

Metro Ticket Generating System

In ServiceNow

Interface Design

Introduction

This document describes the design and configuration of the **Book a Metro Ticket** Service Catalog item in ServiceNow. It explains how the catalog item is structured, the specific variables utilized, the user interaction model, and how it supports a standardized and automated digital ticketing process.

Catalog Item Overview

The following details define the core configuration of the metro ticketing interface:

- **Catalog Item Name:** Book a Metro Ticket
- **Catalog:** Service Catalog
- **Category:** Metro Services (Global)
- **Status:** Active
- **Owner:** System Administrator

The screenshot shows the 'Catalog Item - Book a Metro Ticket' configuration screen in ServiceNow. At the top, there are tabs for 'All', 'Favorites', 'History', 'Workspaces', and 'Admin'. The main title is 'Catalog Item - Book a Metro Ticket'. Below the title, there's a note: 'Catalog items are goods or services available to order from the service catalog. Items can be anything from hardware, like tablets and phones, to software applications, to furniture and office supplies.' There are fields for 'Name' (Book a Metro Ticket), 'Application' (Global), 'Active' (checked), 'Category' (Service Catalog), 'State' (None), 'Checked out' (None), 'Owner' (System Administrator), and 'Fulfillment automation level' (Unspecified). Below these, there are tabs for 'Item Details', 'Process Engine', 'Picture', 'Pricing', and 'Portal Settings'. The 'Item Details' tab is selected, showing a 'Short description' field containing 'A metro e-ticketing system allows passengers to purchase and use tickets digitally, typically via a mobile app or website, eliminating the need' and a rich text editor for 'Description'.

Figure 1: Core Configuration of the "Book a Metro Ticket" Catalog Item

The screenshot shows the 'Catalog Item - Book a Metro Ticket' configuration screen, specifically the 'Variables' section. At the top, there are tabs for 'Variables (12)', 'Variable Sets', 'Catalog UI Policies (4)', 'Catalog Client Scripts (3)', 'Available For', 'Not Available For', 'Categories (1)', 'Catalogs (1)', 'Catalog Data Lookup Definitions', 'Related Articles', 'Related Catalog Items', and 'Assigned Topics'. Below the tabs, there's a search bar and a table with columns for 'Type', 'Question', 'Name', and 'Order'. The table contains 12 rows of variables:

Type	Question	Name	Order
Multiple Choice	What do you want to do Today?	what_do_you_want_to_do_today	100
Single Line Text	Enter Smart Card Number	enter_smart_card_number	200
Single Line Text	Enter Smart Card Name	enter_smart_card_name	300
Single Line Text	Recharge Amount	recharge_amount	350
Reference	Starting From?	starting_from	500
Reference	Going To?	going_to	600
Single Line Text	No of Passengers	no_of_passengers	700
Multiple Choice	Type of Journey	type_of_journey	800
Single Line Text	Amount for Single Journey	amount_for_single_journey	820
Single Line Text	Amount Including Return	amount_including_return	840
Multiple Choice	Mode of Payment	mode_of_payment	900
Single Line Text	Enter Payment Mode	enter_payment_mode	1,000

Figure 2: Structured Variables for Commuter Intake

A comprehensive list of the 12 variables used to capture travel data, such as source and destination stations, passenger count, and journey type. These variables support both card recharges and QR ticket bookings.

The screenshot shows the ServiceNow interface for managing catalog items. The top navigation bar includes 'All', 'Favorites', 'History', 'Workspaces', and 'Admin'. The title bar says 'Catalog Item - Book a Metro Ticket'. Below the title are buttons for 'Copy', 'Try It', 'Update', 'Edit in Catalog Builder', and 'Delete'. A 'Search' bar is also present. The main content area is titled 'Catalog Item = Book a Metro Ticket'. It displays a table of 'Catalog UI Policies' with the following data:

Short description	Variable set	Conditions	Reverse if false	On load	Inherit	Updated	Order
Book using QR	(empty)	true	true	false	2025-12-30 03:16:58	100	
Recharge Fields	(empty)	true	true	false	2025-12-30 03:26:38	100	
None Field	(empty)	true	true	false	2025-12-30 03:30:01	100	
Fields Visibility	(empty)	true	true	false	2025-12-28 08:27:39	100	

Below the table, there is a search bar and a message: 'Catalog item = Book a Metro Ticket'.

Figure 3: Catalog UI Policies for Dynamic Visibility

These four policies, including "Recharge Fields" and "Book using QR," ensure a focused user experience by hiding irrelevant fields and reducing form clutter during the submission process.

The screenshot shows the ServiceNow interface for managing catalog items. The top navigation bar includes 'All', 'Favorites', 'History', 'Workspaces', and 'Admin'. The title bar says 'Catalog Item - Book a Metro Ticket'. Below the title are buttons for 'Copy', 'Try It', 'Update', 'Edit in Catalog Builder', and 'Delete'. A 'Search' bar is also present. The main content area is titled 'Catalog Item = Book a Metro Ticket'. It displays a table of 'Catalog Client Scripts' with the following data:

Name	Active	Table	View	Type	Updated
FareCalculator	true			onChange	2025-12-28 18:16:42
fieldValidation	true			onChange	2025-12-28 18:25:18
QR Generation	true			onSubmit	2025-12-30 19:18:45

Below the table, there is a search bar and a message: 'Catalog item = Book a Metro Ticket'.

Figure 4: Catalog Client Scripts for Real-Time Automation

Detailed view of the scripts responsible for front-end automation, specifically the **FareCalculator** for real-time pricing updates and **QR Generation** for instant ticket fulfillment upon submission.

Description

The **Book a Metro Ticket** catalog item is designed as the primary portal for commuters to request transit services. Users can select journey types, such as single or return trips, and specify their source and destination stations. The item leverages background scripts and pricing configurations to provide real-time fare updates. Upon submission, the interface triggers an automated backend process that generates a unique QR code for immediate use, ensuring a seamless transition from the digital request to physical transit entry.

User Experience Considerations

To ensure a high level of commuter satisfaction and operational efficiency, the following UX principles were applied:

- **Clean and Structured Form Layout:** Fields are organized to guide the user naturally from station selection to payment.
- **Minimal Input Required:** Users only provide essential travel data, with the system auto-calculating secondary values like fares.

- **Dynamic Field Display:** UI Policies reduce clutter by hiding irrelevant fields such as Smart Card details when a QR ticket is selected ensuring a focused submission process.
- **Real-Time Visual Feedback:** The interface provides immediate updates, such as displaying the auto-calculated "Amount for Single Journey" as soon as stations or passenger counts are selected, ensuring transparency before the user clicks "Order Now".

Conclusion

The **Book a Metro Ticket** catalog item provides a simple, efficient, and standardized interface for modern urban transit. Through the use of structured variables, conditional logic, and dynamic pricing configurations, the item supports fully automated backend processing. This design integrates seamlessly with the metro database and fulfilment workflows, delivering a robust digital solution that reduces station congestion and enhances the overall passenger journey.