

# Power BI Automation

Tenant : Digital Data Marts

## 1. Create Group called DDM PBI Apps

The screenshot displays the Microsoft Azure portal interface for managing a group named 'DDM PBI Apps'. The top navigation bar includes the 'Microsoft Azure' logo, a search bar, and user information for 'SatyaVelagala@digitald...'. The left sidebar contains a navigation menu with categories like Overview, Manage, Activity, and Troubleshooting + Support. The main content area shows the group's details, including its name, description, and various attributes.

**DDM PBI Apps**  
Group

« Delete Got feedback?

**DDM PBI Apps**  
Digital Data Marts Power BI Apps Group

Membership type	Assigned
Source	Cloud
Type	Security
Object Id	82298d33-578e-4f8e-9577-28edcc4aaf71
Creation date	1/13/2022, 9:58:34 PM

Counts may be inaccurate if this group was recently created.

**Direct members**

0 User(s)	0 Group(s)	0 Device(s)	0 Other(s)
-----------	------------	-------------	------------

**Group memberships**      **Owners**      **Total members**

0	0	0
---	---	---

## 2. Power BI Admin Portal – Settings

Power BI Admin portal

Trial: 23 days left

Search

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Learn

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Live

Admin portal

Tenant settings

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Users

Premium Per User

Audit logs

Capacity settings

Refresh summary

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Azure connections

Workspaces

Custom branding

Protection metrics

Featured content

principal authentication its service principal must be included in an allowed security group. [Learn more](#)

☒ Enabled

Service principals can use APIs to access tenant-level features controlled by Power BI service admins and enabled for the entire organization or for security groups they're included in. You can control access of service principals by creating dedicated security groups for them and using these groups in any Power BI tenant level-settings. [Learn more](#)

Apply to:

☐ The entire organization

☒ Specific security groups (Recommended)

DDM PBI Apps

X

Enter security groups

☐ Except specific security groups

Apply

Cancel

Block ResourceKey Authentication  
*Disabled for the entire organization*

---

Admin API settings

Allow service principals to use read-only Power BI admin APIs  
*Enabled for a subset of the organization*

Enhance admin APIs responses with detailed metadata (Preview)  
*Disabled for the entire organization*

Enhance admin APIs responses with DAX and mashup expressions (Preview)  
*Disabled for the entire organization*

Activate Windows  
Go to Settings to activate Windows.

### 3. Service Principal Setup : Digital Datamarts – SP1

Microsoft Azure

Search resources, services, and docs (G+)

SatyaVelagala@digitald...  
DIGITAL DATA MARTS (DIGITALD...

Home > Digital Data Marts >

Digital Data Marts - SP1

Search (Ctrl+/) << Delete Endpoints Preview features

Overview

Quickstart

Integration assistant

Manage

Branding

Authentication

Certificates & secrets

Token configuration

API permissions

Expose an API

App roles

Owners

Roles and administrators | Preview

Manifest

Support + Troubleshooting

Troubleshooting

New support request

Essentials

Display name : Digital Data Marts - SP1

Application (client) ID : e032c2ba-101e-4280-80eb-433472224632

Object ID : 46382d91-5e94-4c62-84da-37ceafd0b2e9

Directory (tenant) ID : ec6637ac-f09c-474c-92bf-3213c1bbec92

Supported account types : My organization only

Client credentials : Add a certificate or secret

Redirect URIs : Add a Redirect URI

Application ID URI : Add an Application ID URI

Managed application in I... : Digital Data Marts - SP1

Welcome to the new and improved App registrations. Looking to learn how it's changed from App registrations (Legacy)? [Learn more](#)

Starting June 30th, 2020 we will no longer add any new features to Azure Active Directory Authentication Library (ADAL) and Azure AD Graph. We will continue to provide technical support and security updates but we will no longer provide feature updates. Applications will need to be upgraded to Microsoft Authentication Library (MSAL) and Microsoft Graph. [Learn more](#)

Get Started Documentation

Build your application with the Microsoft identity platform

The Microsoft identity platform is an authentication service, open-source libraries, and application management tools. You can create modern, standards-based authentication solutions, access and protect APIs, and add sign-in for your users and customers. [Learn more](#)

Call APIs

Build more powerful apps with rich user and business data from Microsoft services and your own company's data sources.

View API permissions

Sign in users in 5 minutes

Use our SDKs to sign in users and call APIs in a few steps. Use the quickstarts to start a web app, mobile app, SPA, or daemon app.

View all quickstart guides

Configure for your organization

Assign users and groups, apply conditional access policies, configure single sign-on, and more in Enterprise applications.

Go to Enterprise applications

Activate Windows  
Go to Settings to activate Windows.

#### 4. Add the SPN to the Group (One that has been created in Previous Step ) as Member

Microsoft Azure

Search resources, services, and docs (G+)

Home > Digital Data Marts > Groups > DDM PBI Apps

### DDM PBI Apps | Members

Group

«

+ Add members ✕ Remove ↺ Refresh | Bulk operations ▾ | Columns | Got feedback?

**Direct members** All members

Search by name Add filters

	Name	Type	Email	User type
<input type="checkbox"/>	Digital Data Marts - SP1	Service Principal		

**Manage**

- Overview
- Diagnose and solve problems
- Properties
- Members**
- Owners
- Roles and administrators
- Administrative units
- Group memberships
- Applications
- Licenses
- Azure role assignments

**Activity**

- Access reviews
- Audit logs
- Bulk operation results

**Troubleshooting + Support**

- New support request

## Azure Function Code

```
public static class CreateWorkspaceAF

{
    [FunctionName("CreateWorkspaceAF")]
    public static async Task<ActionResult> Run(
        [HttpTrigger(AuthorizationLevel.Function, "get", "post", Route = null)] HttpRequest req,
        ILogger log)
    {
        log.LogInformation("HTTP triggered function processed a request for CreateWorkspaceAF.");

        string name = req.Query["name"];

        string requestBody = await new StreamReader(req.Body).ReadToEndAsync();
        dynamic data = JsonConvert.DeserializeObject(requestBody);
        name = name ?? data?.name;

        string responseMessage = string.IsNullOrEmpty(name)
            ? "Pass a workspace name (name) in the query string to create a new workspace.\n"
            : $"Workspace with name = {name} is getting created.\n";
    }
}
```

```
PowerBiAppIdentity objAppIdentity = new PowerBiAppIdentity();
```

```
objAppIdentity.TenantId ="ec6637ac-f09c-474c-92bf-3213c1bbec92";
```

```
objAppIdentity.ApplicationId ="e032c2ba-101e-4280-80eb-433472224632";
```

```
objAppIdentity.ClientSecret ="2&27Q~NDwl.iZPGAYmKakOybDS48pX_IYTugT";
```

```
PowerBiServiceApi objservice = new PowerBiServiceApi();
```

```
PowerBiClient PbiClientDetails = objservice.GetPowerBiClient(objAppIdentity);
```

```
var ClientWSes = await objservice. GetTenantWorkspacesAsync(PbiClientDetails);
```

```
foreach (Group ws in ClientWSes) {
```

```
    //Console.WriteLine($"ws name = {ws.Name}");
```

```
    if(!string.IsNullOrEmpty(ws.Name)){
```

```
        if (ws.Name.ToLower().Equals(name.ToLower())) {
```

```
            responseMessage = responseMessage + $"The Workspace is already created with this name, created workspace guid is : {ws.Id}";
```

```
            return new OkObjectResult(responseMessage);
```

```
    }  
    }  
}
```

```
Group workspace =null;
```

```
string workspaceName = name;
```

```
PowerBiTenantDetails tenantDetails = new PowerBiTenantDetails();
```

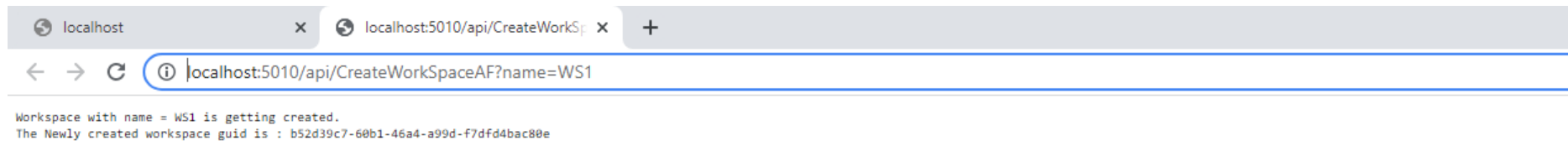
```
workspace = objservice.CreateAndGetNewWorkSpace(objAppIdentity,workspaceName);
```

```
responseMessage = responseMessage + $"The Newly created workspace guid is : {workspace.Id}";
```

```
return new OkObjectResult(responseMessage);
```

```
}
```

```
}
```



Workspace has been Created and I can see Workspace as below and also check access on WS1 located on right of the screen shot


Power BI WS1

Home Favorites Recent Create Datasets Goals Apps Shared with me Deployment pipelines Learn Workspaces WS1

WS1

+ New Create a pipeline

View



**Add content to this workspace**

Save reports, dashboards, datasets, and workbooks to this workspace by making something new or uploading existing files.

**Access**

WS1

Add admins, members, or contributors. [Learn more](#)

Enter email addresses

Member

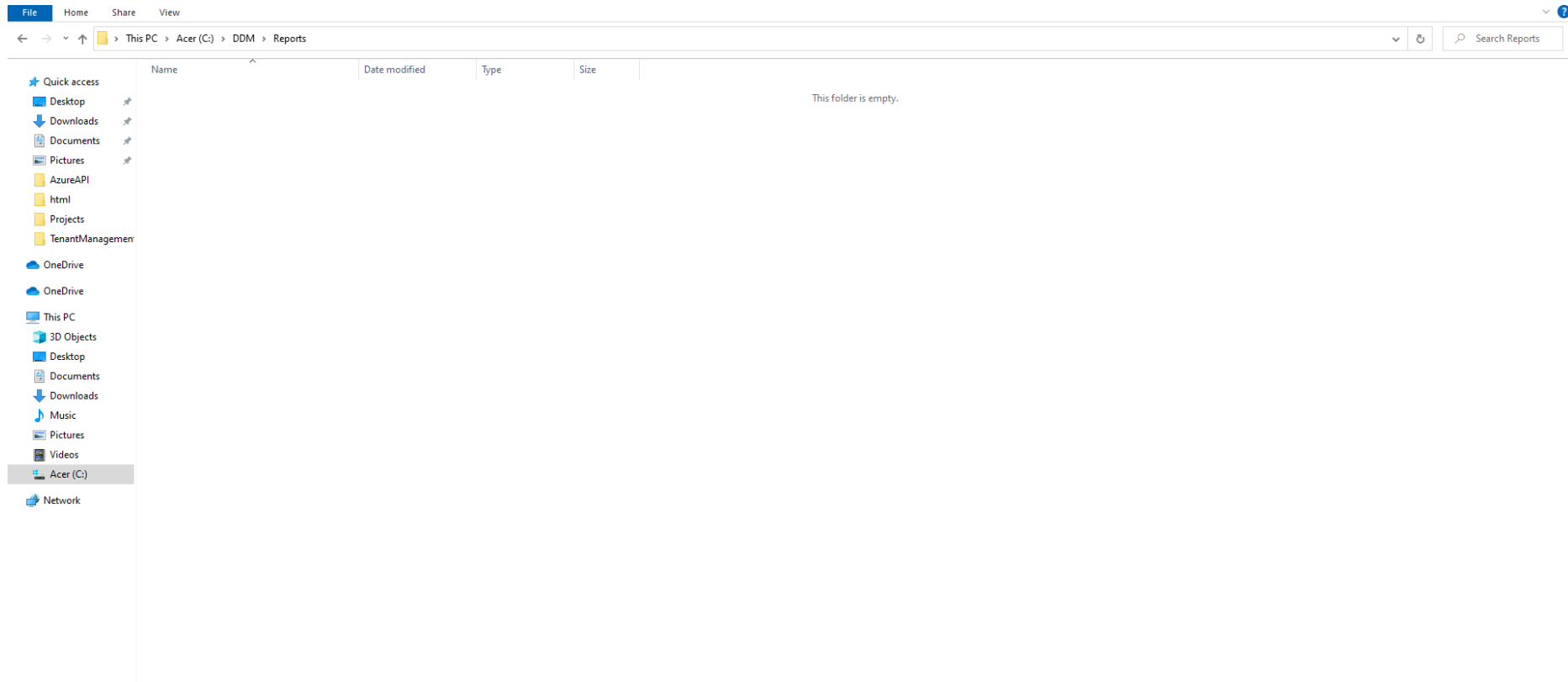
Add

Search

NAME	PERMISSION
Digital Data Marts... (Service Principal) ⓘ	Admin ...
Satya Velagala ⓘ	Admin ...



2. Copy Reports from Live To New Workspace WS1 : The process usually download the Reports from Live workspace and put it into storage area and then publish them back into New Workspace .There is no reports in staging area now



**Give Live Workspace Access for Service Principal** Service Principal need to have access on Live Workspace in order to pull the reports on staging area and then copy them back to Newly created workspace (WS1)

Power BI

https://www.powerbi.com/groups/e1e2c29d-423e-4ba2-8b47-20d1822ae503/list

Power BI Live

Home

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Shared with me

Deployment pipelines

Learn

Workspaces

Live

Live

+ New Create a pipeline

AllContentDatasets + dataflows

Name	Type	Owner	Refreshed	Next refresh	Endorsement
Human Resources Sample	Report	Live	10/01/22, 21:57:42	—	—
IT Spend Analysis Sample	Report	Live	10/01/22, 22:00:05	—	—
Opportunity Analysis Sample	Report	Live	10/01/22, 22:02:32	—	—
Retail Analysis Sample	Report	Live	10/01/22, 22:10:39	—	—
Sales and Marketing Sample	Report	Live	10/01/22, 22:13:14	—	—

Access

Live

Add admins, members, or contributors. [Learn more](#)

Enter email addresses

Member

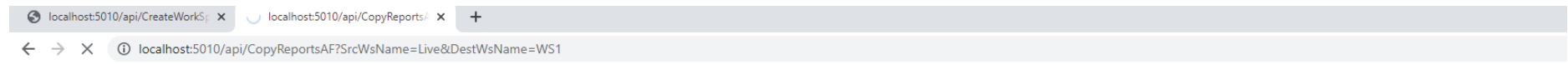
Add

Search

NAME	PERMISSION
Digital Data Marts... (Service Principal)	Admin
Satya Velagala	Admin
ServicePrincipal01 (Service Principal)	Admin
ServicePrincipal01 (Service Principal)	Admin

Activate Windows  
Go to Settings to activate Windows.  
Close

Digital Data Marts... (Service Principal)



Received Source Workspace Id = sLive.  
Received Destination Workspace Id = WS1.  
Source Workspace not found with the given Workspace name = Live.

Staging Now got Reports downloaded as below

Reports

FileHomeShareView

←→↕

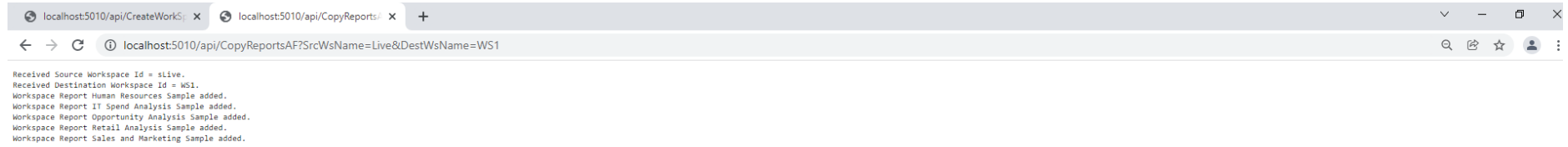
> This PC > Acer (C:) > DDM > Reports

▼↻

Search Reports

	Name	Date modified	Type	Size
★ Quick access	Human Resources Sample	14/01/2022 11:04	Microsoft Power B...	8,486 KB
	IT Spend Analysis Sample	14/01/2022 11:04	Microsoft Power B...	2,000 KB
	Opportunity Analysis Sample	14/01/2022 11:04	Microsoft Power B...	1,782 KB
	Retail Analysis Sample	14/01/2022 11:04	Microsoft Power B...	9,491 KB
	Sales and Marketing Sample	14/01/2022 11:05	Microsoft Power B...	6,527 KB
AzureAPI				
html				
Projects				
TenantManagemen				
OneDrive				
OneDrive				
This PC				
3D Objects				
Desktop				
Documents				
Downloads				
Music				
Pictures				
Videos				
Acer (C:)				
Network				

## Azure Function has completed the run



WS1 has got Reports Now

Power BI

https://www.powerbi.com/groups/16cb1522-5e5a-4e7b-adb2-e67c79ed96fd/list

Trial: 23 days left

Search

Power BI

WS1

WS1

Create app

+ New

Create a pipeline

View

Filters

Settings

Access

Search

All

Content

Datasets + dataflows

	Name	Type	Owner	Refreshed	Next refresh	Endorsement	Sensitivity	Include in app
	Human Resources Sample	Report	WS1	14/01/22, 11:04:36	—	—	—	<div>Yes</div>
	IT Spend Analysis Sample	Report	WS1	14/01/22, 11:04:43	—	—	—	<div>Yes</div>
	Opportunity Analysis Sample	Report	WS1	14/01/22, 11:04:49	—	—	—	<div>Yes</div>
	Retail Analysis Sample	Report	WS1	14/01/22, 11:05:03	—	—	—	<div>Yes</div>
	Sales and Marketing Sample	Report	WS1	14/01/22, 11:05:15	—	—	—	<div>Yes</div>

Home

Favorites

Recent

Create

Datasets

Goals

Apps

Shared with me

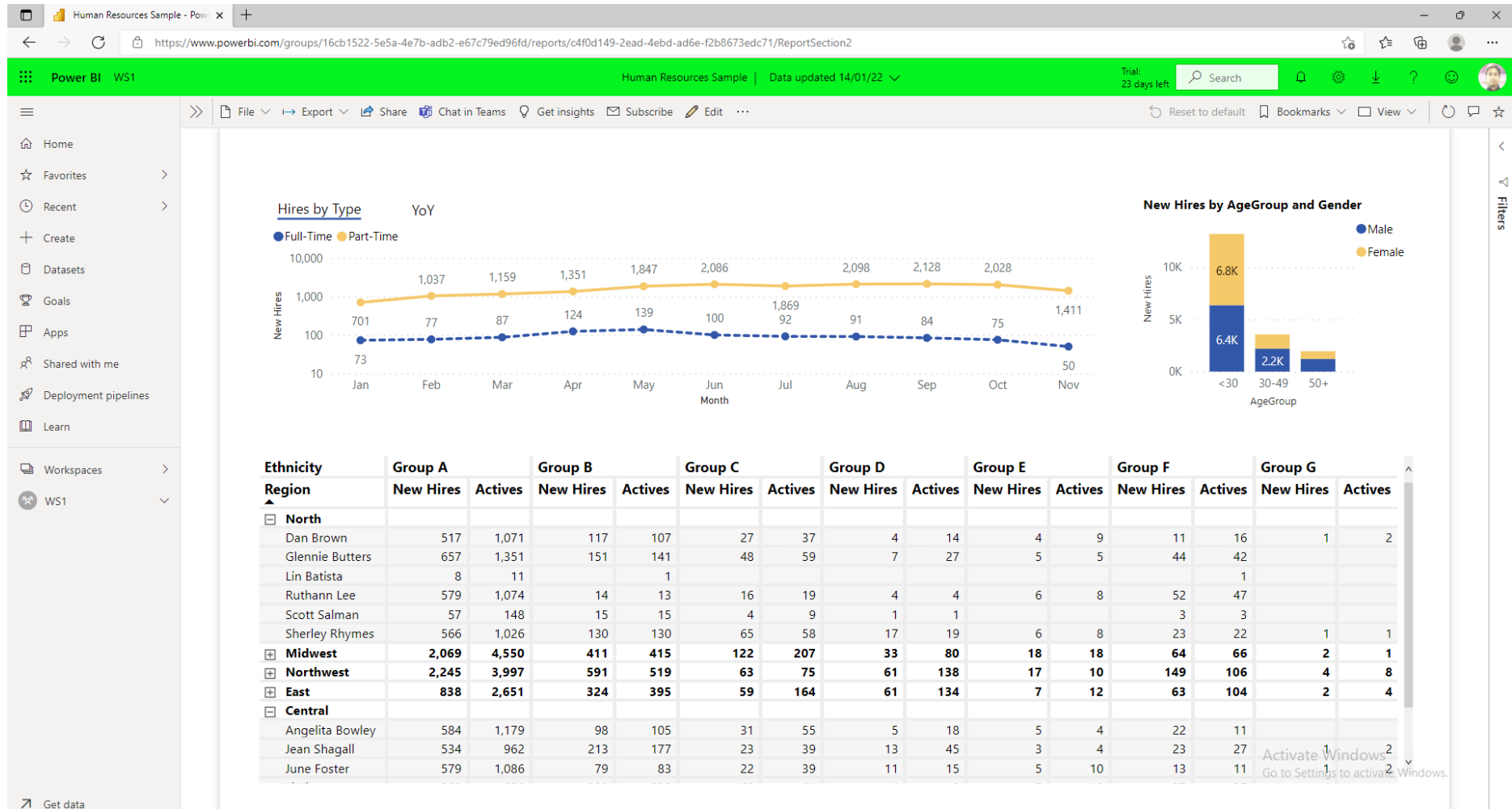
Deployment pipelines

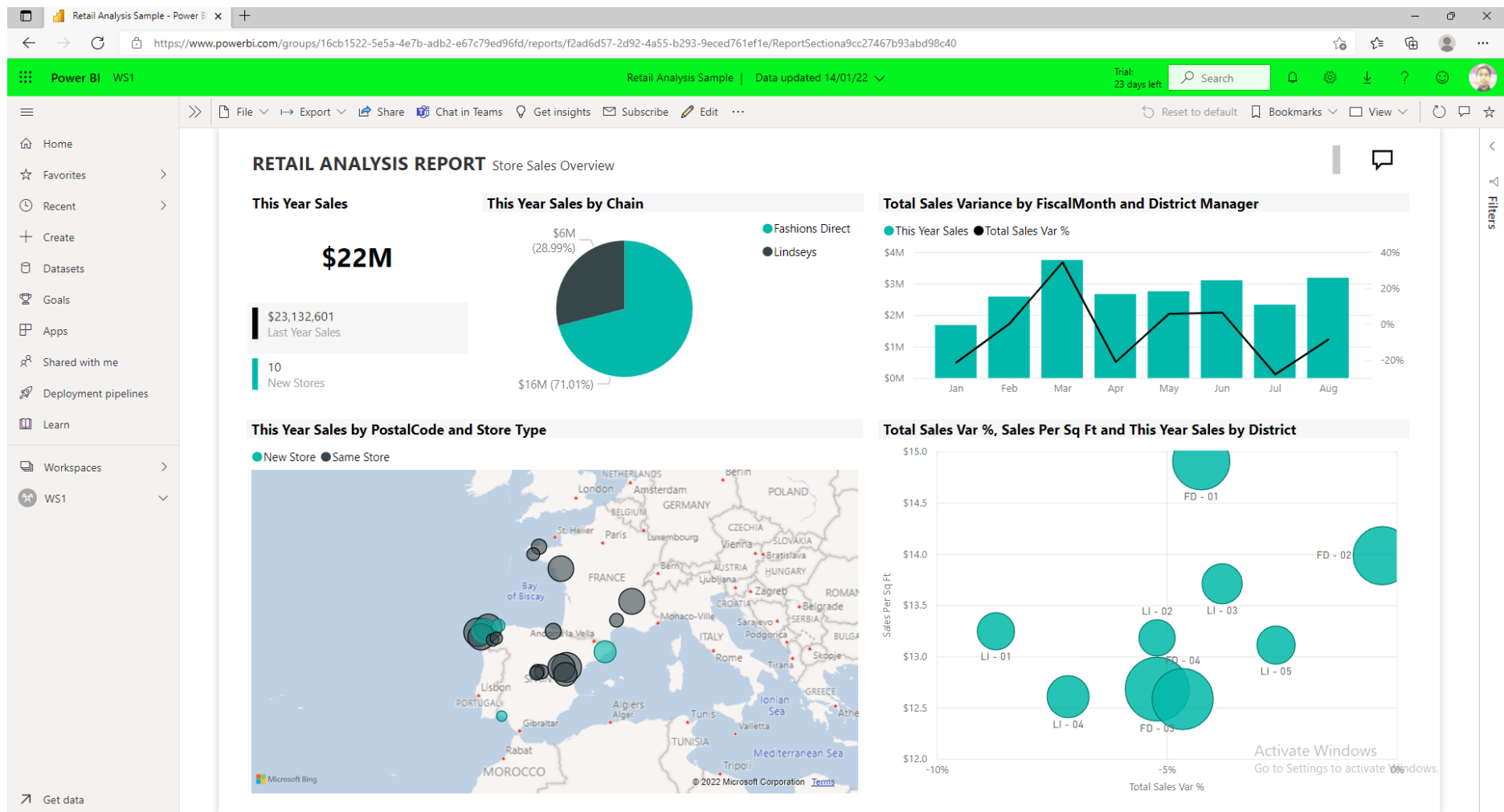
Learn

Workspaces

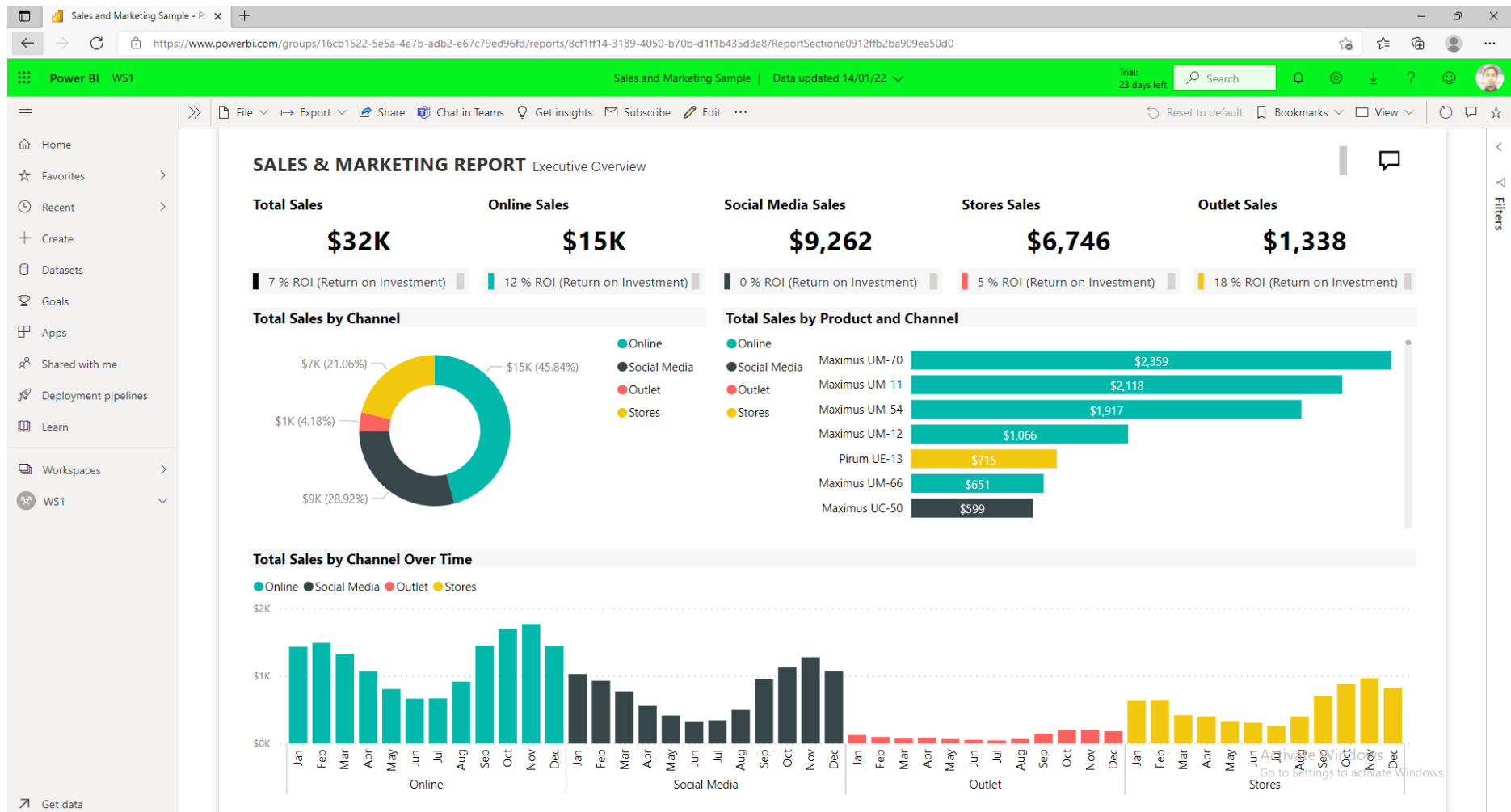
WS1

## Looking into Reports as Just quick check









Setting Up User Access To Workspace : [James.Smith@digitaldatamarts.com](mailto:James.Smith@digitaldatamarts.com) as Member Role for this newly created workspace WS1

Before there is No access for James on WS1 as below

The screenshot shows the Microsoft Power BI web interface. The top navigation bar is green with the Power BI logo and a search bar. The left sidebar contains navigation options: Home, Favorites, Recent, Create, Datasets, Goals, Apps, Shared with me, Deployment pipelines, Learn, Workspaces, and WS1. The main content area displays the 'WS1' workspace with a list of reports under the 'Content' tab. The reports are: Human Resources Sample, IT Spend Analysis Sample, Opportunity Analysis Sample, Retail Analysis Sample, and Sales and Marketing Sample. The 'Access' panel on the right shows the workspace name 'WS1' and a list of members with their permissions. The members listed are 'Digital Data Marts... (Service Principal)' and 'Satya Velagala', both with 'Admin' permissions. The 'Add' button is highlighted in yellow.

Power BI WS1

Trial: 23 days left

Search

WS1

Add admins, members, or contributors. [Learn more](#)

Enter email addresses

Member

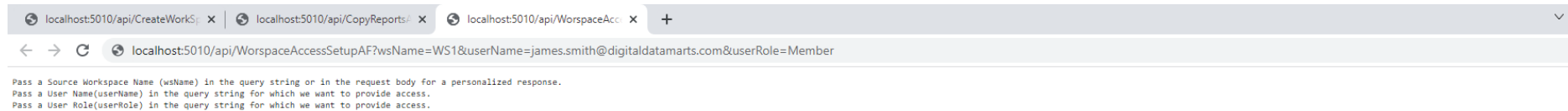
Add

Search

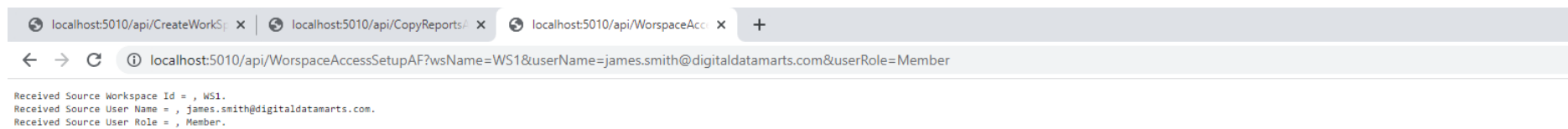
NAME	PERMISSION
Digital Data Marts... (Service Principal) ⓘ	Admin ...
Satya Velagala ⓘ	Admin ...

Activate Windows  
Go to Settings to activate Windows

## Run Azure Function



## Function Run Completed



Now James has meber of the Workspace WS1

Power BI WS1

Trial: 23 days left

Search

WS1

+ New Create a pipeline

All Content Datasets + dataflows

Name	Type	Owner	Refreshed	Next refresh	Endorsement
Human Resources Sample	Report	WS1	14/01/22, 11:04:36	—	—
IT Spend Analysis Sample	Report	WS1	14/01/22, 11:04:43	—	—
Opportunity Analysis Sample	Report	WS1	14/01/22, 11:04:49	—	—
Retail Analysis Sample	Report	WS1	14/01/22, 11:05:03	—	—
Sales and Marketing Sample	Report	WS1	14/01/22, 11:05:15	—	—

Access

WS1

Add admins, members, or contributors. [Learn more](#)

Enter email addresses

Member

Add

Search

NAME	PERMISSION
Digital Data Marts... (Service Principal) ⓘ	Admin ...
James Smith ⓘ	Member ...
Satya Velagala ⓘ	Admin ...

Add [ReddyVelagala@digitaldatalabs.onmicrosoft.com](mailto:ReddyVelagala@digitaldatalabs.onmicrosoft.com) as Contributor and also Group Called “Power BI Role -Contributors” as Contributor

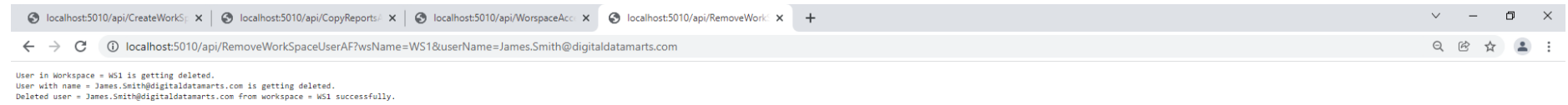
The screenshot displays the Power BI web interface for a workspace named 'WS1'. The left sidebar contains navigation options: Home, Favorites, Recent, Create, Datasets, Goals, Apps, Shared with me, Deployment pipelines, Learn, Workspaces, and a dropdown for 'WS1'. The main area shows the 'Content' tab with a table of reports. The 'Access' panel on the right allows adding members and shows a list of current members and their permissions.

Name	Type	Owner	Refreshed	Next refresh	Endorsement
Human Resources Sample	Report	WS1	14/01/22, 11:04:36	—	—
IT Spend Analysis Sample	Report	WS1	14/01/22, 11:04:43	—	—
Opportunity Analysis Sample	Report	WS1	14/01/22, 11:04:49	—	—
Retail Analysis Sample	Report	WS1	14/01/22, 11:05:03	—	—
Sales and Marketing Sample	Report	WS1	14/01/22, 11:05:15	—	—

NAME	PERMISSION
Digital Data Marts... (Service Principal) ⓘ	Admin ...
James Smith ⓘ	Member ...
reddy velagala ⓘ	Contributor ...
Satya Velagala ⓘ	Admin ...
PowerBI - Role - Contributors ⓘ	Contributor ...

## Remove User From Workspace : James Smith Removed from Workspace WS1



Power BI

https://www.powerbi.com/groups/16cb1522-5e5a-4e7b-adb2-e67c79ed96fd/list

Trial: 23 days left

Search

⏏ ⚙ ⬇ ? 🧑

⌵

Home

Favorites >

Recent >

Create

Datasets

Goals

Apps

Shared with me

Deployment pipelines

Learn

Workspaces >

WS1 ⌵

👤 WS1

+ New ⌵ 🚀 Create a pipeline

View ⌵

All

Content

Datasets + dataflows

	Name	Type	Owner	Refreshed	Next refresh	Endorsement
📊	Human Resources Sample	Report	WS1	14/01/22, 11:04:36	—	—
📊	IT Spend Analysis Sample	Report	WS1	14/01/22, 11:04:43	—	—
📊	Opportunity Analysis Sample	Report	WS1	14/01/22, 11:04:49	—	—
📊	Retail Analysis Sample	Report	WS1	14/01/22, 11:05:03	—	—
📊	Sales and Marketing Sample	Report	WS1	14/01/22, 11:05:15	—	—

👤 Access

WS1

Add admins, members, or contributors. [Learn more](#)

Enter email addresses

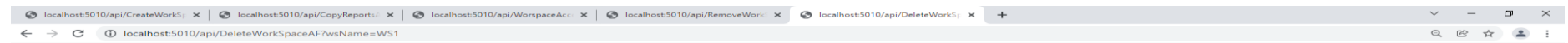
Member ⌵

Add

🔍 Search

NAME	PERMISSION	
Digital Data Marts... (Service Principal) ⓘ	Admin	...
PowerBI - Role - Contributors ⓘ	Contributor	...
reddy velagala ⓘ	Contributor	...
Satya Velagala ⓘ	Admin	...

## Remove Workspace Completely from Tenant





Power BI

+

https://www.powerbi.com/groups/me/list

🔍 Search

🔔

⚙️

⬇️

?

😊

Power BI

My workspace

🏠 Home

☆ Favorites >

🕒 Recent >

+ Create

📄 Datasets

🏆 Goals

📱 Apps

👥 Shared with me

🔗 Deployment pipelines

📖 Learn

📁 Workspaces <

My workspace ▾

My workspace

Workspaces

Live

View ▾

Filters

🔍 Search

### Add content to this workspace

Save reports, dashboards, datasets, and workbooks to this workspace by making something new or uploading existing files.

Add content