**What's new in Dynamics 365 Business Central telemetry - June 2023**

It is June and it has been a month since the last newsletter. The conferences in Florida, Bangkok, and Birmingham had a lot of telemetry content and this can actually be seen om the usage numbers of telemetry and the Power BI apps on telemetry. We now have a combined MAU of 2400+ on the Power BI apps, which is more than I had hoped when looking at the numbers 6 months ago. We can also see in our telemetry (!) for the apps that more partners have serious usage of the apps, which I interpret as them moving up the maturity model.

As always, the bleeding edge news on Dynamics 365 Business Central telemetry happens on Twitter, so if you want to keep up with the latest and greatest (and the beta versions of the Power BI telemetry apps) then follow me there (@kennienp). The intention of these monthly newsletters is to try to gather everything that I know and learn about this area and present it here. Let’s go…

In the June 2023 edition, read about these things:

* Do not miss out on strategic change – use the maturity model to get more data-driven
* Learnings from Directions Asia, Directions NA, and Days of Knowledge UK/Central.
* Cost of Telemetry (data ingestion)
* Telemetry news in AL Home (for developers)
* No-code alerting on telemetry with Power BI Metrics
* Upcoming conference sessions
* Power BI Usage apps – June updates
* New signal/updates
* New videos

# Do not miss out on strategic change – use the maturity model to get more data-driven.

As I wrote in the beginning of this newsletter, we see more and more partners with a high and consistent usage of the Power BI apps. This likely means that they have started using telemetry in a more strategic way in their partner practice, not only for support, but likely also for project implementations and maybe even for pre-sale follow-up activities. These frontrunner partners are getting a strategic advantage over their peers that do not use telemetry as much, and the longer they do this, the larger the advantage they get. Can you afford to lack behind your competitors?

“But Kennie, how do we drive this change? Where do we start?”

Fortunately for you, I put together a playbook that can help you with that. It is called the Telemetry Maturity Model, and in previous newsletters, I dived deeper into how you can use it.

See

for more information.

You could also just download the playbook right now and get started. Get it here: <https://github.com/microsoft/BCTech/blob/master/samples/AppInsights/Presentations/README.md#:~:text=Learn%20how%20we%20use%20telemetry%20(we%20have%20just%20enabled%20it)%20all%20over%20your%20partner%20practice.%20This%20deck%20is%20built%20around%20the%20Telemetry%20Maturity%20Model>

# Learnings from Directions Asia, Directions NA, and Days of Knowledge UK/Central

I had a lot of interactions with partners at the Directions Asia, Directions NA, and Days of Knowledge UK/Central conferences this spring (actually our Telemetry Hero Krzysztof Bialowas delivered the telemetry sessions and training at Days of Knowledge UK, but I will relay his feedback with mine here).

First, I got a LOT of questions. The number one question that I got was “Does it work on-premises?” (it does). This question is now part of the telemetry FAQ on docs, where I have compiled a list of frequently asked questions. You might want to browse the FAQ, maybe you will learn a thing or two. Go here to see the telemetry FAQ: <https://learn.microsoft.com/en-us/dynamics365/business-central/dev-itpro/administration/telemetry-faq>

Second, I learned that 90% of participants that do use telemetry, only use it for support/troubleshooting. This means that there is a huge potential for getting much more out of telemetry than what these partners do today (and they are already paying to get the telemetry data.) I have described a lot of non-techie usage scenarios of telemetry in docs, you might want to check them out and get inspired on new ways to use telemetry. See the scenarios here: <https://learn.microsoft.com/en-us/dynamics365/business-central/dev-itpro/administration/telemetry-power-bi-app#use-the-app>

Third, virtually none of the participants were using telemetry for preparing sales follow-up meetings with customers. I think that there is a huge potential for account managers to use telemetry to prepare sales meetings with customers, where those meetings could provide tons of value for the customer (and likely increase the probability of doing more consultancy business with that customer). If you work in sales (or participate as a technical pre-sales role), you might want to take a look at the playbook I wrote for using telemetry to be more data-driven in your sales organization. Check out the playbook here: <https://github.com/microsoft/BCTech/tree/master/samples/AppInsights/Presentations#:~:text=Base%20follow%2Dup%20meetings%20with%20customers%20on%20data>

Finally, I was positively surprised to hear that many partners now talk about telemetry as a useful tool that they use, not something that is “on the list of things we need to look into.” I heard many partners tell me that they are now enabling telemetry for all their customers, which warms my little telemetry heart… 😊

# Cost of Telemetry (data ingestion)

In some of my conversations with partners at the Spring conferences, we touched upon the topic of cost – how much should we expect to pay for getting telemetry data. To help all of you with that, I did a survey with some frontrunner partners on average cost of telemetry for their customers. I also profiled some telemetry data to learn more about the data size of the events we emit to telemetry. This has resulted in two new paragraphs in docs that I have included here to not keep disrupting you reading the newsletter.

**Calculating the cost of data ingestion**

Currently, the first 5GB of data ingested per month is free. To stay below this limit, you can set up a daily cap of 160 MB per day.

One telemetry event typically consumes 2-10 KB depending of the type of event. The max size for one event is 32 KB.

So with a 160 MB daily cap, you can receive between 5000 (worst case) and 80000 daily events (best case). With event size 10kb, this corresponds to 16000 daily events.

Current price for data ingestion is 2.76 USD/GB (for pay-as-you-go). If we assume 10KB event size, 1 GB can give you an additional 100.000 monthly events ~ 3300 daily events. Or 0.00276 cents/event.

Typically, non-interactive sessions such as web service calls or background sessions are the ones that can generate a lot of data. These are the ones you could consider filtering away to reduce cost.

**Examples of cost of data ingestion**

One partner that uses telemetry a lot reported that they on average spend 7.3 USD per customer per month on data ingestion. For their large customers they spend up to 178 USD per month (without setting up data collection rules, sampling, or daily cap).

Their top 10 customer cost per month on telemetry is:

| Rank | Monthly Cost (in USD) |
| --- | --- |
| 1 | 178.68 |
| 2 | 173.68 |
| 3 | 146.03 |
| 4 | 106.32 |
| 5 | 66.47 |
| 6 | 31.91 |
| 7 | 27.06 |
| 8 | 23.53 |
| 9 | 22.79 |
| 10 | 17.65 |

Everything there is to know about telemetry cost is now be available in this docs article:

<https://learn.microsoft.com/en-us/dynamics365/business-central/dev-itpro/administration/telemetry-control-cost>

# Telemetry news in AL Home (for developers)

AL developers spend a lot of time in VSCode and a few months ago, the team behind the VSCode extension for AL development added ALHome, a communication channel for developers directly in VSCode. I decided to onboard their publication schedule for news pushed to this new channel and the first snippet of information about telemetry for developers was published in May. To not drown the channel only with telemetry news, we will publish other types of news as well and merge in telemetry news snippets every now and then. So, if you are a developer, stay tuned in AL home to learn more about how telemetry can be helpful in your work.

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# No-code alerting on telemetry with Power BI Metrics

If you were present at the keynotes at Directions NA or Directions Asia conferences, you saw demos on how a project manager can track project KPIs and alert on state changes using Power BI metrics scorecards on top of the Power BI apps on telemetry data.

In the demos, we showed an example of a scorecard that tracks Monthly usage (MAU), select error metrics (and an aggregate metric on these), as well as a metric on performance tests:

<insert picture>

Alerting in Teams is literally as easy as clicking “Follow” on the metrics you are interested in. Any state change on that metric will then show up like this in Teams

<insert picture>

Pretty nice, right?

The topic was also covered more in depth in the February 2023 edition of this newsletter:

<https://www.linkedin.com/pulse/whats-new-dynamics-365-business-central-telemetry-2023-pontoppidan-1e/?trackingId=Lyt9tciBSrCjQD1gucWUDA%3D%3D>

This video from a session at the Dynamics Live conference also covers how you can use telemetry to get smoother go-lives: <https://www.youtube.com/watch?v=Ka7MWV3OyII>

And the telemetry documentation has also been updated with guidance on this. See more at <https://learn.microsoft.com/en-us/dynamics365/business-central/dev-itpro/administration/telemetry-alert#no-code-alerting-with-power-bi-metrics>

# Upcoming conference sessions in June 2023

**Business Central Launch event (March 29 – end of June 2023)**

The Business Central Launch Event will take place from March 29-31, 2023. During the three days, you’ll be able to participate in a live opening session, watch sessions on what's new in 2023 release wave 1 and participate in Q&As. After March 31, all sessions will be available on-demand until end of June 2023.

Event is online, agenda is published online, registration needed, attendance is free).

I have recorded two sessions for the event:

Get data-driven with telemetry. This is a non-technical session on how implementation project managers can use telemetry to get low-friction go-lives. The session also has a section for ISV product owners/managers on how they can use telemetry to improve the quality of their apps.

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What’s new in telemetry. A technical session on new data in telemetry and tips and tricks for the telemetry/KQL data nerds.

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Read more and register at

<https://aka.ms/bcle>

**Days Of Knowledge Nordic 2023 (June 1 - 2, 2023) in Odense, Denmark**

If you attend the Days Of Knowledge Nordic conference this year, consider learning some tips and tricks about telemetry in these sessions:

Full day pre-conference session: Telemetry Deep-Dive, by Microsoft MVP Krzysztof Bialowas

<https://directions4partners.com/days-of-knowledge/nordic-2023/schedule/?tid=477469>

Telemetry From Basics To Advanced Usage, by Microsoft MVP Krzysztof Bialowas

<https://directions4partners.com/days-of-knowledge/nordic-2023/schedule/?tid=415395>

I will be present at the conference – do come and say hi if you are there as well (since you read this newsletter, I assume we share an interest in this topic).

Read more

<https://directions4partners.com/days-of-knowledge/nordic-2023/>

**BC/NAV Techdays 2023 (June 22-23, 2023) in Antwerp, Belgium**

If you attend the BC/NAV Techdays 2023 conference this year, consider learning some tips and tricks about telemetry in these sessions:

On Tuesday June 20 and Wednesday June 21, you can attend the full day pre-conference sessions: Telemetry in a day, by Microsoft MVP Krzysztof Bialowas (aka KB).

On Thursday June 22, you can learn about Feature telemetry in the session

The System App in examples. How to develop more with less lines of code

by Microsoft team lead for the system app Jesper Schultz and Microsoft MVP Krzysztof Bialowas (aka KB).

And I was told (I asked) that following sessions at BCTechdays 2023 will include telemetry content in the context of the topics presented:

* Business Central Reporting demystified
* Microsoft Presents: What's new in cloud migration and upgrade
* Microsoft Presents: Locking in AL: Runtime and explicit AL control
* Microsoft Presents: What's new in Business Central clients for AL developers
* Microsoft Presents: What's new in AL
* Microsoft Presents: Demystifying AppSource development
* Microsoft Presents: Using AL-Go for GitHub
* Microsoft Presents: Ease permission management in your applications, levering the latest permission system enhancements
* API best practices

Read more

<https://www.bctechdays.com/>

# Power BI Usage apps – June updates

The June updates for both apps include many of the new cool types of telemetry we got in the version 22 release. And if you work with performance tuning, you are also in for a treat. We added AI-driven visuals to many of the pages in the performance report. Does this qualify to be called Co-pilot on telemetry? Maybe not. But I do think that the new capabilities can provide some guidance on places to start investigations. Please let me know if these visuals provide valuable insights for your data – this is very hard to test on demo data.

NB! The release of the June updates will be aligned with the BCTechdays conference. So

**For both apps**

Error report

On the page “IncomingWebserviceErrors”, added two new visuals. First one shows the new OData error dimensions 'Failure Reason' and 'Diagnostic Message'. The second one shows the User Agent set by the caller. Use this to analyze failed calls by user agents (who called). See failure reason and diagnostics messages (for API/OData requests) to help find the root cause of the errors.

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Performance report

Performance: On page 'Incoming Web Service performance', added calculations on queue time (introduced in telemetry in v22). Use this to analyze time spent in web service queues.

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Performance: On page 'Long Running AL', using new dimension exclusiveTime (this dimension was introduced in 21.6/22.0). Use this to analyze long running AL methods (excluding time spent in modal dialogs).

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**Environment Usage app**

Error report

On page 'Connector Errors', added new visual to show new OData error dimensions 'Failure Reason' and 'Diagnostic Message'.

Administration report

See the full change log here:

<https://github.com/microsoft/BCTech/blob/master/samples/AppInsights/PowerBI/Reports/AppSource/environment-app-pbix/changelog.txt>

**App Usage app**

All major changes are described above (these were changes that were applied to both apps).

See the full change log here:

<https://github.com/microsoft/BCTech/blob/master/samples/AppInsights/PowerBI/Reports/AppSource/isv-app-pbix/changelog-isv-app.txt>

# New signal/updates

**Smaller improvements in 22.x**

When finalizing the 2023 release wave 1, we did some smaller improvements that will come in version 22.0 or in a minor update to version 22:

Long running AL method telemetry (eventId RT0018) will include details on SQL operations in the custom dimensions sqlRowsRead and sqlStatements.

Outgoing web service telemetry (eventId RT0019) will include details on client type and AL stack trace in the custom dimensions clientType and alStackTrace.

KQL samples might already have been updated, see [BCTech/samples/AppInsights/KQL/Queries/ExampleQueriesForEachArea at master · microsoft/BCTech (github.com)](https://github.com/microsoft/BCTech/tree/master/samples/AppInsights/KQL/Queries/ExampleQueriesForEachArea)

The Power BI apps will likely be updated to use this information in the July/August 2023 updates.

**Coming soon/in the works (no ETA given)**

Information on files blocked from upload due to malware scanning (only in the online version).

PTE validation signal (PTEs that block updates to next major)

Cloud migration signal

Job queue descriptions on job queue telemetry

# Blog posts and videos

Back in March 2023, I delivered a telemetry session at the Dynamics Live conference. The recording is now available on YouTube in case you want to learn more about how you can use telemetry to get smoother go-lives.

See the video here: <https://www.youtube.com/watch?v=Ka7MWV3OyII>

Did you know that the BCTech repo has pages with links to blog posts and videos on telemetry?

Blogs: <https://github.com/microsoft/BCTech/blob/master/samples/AppInsights/BLOGS.md>

Videos: <https://github.com/microsoft/BCTech/blob/master/samples/AppInsights/VIDEOS.md>

If you create blog posts/videos on telemetry (or know of things that are not linked from these two pages), feel free to do a pull request to the repository (or send me an email/message)

**That’s all folks!**

That's it for the June newsletter. If you made it all the way down here, then you are truly a Telemetry Hero. See you in a month.

PS. Would love to hear your experiences on using alerts to be more proactive. Reach out (or blog about your experiences.)

PPS. It is not too late to rate the Power BI apps on Appsource 😊 Your feedback matters (a lot).

Do it here:

<https://appsource.microsoft.com/en-us/product/power-bi/microsoftdynsmb.bc_telemetry_pbi_app>

(for environment telemetry)

or

<https://appsource.microsoft.com/en-us/product/power-bi/microsoftdynsmb.bc_telemetry_pbi_app_isv_version>

(for app telemetry)