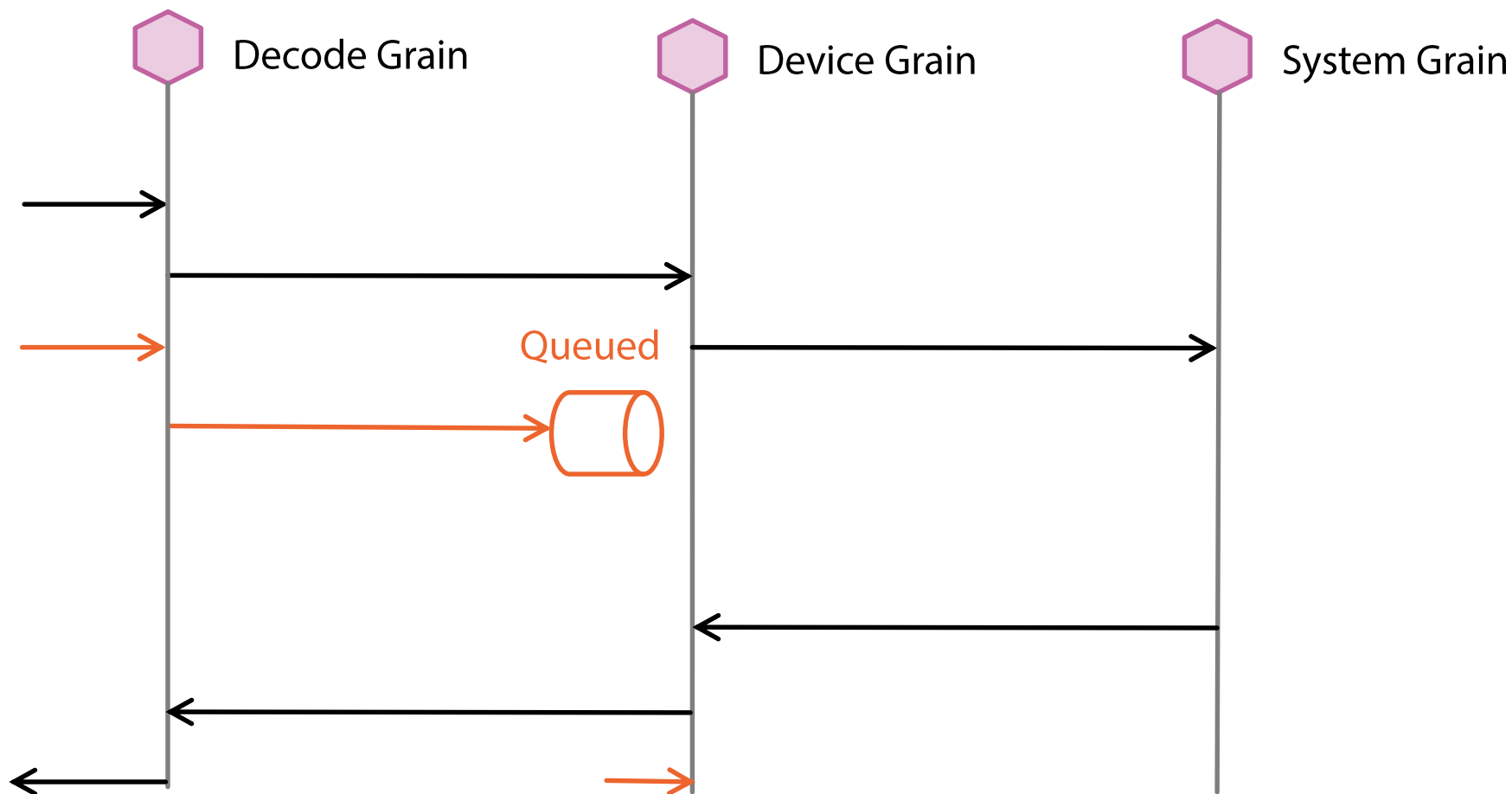
Silo



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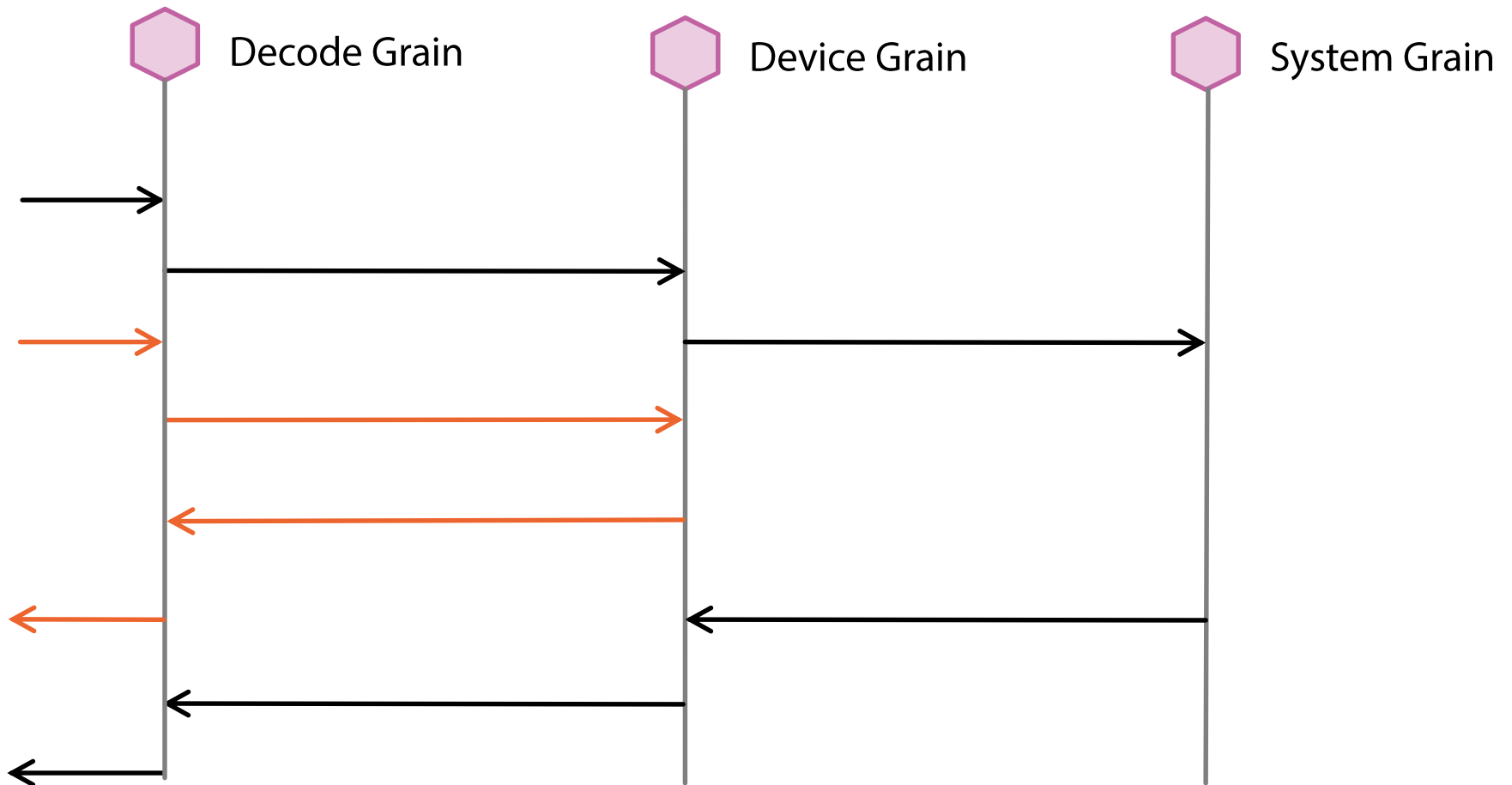
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Reentrant Grains

Grain can accept requests
while awaiting

Care must be taken with state

Applies to whole grain

Still single threaded

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Why Use Reentrant?

Greater throughput on a grain
Just one activation

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How Do You Make a Grain Reentrant?

Attribute on the grain class

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Grain Identity Primary Keys

Long

Guid

String + Long

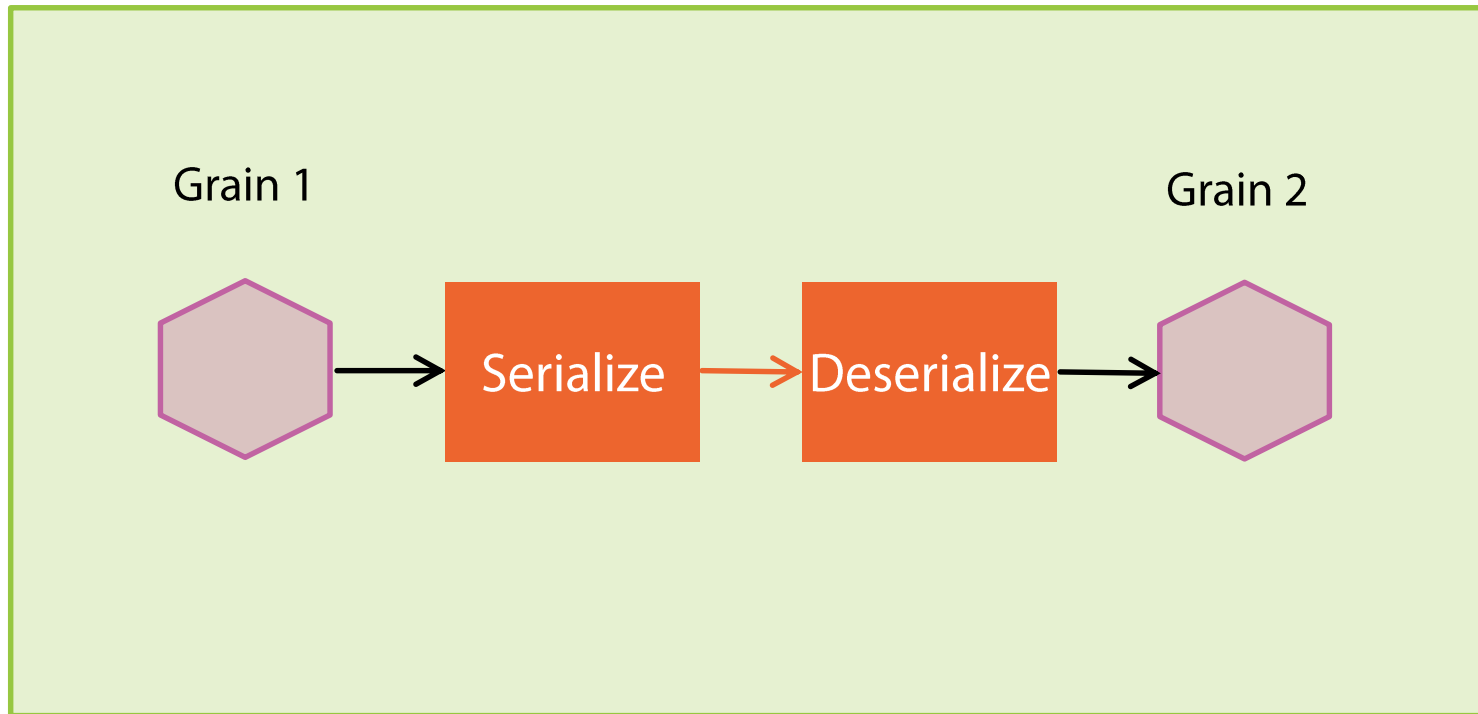
String + Guid

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Silo

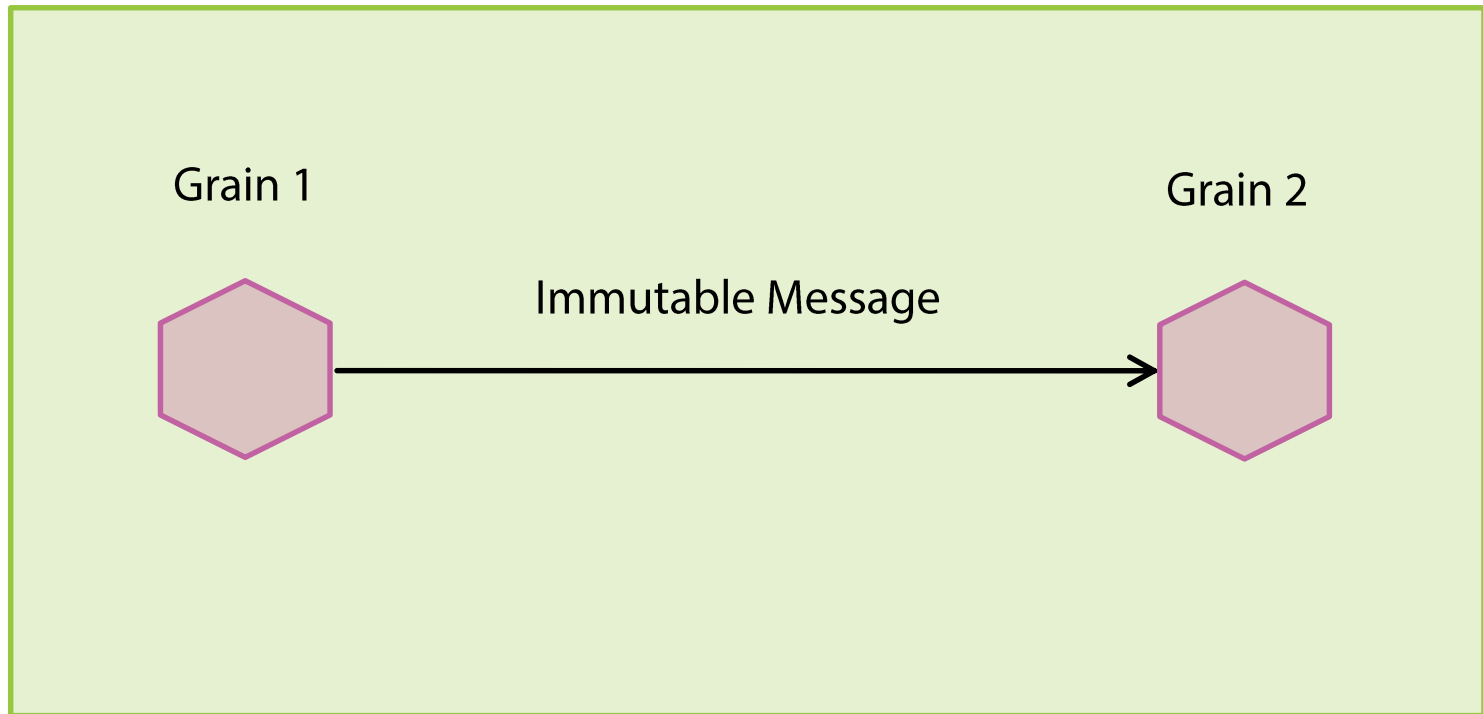


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Immutable Messages

Destination grain must not mutate the data

Data is not serialized

Speeds up inter-grain communication within a silo

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How Do You Make a Message Immutable?

Attribute on the message class

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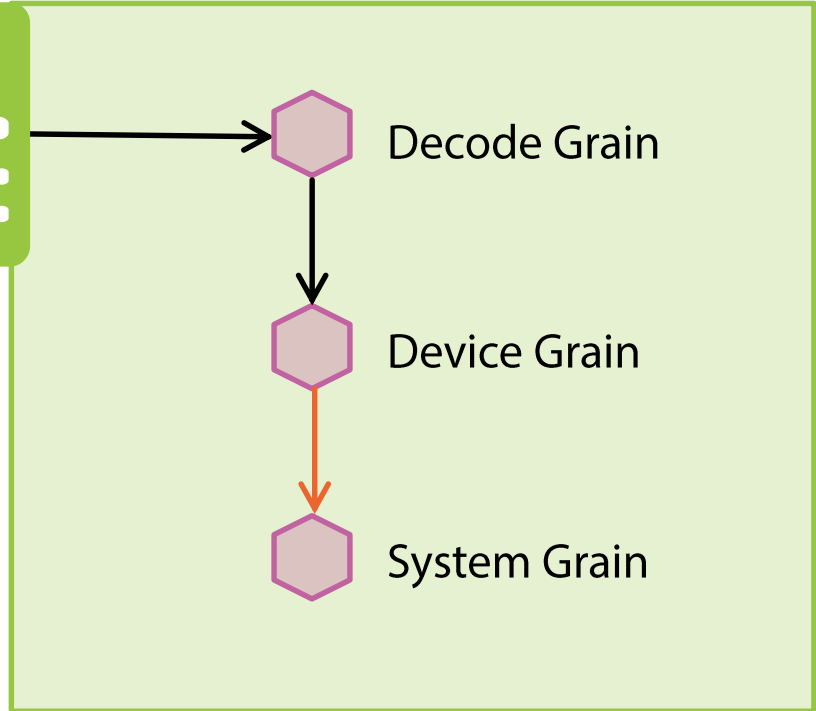
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