

Important Notice:

The *TI Request JSON Schema v1.1.0* must be obtained and used in its official JSON format for all development and validation activities. This PDF version is provided **for readability only**. Copying JSON code from a PDF may introduce formatting changes or errors, which can result in invalid schemas.

```
{
  "$schema": "http://json-schema.org/draft-07/schema#",
  "$id": "https://pdg/dscsa-trace-message-schemas/pdg_dscsa_ti_response_v1_1_0.json",
  "title": "PDG DSCSA TI Response Schema",
  "description": "Defines responses for requests for DSCSA Transaction Information and Ownership Information.",
  "type": "object",
  "properties": {
    "tiResponse": {
      "properties": {
        "tiResponseAuditReferences": {
          "type": "object",
          "properties": {
            "tiResponseID": {"$ref": "#/definitions/uuidType"},
            "tiRequestID": {"$ref": "#/definitions/uuidType"},
            "responder3911IncidentNumber": {"type": "string"},
            "tiResponseTimestamp": {"$ref": "#/definitions/timestampType"}
          },
          "required": [
            "tiResponseID",
            "tiRequestID",
            "tiResponseTimestamp"
          ]
        },
        "tiRespondingPartyInformation": {
          "type": "object",
          "required": ["contactInformation"],
          "properties": {
            "contactInformation": {"$ref": "#/definitions/contactInformationType"},
            "dscsaCredentialPresentation": {"$ref": "#/definitions/dscsaCredentialPresentationType"},
            "responderGLN": {"$ref": "#/definitions/glnType"}
          }
        },
        "tiRequestResponsesInfo": {
          "properties": {
            "tiRequestResponses": {
              "type": "array",
              "items": {
                "required": ["individualRequest"],
                "$comment": "repeats for each Product Identifier/Serial or Lot Identifier pair that matches the results of the request. ",
                "type": "object",
                "properties": {
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"individualRequest": {
  "type": "object",
  "properties": {
    "requestLineNumber": {"type": "number"},
    "productID": {
      "type": "object",
      "properties": {
        "gtin": {"$ref": "#/definitions/gtinType"},
        "ndc": {
          "$ref": "#/definitions/ndcType",
          "$comment": "The FDA National Drug Code. Conditional based on
Request Product ID choice (GTIN or NDC)."}
        }
      },
      "oneOf": [
        {
          "required": ["gtin"]
        },
        {
          "required": ["ndc"]
        }
      ]
    },
    "serialNumberOrLotNumber": {
      "type": "object",
      "properties": {
        "serialNumber": {"$ref": "#/definitions/serialNumberType"},
        "lotNumber": {
          "$ref": "#/definitions/lotNumberType",
          "$comment": "The Lot number assigned by the Manufacturer or
Repackager found in the original Transaction Information."
        }
      },
      "oneOf": [
        {
          "required": ["serialNumber"]
        },
        {
          "required": ["lotNumber"]
        }
      ]
    },
    "responseTypeRequested": {
      "type": "string",
      "enum": [
        "Transaction Information",
        "All Known Owners",

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        "Last Known Owner"
      ]
    }
  },
  "required": [
    "requestLineNumber",
    "productID",
    "serialNumberOrLotNumber",
    "responseTypeRequested"
  ],
  "$comment": "A TI request message may contain a number of individual requests
for TI on individual drug packages or Lots (DSCSA Authorities only). Each individual request may result in many
responses."
},
"responsesToRequest": {
  "type": "object",
  "properties": {
    "transactionInformationResponses": {"$ref":
"/definitions/transactionInformationResponses"},
    "ownershipInformationResponses": {
      "$ref": "#/definitions/ownershipInformationResponses",
      "$comment": "If the Requester requested all known owners or last known
owners, the Responder provides one or more owner information and shipment dates (to sequence the ownership)."}
    }
  },
  "requestLineNumberMessage": {"$ref": "#/definitions/requestResponseMessageType"}
},
"if": {
  "properties": {
    "individualRequest": {
      "type": "object",
      "properties": {
        "responseTypeRequested": {"const": "Transaction Information"}
      },
      "required": ["responseTypeRequested"]
    }
  }
},
"then": {
  "properties": {
    "responsesToRequest": {
      "type": "object",
      "if": {
        "properties": {}
      },
      "then": {

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        "required": ["transactionInformationResponses"]
    }
}
},
"else": {
    "if": {
        "properties": {
            "individualRequest": {
                "type": "object",
                "properties": {
                    "responseTypeRequested": {
                        "enum": [
                            "All Known Owners",
                            "Last Known Owner"
                        ]
                    }
                }
            },
            "required": ["responseTypeRequested"]
        }
    },
    "then": {
        "properties": {
            "responsesToRequest": {
                "type": "object",
                "if": {
                    "properties": {}
                },
                "then": {
                    "required": ["ownershipInformationResponses"]
                }
            }
        }
    },
    "oneOf": [
        {
            "required": ["responsesToRequest"]
        },
        {
            "required": ["requestLineNumberMessage"]
        }
    ]
},
"minItems": 1
},

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        "responseMessage": {"$ref": "#/definitions/responseMessageType"}
    },
    "oneOf": [
        {
            "required": ["tiRequestResponses"]
        },
        {
            "required": ["responseMessage"]
        }
    ]
},
"type": "object",
"required": [
    "tiResponseAuditReferences",
    "tiRespondingPartyInformation"
]
}
},
"definitions": {
    "addressType": {
        "type": "object",
        "properties": {
            "streetAddress": {
                "type": "string",
                "examples": ["21 2nd Street"],
                "default": ""
            },
            "city": {
                "type": "string",
                "examples": ["New York"],
                "default": ""
            },
            "state": {
                "type": "string",
                "examples": ["NY"],
                "default": ""
            },
            "postalCode": {
                "type": "string",
                "examples": ["10021-3100"],
                "default": ""
            }
        }
    },
    "required": [
        "streetAddress",
        "city",

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        "state",
        "postalCode"
    ]
},
"callbackAddressType": {
    "type": "string",
    "format": "url"
},
"CompanyInformation": {
    "type": "object",
    "properties": {
        "gln": {"$ref": "#/definitions/glnType"},
        "companyName": {"$ref": "#/definitions/nameValueType"},
        "companyAddress": {"$ref": "#/definitions/addressType"},
        "tiRequestConnectivityInformation": {"$ref": "#/definitions/connectivityInformationType"}
    },
    "required": [
        "gln",
        "companyName",
        "companyAddress",
        "tiRequestConnectivityInformation"
    ]
},
"connectivityInformationType": {
    "type": "object",
    "properties": {
        "connectivityMethod": {
            "type": "object",
            "$comment": "includes Connectivity options by email or URI or both",
            "properties": {
                "emailConnectivity": {"$ref": "#/definitions/emailType"},
                "URIConnectivity": {"$ref": "#/definitions/uriType"}
            },
            "anyOf": [
                {
                    "required": ["emailConnectivity"]
                },
                {
                    "required": ["URIConnectivity"]
                }
            ]
        },
        "required": ["connectivityMethod"]
    },
    "required": ["connectivityMethod"]
},
"contactInformationType": {
    "properties": {

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        "personOrDepartmentName": {
            "$ref": "#/definitions/nameValueType",
            "$comment": "Part of contactInformation. The person or Department that can be contacted regarding
the Request or Response."
        },
        "organizationName": {
            "$ref": "#/definitions/nameValueType",
            "$comment": "Name of organization requesting TI or responding to a request."
        },
        "contactMethod": {
            "type": "object",
            "$comment": "Phone number or email address that the Requester or Responder can be contacted with.",
            "properties": {
                "phone": {
                    "$ref": "#/definitions/phoneType",
                    "$comment": "The phone number of the Requester or Responder."
                },
                "email": {"$ref": "#/definitions/emailType"}
            },
            "anyOf": [
                {
                    "required": ["phone"]
                },
                {
                    "required": ["email"]
                }
            ]
        },
        "type": "object",
        "required": [
            "personOrDepartmentName",
            "organizationName",
            "contactMethod"
        ],
        "$comment": "Information to aid the Requester or Responder in contacting the other party in regard to the
Request or Response."
    },
    "dateType": {
        "type": "string",
        "maxLength": 6,
        "minLength": 6,
        "pattern": "^\\d{6}$"
    },
    "directPurchaseStatementType": {
        "type": "string"
    },

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"dropShipIndicatorType": {
  "type": "boolean",
  "enum": [
    true,
    false
  ],
  "default": false,
  "$comment": "True if this TI was the result of a drop shipment, False if not."
},
"drugNameType": {
  "type": "string",
  "maxLength": 50,
  "pattern": "^[a-zA-Z ]*$"
},
"dscsaCredentialPresentationType": {
  "oneOf": [
    {
      "properties": {
        "dscsaATPCredentialPresentation": {
          "type": "string",
          "format": "jwt"
        }
      },
      "required": ["dscsaATPCredentialPresentation"]
    },
    {
      "properties": {
        "dscsaATP-EquivalentCredentialPresentation": {
          "type": "string",
          "format": "jwt"
        }
      },
      "required": ["dscsaATP-EquivalentCredentialPresentation"]
    },
    {
      "properties": {
        "dscsaAuthorityPresentation": {
          "type": "string",
          "format": "jwt"
        }
      },
      "required": ["dscsaAuthorityPresentation"]
    }
  ],
  "type": "object"
},
"emailType": {

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        "type": "string",
        "format": "email"
    },
    "glnType": {
        "type": "string",
        "minLength": 13,
        "pattern": "^\\d{13}$",
        "maxLength": 13,
        "$comment": "The GS1 Global Location Number (GLN) as recorded in the TI record. See Implementation
Guideline: Applying GS1 Standards for DSCSA and Traceability."
    },
    "gtinType": {
        "type": "string",
        "minLength": 14,
        "pattern": "^\\d{14}$",
        "maxLength": 14,
        "$comment": "The GS1 Global Trade Item Number (GTIN) identifying the product. See Implementation Guideline:
Applying GS1 Standards for DSCSA and Traceability Conditional based on Product ID choice (GTIN or NDC).\"
    },
    "lastKnownOwnerResponse": {
        "properties": {
            "lastKnownOwnerInformation": {"$ref": "#/definitions/CompanyInformation"},
            "dateOfShipment": {"$ref": "#/definitions/dateType"},
            "dateOfTransaction": {
                "$ref": "#/definitions/dateType",
                "$comment": "Will only have a Transaction Date if Shipment date was greater than 24 hours from the
transaction.\"
            }
        },
        "required": [
            "lastKnownOwnerInformation",
            "dateOfShipment"
        ],
        "type": "object"
    },
    "lotNumberType": {
        "type": "string",
        "minLength": 1,
        "maxLength": 20
    },
    "nameValueType": {
        "type": "string"
    },
    "ndcType": {
        "type": "string",
        "oneOf": [
            {

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        "pattern": "^[0-9]{4}-[0-9]{4}-[0-9]{2}$",
        "$comment": "4-4-2"
    },
    {
        "pattern": "^[0-9]{5}-[0-9]{3}-[0-9]{2}$",
        "$comment": "5-3-2"
    },
    {
        "pattern": "^[0-9]{5}-[0-9]{4}-[0-9]{1}$",
        "$comment": "5-4-1"
    },
    {
        "pattern": "^[0-9]{6}-[0-9]{4}-[0-9]{2}$",
        "$comment": "6-4-2 (future)"
    }
],
"$comment": "The FDA National Drug Code. Conditional based on Request Product ID choice (GTIN or NDC).",
},
"ownershipInformationResponses": {
    "items": {
        "properties": {
            "gtin": {"$ref": "#/definitions/gtinType"},
            "ndc": {"$ref": "#/definitions/ndcType"},
            "serialNumber": {"$ref": "#/definitions/serialNumberType"},
            "dateOfShipment": {"$ref": "#/definitions/timestampType"},
            "dateOfTransaction": {
                "$ref": "#/definitions/timestampType",
                "$comment": "Will only have a Transaction Date if Shipment date was greater than 24 hours from
the transaction."
            },
            "knownOwnerInformation": {"$ref": "#/definitions/CompanyInformation"}
        },
        "required": [
            "gtin",
            "ndc",
            "serialNumber",
            "knownOwnerInformation"
        ],
        "type": "object"
    },
    "type": "array",
    "minItems": 1
},
"phoneType": {"type": "string"},
"productContainerSizeType": {
    "type": "number",
    "minimum": 1,

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    "$comment": "The containerSize of the drug as recorded in the TI."
  },
  "productDataType": {
    "type": "object",
    "properties": {
      "gtin": {"$ref": "#/definitions/gtinType"},
      "ndc": {"$ref": "#/definitions/ndcType"},
      "drugName": {"$ref": "#/definitions/productNameType"},
      "strength": {"$ref": "#/definitions/productStrengthType"},
      "dosageForm": {"$ref": "#/definitions/productDosageFormType"},
      "containerSize": {"$ref": "#/definitions/productContainerSizeType"},
      "numberOfContainers": {"$ref": "#/definitions/productNumberOfContainersType"}
    },
    "required": [
      "gtin",
      "ndc",
      "drugName",
      "strength",
      "dosageForm",
      "containerSize",
      "numberOfContainers"
    ]
  },
  "productDosageFormType": {"type": "string"},
  "productNameType": {"$ref": "#/definitions/nameValueType"},
  "productNumberOfContainersType": {
    "type": "number",
    "minimum": 1
  },
  "productProductionDataType": {
    "properties": {
      "lotNumber": {"$ref": "#/definitions/lotNumberType"},
      "serialNumber": {"$ref": "#/definitions/serialNumberType"},
      "expirationDate": {"$ref": "#/definitions/dateType"}
    },
    "required": [
      "lotNumber",
      "expirationDate",
      "serialNumber"
    ],
    "type": "object"
  },
  "productStrengthType": {"type": "string"},
  "requestResponseMessageType": {
    "properties": {
      "requestResponseMessageCode": {"$ref": "#/definitions/requestResponseMessageCodeType"},
      "requestResponseMessageDescription": {

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        "type": "string",
        "maxLength": 250
    }
},
"required": [
    "requestResponseMessageCode",
    "requestResponseMessageDescription"
],
"type": "object"
},
"requestResponseMessageCodeType": {
    "enum": [
        "xx1",
        "xx2",
        "xx3",
        "xx4",
        "xx5",
        "xx6"
    ],
    "$comment": "xx1 Request Closed, xx2: Additional Information, xx3: Not TI found for request, xx4: Response
Delayed, xx5: Request parameter error, xx6: Request addressed via alternate channel ",
    "type": "string"
},
"responseMessageType": {
    "properties": {
        "responseMessageCode": {"$ref": "#/definitions/requestResponseMessageCodeType"},
        "responseMessageDescription": {
            "type": "string",
            "maxLength": 250
        }
    },
    "required": [
        "responseMessageCode",
        "responseMessageDescription"
    ],
    "type": "object"
},
"serialNumberType": {
    "type": "string",
    "maxLength": 20,
    "minLength": 1,
    "pattern": ""
},
"timestampType": {
    "$comment": "A timestamp to millisecond precision, with an explicit timezone indicator (+/-hh:mm) relative
to UTC",
    "type": "string",

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    "pattern": "^([0-9]{4}-(0[1-9]|1[0-2])-(0[1-9]|[1-2][0-9]|3[0-1]))T(2[0-3]|[01][0-9]):[0-5][0-9]:[0-5][0-9]\\.[0-9]{3}(Z|((\\+|\\-)((0[0-9]|1[0-3]):([0-5][0-9])|14:00)))"
  },
  "transactionInformationResponses": {
    "items": {
      "properties": {
        "transactionInformationData": {
          "type": "object",
          "properties": {
            "productData": {"$ref": "#/definitions/productDataType"},
            "productProductionData": {"$ref": "#/definitions/productProductionDataType"},
            "ownershipFromInformation": {"$ref": "#/definitions/CompanyInformation"},
            "ownershipToInformation": {"$ref": "#/definitions/CompanyInformation"},
            "dropShipInfo": {
              "type": "object",
              "properties": {
                "dropShipIndicator": {
                  "$ref": "#/definitions/dropShipIndicatorType",
                  "default": false,
                  "$comment": "True if this TI was the result of a drop shipment, False if not."
                },
                "dropShipToInformation": {
                  "$ref": "#/definitions/CompanyInformation",
                  "$comment": "Information identifying the Ship To party recorded in the TI if
this was a drop ship transaction and their connectivity information (used by the Requester to submit a TI Request to
them)."
                }
              }
            },
            "if": {
              "properties": {
                "dropShipIndicator": {"const": false}
              }
            },
            "then": {
              "not": {
                "required": ["dropShipToInformation"]
              },
              "properties": {
                "dropShipToInformation": {
                  "not": {}
                }
              }
            },
            "else": {
              "required": ["dropShipToInformation"]
            }
          }
        }
      }
    }
  }
}

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        "poAssociatedWithTI": {"type": "string"},
        "transactionStatement": {"$ref": "#/definitions/transactionStatementType"},
        "directPurchaseStatement": {"$ref": "#/definitions/directPurchaseStatementType"},
        "dateOfShipment": {"$ref": "#/definitions/timestampType"},
        "dateOfTransaction": {
            "$ref": "#/definitions/timestampType",
            "$comment": "Will only have a Transaction Date if Shipment date was greater than 24
hours from the transaction."
        }
    },
    "required": [
        "productData",
        "productProductionData",
        "ownershipFromInformation",
        "ownershipToInformation",
        "transactionStatement",
        "dateOfTransaction"
    ]
},
{
    "required": ["transactionInformationData"],
    "type": "object"
},
{
    "type": "array",
    "minItems": 1
},
{
    "transactionStatementType": {
        "type": "string"
    },
    "uriType": {
        "type": "string",
        "format": "uri-reference"
    },
    "uuidType": {
        "type": "string",
        "pattern": "^[a-fA-F\\d]{8}-[a-fA-F\\d]{4}-4[a-fA-F\\d]{3}-[89abAB][a-fA-F\\d]{3}-[a-fA-F\\d]{12}$",
        "$comment": "Universally Unique Identifier (UUID)"
    }
},
{
    "required": ["tiResponse"]
}
}

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