Azure Resource Usage in `azwrap/wrapper.py`

This document details, for each class (and relevant enum) in `azwrap/wrapper.py`, which Azure resources are used and in what manner (read, create, update, get details, etc.).

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1. `Identity` (Lines 24–73)

Azure Resources Used:

- Azure Active Directory (for authentication)
- Azure Subscription (via `SubscriptionClient`)

Operations:

- Authenticate using DefaultAzureCredential or ClientSecretCredential (read)
- List subscriptions (read)
- Get subscription details (read)

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2. `Subscription` (Lines 77–139)

Azure Resources Used:

- Resource Groups (`ResourceManagementClient`)
- Storage Accounts (`StorageManagementClient`)
- Search Services (`SearchManagementClient`)
- Cognitive Services (`CognitiveServicesManagementClient`)

Operations:

- List resource groups (read)
- Get resource group details (read)
- Create resource group (create)
- List storage accounts (read)
- Get storage account details (read)
- List search services (read)
- Get search service details (read)
- Get Cognitive Services client (read)

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3. `ResourceGroup` (Lines 143–213)

Azure Resources Used:

- Resource Group (context)
- Storage Accounts (`StorageManagementClient`)
- Search Services (`SearchManagementClient`)
- Cognitive Services Accounts (`CognitiveServicesManagementClient`)

Operations:

- List resources in group (read)
- Get storage account (read)
- Create storage account (create)
- Create search service (create)
- Get AI (OpenAI) service (read/get details)

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4. `StorageAccount` (Lines 217–254)

Azure Resources Used:

- Storage Account (`StorageManagementClient`)
- Blob Service (`BlobServiceClient`)

Operations:

- List storage account keys (read)
- Get blob service client (read)
- Get container client (read)
- List containers (read)
- Get container (read)

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5. `BlobType` (Lines 257–419)

Type: Enum

Role:

- Encodes blob types based on file extension and MIME type.
- Used as a helper for blob processing logic in the wrapper.
- **Does not directly interact with Azure resources**, but is essential for determining how blobs are handled by other classes (e.g., `Container`).

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6. `Container` (Lines 421–743)

Azure Resources Used:

- Blob Container (`ContainerClient`, `BlobClient`)

Operations:

- List blobs (read)
- Get blob content (read)
- Get DOCX blob content (read)
- Delete blob (delete)

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7. `SearchService` (Lines 753–1299)

Azure Resources Used:

- Azure Cognitive Search Service (`SearchManagementClient`, `SearchIndexClient`)

Operations:

- Get admin key (read)
- List indexes (read)
- Get index details (read)
- Add fields to index (update)
- Add semantic configuration (update)
- Create or update index (create/update)

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8. `SearchIndexerManager` (Lines 1370–1536)

Azure Resources Used:

- Azure Cognitive Search IndexerClient

Operations:

- List/get/create data source connections (read/create)
- List/get/create indexers (read/create)
- List/get/create skillsets (read/create)

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9. `DataSourceConnection` (Lines 1538–1587)

Azure Resources Used:

- Azure Cognitive Search Data Source Connection

Operations:

- Get name/details (read)
- Update data source connection (update)
- Delete data source connection (delete)

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10. `Indexer` (Lines 1589–1659)

Azure Resources Used:

- Azure Cognitive Search Indexer

Operations:

- Get name/details (read)
- Run indexer (execute)
- Reset indexer (execute)
- Get status (read)

- Update indexer (update)
- Delete indexer (delete)

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11. `Skillset` (Lines 1661–1710)

Azure Resources Used:

- Azure Cognitive Search Skillset

Operations:

- Get name/details (read)
- Update skillset (update)
- Delete skillset (delete)

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12. `SearchIndex` (Lines 1712–2166)

Azure Resources Used:

- Azure Cognitive Search Index (`SearchIndexClient`, `SearchClient`)

Operations:

- Create/update index (create/update)
- Extend index schema (update)
- Upload documents (create)
- Copy data/structure between indexes (read/create)
- Perform search/hybrid search (read)

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13. `AIService` (Lines 2170–2414)

Azure Resources Used:

- Cognitive Services Account (`CognitiveServicesManagementClient`)
- Azure OpenAI (via endpoint)

Operations:

- List account keys (read)
- Get Azure OpenAI client (read)
- List models (read)
- Get model details (read)
- (Other methods likely: manage deployments, not shown in snippet)

Summary Table

Class/Enum	Lines	Azure Resource(s) Used	Operations (Read/Create/Update/Delete/Get Details)
Identity	24–73	Azure AD, Subscription	Authenticate (read), List/Get subscriptions (read)
Subscription	77–139	Resource Groups, Storage, Search, Cognitive	List/Get/Create resource groups (read/create), List/Get storage/search/cognitive services (read)
ResourceGroup	143–213	Resource Group, Storage, Search, Cognitive	List resources (read), Get/Create storage/search/AI services (read/create)
StorageAccount	217–254	Storage Account, Blob Service	List keys (read), Get containers (read)
BlobType (Enum)	257–419	—	Helper for blob type logic; no direct Azure interaction
Container	421–743	Blob Container	List/Get/Delete blobs, Get DOCX content (read/delete)
SearchService	753–1299	Cognitive Search	Get admin key (read), List/Get/Update indexes (read/update), Add fields/config (update)
SearchIndexerManager	1370–1536	Cognitive Search IndexerClient	List/Get/Create data sources, indexers, skillsets (read/create)
DataSourceConnection	1538–1587	Cognitive Search Data Source	Get (read), Update, Delete
Indexer	1589–1659	Cognitive Search Indexer	Get (read), Run, Reset, Status, Update, Delete
Skillset	1661–1710	Cognitive Search Skillset	Get (read), Update, Delete
SearchIndex	1712–2166	Cognitive Search Index	Create/Update, Extend schema, Upload, Copy, Search
AIService	2170–2414	Cognitive Services, Azure OpenAI	List keys/models (read), Get model details (read)