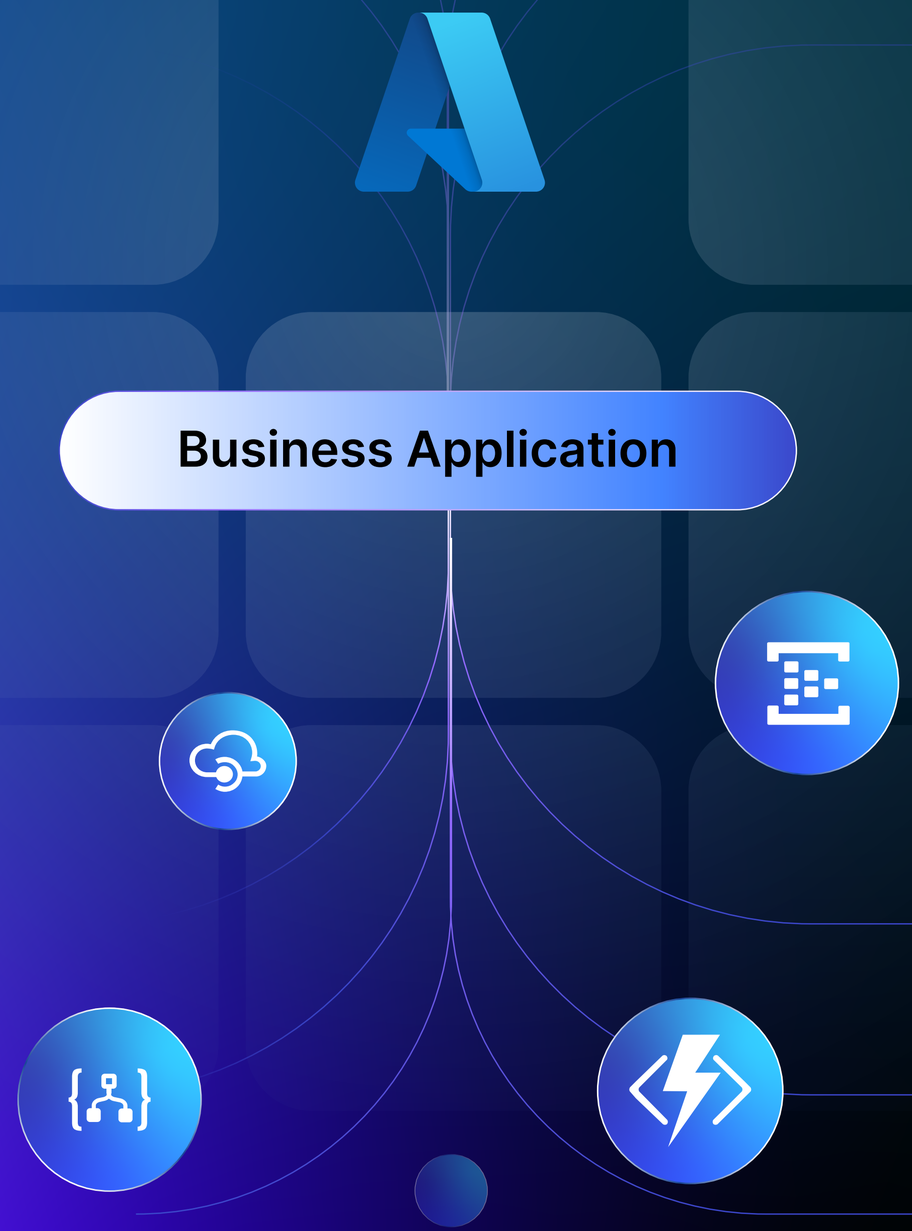
turbo360

Business Application

The concept of a Turbo360 Business Application is that we group Azure resources that work together into a group and we can then manage them together regardless of where they are deployed.

You will have business applications for your individual interfaces or groups of interfaces to make it easy for the support user to be able to manage the resources.



Key Azure Resources in Azure Integration Services

To understand the value of Turbo360 Business Applications for a support operator, lets look at some of the things we can do with the different Azure Integration Services resource types.

1. **Azure Logic Apps**
   - Logic App Standard Workflow
   - Logic App Standard Application
   - Logic App Consumption

2. **Azure API Management (APIM)**

3. **Azure Function Apps**

4. **Azure Messaging**
   - Service Bus
   - Event Grid
   - Event Hub

5. **Data Factory**

6. **Azure Storage**
   (for message tracking, blobs, queues, etc.)

7. **Operations**
   - App Insights

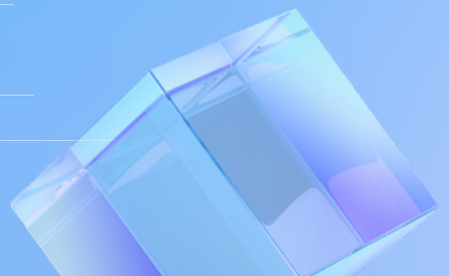
   + Log Analytics (for observability)

8. **Security**
   - Key Vault
   - App Registration
   - Enterprise Application

9. **Other**
   - Data Gateway
   - Integration Account

Logic App

Logic Apps will play the role of your cloud workflow or orchestrator. You will be monitoring and managing these workflows, their performance and any errors they may encounter.



Logic Apps Standard Workflow

Task	Purpose
Monitor run history	Check success/failure of workflows
Track Status	Ensure your workflow is enabled and ready to do work
TODO list of unactioned errors	Keep on top of errors. Which ones have you fixed or can you ignore
Operations	View/Resubmit/Favourite workflows
Logs	KQL monitoring for logs
Automation	Resubmit failures
Maintenance Windows	

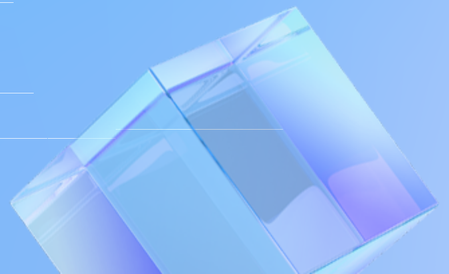
Logic Apps Standard Application

Task	Purpose
Monitor health	Monitor metrics that indicate the app is healthy and ready to process messages
Monitor performance	Monitor metrics to ensure that processing is efficient and problem free
Visualize performance	Simple to manage dashboards to see how your application is performing
State monitoring	Ensure the application is enabled and ready to process data
Watch for throttling	Monitor for performance lags
Operations	Start / Stop application Automate maintenance windows
Logs	Use KQL queries to monitor the application

Logic Apps Consumption

Task	Purpose
Monitor run history	Check success/failure of workflows
Track trigger status	Ensure scheduled or event-based triggers fire
Retry failed runs	Manually or automatically retry transient failures
TODO list of errors you have not yet resolved	Keep on top of errors to fix Ignore errors fixed directly in end systems
Performance dashboard	Monitor for performance lags
Alert on failure thresholds	Trigger alerts for patterns or repeat failures
Monitor any metric	Easy to configure monitoring for any metric
Monitor logs	KQL monitoring for logs
Automation	Resubmit failures

API Management (APIM)



APIM Namespace

The APIM namespace is the root level service for your API Management. At this level we can manage and operate the overall namespace to identify root level issues which might affect all of your API's.

Task	Purpose
Monitor capacity	Ensure your APIM has plenty of capacity for processing requests
Response times	Ensure your APIM is processing requests within an SLA
Errors	Monitor for error thresholds
Audit Logs	Monitor for events in the audit logs to raise alerts for conditions, for example an API being deleted might trigger an alert
Logs	KQL monitoring for custom log conditions

API's

Your APIM Namespace will contain many API's but each of them will perform different roles and may have different behaviour and performance characteristics.

Task	Purpose
Simple yet customizable overview dashboard	Single place to see how the API is performing
Monitor request latency	Spot bottlenecks or slowdowns
Monitor failure thresholds	Identify potential problems with errors
Logs	KQL monitoring for custom log conditions

Operations

Your API may have many operations which are used by different integration use cases. You can group an operation along side the resources that use it to manage them as a group.

Task	Purpose
Simple yet customizable overview dashboard	Single place to see how the API is performing
Monitor request latency	Spot bottlenecks or slowdowns
Monitor failure thresholds	Identify potential problems with errors
Logs	KQL monitoring for custom log conditions
Endpoint Ping	Ping an API operation to ensure if is responding appropriately

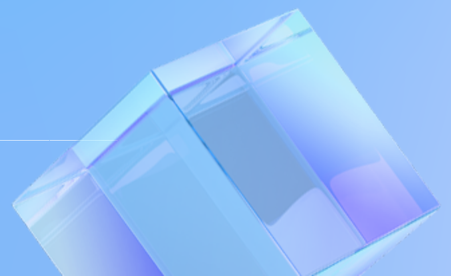
Products

You API's will be exposed to consumers within a product.
You can manage and monitor a product to ensure your

Task	Purpose
Monitor backend health	Ensure APIs and policies route correctly
Track request/response latency	Spot bottlenecks or slowdowns
Audit consumption limits	Monitor quotas, throttling, caching
Trace failing API calls	Identify issues with policies or backend responses
Manage developer portal	Support consumers, update docs, rotate keys

Azure Functions

Azure Functions are a very versatile service on Azure which can be used for a number of different use cases such as the back end for an API, to processing messages or long running durable functions.



Function Apps

You might need to monitor the Function App level resource which will host and run your functions.

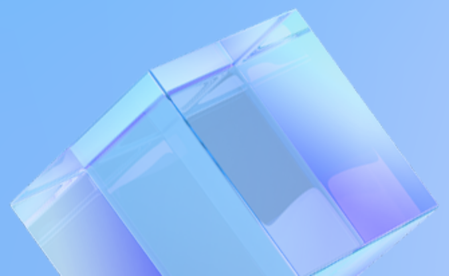
Task	Purpose
Monitor application performance metrics	Ensure the application is healthy and able to process requests
Monitor cold starts / latency	Optimize performance (especially for consumption plan)
Monitor and manage application state	Raise alerts if the application is not running
Log custom events	Monitor KQL queries

Functions

Task	Purpose
Monitor invocation failures	Detect errors, bugs, missing bindings, dependency issues
Monitor status	Alert if disabled and auto correct
Retry queue/event triggers	Resolve transient errors or backlogs
Log custom events	Monitor KQL queries

Azure Messaging

Azure Messaging combines a number of different services such as Service Bus, Event Hub and Event Grid. These services allow you to implement asynchronous services with different types of messaging vand eventing characteristics.



Service Bus

Service Bus is about pub/sub, durable messaging. It is one of the most common services in Azure Integration Services.

Task	Purpose
Monitor dead-letter queues	Detect and triage failed messages
Track queue/topic length	Identify buildup or backlog issues
Monitor queue state	Make sure queue is available
Process retry/fail tracking	Understand failure patterns
Monitor audit log	Alert on conditions like queues being deleted
Monitor sender and receiver applications	Troubleshoot message lock timeouts or session affinity
Monitor namespace, queue, topic & subscription	Monitor all entities
Monitor performance metrics	Ensure efficient queue processing
Monitor capacity	Ensure namespace has capacity for your messaging needs
Automation	Send messages | Process messages | Process dead letter messages

Event Hub

If you are building a system which needs an event stream then Event Hub is your go-to choice.

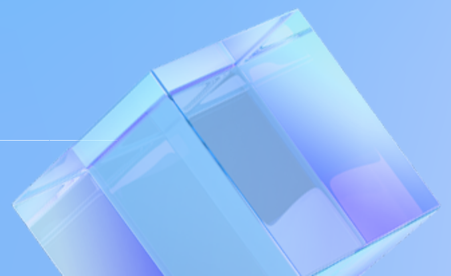
Task	Purpose
Monitor namespace performance	Use metrics on the namespace to monitor capacity and throughput
Event hub level dashboard	View performance and processing of events
Monitor state	Alert if the event hub is disabled
Monitor event hub level IO and performance	Alert if the event hub is not being processed in the right way
Operator Actions	Send test messages Enable / Disable event hub
Monitor sender and receiver applications	Ensure the applications publishing and processing events are healthy
Automation	Send messages

Event Grid

If you are building a reactive application or interface that responds to events then Azure Event Grid is your choice.

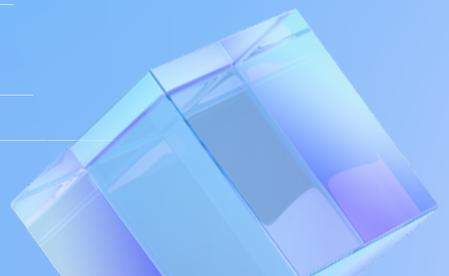
Task	Purpose
Monitor performance	Use metrics on the namespace to monitor capacity and throughput
Simple yet customizable dashboard	View performance and processing of events
Monitor dead letter events	Alert on threshold of dead letter events
Monitor dropped and undelivered events	Alert on metrics indicating processing problems
Monitor event hub level IO and performance	Alert if the event hub is not being processed in the right way
Operator Actions	Send test messages Process dead letter messages Repair and resubmit
Monitor sender and receiver applications	Ensure the applications publishing and processing events are healthy
Automation	Send messages Process dead letter messages

Azure Data Factory (ADF)



Task	Purpose
Monitor pipeline run history	Ensure all activities complete successfully or fail visibly
Check trigger schedules	Validate triggers fired as expected
Alert on failed activities	Notify operations of data ingestion or transformation issues
Track activity duration	Identify performance bottlenecks in copy, data flow, or script actions
Monitor integration runtime	Ensure IR nodes are online and scaling correctly
Logs	Monitor KQL queries
Error TODO list	Manage a list of errors you have not yet resolved
Automation	Replay pipelines

Azure Storage



Queues

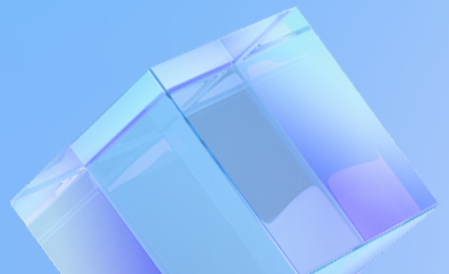
Task	Purpose
Monitor queue depth	Ensure no backlog of messages
View / Update / Resubmit messages	Track message files, integration docs, or config assets
Automation	Purge messages

Storage Account

Task	Purpose
Monitor availability	Ensure storage is available
Monitor IO	Ensure IO is within thresholds
Audit Logs	Monitor audit events for accessing data or generating keys

Operations & Monitoring

You can use some of the out of the box Azure operations and monitoring features but use Turbo360 to enhance the capabilities and provide a safer and simpler user experience.



App Insights / Log Analytics

App Insights and Log Analytics are underlying services used by many of the resources within your Azure Integration Services solution.

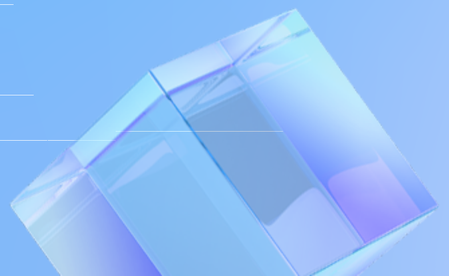
Task	Purpose
Dashboards	Monitor KPIs (success %, failures, latencies)
Setup alerts for common queries	Notify ops teams of issues
View query results	Easy access for teams to common queries you need
Run KQL queries	Monitor common queries and alert on results

Security

Key Vault

If you are using secrets or certificates to access systems in your integration platform then you will be using Key Vault to safely store these secrets.

Task	Purpose
Monitor secret expiry	Alert before expiration
Monitor certificate expiry	Alert before expiration
Monitor availability	Ensure the availability of the Key Vault for use by your applications
Monitor performance metrics	Ensure the Key Vault is performing in terms of access response times
Audit Logs	Alerts when actions such as secrets are read



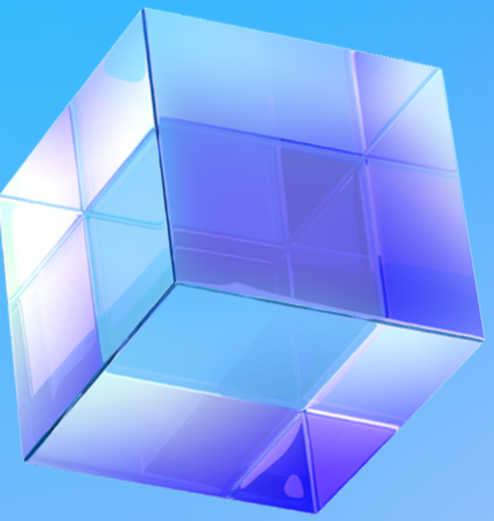
Security

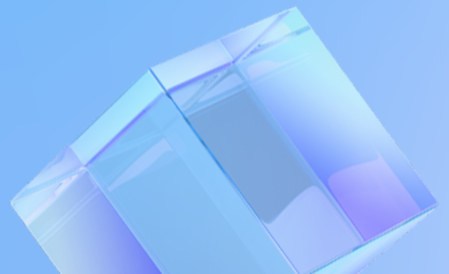
App Registrations (Microsoft Entra ID)

Its common you will have security scenarios that leverage app registrations. Keeping on top of those client secret expiry dates can be a challenge and can cause your interface to stop working.

Task	Purpose
Monitor secret expiry	Alert when close to expiry
Monitor certificate expiry	Alert when close to expiry
Monitor sign-in activity	Use Log Analytics and KQL queries

Other





Integration Account

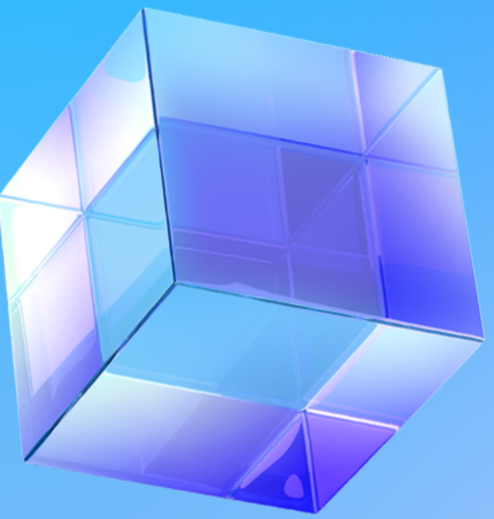
In B2B and EAI interfaces you may need the integration account to help ensure that your able to deliver the complex integration use cases your business depends on.

Task	Purpose
Monitor certificate expiry	Alert before expiration
Alert on audit events	Watch for common events such as: • Partner deleted • Map Deleted • Schema deleted • Certificate deleted
Monitor consumer services	Monitor the services using the integration account

On Premise Data Gateway

If you use connectors that require the on premise data gateway then you will host a service on a virtual machine and then leverage it from your Azure solution. You need to ensure these virtual machines are healthy and performant so your integration solution runs effectively.

Task	Purpose
Monitor the VM state and availability	Ensure the health of VM hosting your data gateway server
Monitor the performance of the VM hosting your data gateway server	Ensure the VM is processing and performing efficiently



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