InEight Estimate

Integration Specification

Changelog

This changelog contains only significant or other notable changes to the document revision. Editorial or minor changes that do not affect the context of the document are not included in the changelog.

Rev.	Date	Description
1.0	10-AUG-2022	Initial Release.
2.0	06-OCT-2022	Added WarehouseAction field to Estimate Jobs. Published revision (Release 22.8)
3.0	10-APR-2023	Added ProjectDisplayId field to Estimate Jobs. Updated field descriptions for Estimate Jobs associated to Platform projects. Published revision (Release 23.2)
4.0	21-APR-2023	Added integrations for Estimate Jobs (Get) and Estimate Jobs (Delete). Published revision (Release 23.4)
5.0	16-FEB-2024	Revised the Overview description. Relabeled existing Estimate Jobs endpoints to Estimate for consistency with APIM labels. Added integrations for Upsert PayItems, List PayItems and Delete PayItems. Published revision (Release 23.12)

Contents

Contents

Overview

Estimate integration APIs permit the creation and maintenance of various entities from outside of the applications interface such as Estimate jobs or pay items. Leveraging these APIs, organizations can utilize data and automate workflows by building integrations to third party applications and external data sources. Estimate APIs work with transactional data and do not require locking the job, therefore they can be used while users are in the job, behaving similar to the way multiple users can work in a single job at the same time.

Integrations in this Document

Integration	Description
Upsert Estimates	This integration allows a customer to create new estimates InEight Estimate application. This supports integrations to external systems such as Bid plan rooms or Customer Relation Management (CRM) systems. Additionally, this integration also permits updating existing estimate data.
List Estimates	This integration allows a customer to retrieve data from existing estimates in the InEight Estimate application.
Delete Estimates	This integration allows a customer to delete estimates that exist in the InEight Estimate application.
Upsert PayItems	This integration permits the creation and/or updating of Pay Item records for a given estimate.
List PayItems	This integration retrieves Pay Item records for a given estimate.
Delete PayItems	This integration allows a customer to delete pay items from a job that exists in InEight Estimate. Passing an array of valid field name and value pairs will delete the corresponding pay items from the indicated job in InEight Estimate.

Upsert Estimates

This integration allows a customer to create new estimates InEight Estimate application. This supports integrations to external systems such as Bid plan rooms or Customer Relation Management (CRM) systems.

This integration can also be used to update data contained in existing estimates. Note any field which is not a required field can be excluded from the JSON. If a field is included in the JSON, the InEight data will be updated even if the field is blank or contains a null value.

Direction		To the InEight cloud platform from an external system.
Frequency		Determined by external system. Suggested implementation to trigger the creation of an Estimate Job each time a project is created in the customers external system
Trigger Method(s)		Determined by external system
API Name		Upsert Estimates
InEight Estimate	Starting Version	22.6
	Ending Version	

Fields

Depth	Name	Type	Precision	Parent	Req.
1	JobCode[1]	String	200		Yes
1	Description	String	300		No
1	ProjectDisplayId	String	200		No
1	SourceJobCode	String	200		No
1	Status	String	200		No
1	WarehouseAction	String	20		No
1	Notes	String	4000		No
1	Location	String	200		No
1	City	String	200		No
1	Country	String	50		No
1	County	String	30		No
1	State	String	50		No
1	Latitude	Number	Float		No
1	Longitude	Number	Float		No
1	Type	String	200		No
1	ContractDuration	Number	Float		No
1	TimeMeasure	String	50		No

Depth	Name	Type	Precision	Parent	Req.
1	Start[2]	String	Date		No
1	Finish[2]	String	Date		No
1	Duration	Number	Float		No
1	BidDate[2]	String	Date		No
1	BidTime[2]	String	Date		No
1	BidLocation	String	50		No
1	OpeningType	String	50		No
1	ProposalType	String	50		No
1	PlanHolders	Number	Float		No
1	OwnersEstimate	Number	Float		No
1	LiquidatedDamages	Number	Float		No
1	LiqDamagesUM	String	50		No
1	EngineerLastName	String	50		No
1	EngineerFirstName	String	30		No
1	EngineerCompanyName	String	200		No
1	OwnerLastName	String	50		No
1	OwnerFirstName	String	30		No
1	OwnerCompanyName	String	200		No
1	ArchitectLastName	String	50		No
1	ArchitectFirstName	String	30		No
1	ArchitectCompanyName	String	200		No
1	EstimatorLastName	String	50		No
1	EstimatorFirstName	String	30		No
1	EstimatorCompanyName	String	200		No
1	RFQContactLastName	String	50		No
1	RFQContactFirstName	String	30		No
1	RFQContactCompanyName	String	200		No
1	UserTag1	String	50		No
1	UserTag2	String	200		No
1	UserTag3	String	200		No
1	UserTag4	String	200		No
1	UserTag5	String	200		No
1	UserTag6	String	200		No
1	UserTag7	String	200		No

Depth	Name	Type	Precision	Parent	Req.
1	UserTag8	String	50		No
1	UserTag9	String	50		No
1	UserTag10	String	50		No
1	UserTag11	String	50		No
1	UserTag12	String	50		No
1	UserTag13	String	50		No
1	UserTag14[2]	String	Date		No
1	UserTag15[2]	String	Date		No
1	UserTag16[2]	String	Date		No
1	UserTag17[2]	String	Date		No
1	UserTag18[2]	String	Date		No
1	UserTag19[2]	String	Date		No
1	UserTag20[2]	String	Date		No
1	UserTag21	Number	Float		No
1	UserTag22[2]	String	Date		No
1	UserTag23[2]	String	Date		No
1	UserTag24	String	200		No

1 - Natural Key field.
2 - The data format for Date/Time fields is YYYY-MM-DDTHH:MM:SS+hhmm, where hhmm is the time zone offset. If the time is already converted to UTC, then the offset will be +0000.

Field Descriptions

Name	Description	Example
JobCode	The value of this field is provided by the user when a job is created. This value must be unique and cannot be modified after the job has been created. Permissible characters are alpha numeric, spaces, and dashes.	Training Job
Description	Free-form text field that is used to provide a description of the project.	Training Job - Maricopa County No. TM2924
ProjectDisplayId	Provide the value of an existing project in InEight Platform to create an association between the Estimate Job and the indicated Platform project. This can be used on the creation of new Estimate Jobs. For an existing Estimate Job that does not already have a Platform project association, a value can be provided here to update an existing Estimate Job by creating the project association.	1000102

Name	Description	Example
SourceJobCode	Value of a valid Job Code or Template Code of the job to be used when creating a new job from a source job. **Note:** This field is not applicable for JobCode_Get.	Sample Template
Status	User defined field for job status. This value should match a value in the Job Status Register. **Note:** When a Job Status is indicated that does not already exist, it is added to the Job Status Register in Estimate with a job status type of Not Applicable.	Bidding
WarehouseAction	Use to include the Estimate job in the Connected Analytics register. Acceptable values are: • None • Update • Remove • EnableAutoUpdate • DisableAutoUpdate If this field is not included, no action is taken.	Update
Notes	For Estimate Jobs associated to a project in InEight Platform, this field is read-only in Estimate and shows the corresponding data from the Notes field in the project. Data used in this field is stored and maintained in the Platform project, not in Estimate. For Estimate Jobs not associated to a Platform project, this is the free-form text Notes field used for notes about the job.	Use this field to record notes, information, special provisions, unusual conditions…
Location	For Estimate Jobs associated to a Project in InEight Platform, this field is read-only in Estimate and shows the corresponding data from the Address1 field in the project. Data used in this field is stored and maintained in the Platform project, not in Estimate. For Estimate Jobs not associated to a Platform project, this is the Jobs location as indicated in the Location field on the Cover Sheet tab of the Job Properties form.	I-10 MP 100 to MP 120
City	For Estimate Jobs associated to a Project in InEight Platform, this field is read-only in Estimate and shows the corresponding data from the City field in the project. Data used in this field is stored and maintained in the Platform project, not in Estimate. For Estimate Jobs not associated to a Platform project, this is the Name field of the city where the job is located.	Phoenix

Name	Description	Example
Country	For Estimate Jobs associated to a Project in InEight Platform, this field is read-only in Estimate and shows the corresponding data from the Country field in the project. Data used in this field is stored and maintained in the Platform project, not in Estimate. For Estimate Jobs not associated to a Platform project, this is the ISO code for the country where the job is located prefixed with @Geo_ and shows as the Jobs country in the Country drop-down list on the Job Properties form. Values are not restricted to list entries. To populate this field with a selection from the list, provide the two-character alpha-numeric ISO country code prefixed with @Geo_.	@Geo_US
County	Name of the county where the job is located.	Maricopa
State	For Estimate Jobs associated to a Project in InEight Platform, this field is read-only in Estimate and shows the corresponding data from the State field in the project. Data used in this field is stored and maintained in the Platform project, not in Estimate. For Estimate Jobs not associated to a Platform project, this is the ISO code for the state where the job is located prefixed with @Geo_ and shows as the Jobs state in the State drop-down list on the Job Properties form. Values are not restricted to list entries. To populate this field with a selection from the list, provide the two-character alpha-numeric ISO code for the country, followed by the appropriate alpha-numeric ISO code for the region, prefixed with @Geo_.	@Geo_US_AZ
Latitude	For Estimate Jobs associated to a Project in InEight Platform, this field is read-only in Estimate and shows the corresponding data from the Latitude field in the project. Data used in this field is stored and maintained in the Platform project, not in Estimate. For Estimate Jobs not associated to a Platform project, this is the Latitude of the project location. Allowed values are maximum of 90 and minimum of -90.	42.0039178
Longitude	For Estimate Jobs associated to a Project in InEight Platform, this field is read-only in Estimate and shows the corresponding data from the Longitude field in the project. Data used in this field is stored and maintained in the Platform project, not in Estimate. For Estimate Jobs not associated to a project in Platform, this is the Longitude of the project location. Allowed values are maximum of 180 and minimum of -180.	-87.9703461
Type	Free-form text field for description of the job type.	Highway and General Engineering

Name	Description	Example
ContractDuration	Contractual duration of the job in days as permitted under the contract.	160
TimeMeasure	Value selected for the contract duration. Allowed values are: • Calendar Days • Work Days • Contract Days	Calendar Days
Start	For Estimate Jobs associated to a Project in InEight Platform, this field is read-only in Estimate and shows the corresponding data from the Forecast Start Date field in the project. Data used in this field is stored and maintained in the Platform project, not in Estimate. For Estimate Jobs not associated to a Platform project, this is the anticipated start date of the job in UTC format as shown in the Forecasted Start field in the UI.	2014-01-06
Finish	For Estimate Jobs associated to a project in InEight Platform, this field is read-only in Estimate and shows the corresponding data from the Forecast Completion Date field in the project. Data used in this field is stored and maintained in the Platform project, not in Estimate. For Estimate Jobs not associated to a Platform project, this is the anticipated finish date of the job in UTC format as shown in the Forecasted Finish field in the UI. This field is derived from adding the value of the Duration field to the Forecast Start field in the UI.	2014-06-05
Duration	For Estimate Jobs associated to a project in InEight Platform, this field is read-only in Estimate and shows the corresponding data from the Forecast Duration field in the project. Data used in this field is stored and maintained in the Platform project, not in Estimate. For Estimate Jobs not associated to a Platform project, this is the duration of the job shown as a whole number derived from the difference in days between the Forecast Finish and Forecast Start fields. If the number of duration days is set, the finish date will recalculate. If the start, finish, and duration values provided in the API do not add correctly, then the finish date will be recalculated. If both finish and duration are not provided, then start date will be copied to the finish.	150
BidDate	Bid date of the job in UTC format.	2013-12-23T00:00:00
BidTime	Bid time of the job in UTC format.	2013-12-23T10:30:00
BidLocation	Location where the bid opening will occur for the job.	Engineer's Office

Name	Description	Example
OpeningType	Type of bid submission for the job.	Public
ProposalType	Type of bid proposal for the job.	Unit Price
PlanHolders	Number of plan holders on the job.	5
OwnersEstimate	Owners estimated value of the job.	6000000
LiquidatedDamages	Liquidated damages as indicated by the contract bid documents.	1000
LiqDamagesUM	Value of the unit of measure assigned to the liquidated damages amount. The value provided must match a value found in the Units of Measure tab in Foundation Setup Data Register.	Each
EngineerLastName	Used to identify the last name of a valid Address Book entry in the Estimate Library. Can be used in conjunction with the EngineerFirstName and EngineerCompanyName attributes to further qualify the selection of the applicable Address Book entry. The value must match a value found in the Address Book and will return the first such instance if multiple instances of an Address Book entry exist.	Jones
EngineerFirstName	Used to identify the first name of a valid Address Book entry in the Estimate Library. Can be used in conjunction with the EngineerLastName and EngineerCompanyName attributes to further qualify the selection of the applicable Address Book entry. The value must match a value found in the Address Book and will return the first such instance if multiple instances of an Address Book entry exist.	Fred
EngineerCompanyName	Used to identify the company name of a valid Address Book entry in the Estimate Library. Can be used in conjunction with the EngineerFirstName and EngineerLastName attributes to further qualify the selection of the applicable Address Book entry. The value must match a value found in the Address Book and will return the first such instance if multiple instances of an Address Book entry exist.	Example Engineer
OwnerLastName	Used to identify the last name of a valid Address Book entry in the Estimate Library. Can be used in conjunction with the OwnerFirstName and OwnerCompanyName attributes to further qualify the selection of the applicable Address Book entry. The value must match a value found in the Address Book and will return the first such instance if multiple instances of an Address Book entry exist.	Slate

Name	Description	Example
OwnerFirstName	Used to identify the first name of a valid Address Book entry in the Estimate Library. Can be used in conjunction with the OwnerLastName and OwnerCompanyName attributes to further qualify the selection of the applicable Address Book entry. The value must match a value found in the Address Book and will return the first such instance if multiple instances of an Address Book entry exist.	Jerry
OwnerCompanyName	Used to identify the company name of a valid Address Book entry in the Estimate Library. Can be used in conjunction with the OwnerFirstName and OwnerLastName attributes to further qualify the selection of the applicable Address Book entry. The value must match a value found in the Address Book and will return the first such instance if multiple instances of an Address Book entry exist.	Example Owner
ArchitectLastName	Used to identify the last name of a valid Address Book entry in the Estimate Library. Can be used in conjunction with the ArchitectFirstName and ArchitectCompanyName attributes to further qualify the selection of the appropriate Address Book entry. The value must match a value found in the Address Book and will return the first such instance if multiple instances of an Address Book entry exist.	Frost
ArchitectFirstName	Used to identify the First name of a valid Address Book entry in the Estimate Library. Can be used in conjunction with the ArchitectLastName and ArchitectCompanyName attributes to further qualify the selection of the applicable Address Book entry. The value must match a value found in the Address Book and will return the first such instance if multiple instances of an Address Book entry exist.	Robert
ArchitectCompanyName	Used to identify the company name of a valid Address Book entry in the Estimate Library. Can be used in conjunction with the ArchitectFirstName and ArchitectLastNameattributes to further qualify the selection of the applicable Address Book entry. The value must match a value found in the Address Book and will return the first such instance if multiple instances of an Address Book entry exist.	Example Architect
EstimatorLastName	Used to identify the last name of a valid Address Book entry in the Estimate Library. Can be used in conjunction with the EstimatorFirstName and EstimatorCompanyName attributes to further qualify the selection of the applicable Address Book entry. The value must match a value found in the Address Book and will return the first such instance if multiple instances of an Address Book entry exist.	Cross

Name	Description	Example
EstimatorFirstName	Used to identify the first name of a valid Address Book entry in the Estimate Library. Can be used in conjunction with the EstimatorLastName and EstimatorCompanyName attributes to further qualify the selection of the applicable Address Book entry. The value must match a value found in the Address Book and will return the first such instance if multiple instances of an Address Book entry exist.	Tom
EstimatorCompanyName	Used to identify the company name of a valid Address Book entry in the Estimate Library. Can be used in conjunction with the EstimatorFirstName and EstimatorLastName attributes to further qualify the selection of the applicable Address Book entry. The value must match a value found in the Address Book and will return the first such instance if multiple instances of an Address Book entry exist.	Example Prime Contractor 1
RFQContactLastName	Used to identify the last name of a valid Address Book entry in the Estimate Library. Can be used in conjunction with the RFQContactFirstName and EstimatorCompanyName attributes to further qualify the selection of the applicable Address Book entry. The value must match a value found in the Address Book and will return the first such instance if multiple instances of an Address Book entry exist.	Cross
RFQContactFirstName	Used to identify the first name of a valid Address Book entry in the Estimate Library. Can be used in conjunction with the RFQContactLastName and EstimatorCompanyName attributes to further qualify the selection of the applicable Address Book entry. The value must match a value found in the Address Book and will return the first such instance if multiple instances of an Address Book entry exist.	Tom
RFQContactCompanyName	Used to identify the company name of a valid Address Book entry in the Estimate Library. Can be used in conjunction with the RFQContactFirstName and EstimatorLastName attributes to further qualify the selection of the applicable Address Book entry. The value must match a value found in the Address Book and will return the first such instance if multiple instances of an Address Book entry exist.	Example Prime Contractor 1
UserTag1	Value that shows in the Tag 1 field in Job Folder Tags. The value provided must match a value in Foundation Setup Data Register > Tags.	Concrete
UserTag2	Free-form text that shows in the Tag 2 field in Job Folder Tags.	Sample Tag Data
UserTag3	Free-form text that shows in the Tag 3 field in Job Folder Tags.	Sample Tag Data

Name	Description	Example
UserTag4	ISO code for the country that shows in the Tag 4 field in Job Folder Tags. Jobs country as shown in the Country drop-down field on the Job Properties form. Values are not restricted to list entries. To populate this field with a selection from the list, provide the two-character alpha-numeric ISO code prefixed with @Geo_.	United States
UserTag5	Free-form text that shows in the Tag 5 field in Job Folder Tags.	Sample Tag Data
UserTag6	Free-form text that shows in the Tag 6 field in Job Folder Tags.	Sample Tag Data
UserTag7	Free-form text that shows in the Tag 7 field in Job Folder Tags.	Sample Tag Data
UserTag8	Value that shows in the Tag 8 field in Job Folder Tags. The value provided must match a value in Foundation Setup Data Register > Tags.	Concrete
UserTag9	Value that shows in the Tag 9 field in Job Folder Tags. The value provided must match a value in Foundation Setup Data Register > Tags.	Concrete
UserTag10	Value that shows in the Tag 10 field in Job Folder Tags. The value provided must match a value in Foundation Setup Data Register > Tags.	Concrete
UserTag11	Value that shows in the Tag 11 field in Job Folder Tags. The value provided must match a value in Foundation Setup Data Register > Tags.	Concrete
UserTag12	Value that shows in the Tag 12 field in Job Folder Tags. The value provided must match a value in Foundation Setup Data Register >Tags.	Concrete
UserTag13	Value that shows in the Tag 13 field in Job Folder Tags. The value provided must match a value in Foundation Setup Data Register > Tags.	Concrete
UserTag14	Date value that shows in the Tag 14 field in Job Folder Tags. Values must be provided in UTC format.	2014-06-05T00:00:00
UserTag15	Date value that shows in the Tag 15 field in Job Folder Tags. Values must be provided in UTC format.	2014-06-05T00:00:00
UserTag16	Date value that shows in the Tag 16 field in Job Folder Tags. Values must be provided in UTC format.	2014-06-05T00:00:00
UserTag17	Date value that shows in the Tag 17 field in Job Folder Tags. Values must be provided in UTC format.	2014-06-05T00:00:00
UserTag18	Date value that shows in the Tag 18 field in Job Folder Tags. Values must be provided in UTC format.	2014-06-05T00:00:00
UserTag19	Date value that shows in the Tag 19 field in Job Folder Tags. Values must be provided in UTC format.	2014-06-05T00:00:00
UserTag20	Date value that shows in the Tag 20 field in Job Folder Tags. Values must be provided in UTC format.	2014-06-05T00:00:00

Name	Description	Example
UserTag21	Numerical value that shows in the Tag 21 field in Job Folder Tags. Only numeric values are acceptable.	1000
UserTag22	Date value that shows in the Tag 22 field in Job Folder Tags. Values must be provided in UTC format.	2014-06-05T00:00:00
UserTag23	Date value that shows in the Tag 23 field in Job Folder Tags. Values must be provided in UTC format.	2014-06-05T00:00:00
UserTag24	Free-form text that shows in the Tag 24 field in Job Folder Tags.	Sample Tag Data

Sample JSON

```
{
"ImportCommand": "ImportJob",
"ImportEntities": [
    {
    "JobCode": "Training Job",
    "Description": "Training Job – Maricopa County No. TM2924",
    "ProjectDisplayId":  "1000102",
    "SourceJobCode": "Sample Template",
    "Status": "Bidding",
    "WarehouseAction": "Update",
    "County": "Maricopa",
    "Type": "Highway and General Engineering",
    "ContractDuration": 160,
    "TimeMeasure": "Calendar Days",
    "BidDate": "2013-12-23 00:00:00.000",
    "BidTime": "2013-12-23 12:00:00.000",
    "BidLocation": "Engineer's Office",
    "OpeningType": "Public",
    "ProposalType": "Unit Price",
    "PlanHolders": 5,
    "OwnersEstimate": 6000000,
    "LiquidatedDamages": 1000,
    "LiqDamagesUM": "Each",
    "EngineerLastName": "Jones",
    "EngineerFirstName": "Fred",
    "EngineerCompanyName": "Example Engineer",
    "OwnerLastName": "Slate",
    "OwnerFirstName": "Jerry",
    "OwnerCompanyName": "Example Owner",
    "ArchitectLastName": "Frost",
    "ArchitectFirstName": "Robert",
    "ArchitectCompanyName": "Example Architect",
    "EstimatorLastName": "Cross",
    "EstimatorFirstName": "Tom",
    "EstimatorCompanyName": "Example Prime Contractor 1",
    "RFQContactLastName": "Cross",
    "RFQContactFirstName": "Tom",
    "RFQContactCompanyName": "Example Prime Contractor 1",
    "UserTag1": "Concrete",
    "UserTag2": "Sample Tag Data",
    "UserTag3": "Sample Tag Data",
```

```
    "UserTag4": "United States",
    "UserTag5": "Sample Tag Data",
    "UserTag6": "Sample Tag Data",
    "UserTag7": "Sample Tag Data",
    "UserTag8": "Concrete",
    "UserTag9": "Concrete",
    "UserTag10": "Concrete",
    "UserTag11": "Concrete",
    "UserTag12": "Concrete",
    "UserTag13": "Concrete",
    "UserTag14": "2014-06-05 00:00:00.000",
    "UserTag15": "2014-06-05 00:00:00.000",
    "UserTag16": "2014-06-05 00:00:00.000",
    "UserTag17": "2014-06-05 00:00:00.000",
    "UserTag18": "2014-06-05 00:00:00.000",
    "UserTag19": "2014-06-05 00:00:00.000",
    "UserTag20": "2014-06-05 00:00:00.000",
    "UserTag21": 1000,
    "UserTag22": "2014-06-05 00:00:00.000",
    "UserTag23": "2014-06-05 00:00:00.000",
    "UserTag24": "Sample Tag Data"
    }
]
}
```

Verification

Go to Jobs > **Jobs Register** to view the list of all jobs.

Many of the Job Properties attributes can be seen or added as columns directly in the Jobs Register. To add a column, right click on a column header and choose **Column Chooser**. Drag a column into a position in the register to add it.
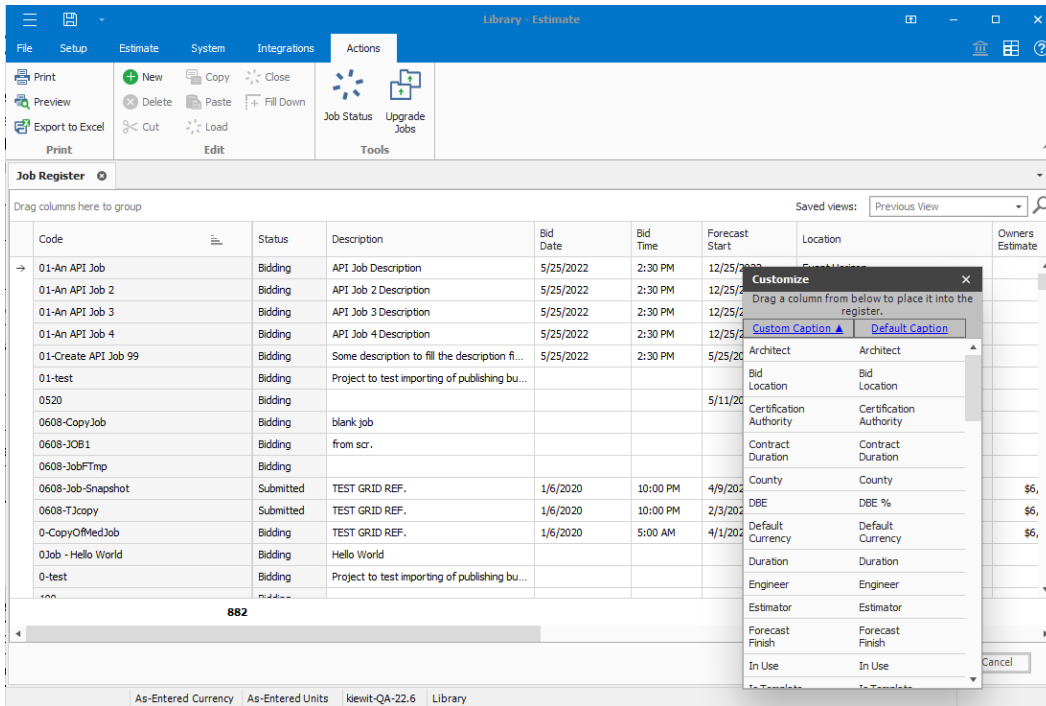
More detailed information on any Job can be found by opening the Job. Select a Job, and then from the Actions menu, click **Load**.
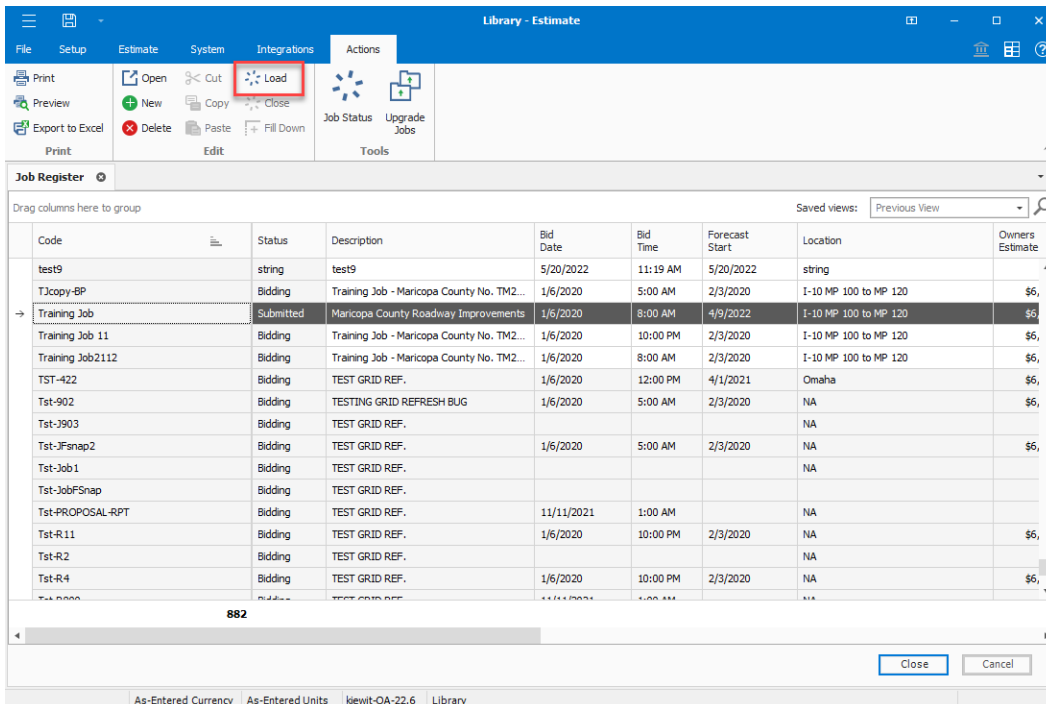
The job typically opens with the CBS Register activated, depending on the users configuration. To view Job Properties, in the ribbon navigation click Setup > **Job Properties**

In the Job Properties form, tabs are used to categorize the Job Properties for a particular project. Click through the tabs to locate and validate the applicable data.

List Estimates

This integration allows a customer to retrieve data from existing estimates in InEight Estimate.

Direction	From InEight
Frequency	Determined by external system
Trigger Method(s)	Determined by external system
API Name	List Estimates
InEight Estimate	**Starting Version** 23.4
	Ending Version

Fields

See Upsert Estimates, Fields for detailed information.

Field Descriptions

See Upsert Estimates, Field Descriptions for detailed information.

Verification

See Upsert Estimates, Verification for detailed information.

Delete Estimates

This integration allows a customer to delete estimates that exist in InEight Estimate. Passing an array of valid Estimate codes deletes the jobs from the InEight cloud platform.

Direction		From InEight
Frequency		Determined by external system
Trigger Method(s)		Determined by external system
API Name		Delete Estimates
InEight Estimate	Starting Version	23.4
	Ending Version	

Fields

See Upsert Estimates, Fields for detailed information.

Field Descriptions

See Upsert Estimates, Field Descriptions for detailed information.

Sample JSON

```
[
  "Training Job",
  "Training Job 2"
]
```

Verification

See Upsert Estimates, Verification for detailed information.

Upsert PayItems

This integration allows a customer to create and update pay items to an existing estimate in the InEight Estimate application. This supports automation of workflows such as importing pay items from a Bid Form or Bill of Quantities (BOQ).

Importing pay items into an estimate where the Lock Pay Items to Cost Items option is selected will create corresponding cost items for each pay item. Pay item hierarchy can also be maintained through the API by specifying the pay item position code. To assign a pay item to a new parent, use the ParentPayItemRef to identify the parent pay item position code.

To make updates to existing pay items, use the ObjectRef name and value pair array to define the name of the field to find a match value on and the value to be matched. In the following example, the payload will update the pay item description to "Sitework modified by Addendum" for all pay items in the "Training Job", where the pay item number (PayItemID) field value is equal to "200".

```
{
   "JobCode": "Training Job",
   "Entities": [
      {
      "ObjectRef": {
      "Name": " PayItemID",
      "Value": "200"
      },
   "Description": "Sitework modified by Addendum"
   }
   ]
}
```

Direction	From an external system to the InEight cloud platform.
Frequency	Determined by external system. Suggested implementation is to manually trigger the creation of pay items in an Estimate Job each time a project is created in the customer's external system.
Trigger Method(s)	Determined by external system.
API Name	Upsert PayItems
InEight Estimate	Starting Version	23.10
	Ending Version	

Fields

Depth	Name	Type	Precision	Parent	Req.
1	JobCode	String	200		No
2	ObjectRef.Name	String	200	JobCode	No
2	ObjectRef.Value	String	200	JobCode	No
2	ParentPayItemRef.Name	String	200	JobCode	No
2	ParentPayItemRef.Value	String	200	JobCode	No
2	ParentPayItemRef	String	200	JobCode	No
2	UnitOfMeasure	String	100	JobCode	No
2	AlternateUnitOfMeasure	String	100	JobCode	No
2	Currency	String	800	JobCode	No
2	Account	String	100	JobCode	No
2	Notes	String	8000	JobCode	No
2	Description	String	4000	JobCode	No
2	UserDefined1	String	500	JobCode	No
2	UserDefined2	String	500	JobCode	No
2	UserDefined3	String	500	JobCode	No
2	UserDefined4	String	500	JobCode	No
2	UserDefined5	String	500	JobCode	No
2	UserDefined6	String	500	JobCode	No
2	UserDefined7	String	500	JobCode	No
2	UserDefined8	String	500	JobCode	No
2	UserDefined9	String	500	JobCode	No
2	UserDefined10	String	500	JobCode	No
2	LineID	String	200	JobCode	No
2	PayItemID	String	200	JobCode	No
2	PositionCode	String	200	JobCode	No
2	RoundingPrecision	Number	double	JobCode	No
2	PaymentMethod	String	100	JobCode	No
2	ProposalSubtotalDescription	String	200	JobCode	No
2	AlertJobMax	Number	double	JobCode	No
2	AlertJobMin	Number	double	JobCode	No
2	AlertPriceMax	Number	double	JobCode	No

Depth	Name	Type	Precision	Parent	Req.
2	AlertPriceMin	Number	double	JobCode	No
2	Margin	Number	double	JobCode	No
2	OriginalForecastQuantity	Number	double	JobCode	No
2	OriginalPayQuantity	Number	double	JobCode	No
2	TotalPrice	Number	double	JobCode	No
2	UnitPrice	Number	double	JobCode	No
2	PriceLocked	Number	boolean	JobCode	No
2	ProposalSubtotal	Number	boolean	JobCode	No
2	QuantityLocked	Number	boolean	JobCode	No
2	UseDefaultEarningsRules	Number	boolean	JobCode	No
2	UserTag1	String	520	JobCode	No
2	UserTag2	String	520	JobCode	No
2	UserTag3	String	520	JobCode	No
2	UserTag4	String	520	JobCode	No
2	UserTag5	String	520	JobCode	No
2	UserTag6	String	520	JobCode	No
2	UserTag7	String	520	JobCode	No
2	UserTag8	String	520	JobCode	No
2	UserTag9	String	520	JobCode	No
2	UserTag10	String	520	JobCode	No

Field Descriptions

Name	Description	Example
JobCode	Identifies the job code of the estimate for which the pay items will be modified.	Training Job
ObjectRef.Name	Identifies the field used to match when updating existing pay items.	PayItemID
ObjectRef.Value	Value in the field defined by ObjectRef.Name when updating existing pay items.	200
ParentPayItemRef.Name	Used to insert pay items in a specific location of the Pay Item hierarchy or it can be used to identify the new location when moving a pay item to a different location within the Pay Item hierarchy. ParentPayItemRef.Name is used to identify the name of the field to match.	PositionCode

Name	Description	Example
ParentPayItemRef.Value	Used to insert pay items in a specific location of the Pay Item hierarchy or it can be used to identify the new location when moving a pay item to a different location within the Pay Item hierarchy. ParentPayItemRef.Value is the value to find in the field defined by ParentPayItemRef.Name.	2
UnitOfMeasure	Name of the unit of measure assigned to the pay item.	Each
AlternateUnitOfMeasure	Name of the alternate unit of measure assigned to the pay item.	Each
Currency	Name of the currency assigned to the pay item.	U.S. Dollar
Account	Name of the account code assigned to the pay item.	1700
Notes	Multi-line text field for storing notes on the pay item.	Price of the mobilization item cannot exceed 10% of the total value of the contract
Description	Description of the pay item entries in pay item and proposal record and register.	Mobilization
UserDefined1	Value of the User Defined 1 text type data field in the Tags/User Defined fields of the pay item record.	Sanitary Sewerage Utilities
UserDefined2	Value of the User Defined 2 text type data field in the Tags/User Defined fields of the pay item record.	Sanitary Sewerage Utilities
UserDefined3	Value of the User Defined 3 text type data field in the Tags/User Defined fields of the pay item record.	Sanitary Sewerage Utilities
UserDefined4	Value of the User Defined 4 text type data field in the Tags/User Defined fields of the pay item record.	Sanitary Sewerage Utilities
UserDefined5	Value of the User Defined 5 text type data field in the Tags/User Defined fields of the pay item record.	Sanitary Sewerage Utilities
UserDefined6	Value of the User Defined 6 text type data field in the Tags/User Defined fields of the pay item record.	Sanitary Sewerage Utilities
UserDefined7	Value of the User Defined 7 text type data field in the Tags/User Defined fields of the pay item record.	Sanitary Sewerage Utilities
UserDefined8	Value of the User Defined 8 text type data field on the Tags/ User Defined fields of the pay item Record.	Sanitary Sewerage Utilities
UserDefined9	Value of the User Defined 9 text type data field in the Tags/User Defined fields of the pay item record.	Sanitary Sewerage Utilities
UserDefined10	Value of the User Defined 10 text type data field in the Tags/User Defined fields of the pay item record.	Sanitary Sewerage Utilities
LineID	Line number of the pay item.	130
PayItemID	Pay item number of the pay item.	641 0100
PositionCode	Pay item position code value for the pay item.	2.1

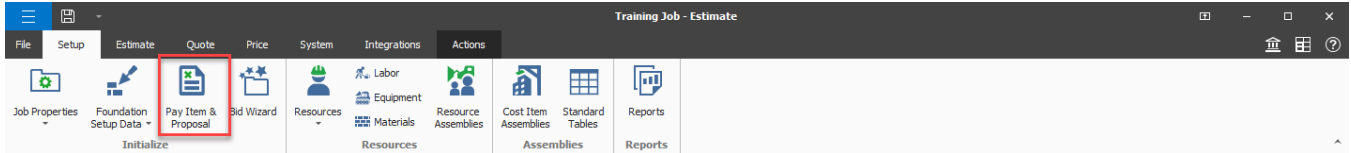| Name	Description	Example
RoundingPrecision	Value indicating the decimal precision applied when rounding off the value of a pay items unit price.	2
PaymentMethod	Payment method of the pay item. Valid values include: Fixed Final Price, Time & Expenses, Unit Price.	Unit Price
ProposalSubtotalDescription	Description used for printing on the subtotal row of the proposal when the ProposalSubtotal field is set to *true*.	SITEWORK
AlertJobMax	Maximum alert/alarm value based on percentage of the job.	100
AlertJobMin	Minimum alert/alarm value based on percentage of the job.	0
AlertPriceMax	Maximum alert/alarm limit value for unit price.	100
AlertPriceMin	Minimum alert/alarm limit value for unit price.	0
Margin	Indicates the pay item prices current margin as a percent of current price to the pay items assigned costs. Setting this value will recalculate the pay items price.	15.803
OriginalForecastQuantity	Value of the pay items Forecast TakeOff Quantity field.	110
OriginalPayQuantity	Value of the pay items Pay Quantity field.	100
TotalPrice	Value of the Total Price (current) field for the pay item.	3400
UnitPrice	Value of the Unit Price (current) field for the pay item.	34
PriceLocked	Indicates if the pay items price is locked, preventing changing of the price by the user or when auto pricing the job	0-False 1-True
ProposalSubtotal	Indicates if the pay item will be a subtotal row when the proposal is printed.	0-False 1-True
QuantityLocked	Indicates if the pay items quantity is locked, preventing changing of the quantity by the user.	0-False 1-True
UseDefaultEarningsRules	Indicates if default earnings rules should be applied to the pay item.	0-False 1-True
UserTag1	Tag field identifier for the value of Tag 1 from the UserTags table.	Bridge
UserTag2	Tag field identifier for the value of Tag 2 from the UserTags table.	Concrete
UserTag3	Tag field identifier for the value of Tag 3 from the UserTags table.	Sample Tag Value
UserTag4	Tag field identifier for the value of Tag 4 from the UserTags table.	Sample Tag Value

Name	Description	Example
UserTag5	Tag field identifier for the value of Tag 5 from the UserTags table.	Sample Tag Value
UserTag6	Tag field identifier for the value of Tag 6 from the UserTags table.	Sample Tag Value
UserTag7	Tag field identifier for the value of Tag 7 from the UserTags table.	Sample Tag Value
UserTag8	Tag field identifier for the value of Tag 8 from the UserTags table.	Sample Tag Value
UserTag9	Tag field identifier for the value of Tag 9 from the UserTags table.	Sample Tag Value
UserTag10	Tag field identifier for the value of Tag 10 from the UserTags table.	Sample Tag Value

Sample JSON

```
{
   "JobCode": "Training Job",
   "Entities": [
   {
      "PositionCode": "1",
      "PayItemID": "200",
      "Description": "SITEWORK & ROADWAY",
   },
   {
      "PositionCode": "2",
      "PayItemID": "400",
      "Description": "WATER & SEWER",
   },
   {
      "PositionCode": "1.1",
      "PayItemID": "641 0100",
      "Description": "Mobilization",
      "OriginalPayQuantity": 1,
      "UnitOfMeasure": "Lump Sum",
   },
   {
      "PositionCode": "1.2",
      "PayItemID": "201 0102",
      "Description": "Clearing & Grubbing",
      "OriginalPayQuantity": 10,
      "UnitOfMeasure": "Acre",
   },
   {
      "PositionCode": "1.3",
      "PayItemID": "202 0183",
      "Description": "Unclassified Excavation",
      "OriginalPayQuantity": 50000,
      "UnitOfMeasure": "Cubic Yard",
   },
   {
```

```
      "PositionCode": "1.4",
      "PayItemID": "303 5912",
      "Description": "Aggregate Base",
      "OriginalPayQuantity": 40000,
      "UnitOfMeasure": "Ton",
   },
   {
      "PositionCode": "1.5",
      "PayItemID": "303 4263",
      "Description": "Asphalt Concrete Hot Mix Type A",
      "OriginalPayQuantity": 38000,
      "UnitOfMeasure": "Ton",
   },
   {
      "PositionCode": "2.1",
      "PayItemID": "413(B) 0464",
      "Description": "36 Inch RCP Culvert Class III",
      "OriginalPayQuantity": 1000,
      "UnitOfMeasure": "Linear Feet",
   },
   {
      "PositionCode": "2.2",
      "PayItemID": "800 0220",
      "Description": "10 Inch PVC Force Main (SDR21)",
      "OriginalPayQuantity": 12000,
      "UnitOfMeasure": "Linear Feet",
   },
   {
      "PositionCode": "2.3",
      "PayItemID": "800 0330",
      "Description": "24 Inch PVC Gravity Sewer (SDR35)",
      "OriginalPayQuantity": 3000,
      "UnitOfMeasure": "Linear Feet",
   },
   {
      "PositionCode": "2.4",
      "PayItemID": "800 0400",
      "Description": "4 Foot Diameter Manhole",
      "OriginalPayQuantity": 16,
      "UnitOfMeasure": "Each",
   },
   ]
}
```

Verification

Pay items created or modified through the integration can be verified by navigating to the Pay Item & Proposal Register in the InEight Estimate application.

Open the applicable estimate job. In the main navigation menu, click the Setup tab > **Pay Item & Proposal** from the Initialize group to open the Pay Item & Proposal Register.

All the jobs pay items are visible in this register.

List PayItems

This integration allows a customer to query pay items from an existing job in InEight Estimate. The Estimate job is specified by passing a valid job code as parameter in the request. A list of valid job codes can be retrieved using the List Estimates API.

Direction	From InEight
Frequency	Determined by external system
Trigger Method(s)	Determined by external system
API Name	List PayItems
InEight Estimate	Starting Version	23.12
	Ending Version	

Fields

See Upsert PayItems, Fields for detailed information.

Field Descriptions

See Upsert PayItems, Field Descriptions for detailed information.

Verification

See Upsert PayItems, Verification for detailed information.

Delete PayItems

This integration allows a customer to delete pay items from a job that exists in InEight Estimate. Passing an array of valid field name and value pairs will delete the corresponding pay items from the indicated job in InEight Estimate.

Direction		From InEight
Frequency		Determined by external system
Trigger Method(s)		Determined by external system
API Name		Delete PayItems
InEight Estimate	Starting Version	23.12
	Ending Version	

Fields

See Upsert PayItems, Fields for detailed information.

Field Descriptions

See Upsert PayItems, Field Descriptions for detailed information.

Sample JSON

```
{
    "JobCode": "Training Job",
    "Entities": [{
        "Name": "PayItemID",
        "Value": "800 0400"
    }]
}
```

Verification

See Upsert PayItems, Verification for detailed information.