

Distributing Content using App Workspaces



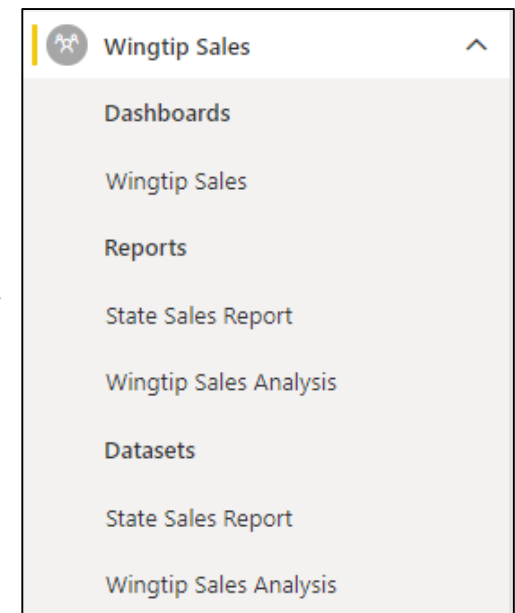
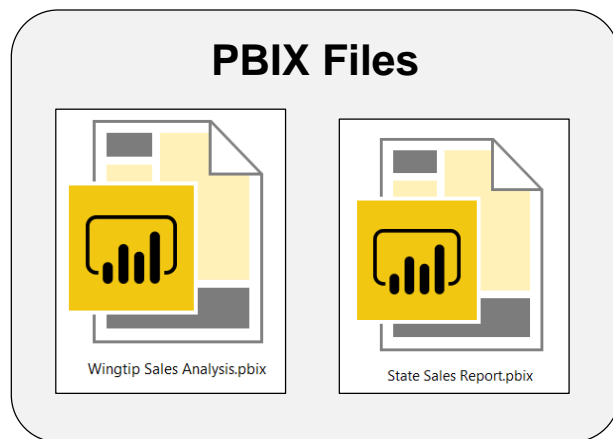
Agenda

- App Workspaces
- Query Parameters
- Publishing Apps
- Dedicated Capacities
- Developing Template Apps



App Workspace used to Publish Content

- Power BI provides workspaces as resource container
 - Workspace contains datasets, reports and dashboards
 - App workspace better than personal workspace for publishing
 - Publish PBIX files to app workspace to add datasets and reports
 - Dashboards must be created by hand in browser



App Workspaces – V1 versus V2

- Power BI supports two different workspace formats
 - V1 workspaces created with Office 365 group
 - V2 workspaces created without Office 365 group
- V2 workspaces released to GA in June 2019
 - New workspaces created as V2 workspace by default
 - V2 workspaces provides flexibility in assigning members
- Many older workspaces still based on V1 format
 - Some new features only supported in V2 workspaces
 - V1 workspaces will require migration to v2 in future



Workspace Is a Container for Resources

- Dashboard
 - Consolidated high-level view into reports and datasets
 - Provides great experience on mobile device (*e.g. iPhone, Android, tablet, etc.*)
- Report
 - Collection of one or more pages with tables & visualizations
 - Provides consumer with interactive control through filtering and bookmarks
- Dataset
 - In-memory data model containing one or more tables
 - Used to supply the underlying data to reports and dashboards
- Dataflows
 - Persistent data store used for more complex ETL requirements
 - Not required in most Power BI scenarios



Configuring Data Source Credentials

- Power BI Desktop never Publishes Credentials
 - PBIDT caches credentials locally for its own use
 - Data source credentials must be configured in service
 - Power BI service stores credentials in encrypted format

The image shows a screenshot of the Power BI Desktop interface. On the left, a panel titled 'Data source credentials' displays a yellow error message: 'Your data source can't be refreshed because the credentials are invalid. Show details'. Below this, a table lists the data source 'Web WingtipSalesDB-cpt.database.windows.net' with an 'Edit credentials' link. On the right, a 'Configure Imported from Cloud' dialog box is open, showing fields for 'Server' (cpt.database.windows.net), 'Database' (WingtipSalesDB), 'Authentication method' (Basic), 'User name' (CptStudent), and 'Password' (masked with dots). The dialog has 'Sign in' and 'Cancel' buttons at the bottom right.

▲ Data source credentials

⊗ Your data source can't be refreshed because the credentials are invalid. [Show details](#)

Web	⊗ Edit credentials
WingtipSalesDB-cpt.database.windows.net	⊗ Edit credentials

Configure Imported from Cloud ×

Server
cpt.database.windows.net

Database
WingtipSalesDB

Authentication method
Basic ▼

User name
CptStudent

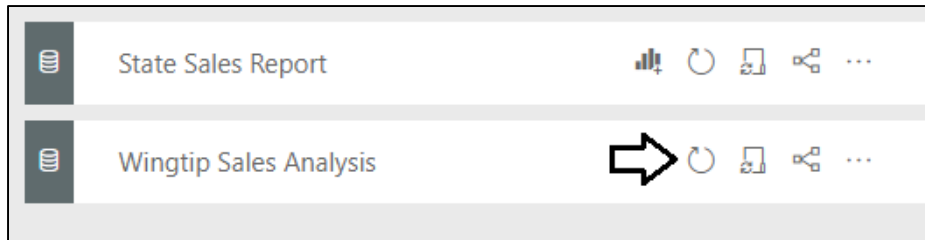
Password
.....

[Sign in](#) [Cancel](#)

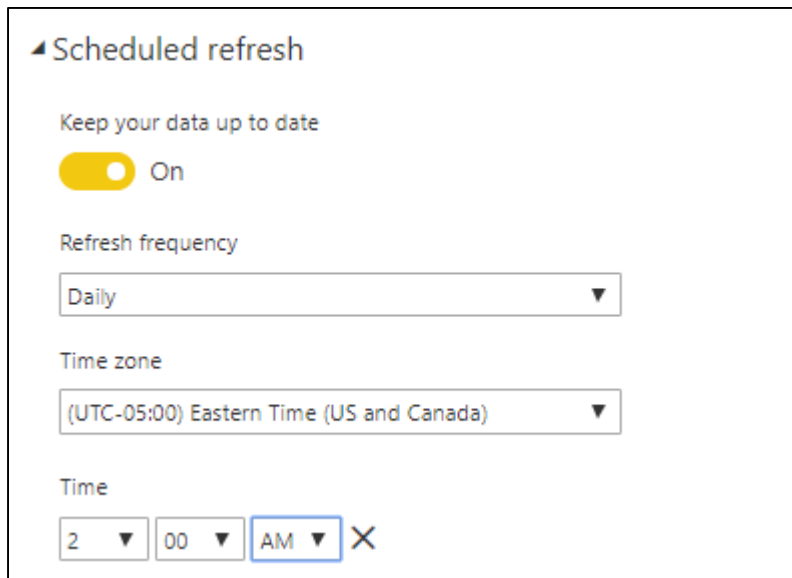


Managing Dataset Refresh

- You can refresh dataset on demand



- You can configure scheduled refresh

A screenshot of a 'Scheduled refresh' configuration panel. It includes a toggle switch for 'Keep your data up to date' which is turned 'On'. Below this is a 'Refresh frequency' dropdown menu set to 'Daily'. The 'Time zone' dropdown is set to '(UTC-05:00) Eastern Time (US and Canada)'. The 'Time' section has three dropdowns for hour (2), minute (00), and period (AM), followed by a close button (X).

Agenda

- ✓ App Workspaces
- Query Parameters
 - Publishing Apps
 - Dedicated Capacities
 - Developing Template Apps



Query Parameters in Power BI Desktop

- What is a Query Parameter?
 - Configurable setting for PBIX file
 - Strongly-typed value to which you can apply restrictions
 - Can be referenced from a query
 - Can be referenced from DAX code in data model
 - Query parameters can be updated in Power BI Service
- Where are Parameters commonly used
 - To parameterize data source connection details
 - To filter rows when importing data
 - Commonly used together with Template Apps



Creating Query Parameters

- Parameters can be created using **Manager Parameters** menu



- Parameter properties

- Name
- Description
- Required
- Allowed Values
- Default Value
- Current Value

Parameters

New

Customer State

Name

Customer State

Description

This parameter is used in the Customers query to filter the customer rows which are loaded into the dataset for the Power BI Desktop project.

☒ Required

Type

Text

Allowed Values

List of values

1	CA
2	OR
3	WA
4	AZ
5	TX
*	

Default Value

CA

Current Value

CA

OK Cancel

Referencing Parameters in a Query

- Parameters can be referenced inside query
 - Next query execution uses current parameter value

The screenshot shows a 'Filter Rows' dialog box with a close button (X) in the top right corner. It has two tabs: 'Basic' (unselected) and 'Advanced' (selected). Below the tabs, it says 'Show rows where:'. There are two columns: 'And/Or' and 'Column'. The 'And/Or' column has a dropdown menu with 'And' selected. The 'Column' column has a dropdown menu with 'State' selected. The 'Operator' column has a dropdown menu with 'equals' selected. The 'Value' column has a dropdown menu with 'Customer State' selected. There is a '...' button to the right of the 'Value' dropdown. Below the filter rules, there is an 'Add Clause' button. At the bottom right, there are 'OK' and 'Cancel' buttons.

And/Or	Column	Operator	Value
	State	equals	Customer State
And	State		ABC

Buttons: Add Clause, OK, Cancel



Updating Parameters in the Service

The screenshot shows the Power BI Settings interface. The left sidebar contains navigation options: Home, Favorites, Recent, Apps, Shared with me, Workspaces, and Wingtip Sales. The main area has tabs for General, Alerts, Subscriptions, Dashboards, **Datasets**, Workbooks, and Dataflows. Under the Datasets tab, 'State Sales Report' is selected. The settings for this dataset are displayed, including configuration details, last refresh information, and a 'Parameters' section. The parameters section contains three input fields: 'DatabaseName' (WingtipSalesDB), 'DatabaseServer' (cpt.database.windows.net), and 'StateFilter' (FL). A yellow 'Apply' button and a grey 'Discard' button are at the bottom. Two white arrows point to the 'StateFilter' field and the 'Apply' button.

Power BI Settings

General Alerts Subscriptions Dashboards **Datasets** Workbooks Dataflows

State Sales Report

Wingtip Sales Analysis

Settings for State Sales Report

This dataset has been configured by [TedP@pbdabc2020.onmicrosoft.com](#).

Last refresh succeeded: Tue Feb 11 2020 10:43:23 GMT-0500 (Eastern Standard Time)
[Refresh history](#)

► Gateway connection

► Data source credentials

◀ Parameters

DatabaseName

WingtipSalesDB

DatabaseServer

cpt.database.windows.net

StateFilter

FL

Apply Discard



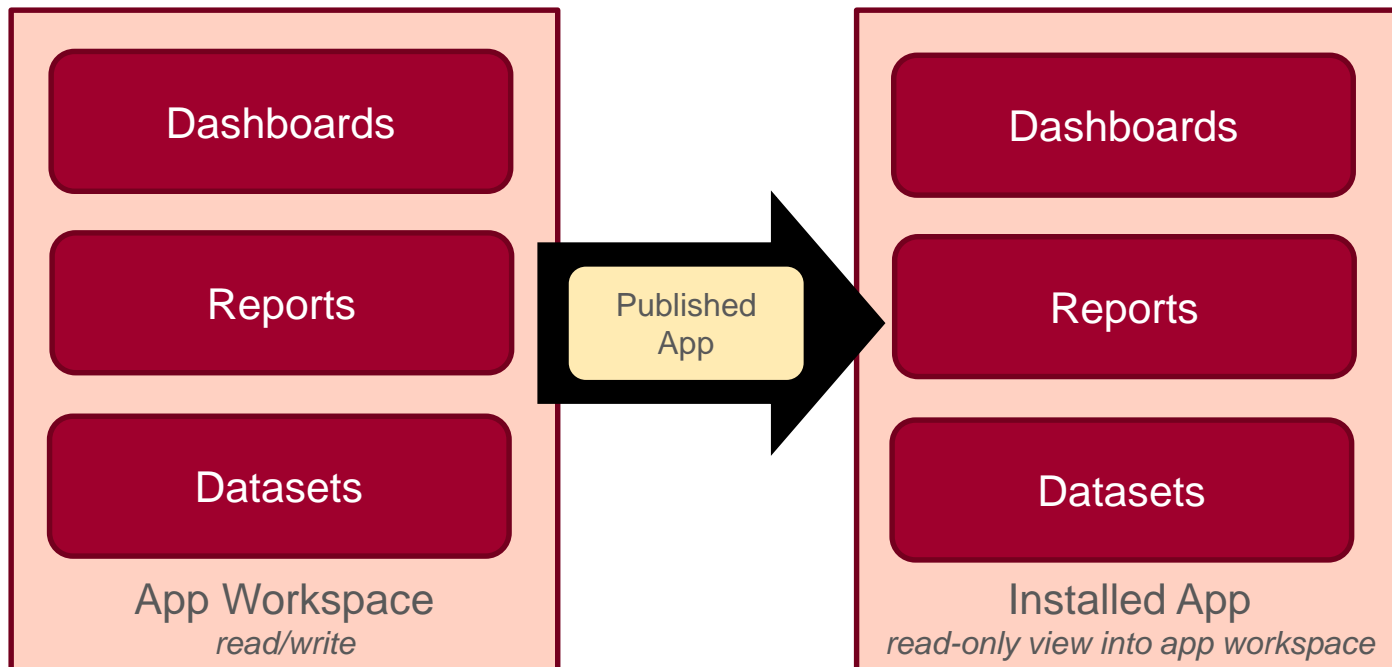
Agenda

- ✓ App Workspaces
- ✓ Query Parameters
- Publishing Apps
 - Dedicated Capacities
 - Developing Template Apps



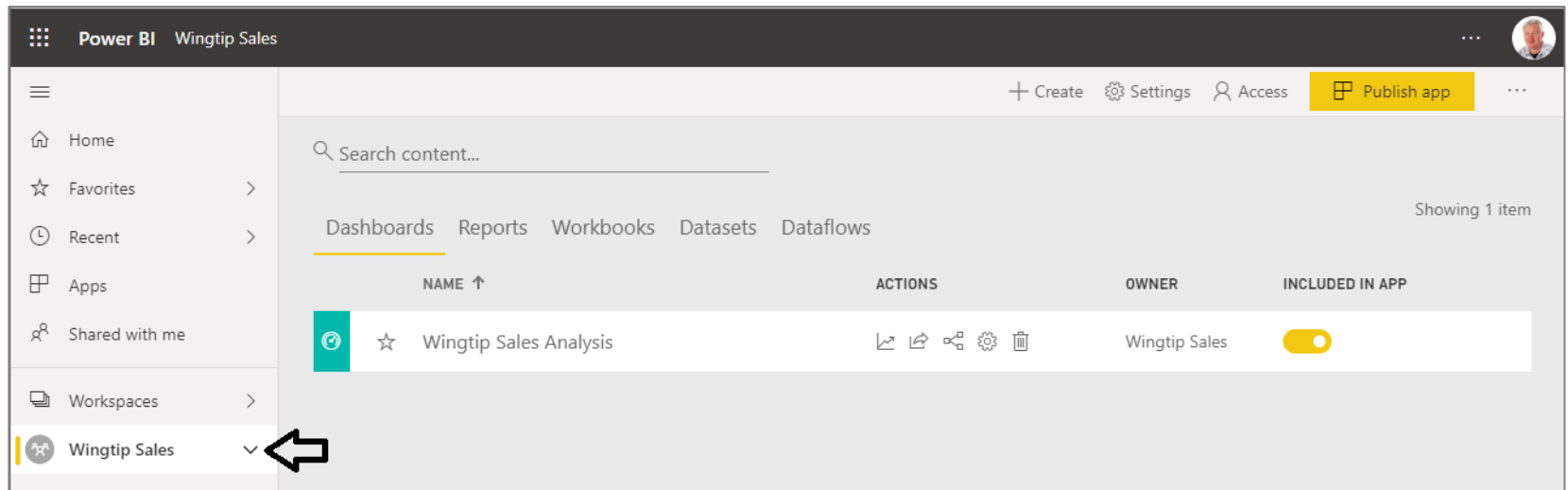
Distributing a Custom Solution

- Strategies for sharing reports and dashboards
 - Dashboard sharing and report sharing
 - Read-only App Workspaces
 - Power BI Apps (supports staged updates)



Publishing an App Workspace as an App

- Navigate to App workspace summary page

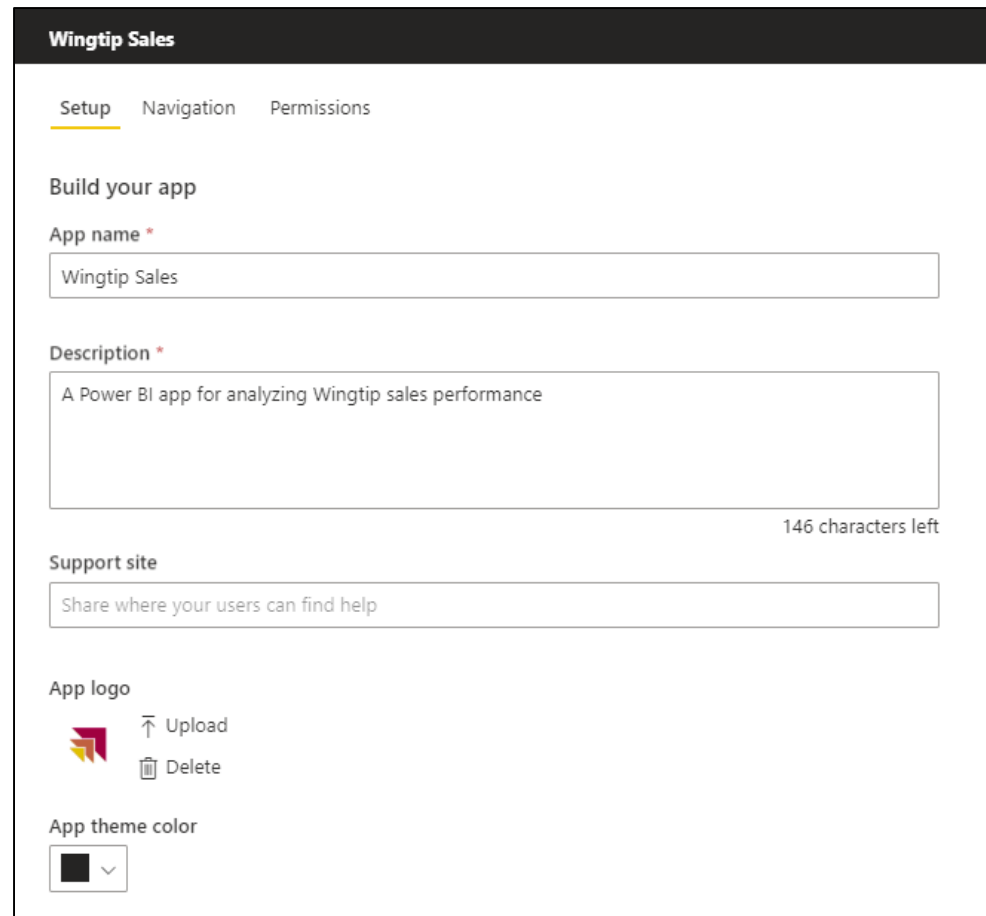


- Click **Publish app** to begin publishing configuration



Publish App - Setup Tab

- Setup Tab configuration settings
 - App name
 - Description
 - Support site
 - App logo
 - App theme color



The screenshot shows the 'Setup' tab for an app named 'Wingtip Sales'. The interface includes tabs for 'Setup', 'Navigation', and 'Permissions'. Under the 'Setup' tab, there are sections for 'Build your app', 'App name', 'Description', 'Support site', 'App logo', and 'App theme color'. The 'App name' field contains 'Wingtip Sales'. The 'Description' field contains 'A Power BI app for analyzing Wingtip sales performance' with a character count of 146 characters left. The 'Support site' field is empty. The 'App logo' section shows a logo icon and buttons for 'Upload' and 'Delete'. The 'App theme color' section shows a color picker with a black square and a dropdown arrow.

Wingtip Sales

Setup Navigation Permissions

Build your app

App name *

Wingtip Sales

Description *

A Power BI app for analyzing Wingtip sales performance

146 characters left

Support site

Share where your users can find help

App logo

Upload

Delete

App theme color


Color picker: Black square with dropdown arrow



Publish App – Navigation Tab

- Navigation tab configuration
 - Select New navigation builder
 - Add/modify/remove navigation node

Wingtip Sales

 **Navigation** [Permissions](#)

New navigation builder
☒ On
Add reports and dashboards to this app. Then organize the custom navigation pane so it's easy for people to find what they're looking for.

Navigation *

+ New

Wingtip Sales Analysis

Wingtip Sales Analysis

Dashboard details

Name *

Wingtip Sales Analysis

[Reset](#)

Dashboard link

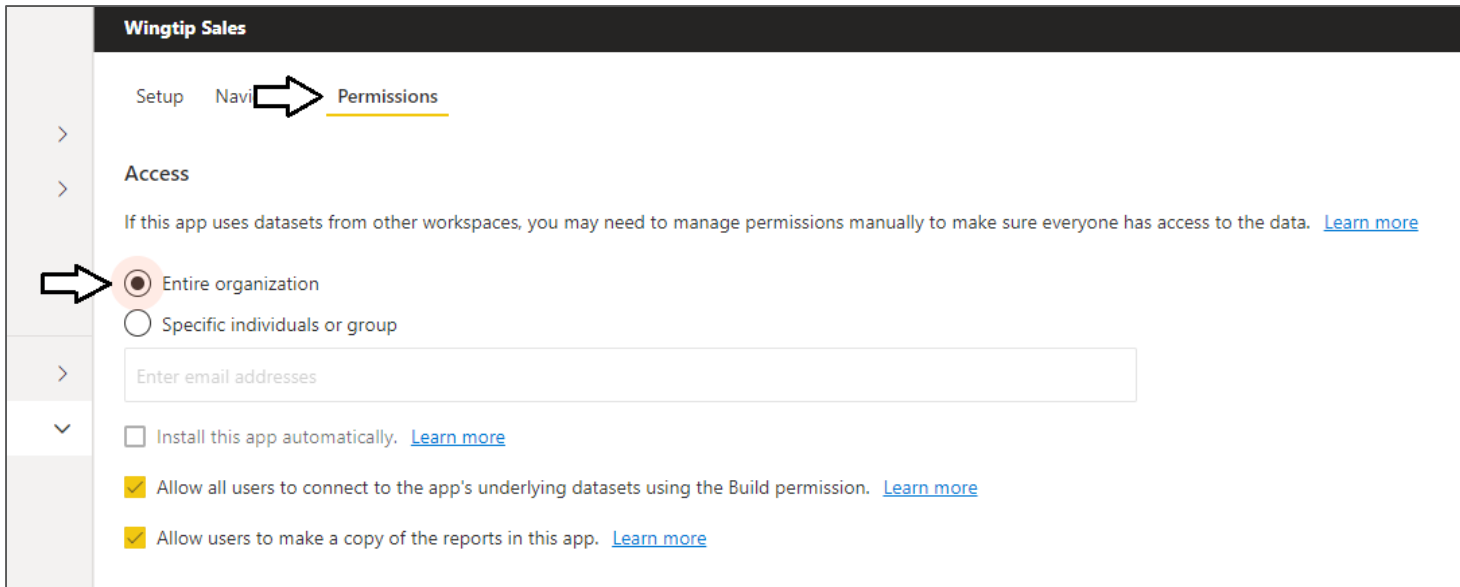
<https://app.powerbi.com/groups/828362e3-2876-4bec-a0fb-8e3bba93a922/dashboards/a1867beb-9f>

[Open](#)



Publish App – Permissions Tab

- Permission tab configuration
 - Select Entire organization or select individual users and groups
 - Install this app automatically (requires enabling tenant-level settings)
 - Allow all users to connect to the app's underlying dataset using Build permissions
 - Allow users to make a copy of the reports in this app

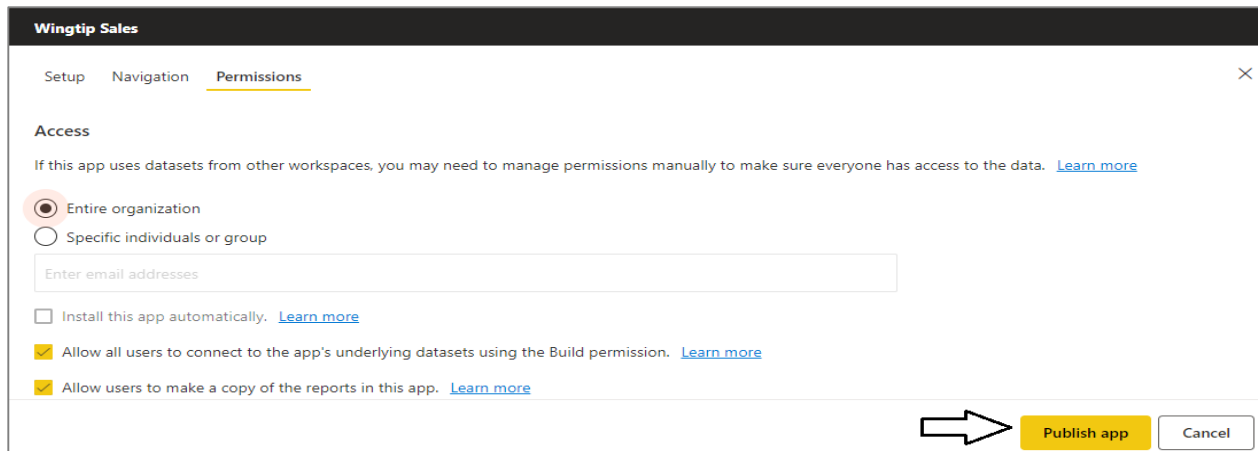


The screenshot shows the 'Wingtip Sales' app configuration page, specifically the 'Permissions' tab. The 'Permissions' tab is selected, indicated by an arrow. Below the tab, the 'Access' section is visible. It contains a message: 'If this app uses datasets from other workspaces, you may need to manage permissions manually to make sure everyone has access to the data. [Learn more](#)'. Underneath, there are two radio button options: 'Entire organization' (selected, indicated by an arrow) and 'Specific individuals or group'. Below these options is a text input field labeled 'Enter email addresses'. Further down, there is a checkbox for 'Install this app automatically. [Learn more](#)'. At the bottom, there are two checked checkboxes: 'Allow all users to connect to the app's underlying datasets using the Build permission. [Learn more](#)' and 'Allow users to make a copy of the reports in this app. [Learn more](#)'.



Completing the Publishing Process

- Click Publish app to complete the publishing process



Wingtip Sales

Setup Navigation Permissions

Access

If this app uses datasets from other workspaces, you may need to manage permissions manually to make sure everyone has access to the data. [Learn more](#)

☒ Entire organization

☐ Specific individuals or group

Enter email addresses

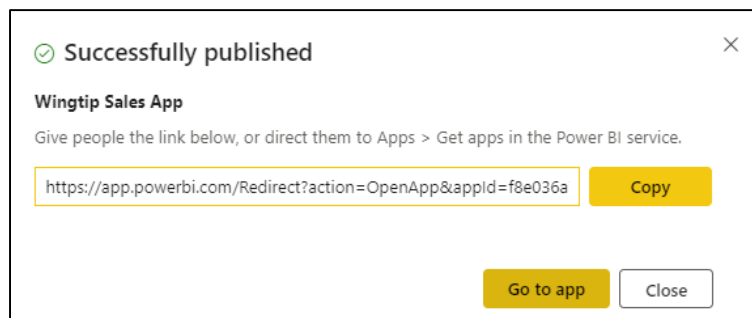
☐ Install this app automatically. [Learn more](#)

☒ Allow all users to connect to the app's underlying datasets using the Build permission. [Learn more](#)

☒ Allow users to make a copy of the reports in this app. [Learn more](#)

Publish app Cancel

- Once published, the app is ready for installation
 - Published app provides link to install and launch app



✓ Successfully published

Wingtip Sales App

Give people the link below, or direct them to Apps > Get apps in the Power BI service.

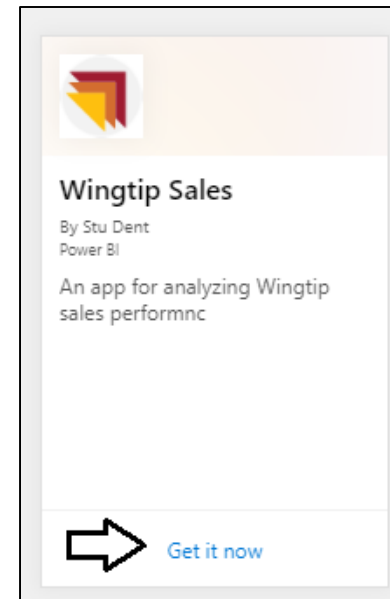
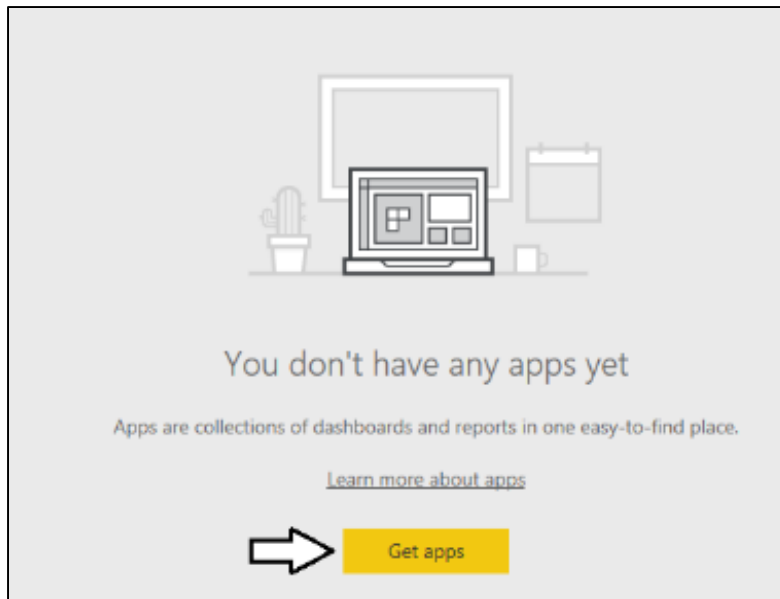
<https://app.powerbi.com/Redirect?action=OpenApp&appId=f8e036a> **Copy**

Go to app Close



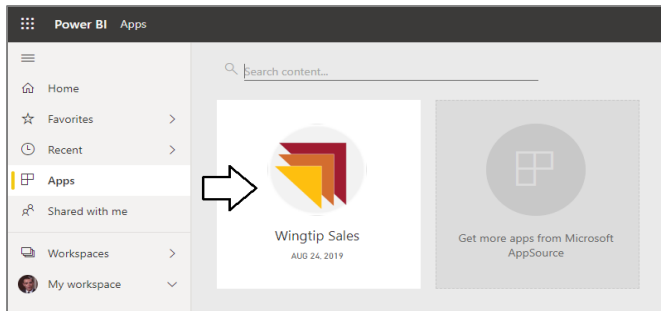
Install an App from User Perspective

- There are three ways to install an app
 - Configure the app to install automatically
 - Navigate to app using app link
 - Install the app from the organization's app catalog

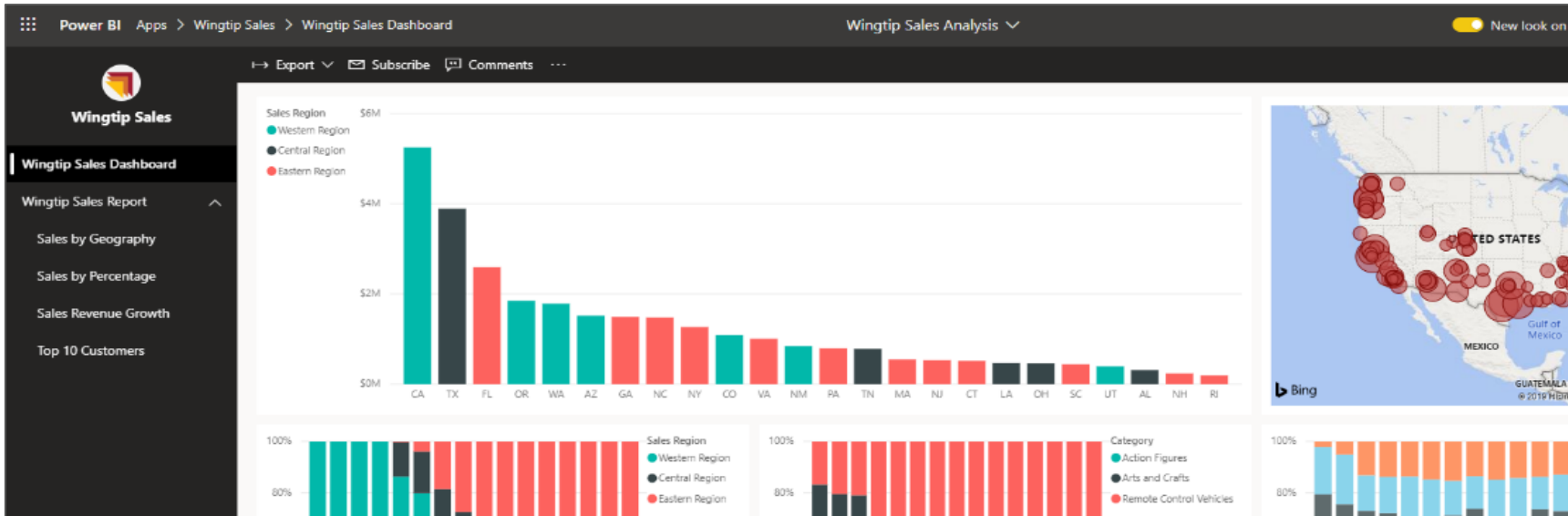


Launching an App

- Installed apps appear as tiles in Apps section



- Clicking app tile launches app





DEMO

Publishing an App Workspace and Installing a Power BI App

Agenda

- ✓ App Workspaces
- ✓ Query Parameters
- ✓ Publishing Apps
- Dedicated Capacities
- Developing Template Apps



Power BI Licensing

- User-based licensing

Power BI (free)	Power BI Pro	Office 365 Enterprise E5
\$0.00 user/month	\$9.99 user/month	\$35.00 user/month
A cloud-based business analytics service that enables anyone to visualize and analyze data with greater speed, efficiency, and understanding. It ...	A cloud-based business analytics service that enables anyone to visualize and analyze data with greater speed, efficiency, and understanding. Power ...	The Office suite, plus email, instant messaging, HD video conferencing, 1 TB personal file storage and sharing, and advanced security, analytics and PSTN ...
Office 2016 desktop & mobile apps Not included	Office 2016 desktop & mobile apps Not included	Office 2016 desktop & mobile apps
Office 365 services	Office 365 services	Office 365 services
...

- Capacity-based Licensing

Power BI Premium P1	Power BI Premium P2	Power BI Premium P3	Power BI Premium EM3 (Month to Month)
\$4,995.00 instance/month	\$9,995.00 instance/month	\$19,995.00 instance/month	\$2,495.00 instance/month
Power BI capacity dedicated to your organization, unlocking unlimited content distribution and dependable performance. P1 offers 8 virtual cores ...	Power BI capacity dedicated to your organization, unlocking unlimited content distribution and dependable performance. P1 offers 16 virtual cores ...	Power BI capacity dedicated to your organization, unlocking unlimited content distribution and dependable performance. P1 offers 32 virtual cores ...	Embed Power BI content in your custom application, powered by 4 virtual cores of dedicated capacity. Some Premium features are disabled ...
Office 2016 desktop & mobile apps Not included	Office 2016 desktop & mobile apps Not included	Office 2016 desktop & mobile apps Not included	Office 2016 desktop & mobile apps Not included
Office 365 services	Office 365 services	Office 365 services	Office 365 services
...



Dedicated Capacities

- Power BI workspaces run in two possible environments
 - Shared Capacities
 - Dedicated Capacities (*aka premium capacities*)

For content in a shared capacity

- Access requires Power BI Pro license
- Dataset size limited to 1GB
- Data refresh limited to 8 times per day
- Does not support incremental refresh
- Does not support publishing paginated reports
- Does not support AI features in Power BI

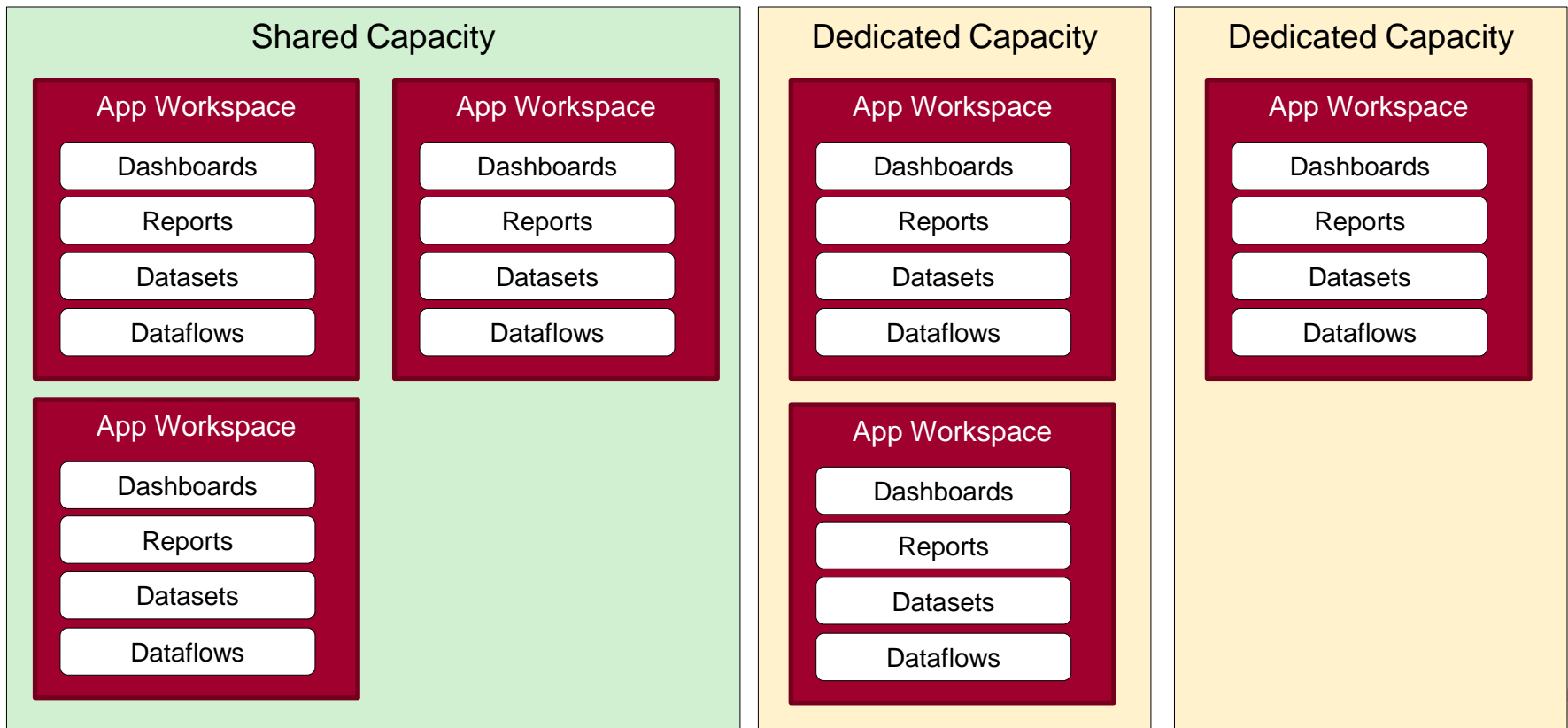
For content in a dedicated capacity

- Access allowed with Power BI Free license
- Dataset size limited to 10 GB
- Data refresh limited to 48 times per day
- Supports incremental refresh
- Supports publishing paginated reports
- Supports AI feature in Power BI



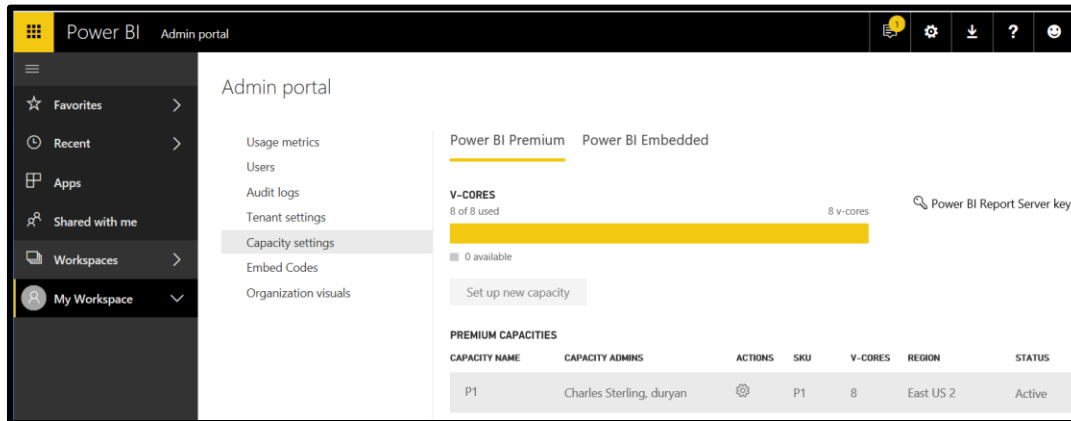
Capacities and Workspace Associations

- Every Power BI workspace runs in the context of a capacity
 - By default, app workspaces and personal workspace run in **shared capacity**
 - Organizations have the option of purchasing **dedicated capacities**

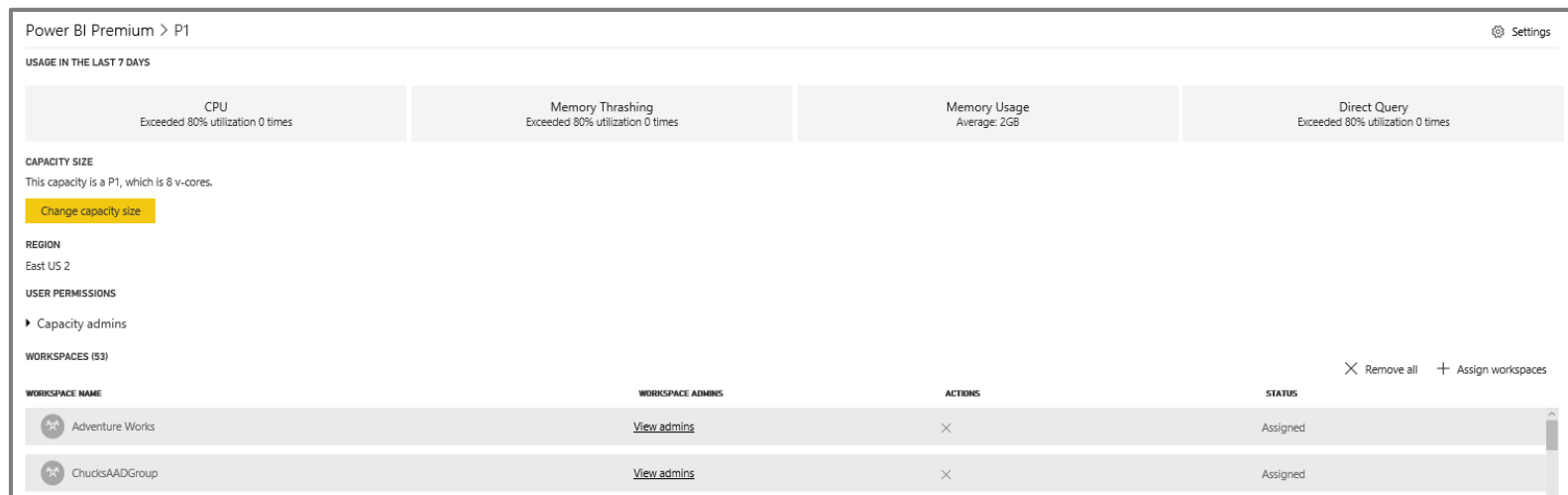


Managing Premium Capacities

- Premium capacities managed in Power BI Admin portal

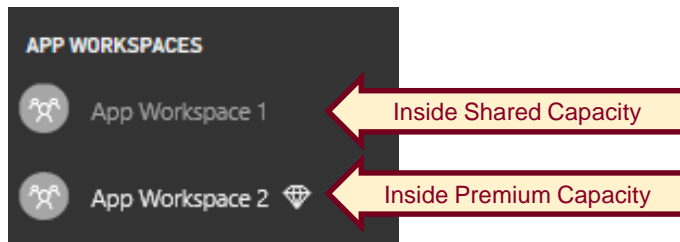


- Admin portal provides UI to configure and monitor premium capacities

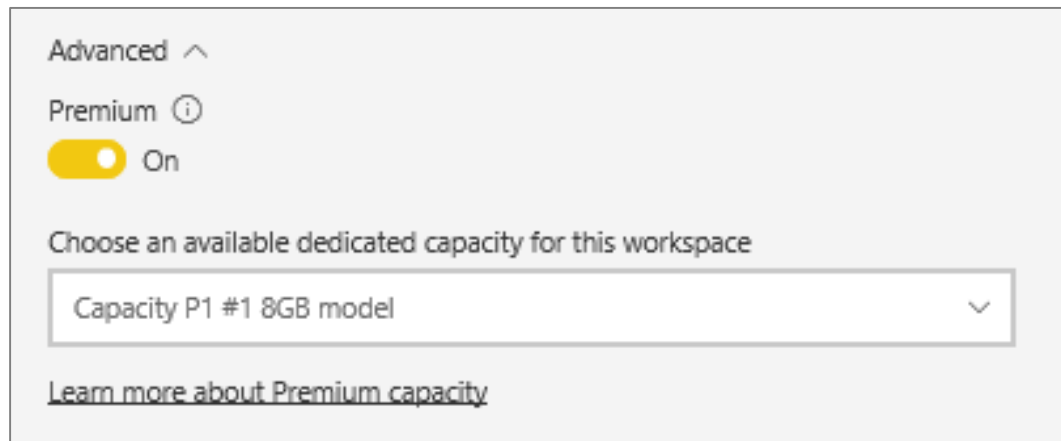
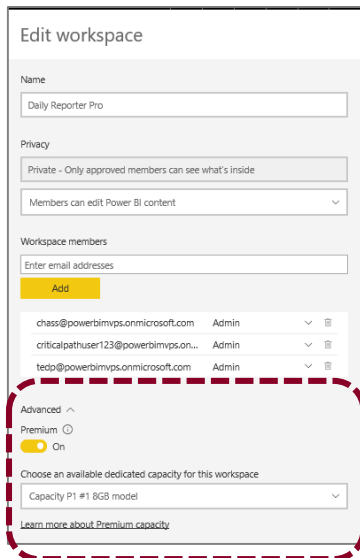


Associating App Workspaces with a Capacity

- App Workspace in Premium Capacity has diamond icon

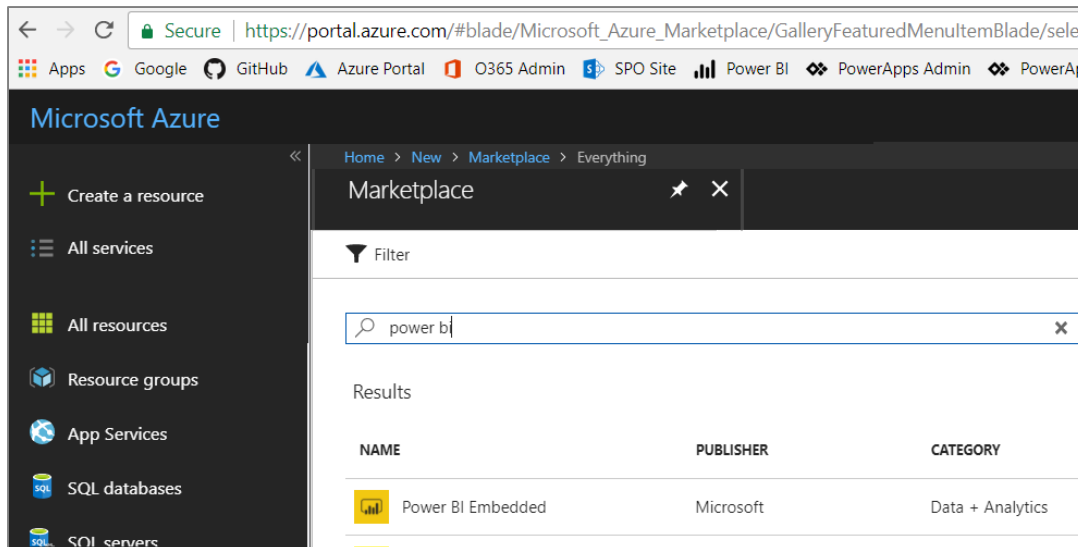


- App workspace moved into Premium capacity in Advanced settings



Creating the Power BI Embedded Service

- Power BI Embedded in an Azure on-demand service
 - Must be created in same location as Power BI Service for tenant
 - Can be created manually through the Azure portal
 - Can be created in automated fashion using PowerShell
 - Requires an Azure subscription *in same tenant*



The screenshot shows the 'Power BI Embedded' creation form. The fields are filled as follows:

- Resource name: myfirstcapacity
- Subscription: Pay-As-You-Go
- Resource group: Create new (selected), biz-app-summit-demos
- Power BI capacity administrator (Select): TedP@BizAppSummit.onmicrosoft.com
- Location: West US 2
- Pricing tier (View full pricing details): A1 (1 V-Cores)

Buttons at the bottom: Create, Automation options

Embedded Capacity Pricing Tiers

Home > myfirstcapacity

myfirstcapacity
Power BI Embedded

Search (Ctrl+)

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems

SCALE

Pricing tier

SETTINGS

Quick Start
Power BI capacity administrators
Properties
Locks
Automation script

MONITORING

Diagnostics logs
Metrics
Alerts

Pause Move Delete

Essentials

Resource group (change)
biz-app-summit-demos
Status
Active
Location
West US 2
Subscription name (change)
Pay-As-You-Go
Subscription ID
63bf3c07-a58b-4940-ab25-a6a66dda26dc

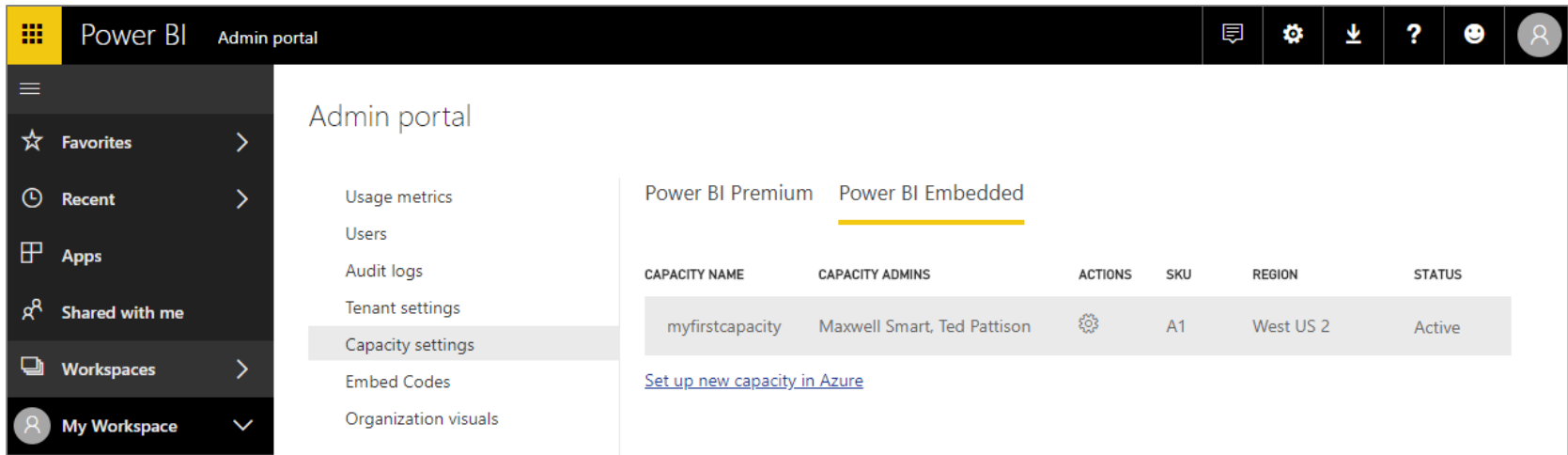
Resource name
myfirstcapacity
Pricing tier
A1

A1	A2	A3
1 V-Cores	2 V-Cores	4 V-Cores
Up to 3 GB Cache	Up to 5 GB Cache	Up to 10 GB Cache
Shared infrastructure	Shared infrastructure	Dedicated service
750.03 USD/MONTH (ESTIMATED)	1,494.03 USD/MONTH (ESTIMATED)	2,994.00 USD/MONTH (ESTIMATED)

A4	A5	A6
8 V-Cores	16 V-Cores	32 V-Cores
Up to 25 GB Cache	Up to 50 GB Cache	Up to 100 GB Cache
Dedicated service	Dedicated service	Dedicated service
5,994.04 USD/MONTH (ESTIMATED)	11,994.02 USD/MONTH (ESTIMATED)	23,994.45 USD/MONTH (ESTIMATED)

Managing Power BI Embedded Capacities

- Managing Power BI Embedded capacity done Azure portal
 - Use Azure portal to assign administrators & change pricing tier to scale
- Managing Power BI Embedded capacity in Power BI Admin portal
 - Power BI Admin portal to assign workspaces to capacities



The screenshot displays the Power BI Admin portal interface. The top navigation bar includes the Power BI logo, 'Admin portal', and several utility icons. A left-hand sidebar contains navigation options: Favorites, Recent, Apps, Shared with me, Workspaces, and My Workspace. The main content area is titled 'Admin portal' and features a sub-menu on the left with options like Usage metrics, Users, Audit logs, Tenant settings, Capacity settings (highlighted), Embed Codes, and Organization visuals. The main panel shows two tabs: 'Power BI Premium' and 'Power BI Embedded' (selected). Below the tabs is a table listing capacities.

CAPACITY NAME	CAPACITY ADMINS	ACTIONS	SKU	REGION	STATUS
myfirstcapacity	Maxwell Smart, Ted Pattison		A1	West US 2	Active

Below the table, there is a link: [Set up new capacity in Azure](#).



P SKUs (P is for Premium)

- All-in version which allows greatest flexibility
 - Used to provide free users with access to apps and content
 - Used to support 1st party and 3rd party embedding
 - The more you pay per month, the more resources you get

Name	Virtual cores	Memory (GB)	Peak renders/hr	Cost
P1	8	25	1-300	\$4,995/mo
P2	16	50	301-600	\$9,995/mo
P3	32	100	601-1,200	\$19,995/mo



EM SKUs (EM is for Embedded)

- SKUs for embedding into SaaS Applications
 - SaaS applications include SharePoint and Teams
 - Supports 1st party and 3rd party embedding
 - Does not provide user with access to PowerBI.com

Name	Virtual cores	Memory (GB)	Peak renders/hr	Cost
EM1	1	3	1-300	\$625/mo
EM2	2	5	301-600	\$1,245/mo
EM3	4	10	601-1,200	\$2,495/mo



A SKUs (A is for Azure)

- A SKU is a Platform-as-a-Service
 - Used by ISVs as the data visualization layer
 - Allows for PBI Embedding into Custom Applications
 - Only supports 3rd party embedding (i.e. App-Owns-Data model)

Name	Virtual cores	Memory (GB)	Peak renders/hour	Cost/hour
A1	1	3	300	~\$1
A2	2	5	600	~\$2
A3	4	10	1,200	~\$4
A4	8	25	2,400	~\$8
A5	16	50	4,800	~\$16
A6	32	100	9,600	~\$32



PBI Capacity SKU Decoder Ring

	P SKU	EM SKU	A SKU
Purchased through...	Office 365	Office 365	Azure
Supports Power BI embedding in custom applications	Yes	Yes	Yes
Supports 3 rd Party Embedding in custom applications	Yes	Yes	Yes
Supports 1 st Party Embedding in custom applications	Yes	Yes	Yes
Supports free users accessing content in Power BI portal	Yes	No	No
Supports free users accessing content in Power BI Mobile	Yes	No	No
Billing cycle	Monthly	Monthly	Hourly
Commitment	Monthly	Monthly/Yearly	None
Turn it off when your not using it	No	No	Yes



Agenda

- ✓ App Workspaces
- ✓ Query Parameters
- ✓ Publishing Apps
- ✓ Dedicated Capacities
- Developing Template Apps



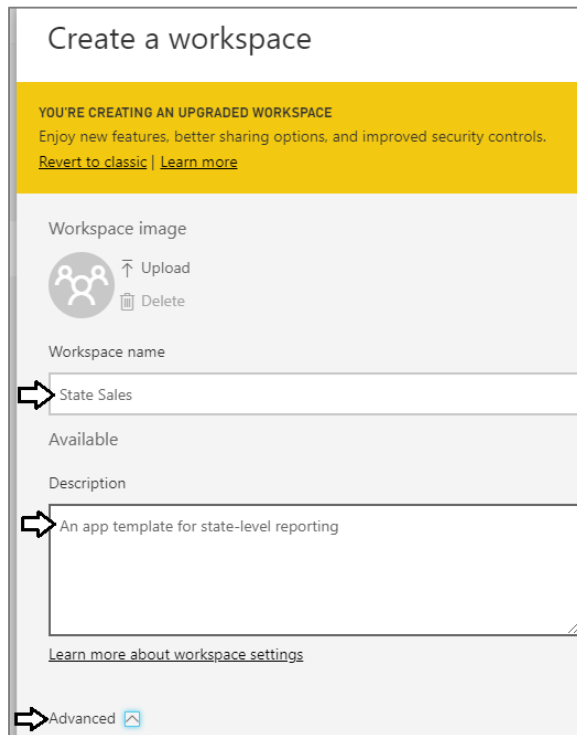
Template Apps

- Used to Clone Workspace Template
 - Template App created creating using app workspace
 - App workspace configured as template app
 - Installing template app involves cloning workspace content
 - Installing template app involves creating new workspace
 - Template app workspace content cloned into new workspace
- Who developed template apps?
 - Mainly used by Independent Software Vendors (ISVs)
 - Not as common to use within a corporate



Creating a Template App


- Template app created as app workspace
 - Requires enabling **Develop a template app** option
 - **Develop a template app** feature cannot be disabled once enabled



Create a workspace

YOU'RE CREATING AN UPGRADED WORKSPACE
Enjoy new features, better sharing options, and improved security controls.
[Revert to classic](#) | [Learn more](#)

Workspace image

 [Upload](#) [Delete](#)

Workspace name


→ State Sales

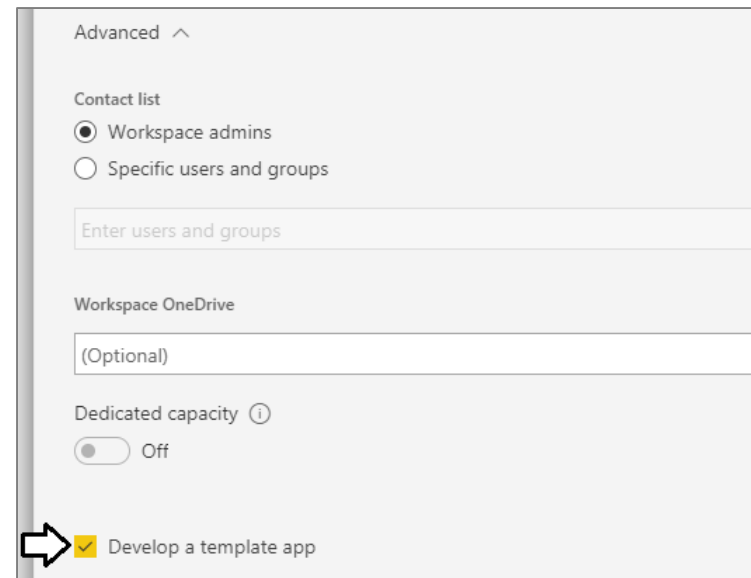
Available

Description

→ An app template for state-level reporting

[Learn more about workspace settings](#)

→ Advanced 



Advanced ^

Contact list

☒ Workspace admins
☐ Specific users and groups

Workspace OneDrive

Dedicated capacity ⓘ

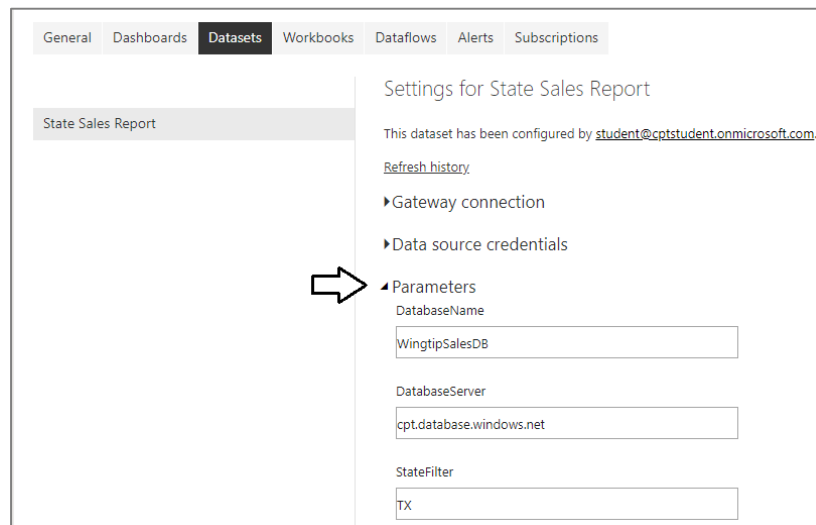
☐ Off

→ ☒ Develop a template app



Configuring Dataset Parameters

- Template apps created using query parameters
 - Parameters configured when template app is created
 - Parameters overridden when template app is installed



The screenshot shows the 'Datasets' tab in a Power BI interface. The 'State Sales Report' dataset is selected. The settings for this dataset are displayed, including a 'Parameters' section. An arrow points to the 'Parameters' section.

General Dashboards **Datasets** Workbooks Dataflows Alerts Subscriptions

State Sales Report

Settings for State Sales Report

This dataset has been configured by [student@cptstudent.onmicrosoft.com](#).

[Refresh history](#)

► Gateway connection

► Data source credentials

Parameters

DatabaseName

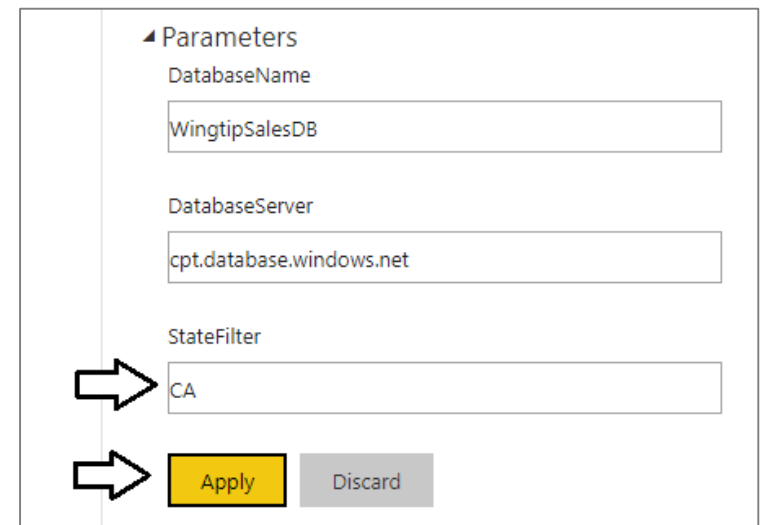
WingtipSalesDB

DatabaseServer

cpt.database.windows.net

StateFilter

TX



The screenshot shows a close-up of the 'Parameters' section for the 'State Sales Report' dataset. The 'DatabaseName' is 'WingtipSalesDB', the 'DatabaseServer' is 'cpt.database.windows.net', and the 'StateFilter' is 'CA'. Arrows point to the 'StateFilter' and the 'Apply' button.

Parameters

DatabaseName

WingtipSalesDB

DatabaseServer

cpt.database.windows.net

StateFilter

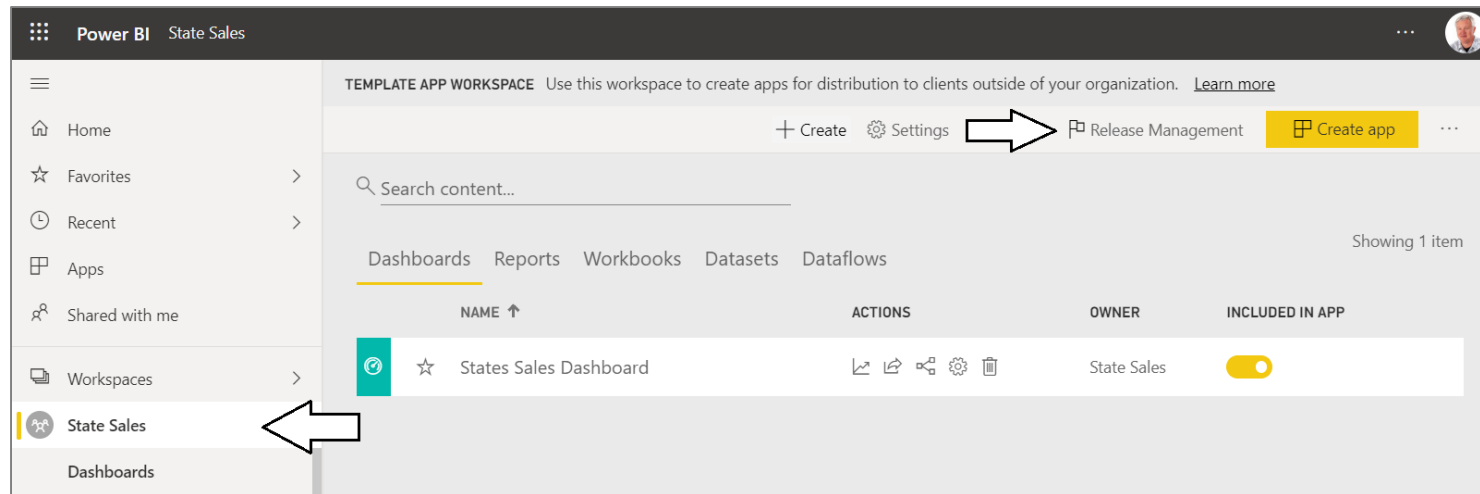
CA

Apply Discard



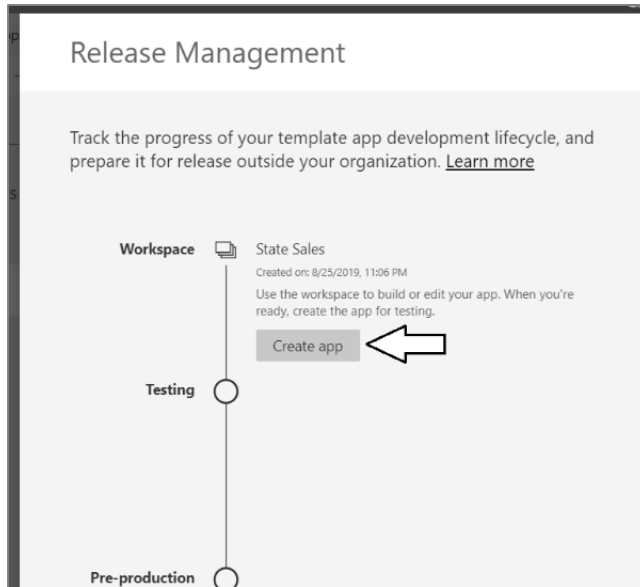
Release Management for Template Apps

- Template app provides release management features
 - Installing template app results in creating new app workspace
 - Template app content cloned into app workspace during install
 - Release management allows testing template app installation



Creating the Template App

- Release Management provides Create app button
 - App is created with extra tabs (e.g. Control and Parameter)

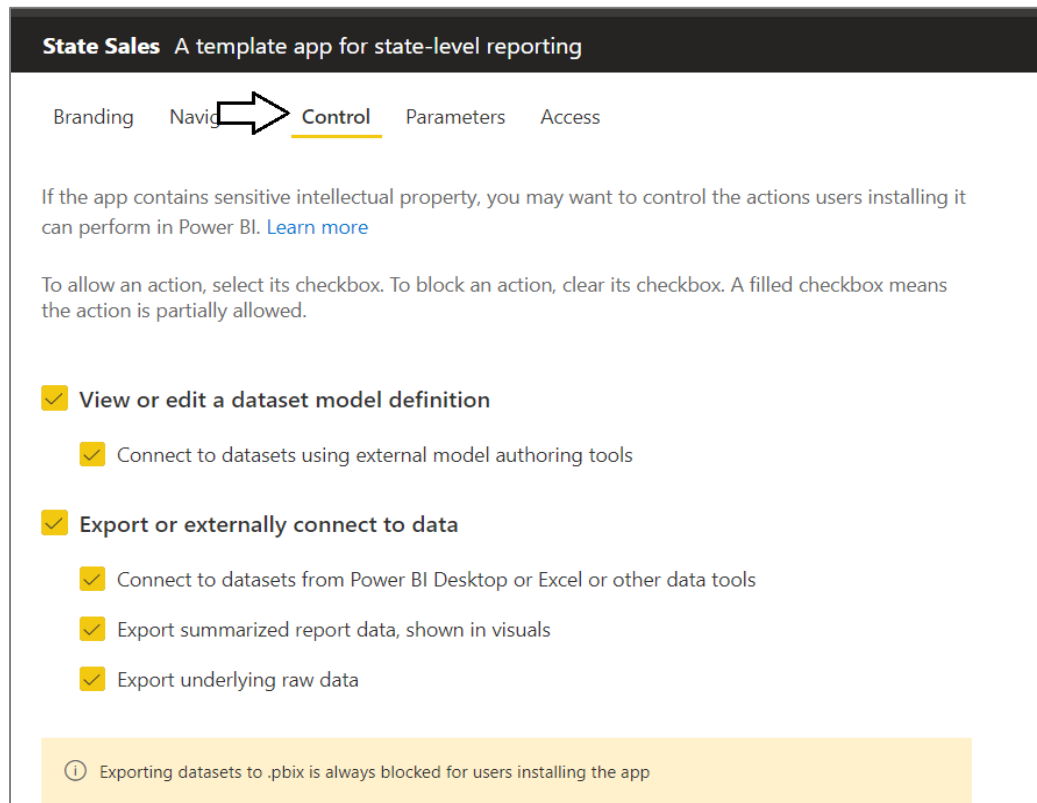


This screenshot shows the configuration page for a template app named 'State Sales'. The page has a blue header with the title 'State Sales' and subtitle 'A template app for state-level reporting'. Below the header are five tabs: 'Branding' (selected), 'Navigation', 'Control', 'Parameters', and 'Access'. The main content area is titled 'Build your app' and contains three input fields: 'App name *' (with the value 'State Sales'), 'Description *' (with the value 'A template app for state-level reporting'), and 'Support site' (with the placeholder text 'Share where your users can find help'). A character count '160 characters left' is visible next to the description field. White arrows point to the 'App name' and 'Description' fields.



Template App – Control Tab

- Control tab provides access control for template app
 - Allows app creator to control access data model
 - Makes it possible to lock down IP when installed in client tenants



Locking Parameter Values

- Template parameters can be configured as required
 - Whoever installs template app must provide value
- Template parameters can be configured as locked
 - Whoever installs template app cannot override value

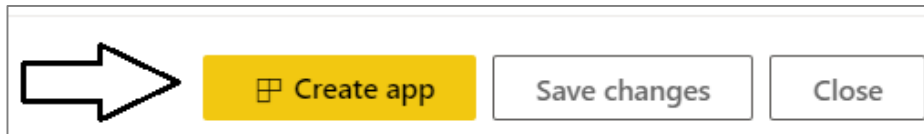
The screenshot displays a configuration window with three sections, each containing a parameter name, a 'Value' field, a 'Required' checkbox, and a lock icon.

- StateFilter**
Value: CA
☐ Required
The lock icon is disabled (greyed out).
- DatabaseServer**
Value: cpt.database.windows.net
☐ Required
The lock icon is active (black), and a double-headed arrow points to it, indicating the value is locked.
- DatabaseName**
Value: WingtipSalesDB
☐ Required
The lock icon is active (black), and a double-headed arrow points to it, indicating the value is locked.

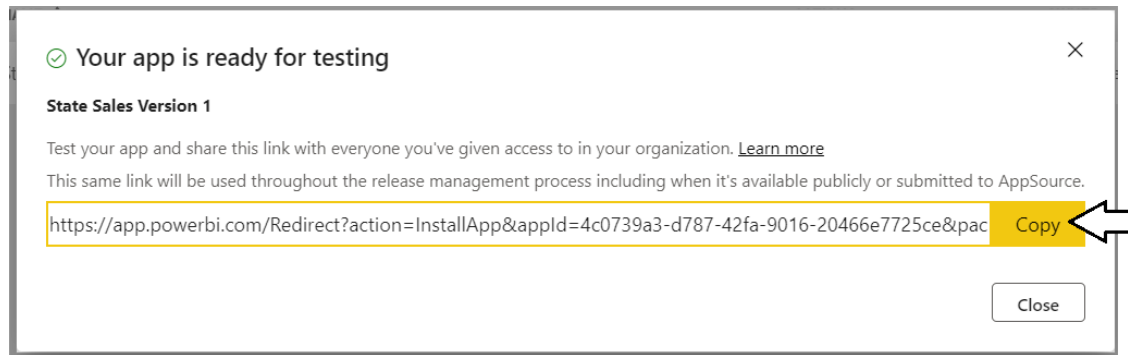


Testing a Template App

- Testing a template app within the same tenant
 - Click Created app



- Copy and navigate to link to install the template app

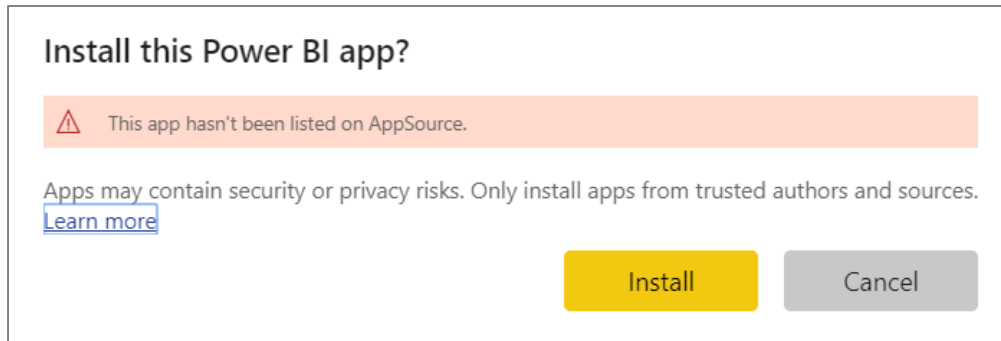


- Further testing done in external tenants
 - Final testing should be done in separate tenants

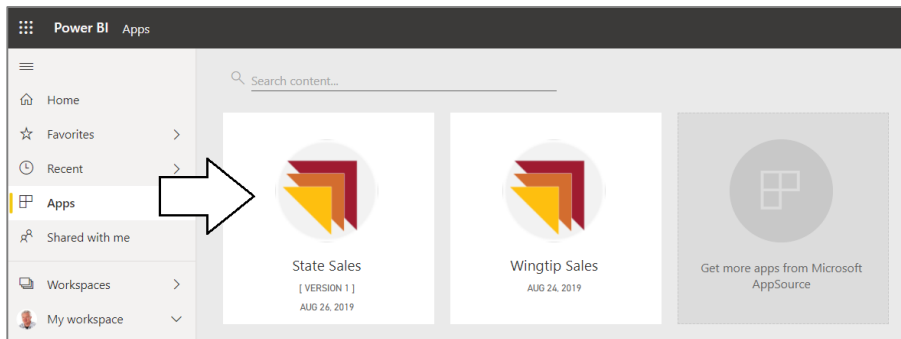


Installing a Template App

- Installing template app creates new app workspace
 - New app workspace automatically published as an app

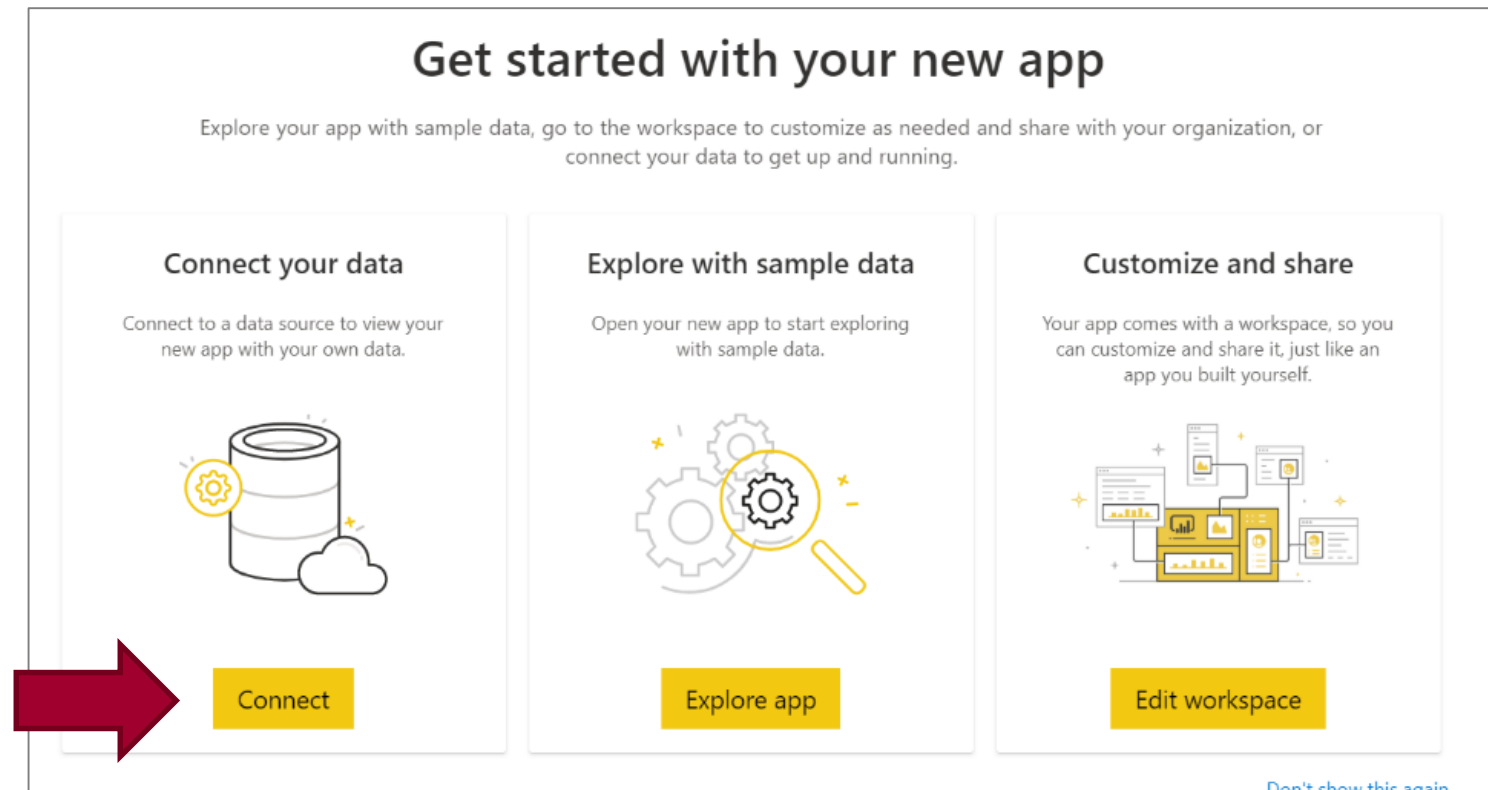


- App tile is created to launch app



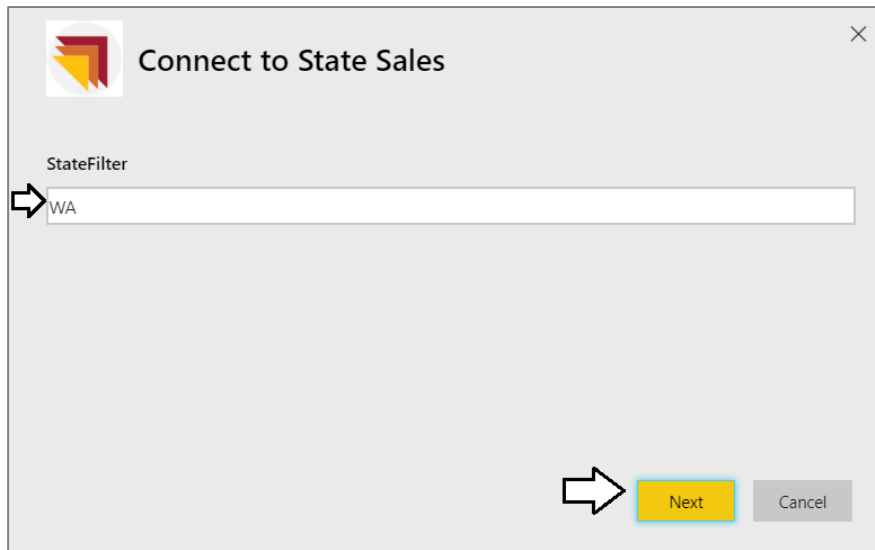
Template App Getting Started Page

- Page displayed on first launch of template app
 - Template app should provide sample data
 - Select **Connect** to configure template app parameters

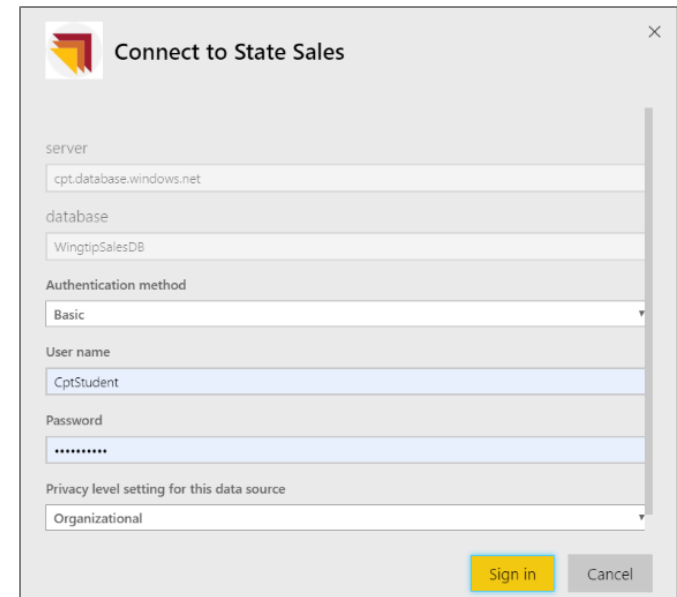


Configuring Template App Parameters

- Connect option allows parameter configuration
 - Installer must set values for required parameters
 - Installer must configure data source credential settings



The screenshot shows a dialog box titled "Connect to State Sales" with a close button (X) in the top right corner. Below the title bar, there is a label "StateFilter" and a text input field containing the value "WA". A white arrow points to the input field. At the bottom right, there is a yellow "Next" button and a grey "Cancel" button. A white arrow points to the "Next" button.



The screenshot shows the same dialog box titled "Connect to State Sales" with a close button (X) in the top right corner. The dialog is now showing configuration fields for the data source. The fields are: "server" with the value "cpt.database.windows.net", "database" with the value "WingtipSalesDB", "Authentication method" with a dropdown menu showing "Basic", "User name" with the value "CptStudent", "Password" with a masked input field showing "*****", and "Privacy level setting for this data source" with a dropdown menu showing "Organizational". At the bottom right, there is a yellow "Sign in" button and a grey "Cancel" button.



Summary

- ✓ App Workspaces
- ✓ Query Parameters
- ✓ Publishing Apps
- ✓ Dedicated Capacities
- ✓ Developing Template Apps

