



# OpenJS World 2021

Virtual Experience | June 2, 2021



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# Node.js Diagnostic Best Practices

Node.js Diagnostics Working group

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## Agenda

- Node.js community
- Diagnostics Working group
- The user journey philosophy
- Diagnostic Best Practices documentation
- Diagnostics Tool tiers
- Current status, Challenges, Call for Action



## Node.js community

- Node.js: open source, cross-platform JS runtime environment
- Node.js: Simply put, JavaScript in the backend
- Node.js: Top runtime in modern workload
- Community: governed under OpenJS foundation
- Community: highly active with many working groups
- Community: Keeps high standards on openness, diversity and inclusivity



## Diagnostics Working group

- Started in 2015 as two separate working groups
  - tracing WG and postmortem WG
- Merged into Diagnostics WG in 2017
- Critical in shaping up many features
  - `async_hooks`, profiling, tracing, dump debug, report
- Operational model: work asynchronously, meet biweekly



## Diagnostics User journey

- Philosophy: shift focus from tools, to user journeys
- Define supported workloads and deployment models
- Define Long-Term-Supported use cases
- Align tools with the use cases, not the other way around
- Identify tooling gaps
- Document user journey content and process
- Drive user-journey to define guides that go into [nodejs.dev](https://nodejs.dev)



## Best Practices documentation

- Step-by-step procedures for Node.js debugging
- Aligned to the user journeys
- Explains best practices for production deployments
  - setup, tool selection, debugging, methodologies
- Loaded with case studies
  - Usage of different tools on similar issues



## Diagnostics Tool tiers

- Assessed classification of supported tools
- Classification based on efficiency, maturity, adoption, and maintenance
- Helps Node.js releases and tool maintenance
- Helps contributing to the tooling improvements





## Best Practices Current status

- Structure defined
- Already in-use doc for memory, profiling, program aborts
- Work in progress for crash, hang, CPU profiling, tracing
- More Case studies to be added
- More Tool usages to be introduced



## Deep dive documents #439

🔔 Open

mmarchini opened this issue on Nov 3, 2020 · 1 comment



mmarchini commented on Nov 3, 2020

- [Memory Leak](#)
- [Process Crash](#)
- [Performance](#)
- [Unexpected Behavior](#)




 main ▾ [diagnostics](#) / [documentation](#) /




**HarshithaKP** doc: document how to use diagr

..

 abnormal\_termination

 cpu

 crash

 hang

 live\_debugging

 memory

 profiling

 tracing

 README.md



## Major challenges

- Slow progress / bandwidth issues
- Lack of real-world stories in some cases
- Lack of broader community engagement



## Call for Action

- Participate in the WG meetings!
- Review the user journey document
- Review the best practice documentation
- Pick up work items!
- Bring-in real world stories!
- Join the working group!



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# THANK YOU!!!

## Node.js Diagnostics Working group

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