



Deploy and Manage Bing Custom Search With ARM

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Goal

1. Deploy and manage 'Grounding with Bing Custom Search' using ARM
2. This document gives examples on **Powershell**

Step 1 - login

```
>az login --tenant "yourTenantID"
```

```
>az login --scope https://management.core.windows.net//.default
```

```
>az account set --subscription "subscriptionID"
```

Step 2 – register Bing search as an Azure resource provider

```
>az provider register --namespace 'Microsoft.Bing'
```

Step 3 – prepare ARM template

Replace 'Bing-custom2' with
the resource name you want

arm-template.json

```
{
  "$schema": "http://schema.management.azure.com/schemas/2015-01-01/deploymentTemplate.json#",
  "contentVersion": "1.0.0.0",
  "parameters": {
    "name": { "type": "string" },
    "location": {
      "type": "string",
      "defaultValue": "global"
    },
    "sku": { "type": "string" },
    "resourceTags": { "type": "object" },
    "apiVersion": { "type": "string" },
    "kind": { "type": "string" }
  },
  "resources": [
    {
      "type": "Microsoft.Bing/accounts",
      "apiVersion": "[parameters('apiVersion')]",
      "name": "[parameters('name')]",
      "location": "[parameters('location')]",
      "tags": "[parameters('resourceTags')]",
      "sku": { "name": "[parameters('sku')]" },
      "kind": "[parameters('kind')]"
    }
  ]
}
```

bing-custom2.json

```
{
  "$schema": "https://schema.management.azure.com/schemas/2019-04-01/deploymentParameters.json#",
  "contentVersion": "1.0.0.0",
  "parameters": {
    "name": {
      "value": "Bing-custom2"
    },
    "location": {
      "value": "global"
    },
    "sku": {
      "value": "G2"
    },
    "kind": {
      "value": "Bing.GroundingCustomSearch"
    },
    "apiVersion": {
      "value": "2020-06-10"
    },
    "resourceTags": {
      "value": {
        "name": "Bing-custom2"
      }
    }
  }
}
```

Step 4 – get access token

CLI command:

➤ az account get-access-token --resource <https://management.azure.com/>

Below is result:

```
{  
  • "accessToken": "zzzzzzzz",  
  • "expiresOn": "2025-12-12 15:07:45.000000",  
  • "expires_on": 1765580865,  
  • "subscription": "xxxxxxx",  
  • "tenant": "yyyyyyyy",  
  • "tokenType": "Bearer"  
  • }
```

This token will be needed in later curl REST API



Step 5 – create Bing resource

- This step will create **Bing-custom2** resource in **my-resourcegroup**
- Two methods are introduced

Step 5 – method1, using CLI

```
> az deployment group create `  
--resource-group my-resourcegroup `  
--template-file ./arm-template.json `  
--parameters @bing-custom2.json
```

Replace with your resource group name

Use the json in step3

Step 5 – method2, using curl REST API

Below is create-bing-resource.REST

```
curl -X PUT "https://management.azure.com/subscriptions/xxxxxxx/resourceGroups/my-  
resourcegroup/providers/Microsoft.Bing/accounts/Bing-custom2?api-version=2020-06-10" \  
-H "Authorization: Bearer zzzzzzzzz" \  
-H "Content-Type: application/json" \  
-d '{  
  "type": "Microsoft.Bing/accounts",  
  "location": "global",  
  "sku": { "name": "G2" },  
  "kind": "Bing.GroundingCustomSearch",  
  "tags": {"name": "Bing-custom2"}  
'
```

Step 5 – method2, result

create-bing-resource.REST

```
Send Request
1 curl -X PUT https://management.azure.com/subscriptions/f464793a-
2 -H "Authorization: Bearer eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiIsIng
3 -H "Content-Type: application/json" \
4 -d '{
5   "type": "Microsoft.Bing/accounts",
6   "location": "global",
7   "sku": { "name": "G2" },
8   "kind": "Bing.GroundingCustomSearch",
9   "tags": { "name": "Bing-custom2" }
10 }'
```

```
1 HTTP/1.1 200 OK
2 Cache-Control: no-store, must-revalidate, no-cache, max-age=0
3 Content-Length: 516
4 Content-Type: application/json; charset=utf-8
5 ETag: "11000-02-0000-0000-0000-0000-0000-0000-0000-0000"
6 Set-Cookie: _Bing-SessionId=[REDACTED]
7 x-ms-operation-identifier: tenantId=[REDACTED]
8 x-ms-providerhub-traffic: True
9 x-ms-request-id: 39C660E19D234072ABA6FD036298570A
10 x-ms-correlation-request-id: ce4fa519-f0ff-44e7-bbd3-5642c6a0eb04
11 mise-correlation-id: 5a375206-744b-4673-a27e-061e7836f6f7
12 X-Cache: CONFIG_NOCACHE
13 Accept-CH: Sec-CH-UA-Arch, Sec-CH-UA-Bitness, Sec-CH-UA-Full-Version, Sec-CH-UA-Full-Version-List, Sec-CH-UA-Mobile, Sec-CH-UA-Model, Sec-CH-UA-Platform, Sec-CH-UA-Platform-Version
14 X-MSEdge-Ref: Ref A: 5475A9E744854619AF18F36796A994F9 Ref B: BY1AA1072316062 Ref C: 2025-12-12T22:24:29Z
15 x-ms-ratelimit-remaining-subscription-writes: 199
16 x-ms-ratelimit-remaining-subscription-global-writes: 2999
17 x-ms-routing-request-id: EASTUS:[REDACTED]
18 Strict-Transport-Security: max-age=31536000; includeSubDomains
19 X-Content-Type-Options: nosniff
```

Step 6 – create Bing configuration

create-update-config.REST

```
curl -X PUT "https://management.azure.com/subscriptions/subscriptionID/resourceGroups/my-resourcegrpup/providers/Microsoft.Bing/accounts/Bing-custom2/customSearchConfigurations/Bing-custom2-config?api-version=2025-05-01-preview" \  
-H "Authorization: Bearer zzzzzzzz" \  
-H "Content-Type: application/json" \  
-d '{  
  "properties": {  
    "blockedDomains": [  
      {  
        "domain": "www.aa.com",  
        "includeSubPages": true  
      },  
      {  
        "domain": "www.yahoo.com",  
        "includeSubPages": false  
      }  
    ],  
    "allowedDomains": [  
      {  
        "domain": "www.amazon.com",  
        "includeSubPages": true,  
        "boostLevel": "Demoted"  
      },  
      {  
        "domain": "www.weather.com",  
        "includeSubPages": false,  
        "boostLevel": "Default"  
      }  
    ]  
  }  
}'
```

Step 6 – result

create-update-config.REST

```
HTTP/1.1 200 OK
Cache-Control: no-store, must-revalidate, no-cache, max-age=0
Content-Length: 864
Content-Type: application/json; charset=utf-8
ETag: "XXXXXXXXXXXXX"
Set-Cookie: _EDGE_FTD_XXXXXXXXXX=XXXXXXXXXXXXXXXXXXXXXXX; domain=tpponly; path=/; expires=Tue, 09 Jan 2027 22:55:28 GMT; domain=Bingapis.com
x-ms-operation-identifier: tenantId=X-MS-BING-ACCOUNTS-0B6D3,objectId=f2e5d977-a9a8-4ea4-dbbf-3-7e75-4db2-9be3-f96588f90d69
x-ms-providerhub-traffic: True
x-ms-request-id: 1F743E35768E4C69828B3104B1B16508
x-ms-correlation-request-id: 877abad9-a4fb-4636-86d4-772ae208004b
mise-correlation-id: 19ef0d5b-261e-47d0-8db7-e324f55de08c
X-Cache: CONFIG_NOCACHE
Accept-CH: Sec-CH-UA-Arch, Sec-CH-UA-Bitness, Sec-CH-UA-Full-Version, Sec-CH-UA-Full-Version-List, Sec-CH-UA-Mobile, Sec-CH-UA-Model, Sec-CH-UA-Platform, Sec-CH-UA-Platform-Version
X-MSEdge-Ref: Ref A: 779011B6F464521AE498EE555588913 Ref B: SJC211051204007 Ref C: 2025-12-12T22:55:25Z
x-ms-ratelimit-remaining-subscription-writes: 199
x-ms-ratelimit-remaining-global-writes: 2999
x-ms-routing-request-id: EASTUS2:20251212T225527Z:877abad9-a4fb-4636-86d4-772ae208004b
Strict-Transport-Security: max-age=31536000; includeSubDomains
X-Content-Type-Options: nosniff
Date: Fri, 12 Dec 2025 22:55:27 GMT
Connection: close

{
  "id": "/subscriptions/f4XXXXXXXXXX/resourcelocations/Microsoft.Bing/accounts/Bing-custom2/customSearchConfigurations/Bing-custom2-config",
  "name": "Bing-custom2-config",
  "type": "microsoft.bing/accounts/customsearchconfigurations",
  "systemData": {
    "createdBy": "helenzeng@microsoft.com",
    "createdByType": "User",
    "createdAt": "2025-12-12T22:55:25.6727242Z",
    "lastModifiedBy": "helenzeng@microsoft.com",
    "lastModifiedByType": "User",
    "lastModifiedAt": "2025-12-12T22:55:25.6727242Z"
  },
  "properties": {
    "allowedDomains": [
      {}
    ]
  }
}
```

Optional Step 7 – list Bing resource configuration

Below is list-config.REST

```
curl -X GET "https://management.azure.com/subscriptions/subscriptionID/resourceGroups/my-resourcegroup/providers/Microsoft.Bing/accounts/Bing-custom2/customSearchConfigurations/Bing-custom2-config?api-version=2025-05-01-preview" \  
-H "Authorization: Bearer zzzzzzzz" \  
-H "Content-Type: application/json" \
```

Optional Step 7 – result

list-config.REST

```
Send Request
1 curl -X GET "https://management.azure.com/subscriptions/f464793a-
2 -H "Authorization: Bearer eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiIsIng
3 -H "Content-Type: application/json" \
4

X GET...W
1 HTTP/1.1 200 OK
2 Cache-Control: no-cache
3 Pragma: no-cache
4 Content-Length: 864
5 Content-Type: application/json; charset=utf-8
6 Expires: -1
7 ETag: "W/31536000-31536000"
8 x-ms-operation-identifier: tenantId-[redacted]
9 x-ms-providerhub-traffic: True
10 x-ms-request-id: [redacted]
11 x-ms-correlation-request-id: [redacted]
12 x-ms-ratelimit-remaining-subscription-reads: 249
13 x-ms-ratelimit-remaining-subscription-global-reads: 3749
14 x-ms-routing-request-id: E[redacted]
15 Strict-Transport-Security: max-age=31536000; includeSubDomains
16 X-Content-Type-Options: nosniff
17 X-Cache: CONFIG_NOCACHE
18 X-MS-Edge-Ref: Ref A: C0148121945A4306A97B10F3D32A2388 Ref B: BY1AA1
19 072319040 Ref C: 2025-12-12T22:58:16Z
20 Date: Fri, 12 Dec 2025 22:58:16 GMT
21 Connection: close
22 {
23   "id": "/subscriptions/[redacted]5/resour
24 ceGroups/[redacted]2/providers/Microsoft.Bing/accounts/Bing-cus
25 tom2/customSearchConfigurations/Bing-custom2-config",
26   "name": "Bing-custom2-config",
27   "type": "microsoft.bing/accounts/customsearchconfigurations",
28   "systemData": {
29     "createdBy": "helenzeng@microsoft.com",
30     "createdByType": "User",
31     "createdAt": "2025-12-12T22:55:25.6727242Z",
32     "lastModifiedBy": "helenzeng@microsoft.com",
33     "lastModifiedByType": "User",
34     "lastModifiedAt": "2025-12-12T22:55:25.6727242Z"
35   },
36   "properties": {
37     "allowedDomains": [
38       {
39         "domain": "www.amazon.com",
40         "includeSubPages": true,
41         "boostLevel": "Demoted"
42       }
43     ]
44   }
45 }
```

Optional step 8 – delete Bing configuration

Below is delete-config.REST

```
curl -X DELETE "https://management.azure.com/subscriptions/subscriptionID/resourceGroups/my-resourcegroup/providers/Microsoft.Bing/accounts/Bing-custom2/customSearchConfigurations/Bing-custom2-config?api-version=2025-05-01-preview" \  
-H "Authorization: Bearer zzzzzzzz" \  
-H "Content-Type: application/json" \
```

Optional step 8 – result

delete-config.REST

```
Send Request
1 curl -X DELETE "https://management.azure.com/subscriptions/f46479
2 -H "Authorization: Bearer eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiIsIng
3 -H "Content-Type: application/json" \
4

X DEL...w
1 HTTP/1.1 200 OK
2 Cache-Control: no-store, must-revalidate, no-cache, max-age=0
3 Set-Cookie: _EDGE_S=SID=0140F05E0C1A00EAF3A0550E0810501; path=/; htt
  ponly; domain=bingapis.com,MUID=214F0500000000000000000000000000; pat
  h=/; expires=Wed, 06-Jan-2027 22:59:49 GMT; domain=bingapis.com
4 x-ms-providerhub-traffic: True
5 x-ms-request-id: CDE7050-1B377-105-1B3A-E91B00000835FF
6 x-ms-correlation-request-id: 3d637f26-be33-400b-b933-6ff0ce071b48
7 mise-correlation-id: 98ae1a06-951e-448b-9124-a593ea11e0c5
8 X-Cache: CONFIG_NOCACHE
9 Accept-CH: Sec-CH-UA-Arch, Sec-CH-UA-Bitness, Sec-CH-UA-Full-Version,
  Sec-CH-UA-Full-Version-List, Sec-CH-UA-Mobile, Sec-CH-UA-Model, Sec-C
  H-UA-Platform, Sec-CH-UA-Platform-Version
10 X-MSEdge-Ref: Ref A: A4A72EC68F5D4DB992F5D887CAD7EA43 Ref B: BY1AA107
  2318052 Ref C: 2025-12-12T22:59:48Z
11 x-ms-operation-identifier: tenantId=1[REDACTED]
  6d3,objectId=f2151077-4050-414d-bb01-100cf16cb701/eastus2/4c77f7c2-d3
  6e-4322-beef1-41c92506cdae
12 x-ms-ratelimit-remaining-subscription-deletes: 199
13 x-ms-ratelimit-remaining-subscription-global-deletes: 2999
14 x-ms-routing-request-id: EASTUS2:10251212T225948Z:3d637f26-be33-400b-
  b933-6ff0ce071b48
15 Strict-Transport-Security: max-age=31536000; includeSubDomains
16 X-Content-Type-Options: nosniff
17 Date: Fri, 12 Dec 2025 22:59:49 GMT
18 Connection: close
19 Content-Length: 0
20
21
```


Steps of Using SDK for Authentication

Python code *azure-login-arm.py* is created for authentication which acts equivalently to the following CLI commands:

```
>az login --tenant "yourTenantID"  
>az login --scope https://management.core.windows.net//.default  
>az account set --subscription "subscriptionID"  
>az account get-access-token --resource https://management.azure.com/
```

How to Run the SDK - Examples

Install:

```
> pip install azure-identity azure-mgmt-resource
```

Usage, select one of the following modes:

```
> python azure_login_arm.py --mode interactive --tenant-id <TENANT_ID> --subscription-id <SUB_ID> --prefetch
```

```
> python azure_login_arm.py --mode azurecli --subscription-id <SUB_ID> --print-token
```

```
> python azure_login_arm.py --mode serviceprincipal --tenant-id <TENANT_ID> --client-id <APP_ID> --client-secret  
<SECRET> --subscription-id <SUB_ID> --output-bearer
```

How to Run the SDK

Examples:

```
> python azure-login-arm.py --mode interactive --tenant-id xxxxxx --subscription-id yyyyyy --prefetch
```

```
[INFO] Auth mode: interactive
[INFO] Prefetched ARM token (aud=https://management.azure.com): eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1... (truncated)
[INFO] Bound ResourceManagementClient to subscription: [REDACTED]
[DONE] Login/Scope/Get-Access-Token/Subscription binding completed.
```

```
➤ python azure-login-arm.py --mode azurecli --subscription-id yyyyyy --print-token
```

[illegible]

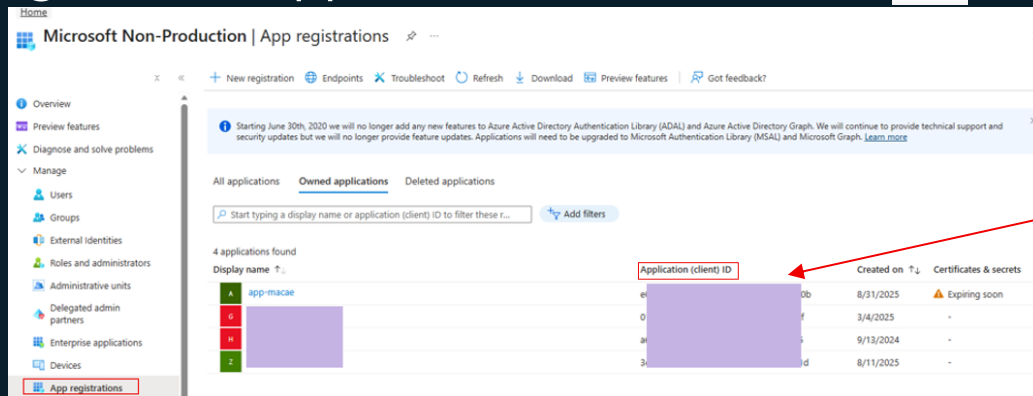
```
➤ python azure-login-arm.py --mode serviceprincipal --tenant-id xxxxxx --client-id my-app-ID --client-secret my-app-secret-value  
--subscription-id yyyyyy --output-bearer
```

[illegible]

```
--output-bearer is set, which can be copy-pasted  
into any HTTP client for REST calls to  
https://management.azure.com
```

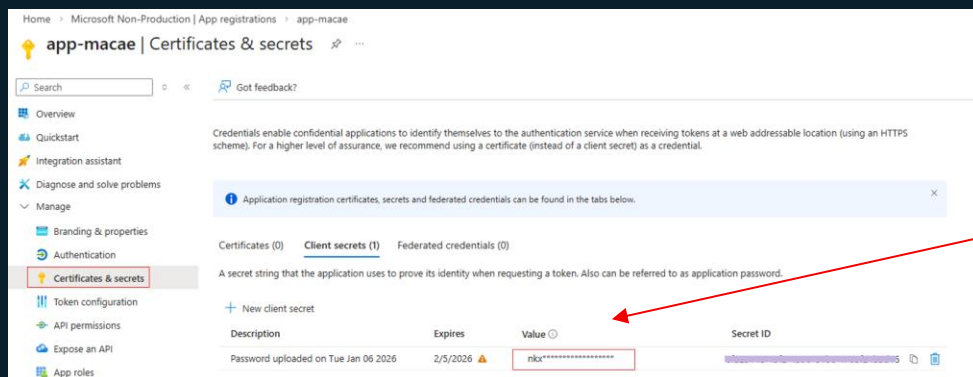
Appendix – How to get application ID and secret

- Get web application URL
 - For example: app-macae-xxxxx.azurewebsites.net
- Register the app in Microsoft Entra ID



Use it as my-app-ID

- Create secret



Use it as my-app-secret-value