

## Issue Event Ticket: User Guide

# Contents

<b>Overview</b>	<b>2</b>
This Guide	2
Workflow	2
<b>Getting Started</b>	<b>3</b>
Accessing the Demo	3
Choosing and Changing Roles	3
<b>Creating Currency Token</b>	<b>4</b>
<b>Creating Tickets for an Event</b>	<b>9</b>
<b>Accepting Ticket Requests</b>	<b>10</b>
<b>Viewing Primary Market and secondary Market</b>	<b>11</b>

## Overview

Issue Event Ticket project explains to create currency token and create tickets for an event, buy tickets from event organizer which would be consider as primary Market and sell the same ticket in secondary Market to gain huge profit than the primary market.

Ticket fraud at festivals is costing fans millions of hard-earned dollars in losses, and in today's market, digital tickets have become an integral part of any event's ticket sales. So integral in fact, that two-thirds of tickets sold online are digital, a comparatively large figure to other online industries, and one that attests to how rapidly the market has

matured. And it's growing. Riskified have found that ticket fraud at festivals is more common than at any other event, with festival passes running four times more likely to be bought using fraudulent means than tickets to sporting events due to their appeal with younger, more tech-savvy crowds. But protecting yourself is easier than you think. By being aware of these key points diminish risk of being affected by ticket fraud at festivals, as we explain as we break down Riskfield's excellent report below.

This demo executes the process of an `IssueEventTicket` to view/Analyze ticket frauds happening in secondary market.

## This Guide

This User Guide takes you step-by-step through creating currencyToken, creating Tickets for an festival event, buy and sell in primaryMarket and SecondaryMarket processing, executing a successful Issue EventTicket Application.

*Note: A full production implementation would include additional features, handle errors and exceptions, and incorporate appropriate security controls.*

## Workflow

### Roles and Responsibilities

Tasks are performed by following roles in the workflow.

Role	Responsibility
NTT_Data(Organizer)	Creating Currency Token Creating Tickets for a festival Event Accepting Ticket requests Monitoring Primary and secondary Market
Patankar(Pprimary Market)	Request festival event Ticket to Organizer Sell festival event Ticket to some other party in secondary Market
Gnyan(Secondary Market)	Buy Ticket from Primary Market not more than 110% than original price of the Ticket.

### Steps The Issue Event Ticket Process workflow involves these steps:

1. **CurrencyToken** : As the organizer create Currency Token.
2. **Organizer Wallet**: As the Organizer, can view the created currency token in order to create Tickets.
3. **Ticket Request**: A Buyer can Request Ticket to organizer and organizer can accept the request to sell ticket to buyer(in this case patankar).
4. **Primary Market**: As the Organizer and Buyer(Patankar) can view Primary Market.

NTT DATA

5. **Second Market:** As the Organiser, Buyer (In this case Patankar) and Buyer1 (In this case Gnyan) can view Primary Market and Secondary Market

All of these steps can be executed through the demo prototype user interface but could be fully automated in a production implementation of the application.

## Getting Started

### Accessing the Demo

Follow the instructions in the Read Me provided with the demo code to install and run the demo.

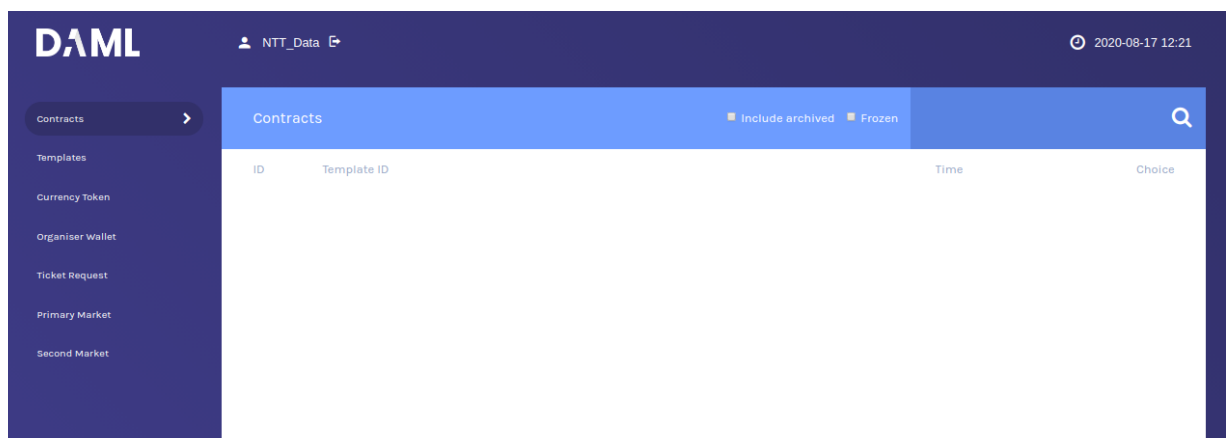
### Choosing and Changing Roles

When you launch the prototype, you will see the Log-In screen. To use this screen:

1. To log in as a user, choose the role from the drop-down list. The username appears at the top of their dashboard. To change to a different user:



- Choose Click on User symbol as shown below the current username on any screen.



- Log in as the new user.

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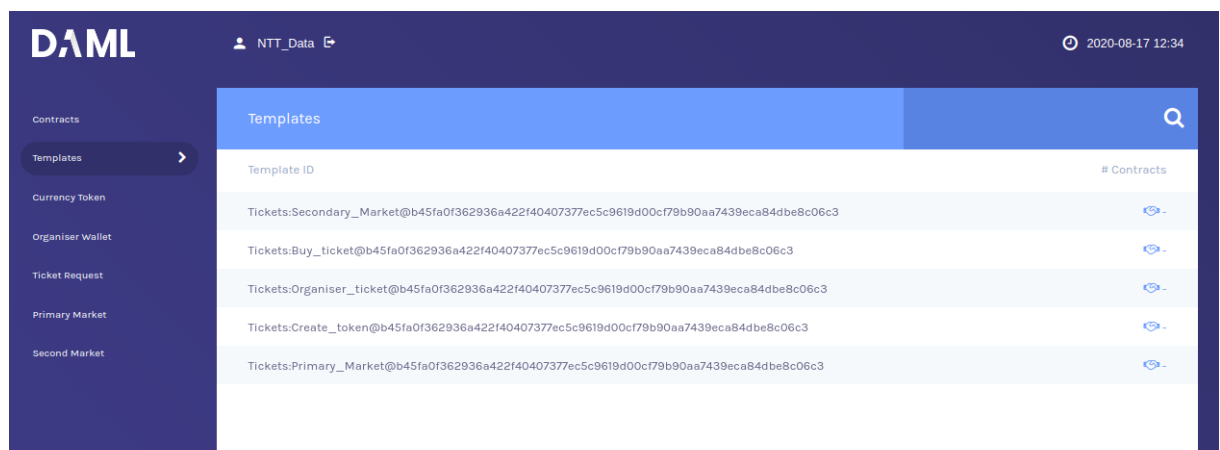
# 1 Creating Currency Token

The workflow begins with creating currencyToken.

To Create a Currency Token:

1. Log in as a NTT\_Data User.

The NTT\_Data list screen will be displayed.



- Click on Templates Tab, Lists all available templates.
- Click on Tickets:Create\_Token@.. template and fill the template as shown in below screen snap and Submit.

A screenshot of the DAML web application showing the form to create a currency token. The header is the same as the previous screenshot. The sidebar is the same, but 'Currency Token' is now selected. The main content area shows the selected template: 'Template Tickets:Create\_token@b45fa0f362936a422f40407377ec5c9619d00cf79b90aa7439eca84dbe8c06c3'. Below this is a form with three input fields: 'organizer' with the value 'NTT\_Data', 'currency\_token' with the value 'NTTGBP', and 'token\_price' with the value '100'. At the bottom of the form is a blue 'Submit' button.

- The symbol ✓ at top right prior to timestamp indicates the Transaction has been completed successfully and Smart Contract for create token has been created, On the left-hand side click **Currency Token** to view created currency token contract.

- Now click on the contract to view details of token currency and click on **Create\_Tickets** button at top right to the contract and provide **total\_tickets** as 1000(as per requirement) and submit.

The screenshot shows the DAML interface with a sidebar on the left containing links: Contracts, Templates, Currency Token, Organiser Wallet, Ticket Request, Primary Market, and Second Market. The main area displays details for a contract with ID 00c01dd928acee39bc60f91a542bc076b25152bf6334c607f7c7c5a37d22ae71cf. A 'Create\_Tickets' button is visible in the top right of the contract details. Below this, the 'Signatories' section lists 'NTT\_Data' as the organizer. The 'Contract details' section shows 'currency\_token' as 'NTTGBP' and 'token\_price' as '100.0'. On the right, the 'Choice: Create\_Tickets' section has a 'total\_tickets' input field set to 'Numeric 10' and a 'Submit' button.

- The symbol ✓ at top right prior to timestamp indicates the Transaction has been completed successfully and Ticket Smart Contract has been created, On the left-hand side click **Organizer Wallet** to view Tickets created.

The screenshot shows the DAML interface with the 'Contracts' table displayed. The table has columns: Contract ID, Organiser, Currency Token, Token Price, Total Tickets, Available Tickets, and Total Ticket Price. A single row is visible with the following data: Contract ID 005cad5847023959, Organiser NTT\_Data, Currency Token NTTGBP, Token Price 100.0, Total Tickets 1000.0, Available Tickets 1000.0, and Total Ticket Price 100000.0. The interface also shows a sidebar with navigation links and a top bar with the DAML logo and user information.

Contract ID	Organiser	Currency Token	Token Price	Total Tickets	Available Tickets	Total Ticket Price
005cad5847023959	NTT_Data	NTTGBP	100.0	1000.0	1000.0	100000.0

## 2 Buy Tickets from the Organizer

The User Patankar now request tickets for an event to buy from Organizer.

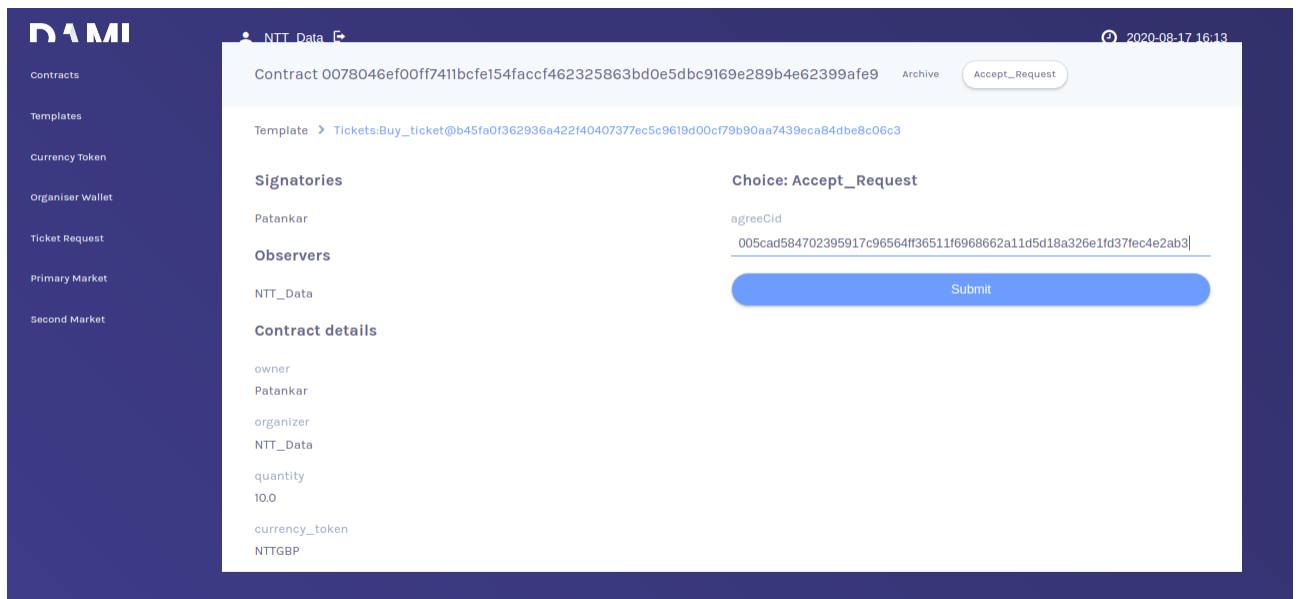
1. Switch user NTT\_Data
2. Choose Patankar from drop down, on left-hand side goto templates and click Tickets: Buy\_ticket@.. and submit template with the fields as shown in below screen snap.

The screenshot shows the DAML interface with a sidebar on the left containing links to Contracts, Templates, Currency Token, Organiser Wallet, Ticket Request, Primary Market, and Second Market. The main area displays a form titled 'Template Tickets:Buy\_ticket@b45fa0f362936a422f40407377ec5c9619d00cf79b90aa7439eca84dbe8c06c3'. The form fields are: owner (Patankar), organizer (NTT\_Data), quantity (10), and currency\_token (NTTGBP). A blue 'Submit' button is located at the bottom of the form.

3. Now Choose NTT\_Data from drop down, on left-hand side goto **Ticket Request** tab to view ticket request from Patankar, can find details like who is organizer, seller, receiver, currency token used and quantity of tickets.
4. Goto **Organizer Wallet** Tab and copy contract Id as NTT\_Data as organizer going to sell tickets from his wallet and then goto **Ticket Request** tab click on contract and click **Accept\_request** button then ask you to provide agreeCid, paste contact Id here and submit to sell requested quantity of tickets to patankar and this transaction would be consider as primary market.

The screenshot shows the DAML interface with the sidebar on the left. The main area displays the details of a contract with ID '001491b0adcd1759d03df3f9091a7f3dce18bc8d5f460ecdd3eba0c4b8728a57d'. The contract details are: organizer (NTT\_Data), total\_tickets (1000.0), available\_tickets (990.0), currency\_token (NTTGBP), token\_price (100.0), and total\_ticket\_price (99000.0). A context menu is open over the contract ID, showing options like Copy, Search Google, Print, and Inspect.

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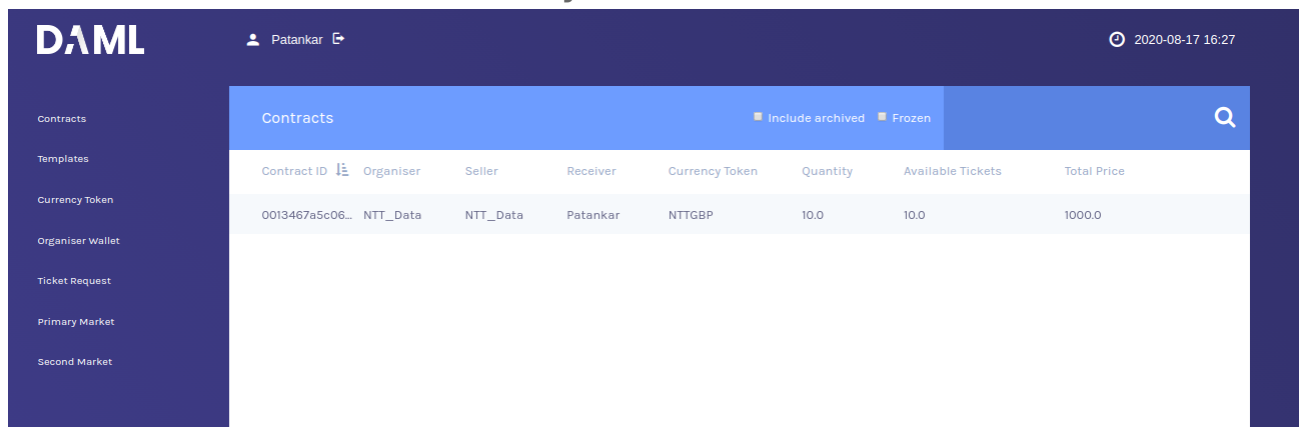


- Now left-hand side goto **Primary Market** tab to view how many tickets and for how much price tickets have been sold, and goto **organizer wallet** to view updated values of available tickets count after tickets sold in primary market.
- Now switch to **Patankar** and on left-hand side goto **Primary Market** to view ticket bought from organizer(NTT\_Data).
- You can check that this Primary ticket contract can only view by NTT\_Data and Patankar, no info to User Gnyan.

### 3 Selling tickets from Primary Market to Second Market

Once Patankar bought tickets from NTT\_Data could be considered as primary Market and Patankar can be able to sell his tickets to some other party in our use-case gnyan to not more than the price 110% than the previous sale price.

- Log in as Patankar.
- On Left-hand-side click **Primary Market** button.



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and then click **Sell\_Ticket** button. Then fill in the details as shown below and submit the transaction.

**Note:** Second\_price value should not exceed 110% than total\_ticket\_price mentioned in the same contract, if not then contract will not be created, hence transaction failed.

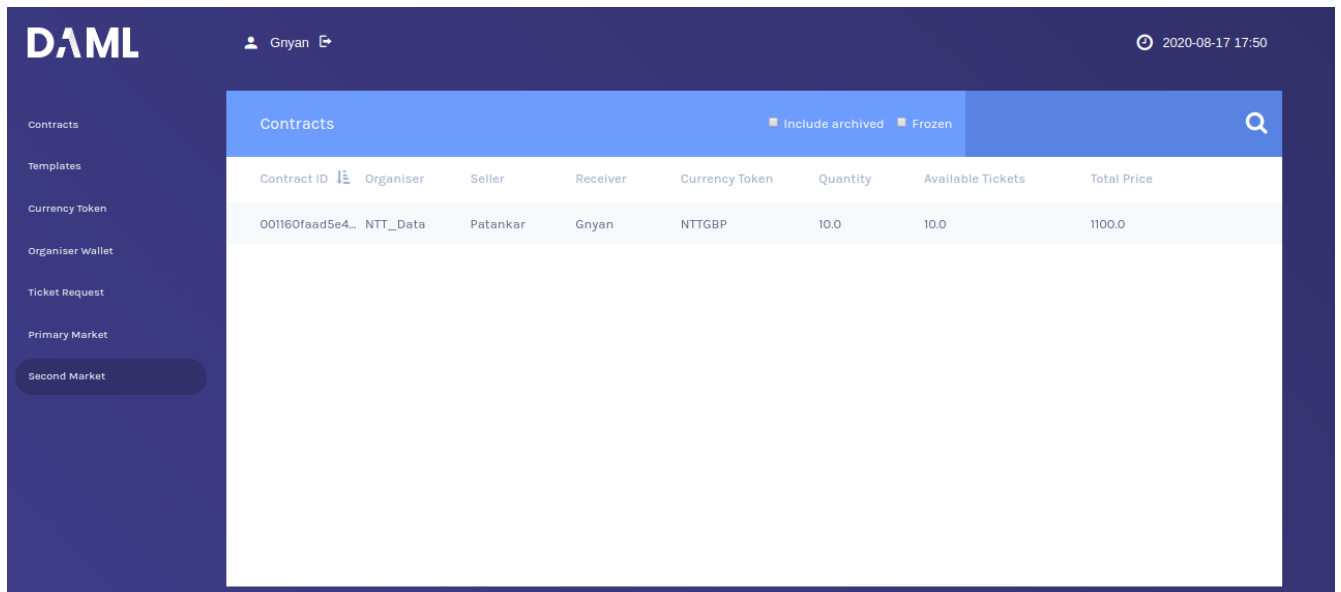
On the left-hand side click on **Second Market** tab to view newly created ticket contract with second price and this transaction would be considered as second market. And Choose User as Gnyan and look the same ticket contract on the left-hand side under Second Market tab.

Patankar user view screen:

Contract ID	Organiser	Seller	Receiver	Currency Token	Quantity	Available Tickets	Total Price
001160faad5e4...	NTT_Data	Patankar	Gnyan	NTTGBP	10.0	10.0	1100.0



Gnyan User View screen:



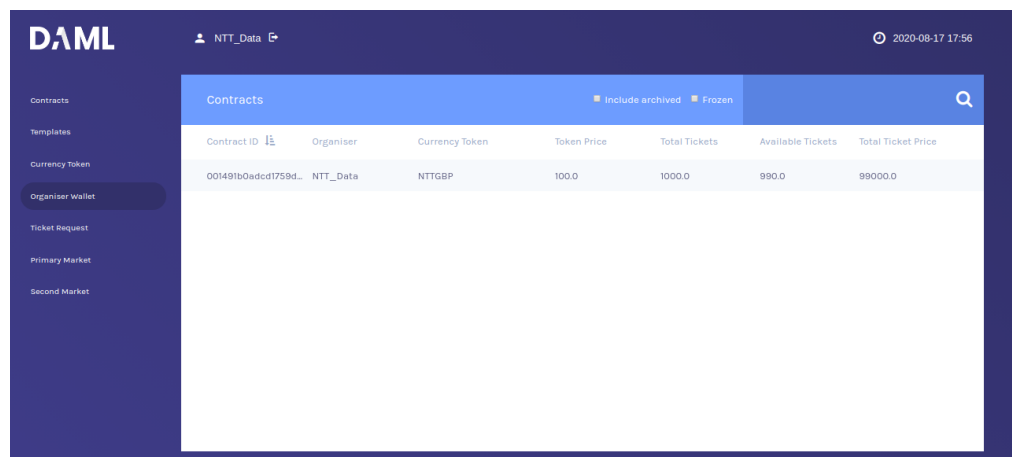
Contract ID	Organiser	Seller	Receiver	Currency Token	Quantity	Available Tickets	Total Price
001160faad5e4...	NTT_Data	Patankar	Gnyan	NTTGBP	10.0	10.0	1100.0

## 4 Viewing Primary Market and Secondary Market

To view the primary market and secondary Market:

1. Choose NTT\_Data user from drop down, In this application we add feature to organizer(in this case NTT\_Data) monitor own wallet, primary market and second market.

Organizer wallet screen:



Contract ID	Organiser	Currency Token	Token Price	Total Tickets	Available Tickets	Total Ticket Price
001491b0adcd1759d...	NTT_Data	NTTGBP	100.0	1000.0	990.0	99000.0

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## Primary Market Screen:

Contract ID	Organiser	Seller	Receiver	Currency Token	Quantity	Available Tickets	Total Price
00cfae2856fb...	NTT_Data	NTT_Data	Patankar	NTTGBP	0.0	0.0	0.0

## Secondary Market Screen:

Contract ID	Organiser	Seller	Receiver	Currency Token	Quantity	Available Tickets	Total Price
00160faad5e4...	NTT_Data	Patankar	Gnyan	NTTGBP	10.0	10.0	1100.0

**Note:** After successful transaction of 2 or more tickets, click on Include Archive check box prior to search box in order to view historic transactions of primary and second market at respective tabs.

- Choose Patankar as user from drop down and on the left-hand side click primary market to view updated available tickets and total ticket price after sold tickets into secondary Market. And after 2 or more transactions click include archive check box to view archived contracts.

Contract ID	Organiser	Seller	Receiver	Currency Token	Quantity	Available Tickets	Total Price
00cfee2856fb...	NTT_Data	NTT_Data	Patankar	NTTGBP	0.0	0.0	0.0

- Choose Gnyan as user from drop down and on the left-hand side click Secondary Market to view tickets info which bought from primary Market. And after 2 or more transactions click include archive check box to view archived contracts.

Contract ID	Organiser	Seller	Receiver	Currency Token	Quantity	Available Tickets	Total Price
001860faad5e4...	NTT_Data	Patankar	Gnyan	NTTGBP	10.0	10.0	1100.0

## Additional Exploration

You can explore some feature as follows

demo Some options:

- As we can implement payment gateway option where patankar and gnyan receives requested tickets from primary and secondary market respectively.

Bear in mind that this demo does not handle exceptions or errors in the way that a production build would do.

NTT DATA