v. Grants

Event : Grants

Only SSG is authorized to update Grants data, either to provide the estimated grants amount or the disbursed amount. The requests are submitted to the respective DL member. This leads to events being registered across the SSG Training Ecosystem DLT, thereby notifying the respective TPs of the results of grants processing.

Partners cannot submit Grants disbursement data via the DL Network. The data for this event is for reading only.

The data submitted for Grants typically should include all the following attributes:

Payload Attributes	Event Fields	Mandatory	Input /Output	Data Type	Description
(grants) referenceNumber	Grants Reference Number	Y	Input	String	Grants Reference Number Generated by SSG after successful validation
(grants) (enrolment) referenceNumber	Enrolment Reference Number	Y	Input	String	Enrolment Reference Number Generated by SSG after successful validation
(grants) (grantAmount) paid	Paid Grant Amount	Y	Input	String	Paid grant amount
(grants) (grantAmount) estimated	Estimated Grant Amount	Y	Input	String	A calculated amount of the grant based on the Rules Engine
(grants) (grantAmount) currencyType	Currency Type	Y	Input	String	Amount Currency Type (SGD)
(grants) (sponsoringAgency) uen	Sponsoring Agency UEN	Y	Input	String	Sponsoring agency UEN
(grants) (sponsoringAgency) name	Sponsoring Agency Name	Y	Input	String	Sponsoring Agency Name
(grants) (fundingComponent) code	Funding Component Code	Y	Input	String	Funding Component Code E.g. CF
(grants) (fundingComponent) description	Funding Component Description	Y	Input	String	Funding Component Description E.g. Course fee Grants (CF)
(grants) (fundingScheme) code	Funding Scheme Code	Y	Input	String	Grant scheme Code E.g. ETSS / WSS / BASELINE / WTS / MCES / ETSP
(grants) (fundingScheme) description	Funding Scheme Description	Y	Input	String	Grant scheme Description For E.g. : 1. Enhanced Training Support for SMEs (ETSS) 2. Workfare Skills Support (WSS) 3. Baseline SkillsFuture Funding (BASELINE) 4. Workfare Training Support Scheme (WTS) 5. Mid-Career Enhanced Subsidy (MCES) 6. Enhanced Training Support Package (ETSP)
(grants) grantStatus	Grant Status	Y	Input	String	Status of the grant E.g. Paid / Cancelled / Pending Payment / Grant Processing

Input Request Parameters : The input to the DLT comprise of the following parts:

- **Header** : consists of attributes which are required by the DLT to process the payload

Attributes	Data Type	Description
eventType	String	Type of the event (Grants)
primaryKey	String	Primary Lookup Key CONCAT(Course Reference Number,Trainee ID)
secondaryKey	String	Secondary Lookup Key (Course Run Reference Number)

tertiaryKey	String	Tertiary Lookup Key (For Grants Request : Grants Reference Number)
trainingPartnerUen	String	Training Partner's UEN
trainingPartnerCode	String	Training Partner's Branch Code
schemaLocation	String	Location of the JSON schema file stored locally in the system
schemaVersion	String	Version of the schema

The schemaLocation field should point to the location of the file in SSG's Repository. For data validation before writing to the DLT, this JSON schema file could be retrieved from SSG's Repository and stored in the local file system.

- **Payload**: consists of the actual grants data; all data within the payload is to be encrypted before writing to the DLT

Attributes	Data Type	Description
payload	Serialized JSON Object	This is the set of nested JSON objects of Grants data

- **Public Payload**: additional fields which are **not encrypted** before writing to the DLT

Attributes	Data Type	Description
tags	Array of String	This is an Array of String tags for future use.
(source) dateTime	String	Source System time stamp in seconds ISO 8601 Datetime format
(source) timeStampInMilliSeconds	String	Source System time stamp in milli seconds Unix Datetime format
(ack) dateTime	String	Acknowledgement time stamp in seconds. To be provided as "-1" by Source System ISO 8601 Datetime format
(ack) timeStampInMilliSeconds	String	Acknowledgement time stamp in milli seconds. To be provided as "-1" by Source System Unix Datetime format

In order to align with SSG's time, the source system should be in sync with the Amazon Time Sync Service via Network Time Protocol (NTP). If the source system time is not aligned with SSG's time, this could lead to improper sequencing of data updates, which in turn would lead to erroneous data submission via the DLT.

- **DLT Data**: fields updated by the Distributed Ledger. Any values supplied by the source system will not be used.

Attributes	Data Type	Description
eventSource	String	Source system initiating the request
timeStamp	String	Time stamp updated by the DL
validationResult	String	Result of the validation performed by SSG

The values for the fields in the DLT schema should not be blank; if any field is left blank it will lead to errors in data submission to SSG

For manual addition of Grants, TGS should trigger DLT update when grants is paid from CFG only

This is a sample of the serialised JSON object of Grants data submitted by SSG:

Grants-Data

```
{
 "header": {
     "eventType": "Grants",
     "primaryKey": "TGS-0026008-ESS0118316H",
     "secondaryKey": "10026",
     "tertiaryKey": "GRN-2006-000462",
     "trainingPartnerUen": "T08GB0032G",
     "trainingPartnerCode": "T08GB0032G-01",
     "schemaLocation": "<TBC>",
     "schemaVersion": "TGS_v1.0"
 },
 "payload": {
     "grants": {
         "enrolment": {
             "referenceNumber": "ENR-1912-000123"
         },
         "grantAmount": {
             "estimated": "100.5",
             "paid": "80.5",
             "currencyType": "SGD"
         },
         "sponsoringAgency": {
             "uen": "116GB0003C",
             "name": " SkillsFuture Singapore"
         },
         "fundingScheme": {
             "code": "MCES",
             "description": "Mid-Career Enhanced Subsidy"
         },
         "fundingComponent": {
             "code": "CF",
             "description": "Course Fees"
         },
         "grantStatus": "Grant Processing",
         "referenceNumber": "GRN-2006-000462"
     }
 },
 "publicPayload": {
     "tags": ["TBC"],
     "source": {
         "dateTime": "2020-05-04 20:58:17",
         "timeStampInMilliSeconds": "1588597097880"
     },
     "ack": {
         "dateTime": "-1",
         "timeStampInMilliSeconds": "-1"
     }
 },
 "dltData": {
     "eventSource": "",
     "timeStamp": "",
     "validationResult": ""
 }
}
```

Submission of data via the DLT

SSG generates Grants events on the SSG Training Ecosystem DL Network, in response to the rest of training data submitted via the DL Network. The typical scenarios when Grants events are generated are listed below:

Successful Enrolment: Upon successful submission of valid enrolment data, SSG generates the estimated grant amount for that submission. The estimated amount is indicated as shown below:

Successful Enrolment

```
"grantAmount": {
   "estimated": "100.5",
   "paid": "",
   "currencyType": "SGD"
}
```

Other relevant details such as Funding component, schemes etc are also provided. The grant status indicates the current status of the processing and the reference number is to be used by partners for identifying the grant record.

Grants Payment/Cancellation: SSG updates the Grants record identified by the relevant Grants reference number upon a change in status such as Cancellation or completion of payment.

Grants Payment/Cancellation

```
"grantAmount": {
   "estimated": "100.5",
   "paid": "80.5",
   "currencyType": "SGD"
}
```

Partners listening for Grants events from the DL Network can read this response and process Grants information on their side.

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