



Application insights overview + One Dynamics One Platform



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What is Application Insights

Overview of Application Insights

- A powerful, extensible Application Performance Management (APM) service extending Azure Monitor.
- Monitoring and Diagnostics
 - Monitor live applications and provide detailed insights into application performance, user activities, and diagnostic data.
- User Interaction Analysis
 - Understand how users interact with the application through detailed telemetry data.
- Custom Metrics and Logs
 - Define custom metrics and log events to track specific parts of your application.
- Enhanced Performance
 - Identify and resolve performance bottlenecks quickly.
- Proactive Issue Detection
 - Automatically detect and diagnose issues before they impact users.
- Data-Driven Decisions
 - Use detailed insights to make informed decisions, improve user experience, and drive application development.

AppInsights in D365

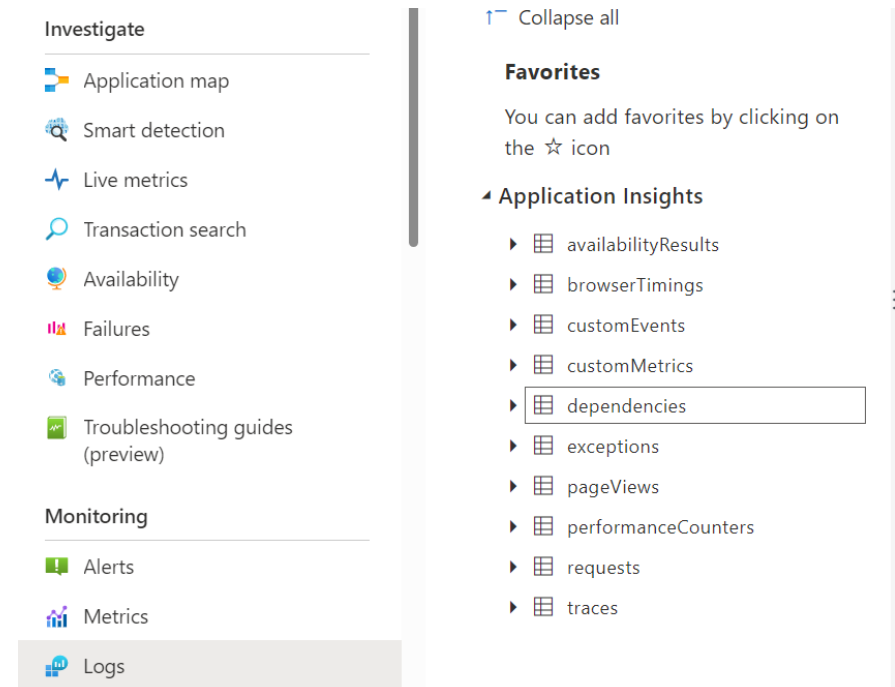
Dynamics 365 Finance & SCM Available Telemetry

Dynamics 365 Finance & SCM maps 4 main telemetry types to Application Insights tables

Telemetry type	Application Insights table name
Form loads	pageViews
X++ exceptions	Exceptions
Custom Events	customEvents
Custom Metrics	customMetrics

CustomEvents will contain most of the telemetry

- Warehouse related telemetry events
- Slow queries



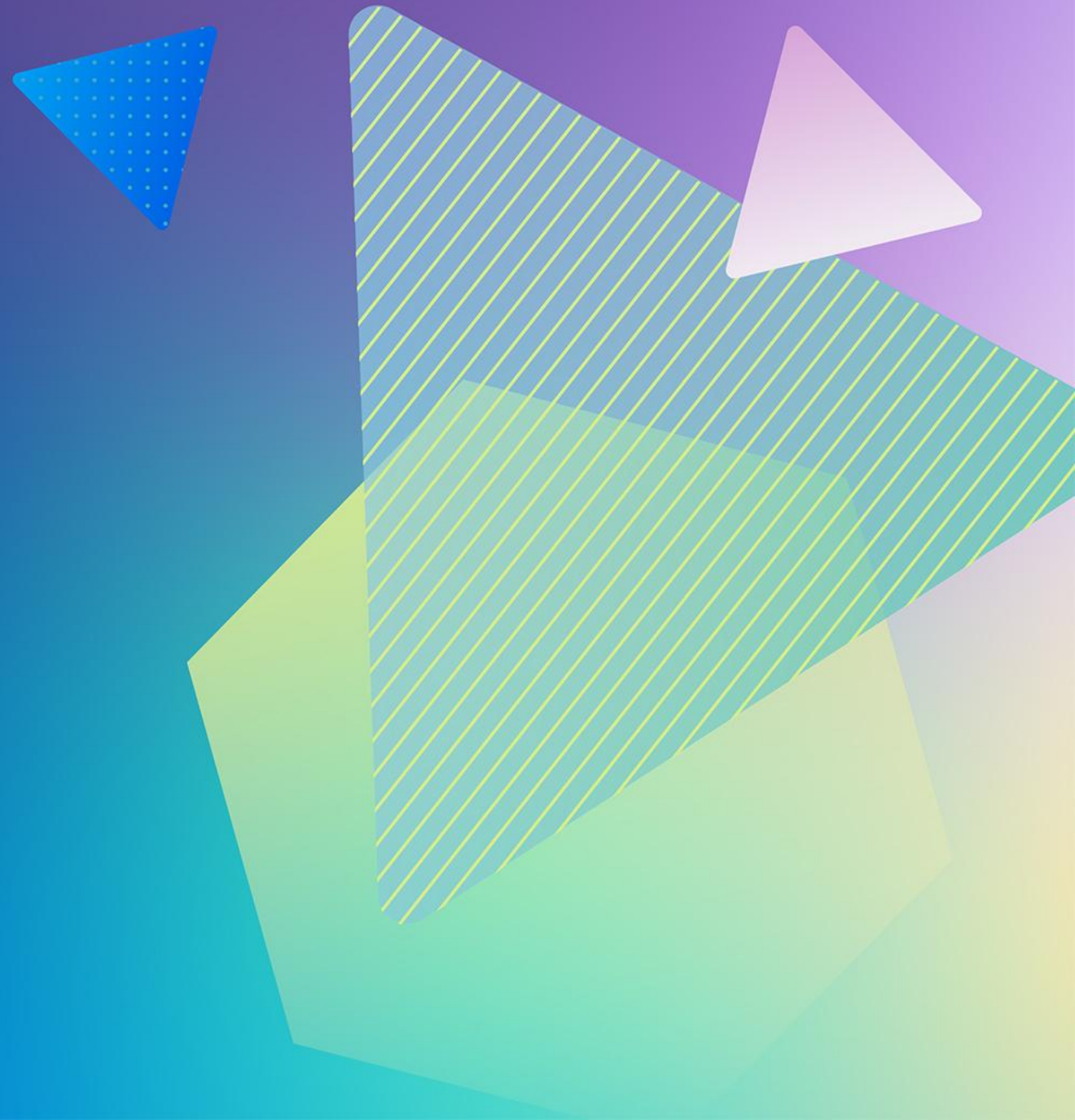
[Monitoring and Telemetry with Microsoft Dynamics 365 Finance and Microsoft Dynamics 365 Supply Chain Management | Microsoft Learn](#)

[microsoft/Dynamics-365-FastTrack-FSCM-Telemetry-Samples: Sample extensions for Dynamics 365 Finance and Supply Chain Management to bootstrap teams wanting to start emitting telemetry for SCM related processes.](#)

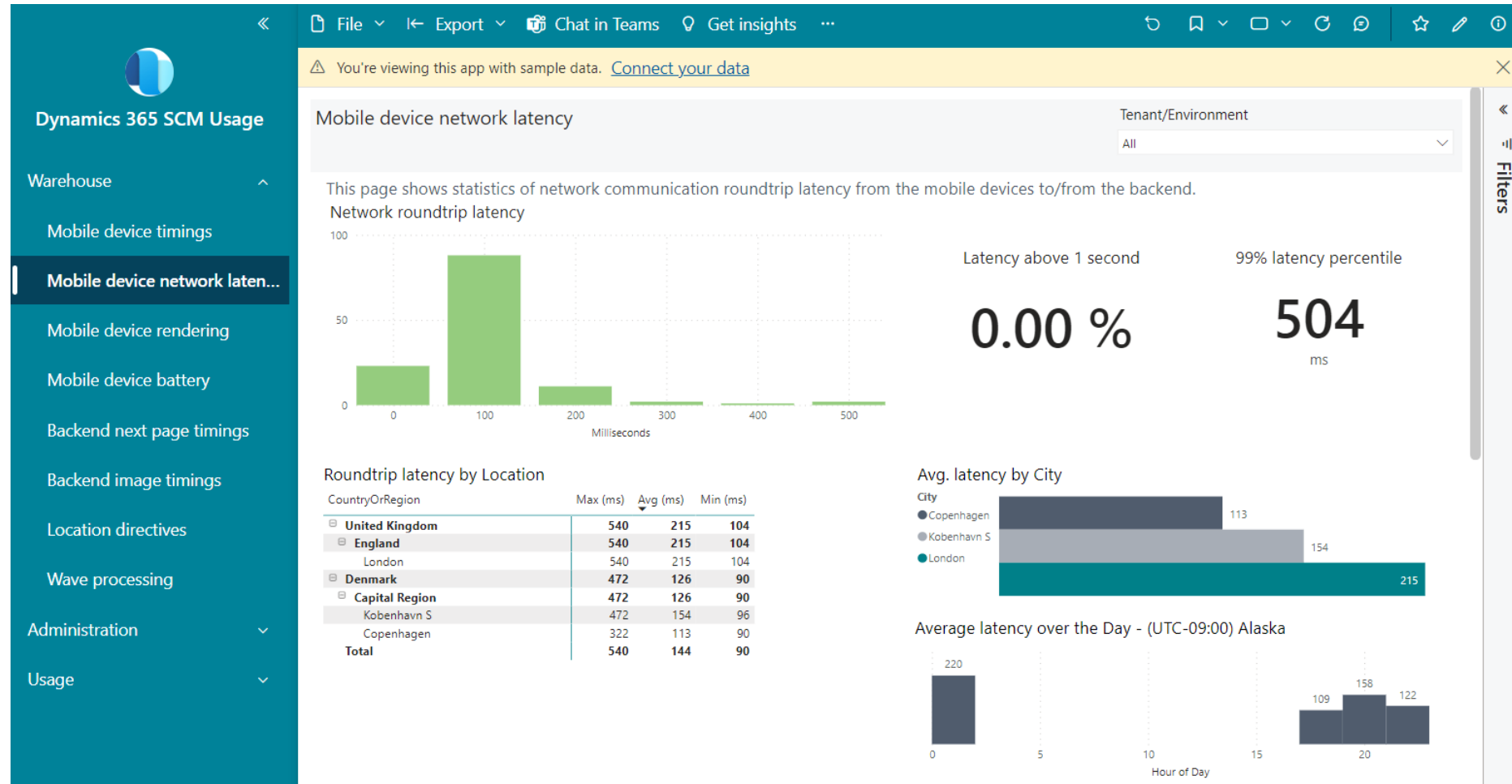
Prerequisites

- Azure Subscription
- Application Insights environment (Requires Contributor, Writer or Admin rights)
- Application insights environment must be unique for an environment or tenant
- Dataverse Environment (For Power Platform and D365 CE)
- The feature is turned on & supported for Managed Environments only(For Power Platform)

Demo



Supply chain usage telemetry – Operational Insights

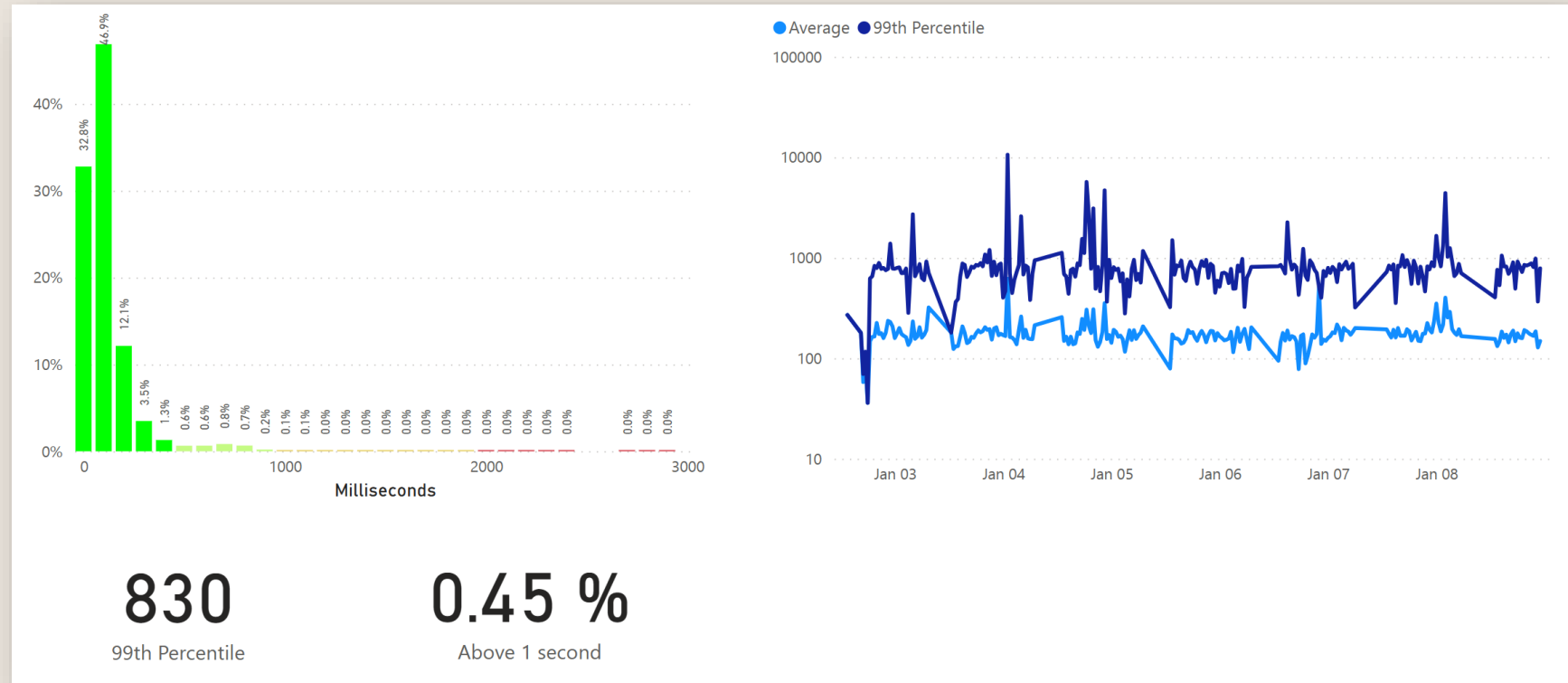


[Enable warehousing telemetry with Application Insights - Supply Chain Management | Dynamics 365 | Microsoft Learn](#)

[Monitor Warehouse Management usage and performance - Supply Chain Management | Dynamics 365 | Microsoft Learn](#)



Examples



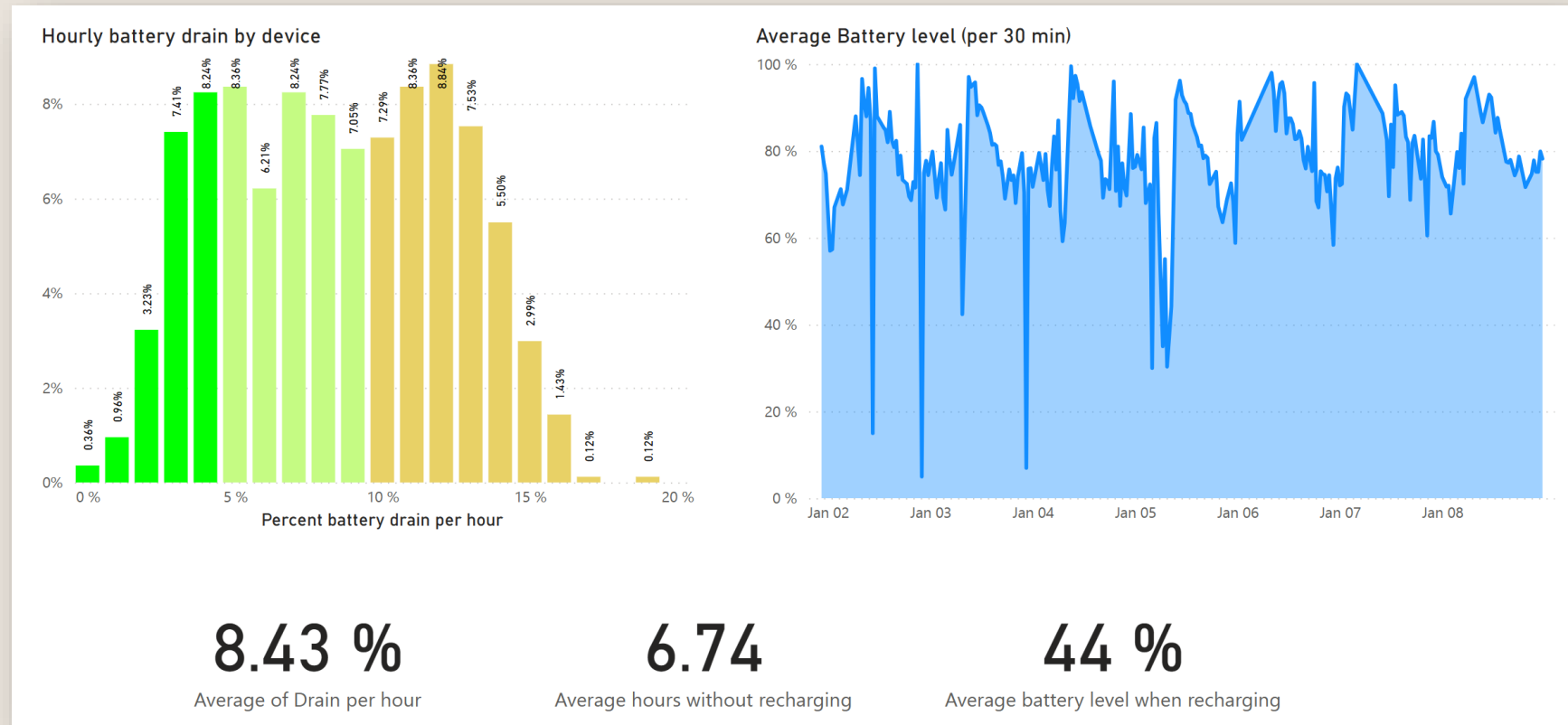
Understand the responsiveness of mobile devices

Examples

client_OS	client_Model	client_Type	Samples	Authorization	Rendering
And 04.4.3	Zebra Technologies	TC55	33533	62.29	427.50
And 08.1.0	Zebra Technologies	TC51	7	4.57	169.71
And 08.1.0	Zebra Technologies	TC56	96	751.22	199.79
And 08.1.0	Zebra Technologies	TC57	36	107.22	306.03
And 10	Zebra Technologies	TC57	153	11.52	187.59
And 11	Zebra Technologies	TC57	1064	15.36	184.03
Total			34889	62.57	418.21

Understand your fleet of mobile devices

Examples



Understand the battery health of mobile devices

Examples

Transaction type	Work type	Count	Total (ms)	Each (ms)	Locations visited (each)	Location actions (each)
Sales	Pick	710,550	198,277K	279	1.29	1.13
Replenishment	Put	23,559	5,561K	236	4.19	1.09
Replenishment	Pick	17,093	3,428K	201	1.07	1.03
Purch	Put	1,044	3,366K	3,224	11.41	1.29
Invent	Put	1,595	2,304K	1,444	4.36	1.06
TransferIssue	Pick	282	1,084K	3,844	1.20	1.05
SortedInventoryPicking	Put	5,682	916K	161	1.00	1.00
Sales	Put	7,755	755K	97	1.00	1.00
TransferReceipt	Put	62	256K	4,132	138.61	1.98
TransferIssue	Put	273	42K	155	1.00	1.00
Total		767,895	215,989K	281	184.72	10.35

Understand Location Directives performance

Commerce Operational Insights



Failure rates for Hardware Station

This query can be used to generate a chart that shows the failure rates in Hardware Station. You can adjust the time period of the chart by using the variables at the beginning to examine a specific period. This query is useful when you want to monitor Hardware Station over time to see whether there is a spike in error rates during specific periods, or when you suspect that a widespread issue might be occurring.

```
// Hardware Station Request Failure Rates ==>
let tenantId = '<tenantId>';
let timeWindow = 1d;           // Use to adjust time window for graph
let timeBucket = 1m;          // Use to adjust granularity of graph
customEvents
| where customDimensions.TenantId == tenantId
| where name has "posInitiatedHardwareStationRequestStarted"
| extend activityId = toString(customDimensions.activityId)
| extend url = toString(customDimensions.hardwareStationUri)
| join kind = inner (customEvents | where customDimensions.TenantId == tenantId
                        | where name has "posInitiatedHardwareStationRequestFailed"
                        | extend activityId = toString(customDimensions.activityId)
                        | extend url = toString(customDimensions.hardwareStationUri))
on activityId, url
| make-series count(), default=0 on timestamp from ago(timeWindow) to now() step timeBucket
| project timestamp, count_
| render timechart
```

Failure rates for the Commerce Runtime

This query can be used to generate a chart that shows the failure rates in the Commerce Runtime. You can adjust the time period of the chart by using the variables at the beginning to examine a specific period. This query is useful when you want to monitor the Commerce Runtime over time to see whether there is a spike in error rates during specific periods, or when you suspect that a widespread issue might be occurring.

```
// CRT Failure Rates ==>
let tenantId = '<tenantId>';
let timeWindow = 1d;           // Use to adjust time window for graph
let timeBucket = 1m;          // Use to adjust granularity of graph
customEvents
| where customDimensions.TenantId == tenantId
| where name has "modelManagersCommerceRuntimeRequestStarted"
| extend requestId = toString(customDimensions.requestId)
| join kind = inner (customEvents | where customDimensions.TenantId == tenantId
                        | where name has "modelManagersCommerceRuntimeRequestError"
                        | extend requestId = toString(customDimensions.requestId))
on requestId
| make-series count(), default=0 on timestamp from ago(timeWindow) to now() step timeBucket
| project timestamp, count_
| render timechart
```

[Operational Insights for POS – Events and Queries White paper](#)

[Set up Operational Insights - Commerce | Dynamics 365 | Microsoft Learn](#)

[GitHub - YAD365/d365-commerce-telemetry: Kusto queries and dashboards for D365 commerce operational insights](#)



Operational Insights Settings

- Configure the connection to your Application Insights instance and setup settings.

The screenshot shows the 'Operational Insights' settings page within the 'Finance and Operations Preview' application. The page has a dark blue header with a search bar containing 'operational' and a user profile icon. Below the header, there's a navigation bar with 'Standard view' and 'Operational Insights' (highlighted in blue). A left sidebar contains a menu with 'Configure', 'Environments', and 'Application Insights registry'. The main content area is titled 'Choose which types of telemetry you would like to capture. Only enabled types will be sent to Application Insights'. It lists two options: 'Commerce channel events' and 'Warehouse events', both with toggle switches set to 'No'. At the bottom, there is a privacy notice: 'By enabling Operational Insights you are affirming that you understand that Operations Insights may transmit diagnostic, activity, and related data including personal data to a geography other than the geography which hosts your D365 Service. To learn more about Operational Insights, read our Feature documentation. Your privacy is important to us. To learn more, read our Privacy Statement.' with a link to the 'Privacy Statement'.

Finance and Operations Preview

operational

DAT | Company accounts data

Standard view

Operational Insights

Configure

Environments

Application Insights registry

Choose which types of telemetry you would like to capture. Only enabled types will be sent to Application Insights

Commerce channel events

No

Warehouse events

No

By enabling Operational Insights you are affirming that you understand that Operations Insights may transmit diagnostic, activity, and related data including personal data to a geography other than the geography which hosts your D365 Service. To learn more about Operational Insights, read our Feature documentation. Your privacy is important to us. To learn more, read our Privacy Statement.

[Privacy Statement](#)

Customizing AppInsights

Logging custom telemetry in FO and SCM

- F&O is quite powerful with the ability to create extensions
- Using the [SysApplicationInsights](#) API custom telemetry can be emitted to AppInsights.
 - Custom Events
 - Custom Metrics
 - Traces
 - Exceptions
 - PageViews

An example of logging telemetry in F&O

- Git hub for the sample used here: [D365-FO-MonitoringAndTelemetry-Samples \(github.com\)](https://github.com/microsoft/D365-FO-MonitoringAndTelemetry-Samples)
- Demo of the sample code to create Custom events in AppInsights and control what events can be logged at what level of severity.

Other standard github repos available for customers:

[microsoft/Dynamics-365-FastTrack-FSCM-Telemetry-Samples](https://github.com/microsoft/Dynamics-365-FastTrack-FSCM-Telemetry-Samples): Sample extensions for Dynamics 365 Finance and Supply Chain Management to bootstrap teams wanting to start emitting telemetry for SCM related processes. (github.com)

[microsoft/Dynamics-365-FastTrack-Implementation-Assets](https://github.com/microsoft/Dynamics-365-FastTrack-Implementation-Assets): Dynamics 365 FastTrack Implementation guides (github.com)

Another sample; [microsoft/ISM-Telemetry-for-Finance-and-Operations](https://github.com/microsoft/ISM-Telemetry-for-Finance-and-Operations): Telemetry samples for Application Insights usage for Dynamics Finance & Operations

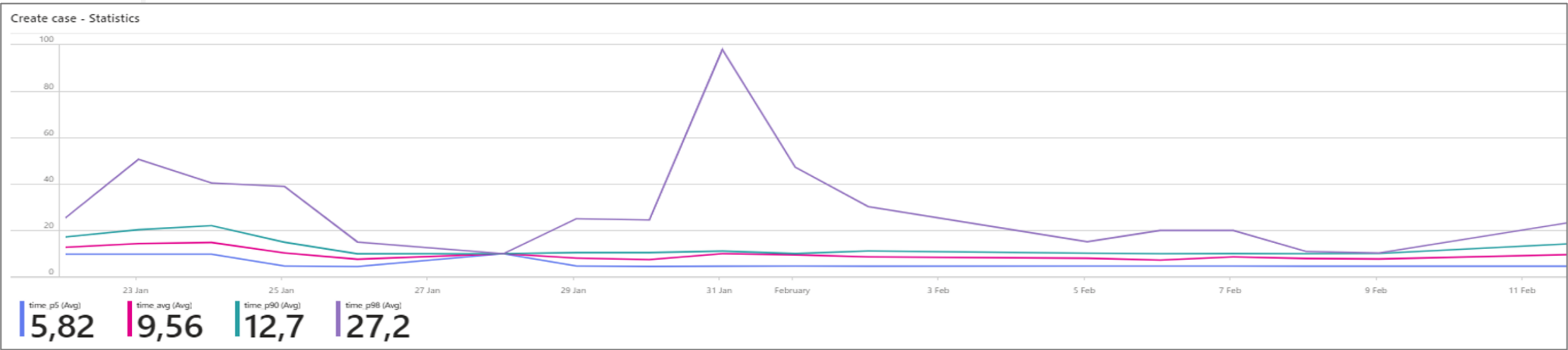
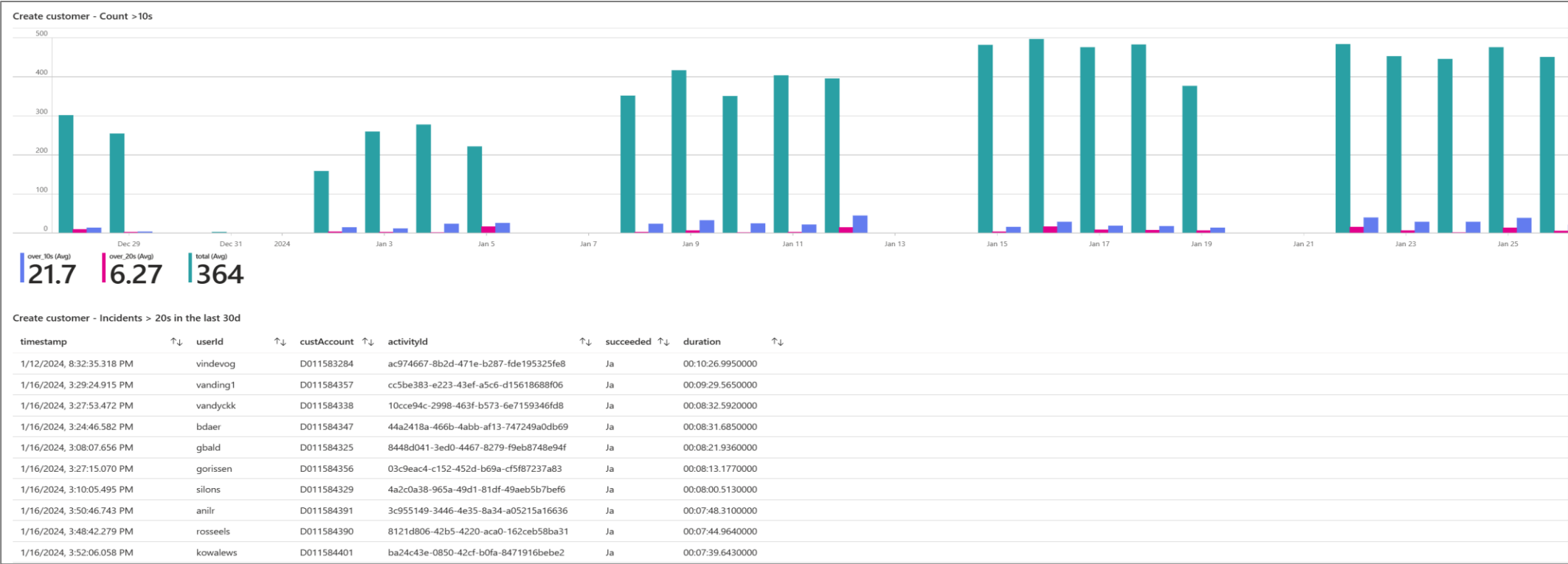
Practical use cases

Monitoring Business KPIs

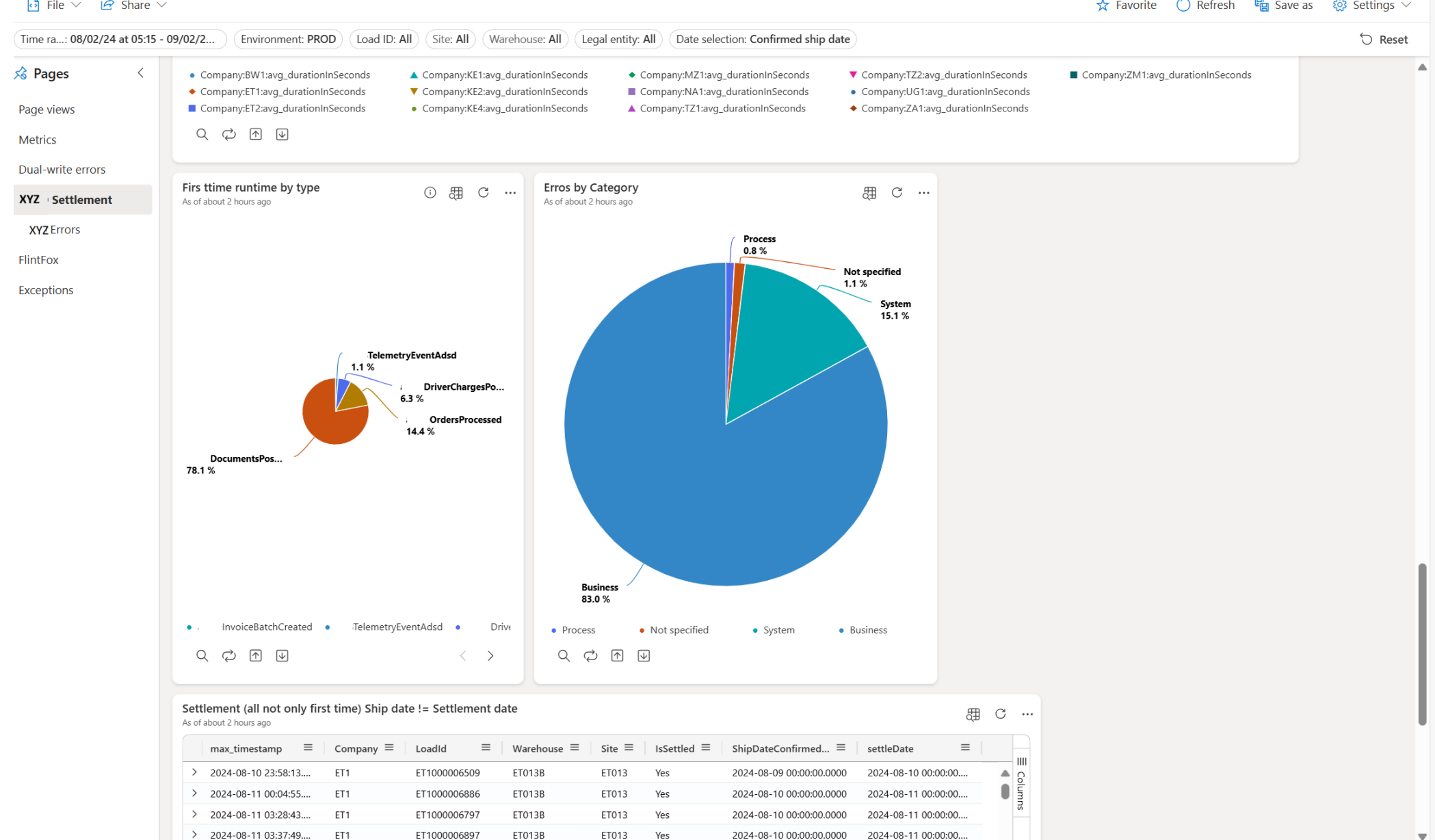
WeekBin name	08-2024			09-2024			10-2024		
	Duration	90th	Volume	Duration	90th	Volume	Duration	90th	Volume
TelemetryaDSDCompleteSettlement	32.4	68.22	14015073	38.5	80.23	13469363	34.8	75.64	11128290
TelemetryDistributeCostPricesFromPendingPrices	40.4	67.00	1486	0.0	0.00	1	46.1	47.00	787
TelemetryLoadWorkManualComplete	50.7	100.67	1528561	52.2	102.52	1510426	48.6	95.17	1552458
TelemetryReceiptITTransactions	3.6	6.54	14404	4.3	7.65	15009	3.8	7.14	14318
TelemetryReleaseLoadToWarehouse	106.9	308.21	1006172	104.2	296.44	958464	104.8	319.45	963273
TelemetryShipConfirm	33.5	74.08	1616703	41.2	101.02	1585279	39.5	94.70	1577134
TelemetryTransferJournalPost	3.5	4.52	31657	3.4	4.51	29396	3.5	4.71	30489

Monitoring Business Processes

- Form loading times and trends
- Customer creation
- Invoice creation and posting times
- Price agreement calculation timings
- Printing of invoices (Integration with printing service party)
- Dataverse requests



Identifying customization issues



Customers Monitoring Dual-Write

Pages

Page views

Metrics

Dual-write errors

Settlement

Errors

FlintFox

Exceptions

Dual-write errors

As of 5 days ago

	timestamp	TitleField1	TitleField2	EntityName	Company	QueueRecId	RefRecId	RefTableId	errorOnly
>	2024-08-21 17:21:21.3230	6000009181	PC0000001	ISalesOrderLineV2Entity	bw1	5761419945	5707599820	1328	
>	2024-08-21 17:32:18.6870	1004178853	SHOPRITE EVATON	ISalesOrderHeaderV2Entity	za1	5761424201	5647649382	2878	
>	2024-08-21 17:36:38.2310	6000085261	7479	ISalesOrderLineV2Entity	ug1	5761371816	5707814641	1328	
>	2024-08-21 17:36:38.5260	6000085261	Kunya George	ISalesOrderHeaderV2Entity	ug1	5761371817	5648488333	2878	
>	2024-08-21 18:08:58.5360	1004527329	5105	ISalesOrderLineV2Entity	tz1	5761325862	5707494108	1328	Request failed with status code 400
>	2024-08-21 18:12:04.8350	6000018788	CB0200104	ISalesOrderLineV2Entity	et1	5761384337	5707790866	1328	
>	2024-08-21 18:14:53.5660	1004515310	6121	ISalesOrderLineV2Entity	za1	5761403929	5707352067	1328	Request failed with status code 400
>	2024-08-21 18:14:54.4260	1004494473	4307	ISalesOrderLineV2Entity	za1	5761456034	5706998200	1328	Request failed with status code 400
>	2024-08-21 18:14:54.7660	1004529637	1040	ISalesOrderLineV2Entity	za1	5761457950	5707528526	1328	Request failed with status code 400
>	2024-08-21 18:14:54.8540	1004456765	0890	IReturnOrderLineV2Entity	za1	5761418027	5706645410	1328	Request failed with status code 400
>	2024-08-21 18:14:54.9230	1004529094	5889	ISalesOrderLineV2Entity	za1	5761457763	5707543246	1328	Request failed with status code 400
>	2024-08-21 18:14:56.3040	1004526531	5177	ISalesOrderLineV2Entity	za1	5761418289	5707492526	1328	Request failed with status code 400
>	2024-08-21 18:14:56.4380	1004523154	MONERENG SUPERMARKET	ISalesOrderHeaderV2Entity	za1	5761458853	5648409397	2878	Request failed with status code 400
>	2024-08-21 18:14:56.4470	1004531133	CB0200019	ISalesOrderLineV2Entity	za1	5761456989	5707611120	1328	Request failed with status code 400

Errors by type

As of 5 days ago

count_	errorOnly
> 805	
> 99	Request failed with status code PreconditionFailed and CDS error code : 0x80060892 response message: A record that has the attribute values Order, Seque...
> 1	Request failed with status code BadRequest and CDS error code : 0x8004418e response message: The plug-in execution failed because no Sandbox Hosts ar...
> 1	Request failed with status code BadRequest and CDS error code : 0x8004418e response message: The plug-in execution failed because no Sandbox Hosts ar...
> 1	Request failed with status code BadRequest and CDS error code : 0x8004418e response message: The plug-in execution failed because no Sandbox Hosts ar...
> 1	Request failed with status code BadRequest and CDS error code : 0x8004418e response message: The plug-in execution failed because no Sandbox Hosts ar...
> 1	Request failed with status code BadRequest and CDS error code : 0x8004418e response message: The plug-in execution failed because no Sandbox Hosts ar...
> 1	Request failed with status code BadRequest and CDS error code : 0x8004418e response message: The plug-in execution failed because no Sandbox Hosts ar...
> 1	Request failed with status code BadRequest and CDS error code : 0x8004418e response message: The plug-in execution failed because no Sandbox Hosts ar...
> 1	Request failed with status code BadRequest and CDS error code : 0x80040265 response message: The plug-in execution failed because no Sandbox Hosts ar...
> 1	Request failed with status code BadRequest and CDS error code : 0x8004418e response message: The plug-in execution failed because no Sandbox Hosts ar...
> 1	Request failed with status code BadRequest and CDS error code : 0x8004418e response message: The plug-in execution failed because no Sandbox Hosts ar...
> 1	Request failed with status code BadRequest and CDS error code : 0x8004418e response message: The plug-in execution failed because no Sandbox Hosts ar...

App insights in the Power platform

Canvas Apps

Power Pages websites

Dataverse Diagnostics
& Performance

Power Automate

Dynamics 365
Customer Service

Power Apps

Application Insights Cost Model

Understanding the Azure Monitor costing model

- Azure monitor pricing calculator
 - [Azure Monitor cost and usage - Azure Monitor | Microsoft Learn](#)
- Ingestion, retention, and export of data in Log Analytics workspaces is the main cost driver.

Cost optimization best practices

- Configure the right pricing tier for storage based on overall estimated data volume.
 - <https://learn.microsoft.com/en-us/azure/azure-monitor/logs/data-platform-logs#table-plans>
- Configure data retention and archiving.
 - [Manage data retention in a Log Analytics workspace - Azure Monitor | Microsoft Learn](#)
- Setup alerting for high data collection.
- Set up alerts on Azure Advisor cost recommendations for Log Analytics workspaces.
- Use configuration / sampling / filtering where possible to reduce unneeded telemetry.

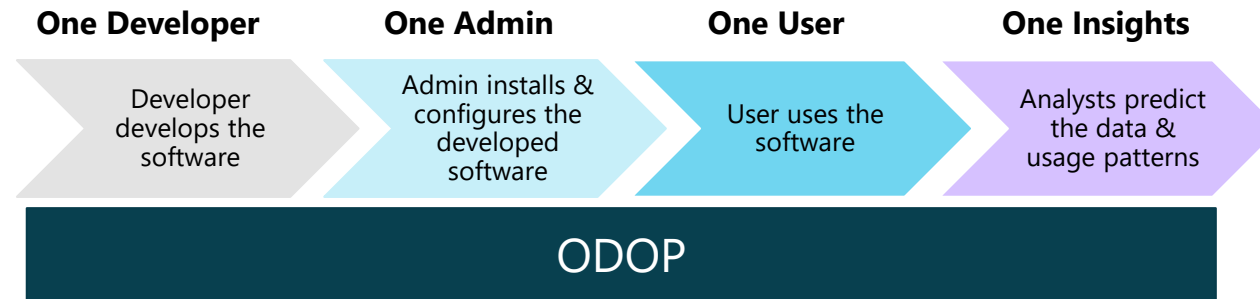


One Dynamics One Platform

What is the Objective?

Front office and back-office integrations have always existed with enterprises. These integrations take up significant time and incur cost in any implementations. Integrating heterogeneous applications not only poses challenges to our customers, partners and ISV's & admins, it also poses challenges to end users' experience in the end-to-end scenario(s).

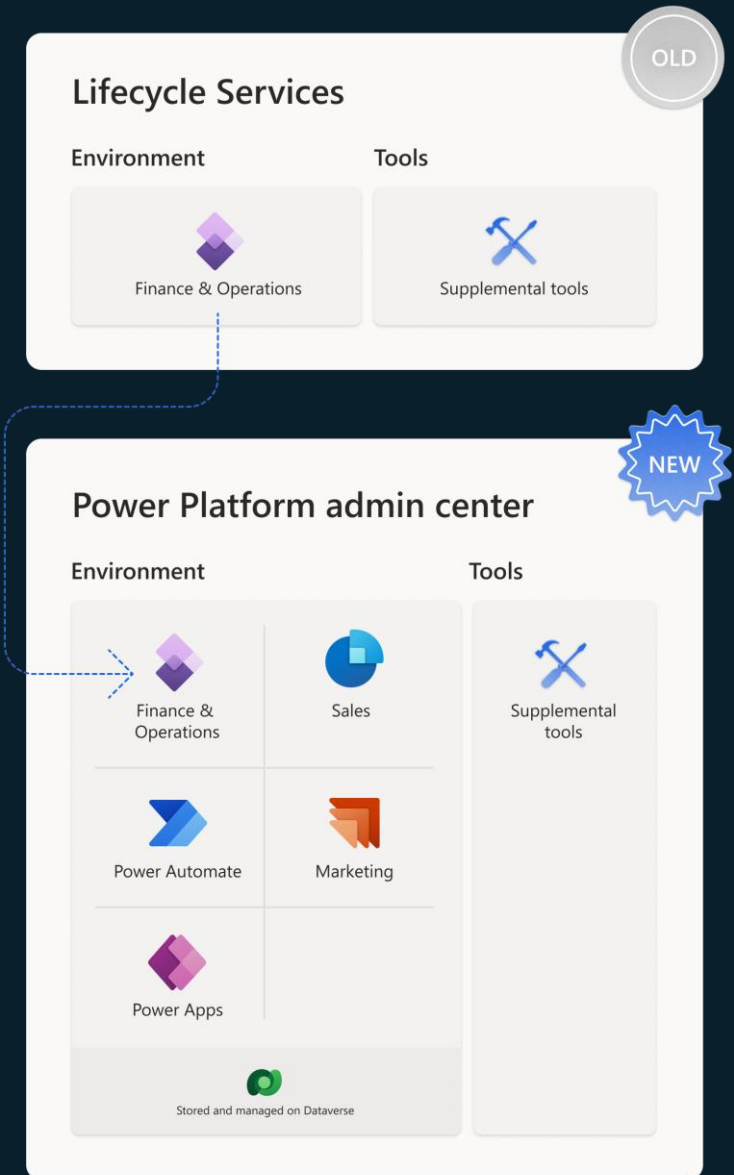
One Admin, One User, One Developer, One Insights is the vision to enable the converged experiences across F&O and the Power Platform.



One Admin, One Admin Center

Finance and Operations runs on Dataverse

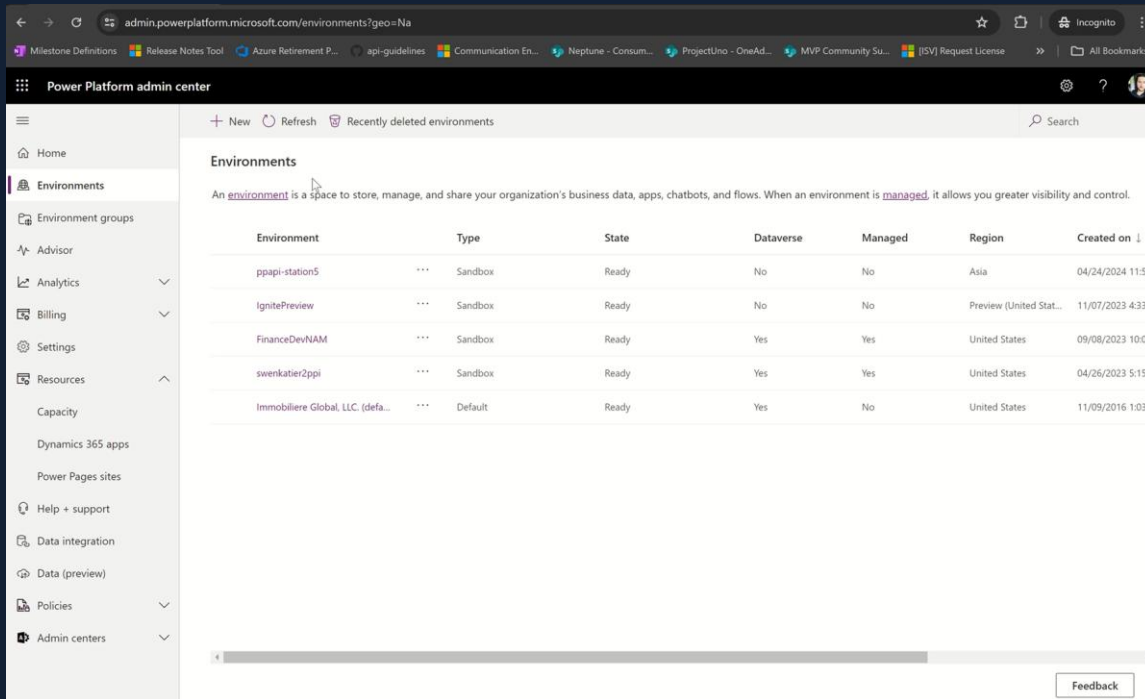
- Provides for a unified **environment lifecycle** as well as **application lifecycle**
- **Single admin portal** for managing low-code as well as business applications
- Robust automation support in **Connectors, CLI, PowerShell, and REST APIs**



Provision a new unified environment

Available Now!

User Interface



Advantages

- ✓ Easy
- ✓ Can Delegate to Partners
- ✓ All-in-one environment for D365

Automation

```
PS C:\Users\laswenka> Add-PowerAppsAccount
WARNING: The names of some imported commands from the module 'Microsoft.PowerApps.AuthModule' include unapproved verbs that might make them less discoverable. To find the commands with unapproved verbs, run the Import-Module command again with the Verbose parameter. For a list of approved verbs, type Get-Verb.
PS C:\Users\laswenka> |
```

Advantages

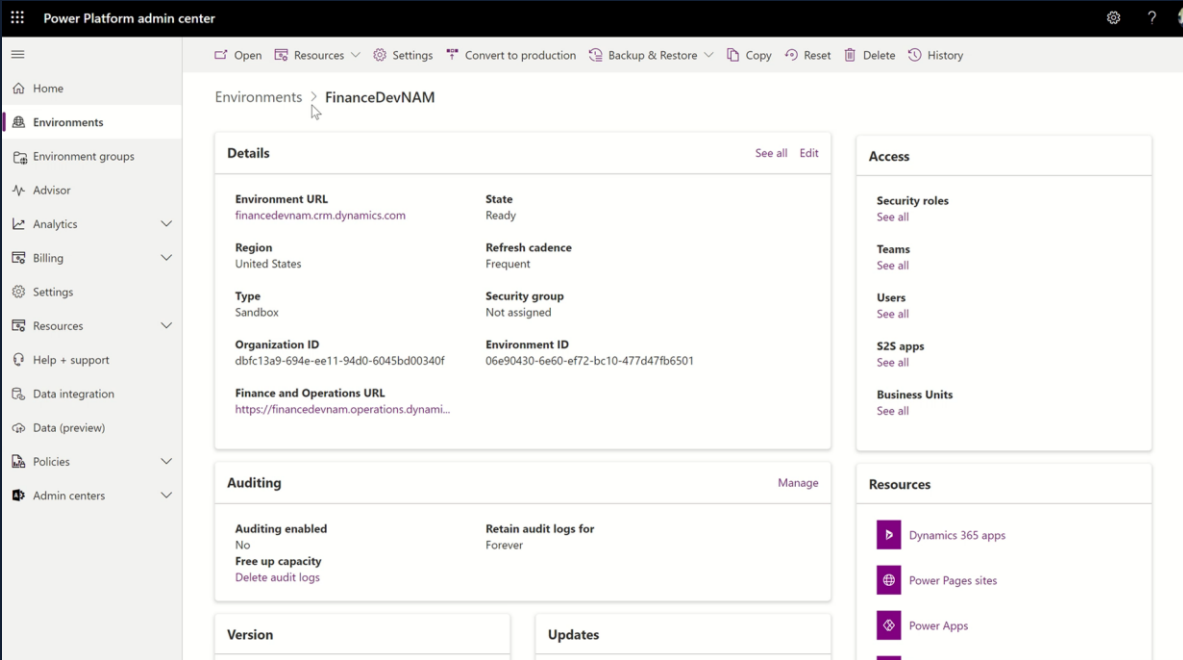
- ✓ Create many in parallel
- ✓ Use Service Principal
- ✓ Simplify DevOps processes



Copy an environment

Available Now!

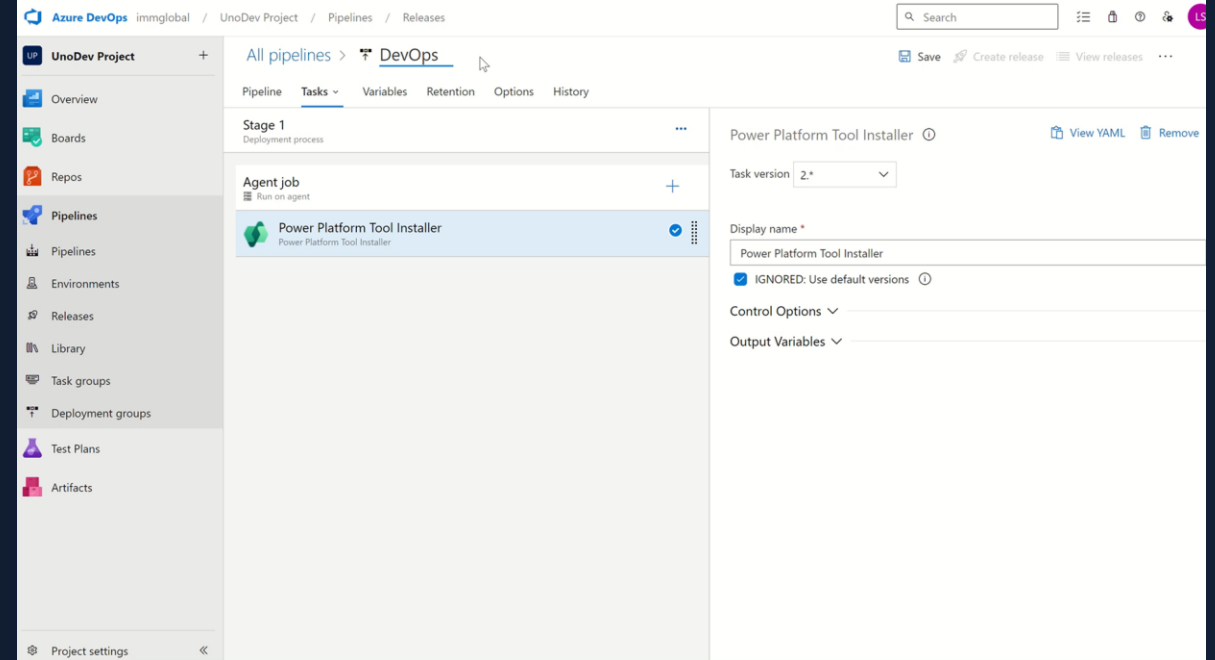
User Interface



Advantages

- ✓ Copies Code & Database
- ✓ Copy LCS to PPAC, or PPAC to PPAC
- ✓ Prod direct to a Developer

Automation

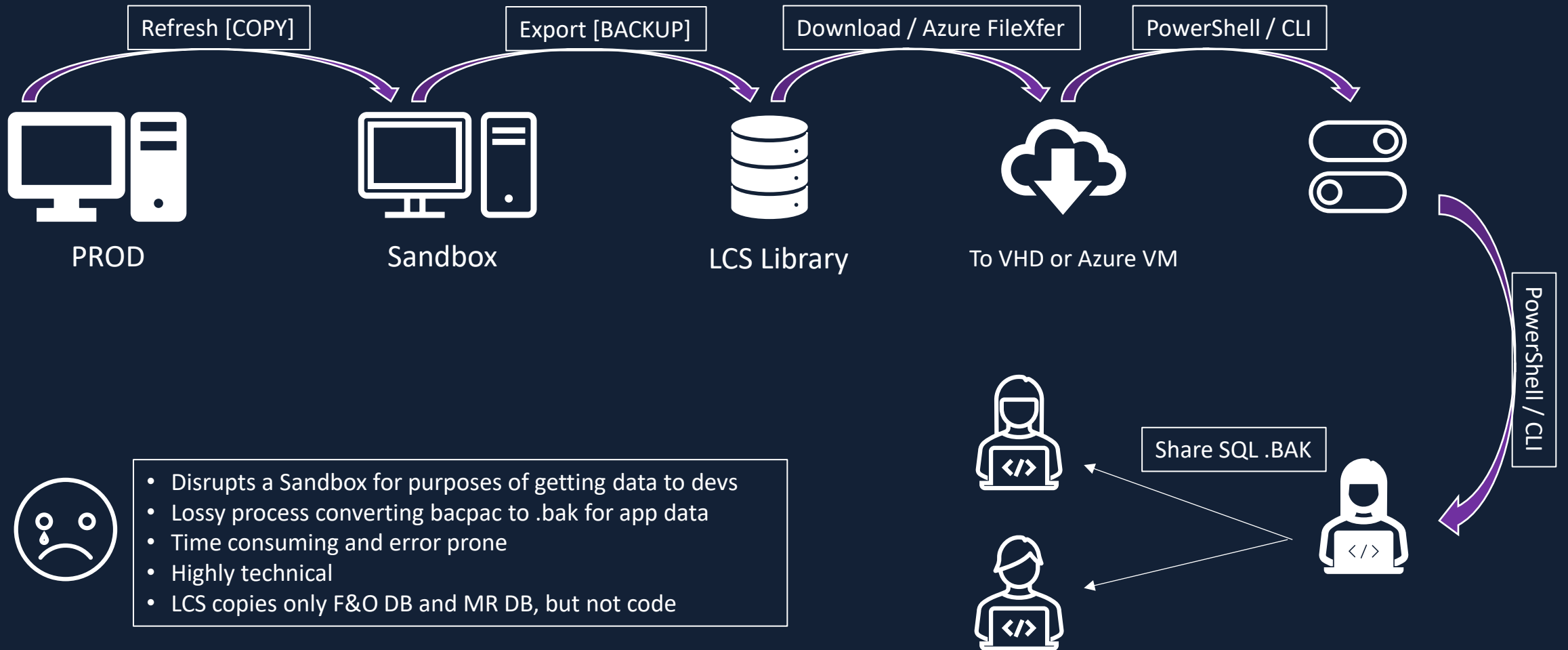


Advantages

- ✓ Robust DevOps Processes
- ✓ Use Service Principal
- ✓ Minimal Setup Required

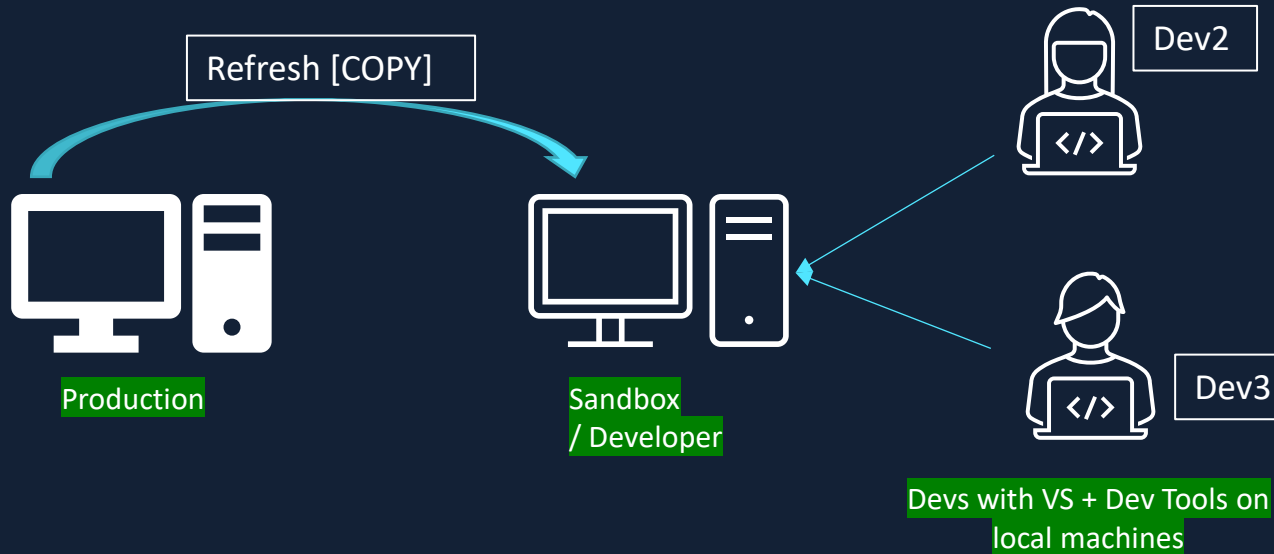


LCS copy was painful...



Available Now!

Simple Copy process in PPAC



- PPAC copies code and data both | Ready to debug
- Comes as exact replica of the source including the application version, add-ins, ISV, customizations
- Unified experience for building DV solutions, X++ solutions, or a solution that spans both

Copy environment

LaneUDE1

ⓘ Overwrite another environment with a copy of this one. Its existing resources including backups will be deleted. [Learn more](#)

This operation is subject to [capacity constraints](#)

Copy over *

☒ Everything
Includes all application data, customizations, and schemas

☐ Customizations and schemas only
Doesn't include application data or audit logs

Audit logs

To improve operation speed, audit logs are not copied over by default [Change this](#) | [Learn more](#)

Transactionless Copy

To reduce storage consumption, transactions are not copied by default for Finance and Operation Apps [Change this](#) | [Learn more](#)

Select target environment to overwrite *

Select ▼

[Don't see your environment?](#)

Transaction-less Copy

Available Now!

Why

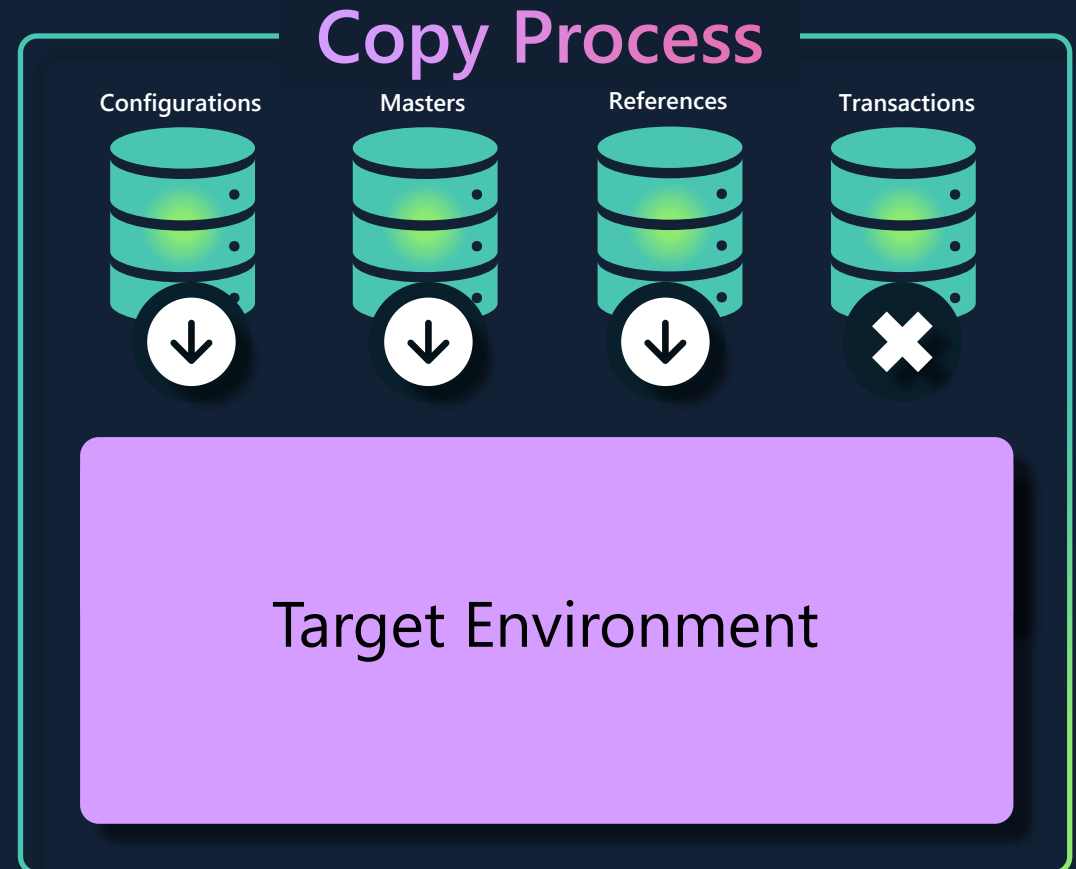
- Provide a tool to reduce extra storage consumption outside of Production
- Reduce unnecessary bloat in test/developer environments

Admins can

- Source environment can be unified or from LCS
- Leverage automation in AzDevOps, Logic Apps, Power Automate
- Load sanitized data for use outside of production

Results

- Up to 90% storage reductions, especially with DV Minimal Copy
- The larger the source environment, the larger the savings potential



Target is a unified sandbox or developer environment

March 28, 2025




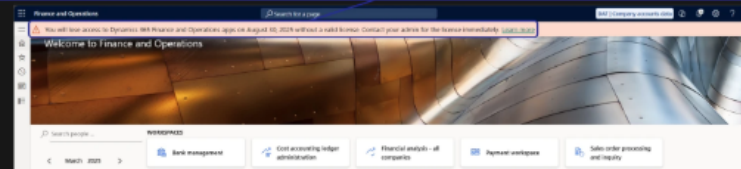
Today, we're introducing updates that will help centralize user license management and provide clarity for administrators. Starting April 30th, administrators will have access to license usage reporting that shows seats available and seats assigned. Starting September 1st, users that have not yet been assigned a license will start to see an in-product notification asking them to contact their administrator to request license assignment. Beginning November 1, 2025, users will require an assigned license to access the Dynamics 365 Finance and Operations applications. We are giving customers time to prepare with tools and training to support any action needed. For users that already have licenses assigned, there will be no disruption, and no action needed from their administrator.

Key Dates and Actions for Simplified License Management

Starting April 30, 2025, we will introduce enhanced license reporting in the [Power Platform admin center](#), offering comprehensive insights into license usage across all security roles.

Starting September 1, 2025, users who do not meet license requirements will receive proactive notifications directly within the Dynamics 365 application, instructing them to request proper licensing through their administrator. This improvement supports your efforts to maintain precise control and ensures compliance while reducing administrative overhead.

 You will lose access to Dynamics 365 Finance and Operations apps on August 30, 2025 without a valid license. Contact your admin for the license immediately. [Learn more](#)



Beginning November 1, 2025, all Dynamics 365 customers will be required to assign user licenses directly through the [Microsoft 365 admin center](#) for the following applications:

[Simplifying License Management for Dynamics 365](#)

Microsoft 365 admin center

Search

Home > Message center

Message center

Each message gives you a high-level overview of a planned change and how it affects users, and links out to more detailed information to help you prepare. [Learn more about changes](#)

Inbox

Archive

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Archive

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Share

Filters:

Service: Finance and Operations Apps

Tag

Message

☐ Message title

☒ Finance and Operations Apps - Prepare for user license assignment requirements (August 30, 2025)

☐ Finance and Operations Apps - [Reminder] Dataverse will be mandatory for all new and existing deployments

☐ Dynamics 365 Supply Chain Management - Demand planning feature release

Finance and Operations Apps - Prepare for user license assignment requirements (Aug 30, 2025)

Archive Share Copy link Mark as unread

We are introducing updates designed to centralize user license management and enhance clarity for administrators. Beginning **April 30, 2025**, administrators will gain access to license usage reporting, which will provide additional details about available and assigned seats.

Beginning August 30, 2025, all Dynamics 365 customers will be required to assign user licenses directly through the [Microsoft 365 admin center](#) for the following applications:

- Microsoft Dynamics 365 Finance
- Microsoft Dynamics 365 Supply Chain Management
- Microsoft Dynamics 365 Commerce
- Microsoft Dynamics 365 Project Operations
- Microsoft Dynamics 365 Human Resources

What action do I need to take?

Assign licenses to all applicable users through the Microsoft 365 admin center before August 30, 2025, to prevent uninterrupted access. Please review the [Finance and Operations User license level overview report](#) in the Power Platform admin center to identify users that need licenses assigned.

Why is this action needed?

Users who are not assigned licenses before August 30, 2025, will lose access to Dynamics 365 Finance and Operations applications and will be prompted to contact their administrator for the correct licensing.

More information:

- Learn more about [Simplifying License Management for Dynamics 365 Finance and Operations: Improved User License Validation](#).
- Learn how to [Stay compliant with user licensing requirements](#).
- Watch the [User Security Governance Overview | FastTrack Tech Talk | Dynamics 365](#).
- Comprehensive license reports are available via the [Power Platform admin center](#) and [Dynamics Lifecycle Services \(LCS\)](#).

Do you like this change?

Relevance

Medium

Service & monthly active users

Finance and Operations Apps

Message ID

MC1051964

Published

Apr 9, 2025

Tag

ADMIN IMPACT

USER IMPACT

Power Platform Admin Center – License Management

Get an overview available and assigned licenses

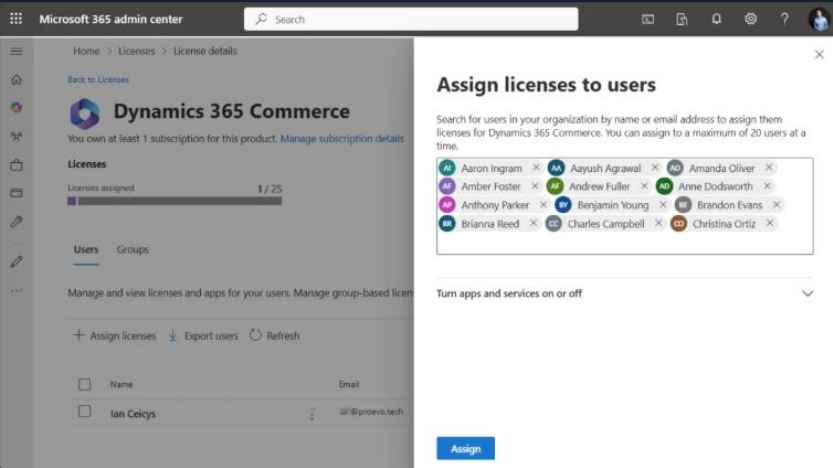
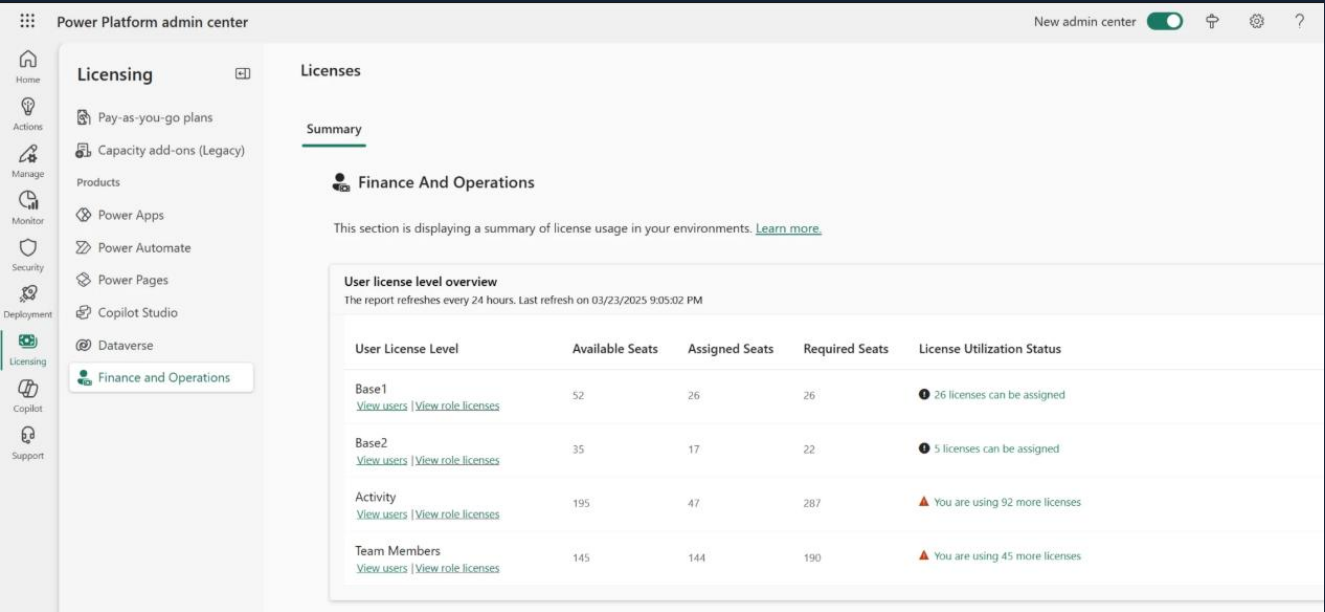
Based on security roles assigned to users

In PPAC you can see user licenses but also capacity usage.

PPAC will be the center for all Dynamics 365 admin.

In the licensereport you can see overage, what user is triggering it and what security role that is affected.

Licenses are allocated in M365 Admin center as with other type of licenses.



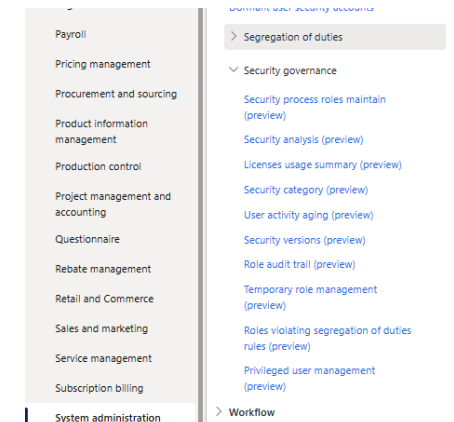
[Simplifying License Management for Dynamic](#)

User Security Governance

– New module in F&O

Features/ improvements

- Better UI to design process-based security roles, duty and/or privilege
 - Position/ responsibility-based user role designer to meet accurate needs
- Added tools for creating new roles/ duties from the existing objects through import processes
 - Merging of duties
- Automate temporary role assignments
- Privileged User Management (aka FireFighter role)
 - Enable dedicate accounts to gain time-bound elevated privilege
- Segregation of duties & Separation of privileges continuous monitoring
 - Define threshold and control the creation of duties/ privileges with overlapping entry points.
- Allow to draft and eventually convert defined roles to AOT project
- Role, duty, and privilege versioning
 - Supplemented with version comparison
 - Feature to restore previous versions
- Duty subtraction function
- Export of security configuration to xml
- Security audit trail to track changes done in our module
- New reports added with License indicators by
 - Role
 - Duty
 - Privilege
 - Entry points
- User Aging report



[User security governance overview - Finance & Operations | Dynamics 365 | Microsoft Learn](#)

[User Security Governance Overview | FastTrack Tech Talk | Dynamics 365](#)

