## Performance FAQs for Cosmic Partners and Cosmic OCEs

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| Q:How to investigate performance issues on Cosmic and create an incident if needed?  A: Please review [TSG for perf investigation](https://aka.ms/cosmic/tsg/perf) to collect and analyze the necessary performance data for troubleshooting. If needed, you can create an incident at [aka.ms/cosmic911](https://aka.ms/cosmic911). |
| Q:How to troubleshoot high CPU, memory, latency and timeout issues on Cosmic?  A:Please refer to troubleshooting guide for Cosmic Perf investigation at <https://aka.ms/cosmic/tsg/perf>. |
| Q:How to review resource utilization on Cosmic Windows?  A:Please refer to [Windows Performance Counter - Cosmic Perf Analysis - Dashboards - Grafana](https://cosmicmonitoring-b6a0cza8a4ghfnda.scus.grafana.azure.com/d/f5035b83-bb8d-41ac-808b-65635396a8a1/windows-performance-counter?orgId=1&refresh=30s) |
| Q:How to review resource utilization on Cosmic Linux?  A:Please refer to [Linux Utilization - Cosmic Perf Analysis - Dashboards - Grafana](https://cosmicmonitoring-b6a0cza8a4ghfnda.scus.grafana.azure.com/d/rYdddlPWk/linux-utilization?orgId=1) |
| Q:How to get access to Cosmic Grafana dashboard?  A:Please refer to [Access to COSMIC Grafana dashboards | COSMIC Partner Documentation](https://eng.ms/docs/experiences-devices/m365-core/substrate-platform/cosmic-group/partners/tools/grafana/access-to-grafana-dashboards) |
| Q: How to perform CPR profiling tools on Cosmic?  A:  You can set up **EfficiencyPack (EP)** triggers with the "Profile" action for CPR analysis based on custom thresholds, please refer to [Trigger - EP Portal](https://epportal.azurewebsites.net/trigger?teamName=Cosmic).  Additionally, you can use Cosmic CLI to run *cc debug cpr* or use the COP portal to for on-demand CPR analysis, please refer to [Run CPR Analysis with Debug Container | COSMIC Partner Documentation](https://eng.ms/docs/experiences-devices/m365-core/substrate-platform/cosmic-group/partners/troubleshooting/debug-tools/run-cpr-analysis-with-debug-container). |
| Q:How to configure EfficiencyPack (EP) triggers?  A: Please refer to [You can configure EPM triggers via the EP Portal. | Efficiency Pack](https://eng.ms/docs/products/efficiency-pack/monitoring/triggers/configure-triggers) |
| Q: How to collect memory dump on Cosmic?  A:  You can set up **EfficiencyPack (EP)** triggers with the "Memory Dump" action for CPR analysis based on custom thresholds, please refer to [Trigger - EP Portal](https://epportal.azurewebsites.net/trigger?teamName=Cosmic).  Additionally, you can use Cosmic CLI to run *cc debug getdump* for capturing a memory dump. Please refer to [Take a dump on-demand using ProcessDump | COSMIC Partner Documentation](https://eng.ms/docs/experiences-devices/m365-core/substrate-platform/cosmic-group/partners/troubleshooting/debug-tools/how-to-processdump) |
| Q:How to review dump on Cosmic?  A:  If you are a Cosmic OCE, please refer to [How to review memory dump on Cosmic](onenote:https://microsoft.sharepoint-df.com/teams/EDPerfCommunity/Shared%20Documents/Substrate/Perf_On-Call_HandBook/COSMIC.one#How%20to%20review%20memory%20dump%20on%20Cosmic&section-id={3C041FD4-9AF4-427C-9BD3-9B94BCA3EF34}&page-id={C632DD8D-E3C1-4682-AD79-1384EEB6079E}&object-id={86D308FF-9139-0595-1DF2-B7180DCF4B1F}&12)  ([Web view](https://microsoft.sharepoint-df.com/teams/EDPerfCommunity/_layouts/OneNote.aspx?id=%2Fteams%2FEDPerfCommunity%2FShared%20Documents%2FSubstrate%2FPerf_On-Call_HandBook&wd=target%28COSMIC.one%7C3C041FD4-9AF4-427C-9BD3-9B94BCA3EF34%2FHow%20to%20review%20memory%20dump%20on%20Cosmic%7CC632DD8D-E3C1-4682-AD79-1384EEB6079E%2F%29)).  If you are a Cosmic partner, you need to configure the *JitWatsonDumpMdsMaNamespace* and *JitWatsonMinidumpMdsMaNamespace* in JitWatson. This setup enables dumps to be uploaded to a designated namespace that you can access. Please refer to  [Setup JitWatson inside containers | COSMIC Partner Documentation](https://eng.ms/docs/experiences-devices/m365-core/substrate-platform/cosmic-group/partners/onboarding/monitor/jitwatson-crashdump-setup) and [COSMIC containerization and onboarding checklist | COSMIC Partner Documentation](https://eng.ms/docs/experiences-devices/m365-core/substrate-platform/cosmic-group/partners/onboarding/cosmic-containerization-checklist). |
| Q: Why does the service experience CPU spikes every 8 hours on Cosmic?  A: The issue could be caused by security scanning from AzSecPack, which should be disabled. During the spikes, you may notice the azqualysscancommand process running. Please follow the instructions to [disable the AzSecPack](https://eng.ms/docs/experiences-devices/m365-core/substrate-platform/cosmic-group/partners/onboarding/configure-containers/setup-geneva-monitoring#disable-azsecpack) and [remove unnecessary MA extensions](https://eng.ms/docs/experiences-devices/m365-core/substrate-platform/cosmic-group/partners/onboarding/configure-containers/setup-geneva-monitoring#disable-unnecessary-ma-extensions). |
| Q:How to setup Watson on Cosmic?  A:For Cosmic Windows, please refer to [Setup JitWatson inside containers | COSMIC Partner Documentation](https://eng.ms/docs/experiences-devices/m365-core/substrate-platform/cosmic-group/partners/onboarding/monitor/jitwatson-crashdump-setup). For Cosmic Linux, please refer to [How to onboard to Azure Watson in COSMIC Linux and get access to dumps | COSMIC Partner Documentation](https://eng.ms/docs/experiences-devices/m365-core/substrate-platform/cosmic-group/partners/troubleshooting/debug-tools/azure-watson-linux-onboarding). |
| Q: Why does pod CPU utilization have a different distribution on Cosmic?  A:  Please review the **requests per second (RPS)** chart by pod to determine if the resource usage difference is due to uneven request distribution. If so, work with Exchange/Cosmic for further investigation.  If the request distribution is even, the difference in CPU utilization could be due to variations in the underlying hardware. Please review [Pod Hardware Info](https://msit.powerbi.com/groups/b61e509d-d7b3-4375-a9ae-0f2681bc59c8/reports/44181d88-73f7-4adb-86ab-40e4109d1b50/ReportSection?experience=power-bi) to confirm if that is the case.  If there are no differences in request distribution or hardware, please create an incident with your findings at [aka.ms/cosmic911](https://aka.ms/cosmic911) for deeper investigation. |
| Q: What are Cosmic performance best practices? A: Please refer to [Performance Best Practices | COSMIC Partner Documentation](https://eng.ms/docs/experiences-devices/m365-core/substrate-platform/cosmic-group/partners/onboarding/set-up-service-configurations/bestpractices#base-image-for-windows-container). |

## Performance FAQs for Cosmic Performance Analyst

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| Q: How to connect to a Cosmic Windows node without using jumpbox?  A: You can connect to any HPC on a node, please refer to [How to connect to EP pod on Cosmic Windows](onenote:https://microsoft.sharepoint-df.com/teams/EDPerfCommunity/Shared%20Documents/Substrate/Perf_On-Call_HandBook/COSMIC.one#How%20to%20connect%20to%20EP%20pod%20on%20Cosmic%20Windows&section-id={3C041FD4-9AF4-427C-9BD3-9B94BCA3EF34}&page-id={C7FE0243-C926-4AE2-A9A1-635D3B868209}&object-id={490E5987-9D06-032B-3A69-5C1B78505154}&12)  ([Web view](https://microsoft.sharepoint-df.com/teams/EDPerfCommunity/_layouts/OneNote.aspx?id=%2Fteams%2FEDPerfCommunity%2FShared%20Documents%2FSubstrate%2FPerf_On-Call_HandBook&wd=target%28COSMIC.one%7C3C041FD4-9AF4-427C-9BD3-9B94BCA3EF34%2FHow%20to%20connect%20to%20EP%20pod%20on%20Cosmic%20Windows%7CC7FE0243-C926-4AE2-A9A1-635D3B868209%2F%29)). |
| Q: How to connect to a Cosmic Linux node? A: [Connect to Linux Node | COSMIC Internal Documentation](https://eng.ms/docs/experiences-devices/m365-core/substrate-platform/cosmic-group/internal-team-docs/troubleshooting/tsgs/runtime/linux/connect-to-linux-node) |