


	GDB	UDB 
Time-to-fix	<p>SLOW</p> <ul style="list-style-type: none"> Lengthy, complex multiple- iteration debugging process reliant on guesswork Build and test multiple hypotheses all whilst reproducing the failure over and over again 	<p>FAST</p> <ul style="list-style-type: none"> Single debug cycle Put a watchpoint on the variable containing bad data and run backwards to go straight to the line of code that most recently modified it
Workflow	<p>REPETITIVE</p> <ul style="list-style-type: none"> Unlikely to gather all key pieces of information first time - multiple reruns needed to get to root cause 	<p>EFFICIENT</p> <ul style="list-style-type: none"> Capture the failure once and debug it in one session - time travel backward from crash/error to root cause
Ease of debugging	<p>COMPLEX</p> <ul style="list-style-type: none"> Program behavior may differ with repeated restarts/reruns - making debugging unnecessarily complicated 	<p>EASY</p> <ul style="list-style-type: none"> Ability to navigate forward and backward in a single debug session making code observability easier
Time Travel Debugging capability	<p>UNUSABLE</p> <ul style="list-style-type: none"> Technically available in GDB, but too slow to be usable on real-life complex applications 	<p>PERFORMANT</p> <ul style="list-style-type: none"> Purpose-built time travel debugger. Performant and usable for debugging real-life, complex programs (including cloud / VMs / multithreaded)
Code-level observability	<p>UNUSABLE</p> <ul style="list-style-type: none"> Impractical due to slow performance when navigating in reverse 	<p>RESPONSIVE</p> <ul style="list-style-type: none"> Watch memory changes and inspect global and local variable values in order to fully understand unintended code behavior as you navigate forward and in reverse