OpenInvoice



AFE and Cost Center - API

OpenInvoice Integration Guide for Buyers

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Overview

Why use AFE/Cost Center Integration?

Up to date cost object data such as AFE and Cost Center information is essential to assist buyer companies with accurately coding their electronic invoices in OpenInvoice. In order to ensure the latest cost object data is available to suppliers and buyer company AP personnel, OpenInvoice supports the following method of AFE/Cost Center Integration.

This document provides guidance for the implementation of AFE/CostCenter integration and defines associated business rules that complement the xml schema.

Posting AFE/Cost Center XML to OpenInvoice

There are two main technical requirements for posting an AFE or Cost Center file to OpenInvoice:

1. Construction of the AFE or CC XML file based on the pre-defined XML schema.
2. Data streaming to “AFE API” or “Cost Center API”

Refer to the “OpenInvoice APIs for Buyers” guide for the API details and options. The guide explains how to set-up your security profile and use the APIs.

What is the format for the AFE/Cost Center POST?

The AFE/Cost Center POST is a batch process. An AFE/Cost Center file may include multiple AFE/Cost Centers and associated business rules. Multiple AFE/Cost Center import files can be transmitted to OpenInvoice one by one; however the maximum size of each AFE/Cost Center file is 3 MB. The “Content-Type” in the HTTPS request header should be set to: application/xml.

1. Cost Centers should be posted to OpenInvoice before you post the AFE file. This is important to have the CCs in OpenInvoice first as they can be linked to the AFEs.
2. It’s important to wait for the completion of the previous AFE import before the next AFE import is started. Same situation applies to Cost Center import. The system prevents more than one AFE or CC from being processed at the same time in order to protect the integrity of the data.
3. A returned HTTP status code 200 means all of the AFE/Cost Centers specified in the AFE/Cost Center import xml file has been imported successfully. The HTTP response body contains a response document complying with OpenInvoice’s DOResponse.xsd schema. The DOResponse status code will be “Success” and may contain warning messages. Warning messages specify conditions that do not preclude successful import of the document, but may be cause for concern.

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Warnings are given with the intention that users will correct the condition(s) causing the warnings.

4. A returned HTTP status code other than 200 means either the system cannot process the AFE/Cost Center import file (ie. Invalid xml formatting) or some of the AFE/Cost Centers have not been imported successfully. The DOResponse status code will be “Failure” in both cases. The DOResponse will contain error messages to explain the cause of the upload failure.

5. It is the buyer company’s responsibility to parse the error/warning messages contained in the DOResponse. The buyer company is also responsible for re-posting the AFE/Cost Center import file if the initial attempt was unsuccessful.

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Data Mapping

Data Structure

AFEBatch.xsd is the schema to be used for importing AFEs. CostCenterBatch.xsd is the schema used for importing CostCenters.

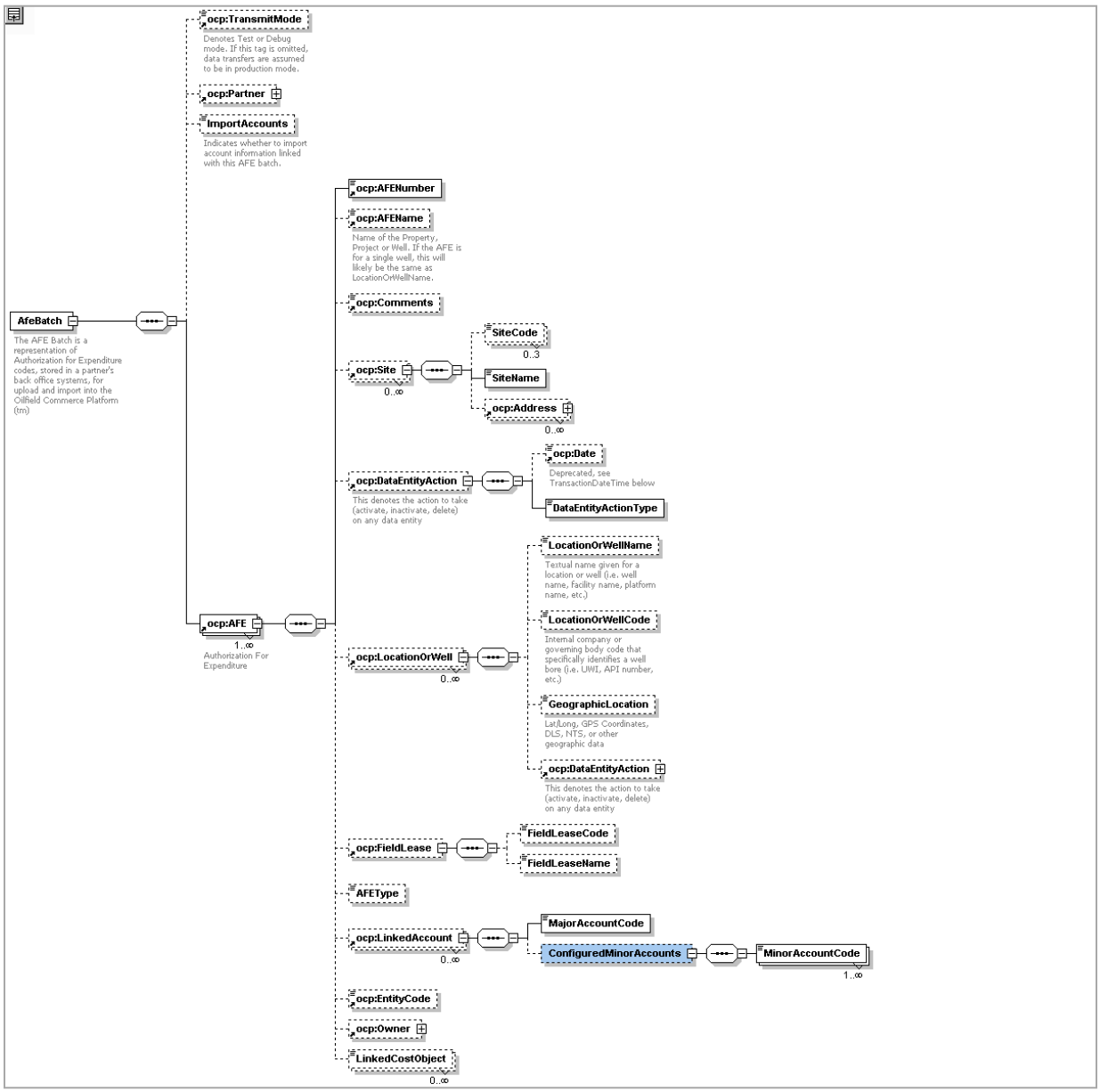


Figure 1: AFEBatch.xsd

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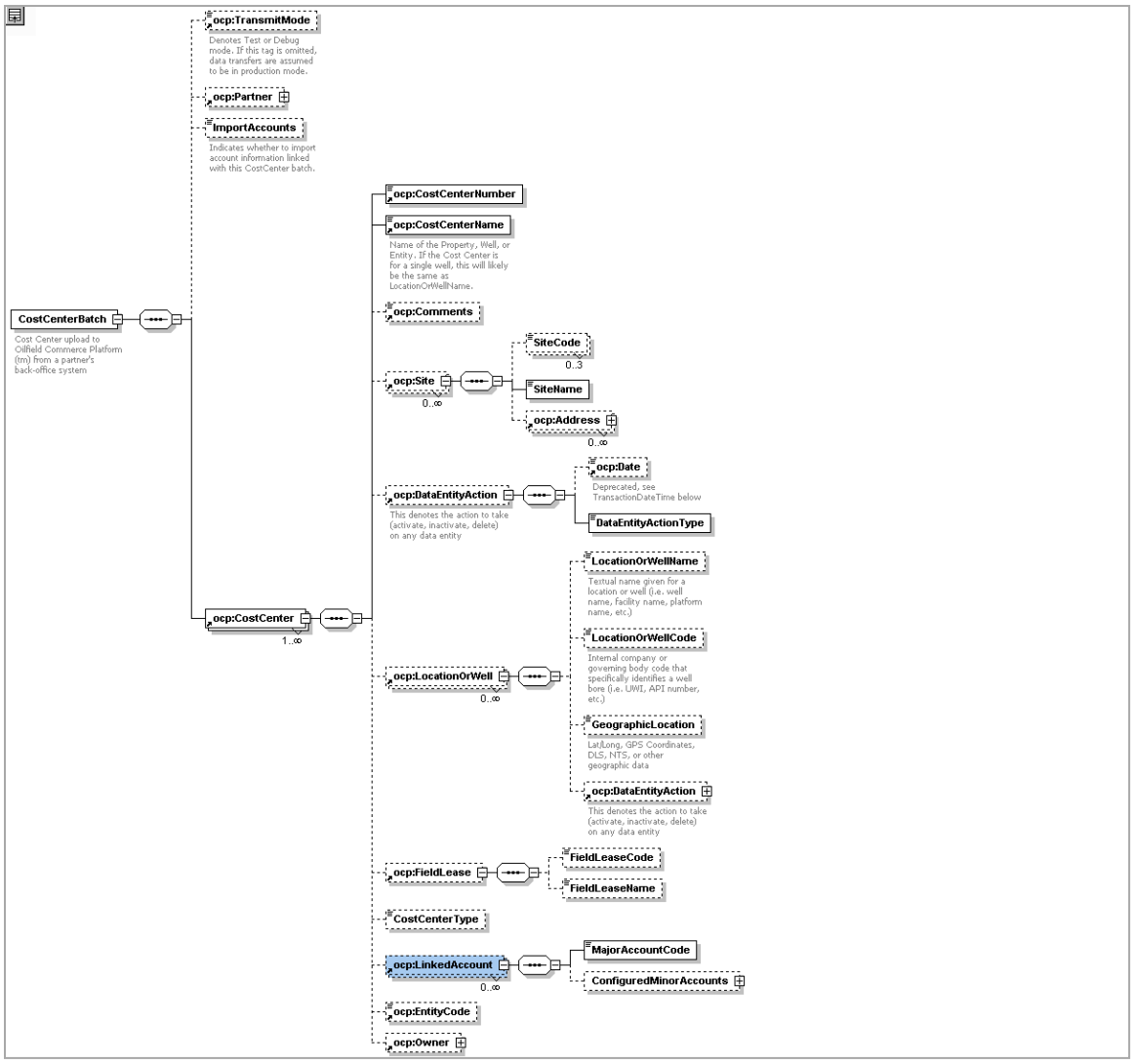


Figure 2: CostCenterBatch.xsd

"Partner" section contains the DUNS number for identifying the company that the imported AFEs or CostCenters belong to.

"AFE or CostCenter" section contains AFE/CostCenter information, such as AFE or CostCenter name, Site, Location information etc. for import.

XML elements will be identified with a '/' notation, so AfeBatch/AFE/AFENumber represents the XML element <AfeBatch><AFE><AFENumber>. Since everything is subordinate to a AfeBatch, AfeBatch will be omitted from the SC XML field columns. XML attributes are identified by the '@' symbol, so that Partner/Company/CompanyCode@CompanyCodeType represents the XML attribute <AfeBatch><Partner><Company><CompanyCode><CompanyCodeType = "xxx">

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AFE File Format

The following table outlines how the XML field values should be derived for AFE data.

Tag	Data type	Usage	Business Rules
AfeBatch		Mandatory	Root element. The AFE Batch is a representation of Authorization for Expenditure codes, stored in a partner's back office system for upload and import into OpenInvoice
../Partner		Optional	Parent element encapsulating document sender information
../Partner/Company		Mandatory	Parent element containing sender company identifier
../Partner/Company/CompanyCode	Sting (9)	Mandatory	DUNS number of the document sender
../Partner/Company/CompanyCode@CompanyCodeType	"DUNSNumber"	Mandatory	Type of reference data. Hard code to "DUNSNumber".
../ImportAccounts	Enumeration: "true" "false"	Optional	Indicates whether to import account information links. If "true", account information provided in the import file will be uploaded into OpenInvoice. If "false", account information will be ignored on import
../AFE		Mandatory may have multiple occurrences	Parent element containing information for a single AFE
../AFE/AFENumber	String (25)	Mandatory	A unique number identifying the AFE. If an AFE with the same AFE number already exist, the information of the existing AFE will be updated.
../AFE/AFEName	String (100)	Optional	Name of the Property, Project or Well. If the AFE is for a single well, this will likely be the same as the LocationOrWellName tag (below)

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Tag	Data type	Usage	Business Rules
../AFE/Comments	String (255)	Optional	Description field of the AFE. Free form text. Only visible on AFE profile page within OpenInvoice
../AFE/Site		Optional, may have multiple occurrences	Parent element containing information on a single site. By default (without specifying /AFE/Site, the AFE belongs to all sites.
../AFE/Site/SiteCode	String (25)	Optional, may have multiple occurrences	Code identifying the Site for which this AFE is valid. Site Code is defined in the application and an exact match must be achieved for information to be uploaded. Warning issues if Site Code does not resolve. When both site code and site name present, site code takes precedence.
../AFE/SiteCode@SiteCodeType	Enumeration: “AssignedByBuyer”	Mandatory	Type of reference data. Hard code to “AssignedByBuyer”.
../AFE/Site/SiteName	String (50)	Mandatory	The name of the Site for which this AFE is valid. Site Name is defined in the application and an exact match must be achieved for information to be uploaded. Warning issued id Site Name does not resolve.
../AFE/DataEntityAction		Optional	Parent element containing a single Action to take on this AFE
../AFE/DataEntityAction/DataEntityActionType	Enumeration: “Activate” “Inactive” “Delete”	Mandatory	The action to take on this AFE. If no value is provided the import will assume an action of “Active”
../AFE/LocationOrWell		Optional, may have multiple occurrences	Parent element containing the Location or Well information for this AFE

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Tag	Data type	Usage	Business Rules
../AFE/LocationOrWell@default	Enumeration: “true” “false”	Optional	It there are multiple locations associated with an AFE, a default location can be specified which will auto populate the location field for a specific coding AFE
../AFE/LocatioOrWell/LocationOrWellName	String (100)	Optional	This may be the name of the Location associated with the physical location of the AFE. This element maps to the “Location Name” in OpenInvoice
../AFE/LocationOrWell/LocationOrWellCode	String (25)	Optional	This may be a code associated with the physical location of the AFE. This element maps to the “Location Code” in OpenInvoice
../AFE/LocationOrWell/GeographicLocation	String (50)	Mandatory	This is the location associated with the AFE. This is the identifier for a Location associated with and AFE object. This maps to the “Location” in OpenInvoice. This element is MANDATORY for importing location information.
../AFE/LocationOrWell/DateEntityAction/DataEntityAction		Optional	Parent element containing a single Action to take on this Location
../AFE/LocatioOrWell/DataEntityAction/DataEntityActionType	Enumeration: “Activate” “Inactive: “Delete”	Mandatory	The action to take on this Location. If no value is provided the import will assume an action of “Activate”
../AFE/FieldLease		Optional	Parent element containing information on a single Field Lease.

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Tag	Data type	Usage	Business Rules
../AFE/FieldLease/FieldLeaseCode	String (25)	Optional	Code associated with a Field Lease. IF provided and valid the AFE will have this Field Lease as an attribute. Warning is issues if not Field Lease Code is found.
../AFE/FieldLease/FieldLeaseName	String (50)	Optional	If provided and valid the AFE will have this Field Lease as an attribute. Warning is issues if not Field Lease Name is found
../AFE/AFEType	String (25)	Optional	Must be a valid pre-configured AFE type in OpenInvoice
../AFE/LinkedAccount		Optional may have multiple occurrences	Parent element containing information Major Account for this AFE
../AFE/LinkedAccount/MajorAccountCode	String (25)	Mandatory	Major account associated with the AFE for coding purposes. Must be a valid pre-configured Major account in OpenInvoice. If linking major accounts to AFEs in this batch, then the <ImportAccounts> tag must be set to “true. (see page 10)
../AFE/LinkedAccount/ConfiguredMinorAccounts		Optional	Parent element for the information of Minor Accounts for this AFE
../AFE/LinkedAccount/ConfiguredMinorAccounts/MinorAccountCode	String (25)	Mandatory may have multiple occurrences	The provided minor account must be mapped to the Major account in OpenInvoice. If no minor account is provided, all minor accounts associated with the major account are valid for this AFE
../AFE/EntityCode	String (25)	Optional	Corresponding to the Entity Code in OpenInvoice.

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Tag	Data type	Usage	Business Rules
../AFE/LinkedCostObject	String (50)	Optional may have multiple occurrences	List of Cost Centers mapped to this AFE. List of CostCenters provided must be pre-configured in OpenInvoice
../AFE/Restriction		Optional	Package for specifying whether an AFE requires purchase order to be presented
../AFE/Restriction/Allocation		Mandatory	Parent element containing requirement for purchase order
../AFE/Restriction/Allocation/AllocationClass	Enumeration “PurchaseOrder”	Mandatory	Hard code to “PurchaseOrder”
../AFE/Restriction/Allocation/Constraint	Enumeration “Required” “NotRequired” “RequiredWithNoCostObject”	Mandatory	One of the allowed enumeration values to specify whether the AFE requires the presence of purchase order. Please note “RequiredWithNoCostObject” means an AFE requires purchase order only when the cost center isn’t specified

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Cost Center File Format

The following table outlines how the XML field values should be derived for Cost Center data.

Tag	Data type	Usage	Business Rules
CostCenterBatch		Mandatory	Root element. The Cost Cener Batch is a representation of cost centers, stored in a partner's back office system for upload and import into OpenInvoice
../Partner		Optional	Parent element for Partner information package
.,./Partner/Company/CompanyCode	String (9)	Optional	DUNS number of the sender of the document. Document sender must have the DUNS number of the on-behalf-of company in their OBO list. Imports for companies not in the OBO list will be rejected
../ImportAccounts	Enumeration: "true" "false"	Optional	Indicates whether to import account information links with this COST CENTER batch. If value is set to "true" account information provided in the import file will be uploaded into OpenInvoice. If value is set to "false" account information will be ignored on import.
../CostCenter		Mandatory may have multiple occurrences	Parent element for the Cost Center package.
../CostCenter/CostCenterNumber	String (25)	Mandatory	Unique number identifying the Cost Center. If a Cost Center with the same Cost Center number already exists, the information of the existing Cost Center will be updated.

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Tag	Data type	Usage	Business Rules
../CostCenter/CostCenterName	String (100)	Mandatory	Name of the Property, Project or Well. If the Cost Center is for a single well, this will likely be the same as LocationOrWellName
../CostCenter/Comments	String (255)	Optional	Description field for the Cost Center. Free form test. Only visible on Cost Center profile page within the application.
../CostCenter/Site		Optional	Parent element for the Site information package
../CostCenter/Site/SiteCode	String (25)	Optional	Code identifying the Site for which this Cost Center is valid. Site Code is defined on the Site configuration and an exact match must be achieved for information to be uploaded. Warning if site code does not resolve.
../CostCenter/Site/SiteName	String (50)	Optional	The name of the Site for which this Cost Center is valid. Site Name is defined on the Site configuration and an exact match must be achieved for information to be updated. Warning if Site Name does not resolve.
../CostCenter/DataEntityAction		Optional	Parent element for the Action Type of the Cost Center
../CostCenter/DataEntityAction/DataEntityActionType	Enumeration: “Activate” “Inactivate” “Delete”	Mandatory	This denotes the action to take on any data entity. If no value is provided, the import will assume an action of “Active”
../CostCenter/LocationOrWell		Optional	Parent element containing the Location or Well information
../CostCenter/LocationOrWell@default	Enumeration: “true” “false”	Optional	Parent element identifying the site of the person who took the action.

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Tag	Data type	Usage	Business Rules
../CostCenter/LocationOrWell/LocationOrWellName	String (100)	Optional	This may be the name of the Location associated with the physical location of the Cost Center. This element maps to the Location Name in OpenInvoice.
../CostCenter/LocationOrWell/LocationOrWellCode	String (25)	Optional	This may be a code associated with the physical location of the Cost Center. This element maps to the Location Code in OpenInvoice
../CostCenter/LocationOrWell/GeographicLocation	String (50)	Mandatory	This is the location associated with the Cost Center. This is the identifier for a Location associated with an Cost Center object. This element maps to Location in OpenInvoice. This element is MANDATORY for importing location information.
../CostCenter/LocationOrWell/DataEntityAction		Mandatory	Parent element for action to be taken on location
../CostCenter/LocationOrWell/DataEntityAction/SataEntityActionType	Enumeration: “Activate” “Inactivate” “Delete”	Mandatory	The action to take on this Location. If no value is provided the import will assume an action of “Activate”
../CostCenter/FieldLease		Optional	Parent element for the Field Lease package. Field Lease Code and Name must be preconfigured in OpenInvoice
../CostCenter/FieldLease/FieldLeaseCode	String (25)	Optional	Code associated with a Field Lease. If provided and valid the Cost Center will have this Field Lease as an attribute. Warning is issued if no Field Lease Code is found.

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Tag	Data type	Usage	Business Rules
../CostCenter/FieldLease/FieldLeaseName	String (50)	Optional	The name of a Field Lease. If provided and valid the Cost Center will have this Field Lease as an attribute. Warning is issued if no Field Lease Name is found.
../CostCenter/CostCenterType	String (25)	Optional	Name of the Cost Center type. Must be a valid pre-configured Cost Center Type in OpenInvoice
../CostCenter/LinkedAccount		Optional, may have multiple occurrences	Parent element for coding information
../CostCenter/LinkedAccount/MajorAccountCode	String (25)	Mandatory	Major account associated with the Cost Center for coding purposes. Must be a valid pre-configured Major account in OpenInvoice. If linking major accounts to CCs in this batch, then the <ImportAccounts> tag must be set to “true. (see page 14)
../CostCenter/LinkedAccount/ConfiguredMinorAccounts		Mandatory	Parent element identifying the Minor Accounts
../CostCenter/LinkedAccount/ConfiguredMinorAccounts/MinorAccountCode	String (25)	Mandatory may have multiple occurrences	Valid minor account that is mapped to the major. The provided minor must be mapped to the Major account in OpenInvoice. If no minor is provided all minors associated with the major are valid for this Cost Center.
../CostCenter/EntityCode	String (25)	Optional	Corresponding to the Entity Code in OpenInvoice.
../CostCenter/Restriction		Optional	Package for specifying whether a Cost Center requires purchase order to be presented

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Tag	Data type	Usage	Business Rules
../CostCenter/Restriction/Allocation		Mandatory	Parent element containing requirement for purchase order
../CostCenter/Restriction/Allocation/AllocationClass	Enumeration “PurchaseOrder”	Mandatory	Hard code to “PurchaseOrder”
../CostCenter/Restriction/Allocation/Constraint	Enumeration “Required” “NotRequired” “RequiredWithNoCostObject”	Mandatory	One of the allowed enumeration values to specify whether a Cost Center requires the presence of purchase order. Please note “RequiredWithNoCostObject” means a Cost Center requires purchase order only when the AFE isn’t specified

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