



Integration API Reference Guide
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Oracle Instantis EnterpriseTrack Integration API Reference Guide

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CHAPTER 1

GETTING STARTED

This document provides details useful when designing, programming, deploying, and troubleshooting Web-enabled applications for your EnterpriseTrack® account.

The EnterpriseTrack application includes an Integration module that allows you to create customized applications that:

- Obtain activity assignment data
- Update activity data
- Update effort data
- Obtain the “Project Finances Element Monthly Detail” report

This document also includes details on preconfigured, Web-enabled reports that do not require any software development (programming) effort.

RECOMMENDATIONS

Before developing any Web service software, you should be familiar with:

- A programming language or environment for developing Web service applications
- The fundamentals of Web services (for an overview, go to <http://www.w3schools.com/webservices/default.asp>)
- The JSON data format (for an overview, go to <http://www.w3schools.com/json/default.asp>)

REQUIREMENTS

Before developing any EnterpriseTrack-specific Web service software, you should:

- Be familiar with the EnterpriseTrack product, especially those areas you want to manipulate using the Integration module.
- Confirm that you have a valid EnterpriseTrack user account (login ID and password).

- To use the financial report related Integration function, verify that you have permission to execute the financial report from an interactive session.
- To update effort or activity using the Integration functions, verify that you have permission to update activities for the project.
- Verify that you have the **Execute APIs** permission.
- If invoking the function for someone other than yourself, verify that you have the **Execute APIs as Proxy** permission.
- To update effort using the Integration functions, also verify the following:
 - If you will be updating efforts for yourself, verify that you have the necessary permissions required to perform this operation interactively.
 - If you will be updating efforts for someone other than yourself, verify that you have the necessary permissions required to perform this operation interactively.

INTEGRATION FUNCTIONS

The following Web service capabilities are supported:

- Login Function

This function provides the necessary authentication data to your EnterpriseTrack account and starts your Web services session.

- Logout Function

This function terminates your Web services session.

- GetActivityAssignments Function

This function fetches the activity information that corresponds to the search criteria (filter data) you specify in the input parameters.

- UpdateResourceEffort Function

This function updates the effort based on the details you specify in the input parameters.

- UpdateActivity Function

This function updates the activity data based on the details you specify in the input parameters.

- GetFinanceData Function

This function fetches the data that is equivalent to the “Project Finances Element Monthly Detail Report” and corresponds to the search criteria you specify in the input parameters.

- Preconfigured Remote Reports

This is a collection of advanced reports that extract data to be used for integration purposes. These reports do not require any software development and can merely be invoked using a URL.



The capitalization used in the name of the Web services functions as described in this document is provided solely to improve clarity and readability—the functions themselves, and their parameters, use all lowercase letters unless otherwise noted.

FUNCTION INVOCATION

All *programmable* functions are invoked using a SiteWand symbolic submission. (Invocation details for non-programmable capabilities are described in the *Preconfigured Remote Reports* section.)

An Integration Login relies on the following path.

```
https://<server>/SiteWand/Submission/<account_name>/integration/login
```

Once successfully logged in, the Integration functions rely on the following path.

```
<api_session>
```

where:

Placeholder	Description
<server>	Specifies the IP address or hostname of the server hosting your EnterpriseTrack instance.
<account_name>	Specifies the account name (or company name) of your EnterpriseTrack instance.
<api_session>	Specifies the session URL associated with your Integration login. This value is obtained when successfully completing a Login function and the value is similar to the following. <code>https://ABC.example.com/SiteWand/Submission/F_xer34afd2f</code>

The invocation parameters for each function are provided as detailed for each function.



The /SiteWand/Submission portion of the URL *is* case sensitive. Unless otherwise noted, all other text in the URL *is not* case sensitive.

GLOBAL_PROPERTIES OBJECT

Most of the functions rely on input parameters to specify the search criteria (filter data), or to provide the updates to the EnterpriseTrack data. Conversely, many of the functions rely on output parameters as the mechanism to deliver those results.

To ensure compatibility with the configuration of the EnterpriseTrack application, the `global_properties` object is included in this collection of parameters. The settings specified in this object perform the necessary “translations” of the data (specified by the other parameters) into the formats compatible with the EnterpriseTrack application.

Since the majority of the functions use JSON data format, the details are presented in the following table as name/value pairs. Unless otherwise specified, all values are not case sensitive.

Name	Data Type	Value Required? (when input)	Placeholder or Constant	Description
api_version	String	Yes	et-integration-api-1.0	Specifies the version number of the Integration API software.
char_set	String	Yes	<char_set>	Specifies the character set that EnterpriseTrack uses. Typically, utf-8 is specified.
date_format	String	Optionally required (see description)	<date_format>	Required only if date parameters are used by the Integration function. Specifies the date format that EnterpriseTrack uses. Typically, yyyy/MM/dd is specified.
effort_unit	String	Not applicable	<effort_unit>	Output parameter. Specifies the unit of measurement for effort.

INTEGRATION API REFERENCE GUIDE

Name	Data Type	Value Required? (when input)	Placeholder or Constant	Description
language	String	No	<lang>	Specifies the language that EnterpriseTrack uses. If no value is specified, the language is set to that used for the Login session.

LOGIN FUNCTION

The Login function provides the necessary authentication data to your EnterpriseTrack account and, if successful, starts your Web services session.

The other Integration functions can be successfully invoked *only* after the Login function is successful. Once you are logged in, you can invoke any number of Integration functions. However, when you are finished with your Web service interactions you should invoke the Logout function. In the event you fail to log out, you will automatically be logged out after the same period of inactivity as an interactive session.



You may have any number and combination of interactive (browser) and Web services sessions.

INVOCATION PARAMETERS

The parameters for the invocation of the Login function are described in the following table. Unless otherwise specified, all values are not case sensitive.

Name	Data Type	Placeholder or Constant	Description
api_name	String	login	Specifies the name of the Integration function.
output_type	String	JSON	Specifies the data format for the output.
user_login_id	String	<login_id>	Specifies your EnterpriseTrack login ID. The case sensitivity for this value conforms to that used by your EnterpriseTrack system.
password	String	<pwd>	Specifies the password corresponding to your EnterpriseTrack login ID. The case sensitivity for this value conforms to that used by your EnterpriseTrack system.



POST is the only recommended option.

INVOCATION EXAMPLE

The syntax for the invocation of the Login function is as follows.

```
https://<server>/SiteWand/Submission/<account_name>/integration/
login?api_name=login&output_type=JSON&user_login_id=<login_id>
```

OUTPUT PARAMETERS

The results of the Login function are provided in JSON data format. The following table details the name/value pairs.

Name	Data Type	Description
result_code	String	Provides the result code for the completion status of the function.
result_reason	String	If the function is successful, NULL results. Otherwise, the reason for the error is returned.
api_url	String	If the function is successful, the <i>session</i> URL is returned. Otherwise, NULL is returned. The <api_session> value that is returned is used by each of the programmable Integration functions.

OUTPUT EXAMPLES

The results from a successful Login are similar to the following.

```
{
  "result_code": "SUCCESS",
  "result_reason": "",
  "api_url": "https://ABC.example.com/SiteWand/Submission/F_xer34afd2f"
}
```

The results from a failed Login are similar to the following.

```
{
  "result_code": "ERR_AUTHENTICATION",
  "result_reason": "You specified invalid login information.",
  "api_url": ""
}
```

LOGOUT FUNCTION

The Logout function terminates your Web services session. This function should always be invoked when you have concluded your Web-service based interactions with your EnterpriseTrack account. In the event you fail to log out, you will automatically be logged out after the same period of inactivity as an interactive session.

INVOCATION PARAMETERS

The parameters for the invocation of the Logout function are described in the following table. Unless otherwise specified, all values are not case sensitive.

Name	Data Type	Placeholder or Constant	Description
api_name	String	logout	Specifies the name of the Integration function.

INVOCATION EXAMPLE

The syntax for the invocation of the Logout function is as follows.

```
<api_session>?api_name=logout
```



There are no input or output parameters for the Logout function.

OUTPUT EXAMPLE

If the Logout function is successful, you are merely logged out of your current Web services session.

GETACTIVITYASSIGNMENTS FUNCTION

The GetActivityAssignments function fetches the activity information that corresponds to the search criteria (filter data) you specify in the input parameters.

INVOCATION PARAMETERS

The parameters for the invocation of the GetActivityAssignments function are described in the following table. Unless otherwise specified, all values are not case sensitive.

Name	Data Type	Placeholder or Constant	Description
api_name	String	getactivityassignments	Specifies the name of the Integration function.
input_type	String	JSON	Specifies the data format for the input.
output_type	String	JSON	Specifies the data format for the output.
input_data	String	<i><input_params></i>	Specifies the location of the input parameters. This value is case sensitive.

INVOCATION EXAMPLE

The syntax for the invocation of the GetActivityAssignments function is as follows.

```
<api_session>?api_name=getactivityassignments&input_type=JSON
&output_type=JSON&input_data=<input_params>
```

INPUT PARAMETERS

The input parameters described in the following table provide the search criteria (filter data) used to identify the data you want.

This information should be provided in the JSON formatted data specified by *<input_params>*. Unless otherwise specified, all values are not case sensitive.

Name	Data Type	Value Required?	Placeholder or Constant	Description
global_properties	Object	Yes	Not applicable	This <i>object</i> specifies the global settings for your EnterpriseTrack instance. See “ <i>global_properties Object</i> ” for details.
application_data	Object	Yes	Not applicable	This <i>object</i> specifies the search criteria. See “ <i>application_data</i> ” for details.

APPLICATION_DATA

resource_descriptor	Object	Yes	Not applicable	This <i>object</i> specifies the resource. An error results in the event a matching resource cannot be found. See “ <i>resource_descriptor</i> ” for details.
start_date_from	Date	No	<i><start_from></i>	Specifies the beginning date for the range of start dates. This filters on actual (if present) or planned activity dates.
start_date_to	Date	No	<i><start_to></i>	Specifies the ending date for the range of start dates. This filters on actual (if present) or planned activity dates.

Name	Data Type	Value Required?	Placeholder or Constant	Description
end_date_from	Date	No	<end_from>	<p>Specifies the beginning date for the range of end dates.</p> <p>This filters on actual (if present) or planned activity dates.</p>
end_date_to	Date	No	<end_to>	<p>Specifies the ending date for the range of end dates.</p> <p>This filters on actual (if present) or planned activity dates.</p>
include_external_wa	Boolean	No	<incl_external>	<p>Indicates whether or not to consider external activities.</p> <p>Valid values are:</p> <ul style="list-style-type: none"> • TRUE • FALSE
include_closed_wa	Boolean	No	<incl_closed>	<p>Indicates whether or not to include closed activities.</p> <p>Valid values are:</p> <ul style="list-style-type: none"> • TRUE • FALSE (default)
max_rows	Integer	No	<max_rows>	<p>Specifies the maximum number of rows of data to be fetched.</p> <p>The default value is 20.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
------	-----------	-----------------	-------------------------	-------------

RESOURCE_DESCRIPTOR

A value for at least one of the following parameters must be provided.

resource_id	String	No	<resource_ID>	<p>Specifies the resource ID.</p> <p>If:</p> <p style="padding-left: 40px;">A resource_id value <i>is</i> specified</p> <p>Then:</p> <p style="padding-left: 40px;">All other parameters are ignored.</p> <p>Otherwise:</p> <p style="padding-left: 40px;">The other resource_descriptor parameters will be used to help identify the resource.</p>
resource_login_id	String	No	<resource_login_ID>	<p>Specifies the login ID.</p> <p>If:</p> <p style="padding-left: 40px;">A resource_id value <i>is not</i> specified</p> <p style="padding-left: 40px;">-and if-</p> <p style="padding-left: 40px;">A resource_login_id value <i>is</i> specified</p> <p>Then:</p> <p style="padding-left: 40px;">All other parameters are ignored.</p> <p>Otherwise:</p> <p style="padding-left: 40px;">The other resource_descriptor parameters will be used to help identify the resource.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
resource_email	String	No	<resource_email>	<p>Specifies the e-mail address.</p> <p>If:</p> <p style="padding-left: 20px;">A resource_id value <i>is not</i> specified</p> <p style="padding-left: 20px;">-and if-</p> <p style="padding-left: 20px;">A resource_login_id value <i>is not</i> specified</p> <p style="padding-left: 20px;">-and if-</p> <p style="padding-left: 20px;">A resource_email value <i>is</i> specified</p> <p>Then:</p> <p style="padding-left: 20px;">All other parameters are ignored <i>unless</i> multiple resources use the same e-mail address.</p> <p>Otherwise:</p> <p style="padding-left: 20px;">The other resource_descriptor parameters will be used to help identify the resource.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
resource_last_name	String	No	<resource_last_name>	<p>Specifies the last name.</p> <p>If:</p> <p style="padding-left: 20px;">A resource_id value <i>is not</i> specified</p> <p style="padding-left: 20px;">-and if-</p> <p style="padding-left: 20px;">A resource_login_id value <i>is not</i> specified</p> <p style="padding-left: 20px;">-and if-</p> <p style="padding-left: 20px;">A resource_email value <i>is not</i> specified, or multiple resources have the same e-mail address</p> <p>Then:</p> <p style="padding-left: 20px;">The combination of the resource_last_name and resource_first_name values are used to identify the resource.</p> <p>Otherwise:</p> <p style="padding-left: 20px;">The resource cannot be found and an error results.</p>
resource_first_name	String	No	<resource_first_name>	Specifies the first name.

INPUT EXAMPLES

The syntax for the GetActivityAssignments data input parameters is as follows.

```
{
  "global_properties":
  {
    "api_version": "et-integration-api-1.0",
    "char_set": "<char_set>",
    "date_format": "<date_format>",
    "language": "<lang>"
  },
  "application_data":
  {
    "resource_descriptor":
    {
      "resource_id": "<resource_ID>",
      "resource_login_id": "<resource_login_ID>",
      "resource_email": "<resource_email>",
      "resource_first_name": "<resource_first_name>",
      "resource_last_name": "<resource_last_name>"
    },
    "start_date_from": "<start_from>",
    "start_date_to": "<start_to>",
    "end_date_from": "<end_from>",
    "end_date_to": "<end_to>",
    "include_external_wa": "<incl_external>",
    "include_closed_wa": "<incl_closed>",
    "max_rows": "<max_rows>"
  }
}
```

This is an example with values for the placeholders.

```
{
  "global_properties":
  {
    "api_version": "et-integration-api-1.0",
    "char_set": "utf-8",
    "date_format": "yyyy/mm/dd",
    "language": "en"
  },
  "application_data":
  {
    "resource_descriptor":
    {
      "resource_id": "GHGHG545TRT",
      "resource_login_id": "ashish_nathani",
      "resource_email": "john.smith@example.com",
      "resource_first_name": "john",
      "resource_last_name": "smith"
    },
    "start_date_from": "2011/12/01",
    "start_date_to": "2011/12/31",
    "end_date_from": "2011/12/01",
    "end_date_to": "2011/12/31",
    "include_external_wa": "TRUE",
    "include_closed_wa": "FALSE",
    "max_rows": "20"
  }
}
```

OUTPUT PARAMETERS

The results of the GetActivityAssignments function are provided in JSON data format. The following table details the name/value pairs.

Name	Data Type	Description
global_properties	Object	This <i>object</i> lists the global settings for your EnterpriseTrack instance. See “global_properties Object” for details.
application_data	Object	This <i>object</i> lists your search criteria and provides the results. See “application_data” for details.

APPLICATION_DATA

et_transaction_id	String	Provides the unique EnterpriseTrack transaction ID that is stored in the audit tables.
result_code	String	Provides the result code for the completion status of the function.
result_reason	String	If the function is successful, NULL is returned. Otherwise, the reason for the error is returned.
activity_descriptor_list	Object	This <i>object</i> contains the lists of activities corresponding to the search criteria you specified. See “activity_descriptor_list” for details.

ACTIVITY_DESCRIPTOR_LIST

resource_descriptor	Object	This <i>object</i> specifies the resource. See “resource_descriptor” for details.
total_assignments	Integer	Provides the total number of assignments for the specified resource.

Name	Data Type	Description
rows_returned	Integer	Specifies the number of activities actually returned. This could be different from the number of total assignments due to the restrictions imposed by the max_rows value you specified in the input parameters.
activity_descriptor	Array of Objects	These <i>objects</i> contain the details of an activity. See “activity_descriptor” for details.
project_descriptor	Object	This <i>object</i> provides the details of the project. See “project_descriptor” for details.

RESOURCE_DESCRIPTOR

resource_id	String	Specifies the resource ID.
resource_login_id	String	Specifies the login ID.
resource_email	String	Specifies the e-mail address.
resource_last_name	String	Specifies the last name.
resource_first_name	String	Specifies the first name.

ACTIVITY_DESCRIPTOR

activity_id	String	Provides the ID for the activity.
activity_name	String	Provides the name of the activity.
activity_desc	String	Provides the comments associated with the activity.
activity_type	String	Provides the type of the activity.
activity_planned_start_date	Date	Provides the planned start date of the activity. In some cases, this value may be NULL.

Name	Data Type	Description
activity_ planned_end_date	Date	Provides the planned end date of the activity. In some cases, this value may be NULL.
activity_ actual_start_date	Date	Provides the actual start date of the activity.
activity_ actual_end_date	Date	Provides the actual end date of the activity.
activity_actual_ efforts	Number	Provides the actual effort for the activity.
activity_ remaining_efforts	Number	Provides the computed remaining effort for the activity.
activity_planned_ efforts	Number	Provides the planned effort for the activity.
activity_ percent_completion	Number	Provides the percentage completion of the activity.
activity_owner_ info	String	Specifies the name(s) of the activity owner. The format is last name, comma, a space, first name, a space, and then the role enclosed in parentheses. Multiple values should be separated by semicolons. For example: John, Smith (Project Manager); John, Jones (Network Admin).
activity_ baseline_start_date	Date	Provides the baseline start date for the activity.
activity_ baseline_end_date	Date	Provides the baseline end date for the activity.
activity_planned_ effort_type	String	Provides the planned effort type for the activity.
activity_actual_ effort_type	String	Provides the actual effort type for the activity.

Name	Data Type	Description
status_descriptor	Object	This <i>object</i> specifies the status of the activity. See “status_descriptor” for details.
role_descriptor	Object	This <i>object</i> provides details about the role. See “role_descriptor” for details.
activity_external	String	Indicates whether or not the activity is tracked outside of the EnterpriseTrack application. Expected values are: <ul style="list-style-type: none"> • YES • NO
activity_external_id	String	Provides the external ID if the activity is tracked outside of the EnterpriseTrack application. This value is typically NULL when the value for activity_assignment_external is NO .
project_descriptor	Object	This <i>object</i> provides the project details. See “project_descriptor” for details.

STATUS_DESCRIPTOR

status_id	String	Provides the ID of the status.
status_desc	String	Provides the description of the status.

ROLE_DESCRIPTOR

role_id	String	Provides the ID of the role.
role_desc	String	Provides the description of the role.

PROJECT_DESCRIPTOR

project_id	Integer	Provides the ID for the project.
project_name	String	Provides the name for the project.

Name	Data Type	Description
project_manager	String	Provides the name of the manager of the project.
project_status	String	Provides the status of the project.
project_program	String	Provides the names of the programs associated with the project.

OUTPUT EXAMPLE

The syntax for the JSON formatted parameters from a successful GetActivityAssignments function is similar to the following.

```
{
  "global_properties":
  {
    "char_set": "<some_character_set>",
    "date_format": "<some_date_format>",
    "effort_unit": "<some_units_for_effort>",
    "language": "<some_language>"
    "api_version": "et-integration-api-1.0",
  },
  "application_data":
  {
    "et_transaction_id": "<unique_transaction_ID>",
    "result_code": "<result_code>",
    "result_reason": "<result_reason>",
    "activity_descriptor_list":
    {
      "resource_descriptor":
      {
        "resource_id": "<some_value>",
        "resource_login_id": "<some_value>",
        "resource_email": "<some_value>",
        "resource_last_name": "<some_value>",
        "resource_first_name": "<some_value>"
      },
      "total_assignments": "<number_of_activities>",
      "rows_returned": "<number_of_rows_returned>",
      "activity_descriptor":
      [
        {
          "activity_id": "<ID_1>",
          "activity_name": "<activity_name>",
          "activity_desc": "<activity_description>",
          "activity_type": "<activity_type>",
          "activity_planned_start_date": "<some_date>",
          "activity_planned_end_date": "<some_date>",
          "activity_actual_start_date": "<some_date>",
          "activity_actual_end_date": "<some_date>",
          "activity_actual_efforts": "<actual_efforts_value>",
          "activity_remaining_efforts": "<remaining_efforts_value>",
          "activity_planned_efforts": "<planned_efforts_value>",
        }
      ]
    }
  }
}
```

```

"activity_percent_completion": "<some_value>",
"activity_owner_info": "<list_of_owners>",
"activity_baseline_start_date": "<some_date>",
"activity_baseline_end_date": "<some_date>",
"activity_planned_effort_type": "<PET_value>",
"activity_actual_effort_type": "<AET_value>",
"status_descriptor":
{
  "status_id": "<status_ID>",
  "status_desc": "<status_description>"
},
"role_descriptor":
{
  "role_id": "<role_ID>",
  "role_desc": "<role_description>"
},
"activity_external": "<yes|no>",
"activity_external_id": "<some_ID>",
"project_descriptor":
{
  "project_id": "<project_ID>",
  "project_name": "<project_name>",
  "project_manager": "<project_manager_name>",
  "project_status": "<project_status>",
  "project_program": "<list_of_program_names>"
}
},
{
  "activity_id": "<ID_2>",
  "activity_name": "<activity_name>",
  "activity_desc": "<activity_description>",
  "activity_type": "<activity_type>",
  "activity_planned_start_date": "<some_date>",
  "activity_planned_end_date": "<some_date>",
  "activity_actual_start_date": "<some_date>",
  "activity_actual_end_date": "<some_date>",
  "activity_actual_efforts": "<actual_efforts_value>",
  "activity_remaining_efforts": "<remaining_efforts_value>",
  "activity_planned_efforts": "<planned_efforts_value>",
  "activity_percent_completion": "<some_value>",
  "activity_owner_info": "<list_of_owners>",
  "activity_baseline_start_date": "<some_date>",
  "activity_baseline_end_date": "<some_date>",
  "activity_planned_effort_type": "<PET_value>",
  "activity_actual_effort_type": "<AET_value>",
  "status_descriptor":
  {
    "status_id": "<status_ID>",
    "status_desc": "<status_description>"
  },
  "role_descriptor":
  {
    "role_id": "<role_ID>",
    "role_desc": "<role_description>"
  },
  "activity_external": "<yes|no>",
  "activity_external_id": "<some_ID>",
  "project_descriptor":

```

```
{
  "project_id": "<project_ID>",
  "project_name": "<project_name>",
  "project_manager": "<project_manager_name>",
  "project_status": "<project_status>",
  "project_program": "<list_of_program_names>"
}
]
}
}
```

UPDATERESOURCEEFFORT FUNCTION

The UpdateResourceEffort function updates the effort for an activity based on the details you specify in the input parameters.

INVOCATION PARAMETERS

The parameters for the invocation of the UpdateResourceEffort function are described in the following table. Unless otherwise specified, all values are not case sensitive.

Name	Data Type	Placeholder or Constant	Description
api_name	String	updateresourceeffort	Specifies the name of the Integration function.
input_type	String	JSON	Specifies the data format for the input parameters.
output_type	String	JSON	Specifies the data format for the output parameters.
input_data	String	<input_params>	Specifies the location of the input parameters. This value is case sensitive.

INVOCATION EXAMPLE

The syntax for the invocation of the UpdateResourceEffort function is as follows.

```
<api_session>?api_name=updateresourceeffort&input_type=JSON
&output_type=JSON&input_data=<input_params>
```

INPUT PARAMETERS

The input parameters described in the following table provide the search criteria (filter data) to identify the activity, as well as to specify the updated effort data you want to commit.

This information should be provided in the JSON formatted data specified by *<input_params>*. Unless otherwise specified, all values are not case sensitive.



This function includes a “test” feature (see **test_mode**) that allows you to verify that the information you include in the input parameters can be successfully committed. Since there is no mechanism to “roll back” invalid data, you are encouraged to “test” the data before actually committing any updates.

Name	Data Type	Value Required?	Placeholder or Constant	Description
global_properties	Object	Yes	Not applicable	This <i>object</i> specifies the global settings for your EnterpriseTrack instance. See “ <i>global_properties Object</i> ” for details.
application_data	Object	Yes	Not applicable	This <i>object</i> specifies the search criteria, as well as the revised effort data. See “application_data” for details.

APPLICATION_DATA

source_application_descriptor	Object	Yes	Not applicable	This <i>object</i> specifies the information you want stored in the audit tables. See “source_application_descriptor” for details.
-------------------------------	--------	-----	----------------	---

Name	Data Type	Value Required?	Placeholder or Constant	Description
security_descriptor	Object	Yes	Not applicable	<p>This <i>object</i> specifies the authentication information to be verified.</p> <p>See “security_descriptor” for details.</p>
resource_descriptor	Object	Yes	Not applicable	<p>This <i>object</i> specifies the resource.</p> <p>An error results in the event a matching resource cannot be found.</p> <p>See “resource_descriptor” for details.</p>
project_descriptor	Object	Optionally required (see description)	Not applicable	<p>Required only if operation_type has one of the following values:</p> <ul style="list-style-type: none"> • INTERNAL_ACTIVITY • EXTERNAL_ACTIVITY • PROJECT_TIME <p>This <i>object</i> specifies the project details.</p> <p>See “project_descriptor” for details.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
time_category_descriptor	Object	Optionally required (see description)	Not applicable	Required only if operation_type has one of the following values: <ul style="list-style-type: none"> • NON_PROJECT_TIME • NON_WORKING_TIME This <i>object</i> specifies the category information for the effort. See “time_category_descriptor” for details.
operation_type	String	Yes	<op_type>	Specifies the type of operation. Valid values are: <ul style="list-style-type: none"> • INTERNAL_ACTIVITY • EXTERNAL_ACTIVITY • PROJECT_TIME • NON_PROJECT • NON_WORKING_TIME
test_mode	Boolean	No	<test_mode>	Indicates whether or not this invocation of the function is merely a test. Valid values are: <ul style="list-style-type: none"> • TRUE • FALSE (default) If test_mode is FALSE , then the updates <i>will be committed</i> in the EnterpriseTrack database.

SOURCE_APPLICATION_DESCRIPTOR

source_app	String	Yes	<source_App>	Specifies the name of the source application.
------------	--------	-----	--------------	---

Name	Data Type	Value Required?	Placeholder or Constant	Description
source_ref_unique_id	String	Yes	<source_ID>	Specifies the ID of the caller of the Integration function.
source_ref_description	String	Yes	<source_desc>	Specifies the description of the caller of the Integration function.
source_ref_type	String	Yes	<source_type>	Specifies the reference type of the caller of the Integration function.

Name	Data Type	Value Required?	Placeholder or Constant	Description
<i>SECURITY_DESCRIPTOR</i>				
authorization_policy	String	Yes	<auth_policy>	<p>Specifies the authorization policy to be used.</p> <p>Valid values are:</p> <ul style="list-style-type: none"> • AUTHORIZE_WITH_LOGIN_RESOURCE Execute using the permissions of the logged in Integration user. • AUTHORIZE_WITH_RECORD_LOCATOR_RESOURCE Execute using the permissions of the resource specified in resource_descriptor. • AUTHORIZE_WITH_AUTHORIZATION_POLICY_GIVEN_RESOURCE Execute using the permissions of the resource specified in authorization_policy_given_resource_descriptor.

Name	Data Type	Value Required?	Placeholder or Constant	Description
authorization_policy_given_resource_descriptor	Object	Optionally required (see description)	Not applicable	<p>Required only if authorization_policy has the following value:</p> <ul style="list-style-type: none"> AUTHORIZE_WITH_AUTHORIZATION_POLICY_GIVEN_RESOURCE <p>This <i>object</i> specifies the resource whose permissions should be used to execute the function.</p> <p>See “authorization_policy_given_resource_descriptor” for details.</p>

AUTHORIZATION_POLICY_GIVEN_RESOURCE_DESCRIPTOR

resource_id	String	No	<auth_resource_ID>	<p>Specifies the resource ID of the authorized resource.</p> <p>If:</p> <p style="padding-left: 20px;">A resource_id value <i>is</i> specified</p> <p>Then:</p> <p style="padding-left: 20px;">All other parameters are ignored.</p> <p>Otherwise:</p> <p style="padding-left: 20px;">The other resource_descriptor parameters will be used to help identify the resource.</p>
-------------	--------	----	--------------------	--

Name	Data Type	Value Required?	Placeholder or Constant	Description
resource_login_id	String	No	<auth_resource_login_ID>	<p>Specifies the login ID of the authorized resource.</p> <p>If:</p> <p style="padding-left: 20px;">A resource_id value <i>is not</i> specified</p> <p style="padding-left: 20px;">-and if-</p> <p style="padding-left: 20px;">A resource_login_id value <i>is</i> specified</p> <p>Then:</p> <p style="padding-left: 20px;">All other parameters are ignored.</p> <p>Otherwise:</p> <p style="padding-left: 20px;">The other resource_descriptor parameters will be used to help identify the resource.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
resource_email	String	No	<auth_resource_email >	<p>Specifies the e-mail address of the authorized resource.</p> <p>If:</p> <ul style="list-style-type: none"> A resource_id value <i>is not</i> specified -and if- A resource_login_id value <i>is not</i> specified -and if- A resource_email value <i>is</i> specified <p>Then:</p> <p>All other parameters are ignored <i>unless</i> multiple resources use the same e-mail address.</p> <p>Otherwise:</p> <p>The other resource_descriptor parameters will be used to help identify the resource.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
resource_last_name	String	No	<auth_resource_last_name>	<p>Specifies the last name of the authorized resource.</p> <p>If:</p> <ul style="list-style-type: none"> A resource_id value <i>is not</i> specified -and if- A resource_login_id value <i>is not</i> specified -and if- A resource_email value <i>is not</i> specified, or multiple resources have the same e-mail address <p>Then:</p> <p>The combination of the resource_last_name and resource_first_name values are used to identify the resource.</p> <p>Otherwise:</p> <p>The resource cannot be found and an error results.</p>
resource_first_name	String	No	<auth_resource_first_name>	<p>Specifies the first name of the authorized resource.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
<i>RESOURCE_DESCRIPTOR</i>				
A value for at least one of the parameters must be provided.				
resource_id	String	No	<resource_ID>	<p>Specifies the resource ID of the resource.</p> <p>If:</p> <p style="padding-left: 20px;">A resource_id value <i>is</i> specified</p> <p>Then:</p> <p style="padding-left: 20px;">All other parameters are ignored.</p> <p>Otherwise:</p> <p style="padding-left: 20px;">The other resource_descriptor parameters will be used to help identify the resource.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
resource_login_id	String	No	<resource_login_ID>	<p>Specifies the login ID of the resource.</p> <p>If:</p> <p style="padding-left: 40px;">A resource_id value <i>is not</i> specified</p> <p style="padding-left: 40px;">-and if-</p> <p style="padding-left: 40px;">A resource_login_id value <i>is</i> specified</p> <p>Then:</p> <p style="padding-left: 40px;">All other parameters are ignored.</p> <p>Otherwise:</p> <p style="padding-left: 40px;">The other resource_descriptor parameters will be used to help identify the resource.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
resource_email	String	No	<resource_email>	<p>Specifies the e-mail address of the resource.</p> <p>If:</p> <ul style="list-style-type: none"> A resource_id value <i>is not</i> specified -and if- A resource_login_id value <i>is not</i> specified -and if- A resource_email value <i>is</i> specified <p>Then:</p> <p>All other parameters are ignored <i>unless</i> multiple resources use the same e-mail address.</p> <p>Otherwise:</p> <p>The other resource_descriptor parameters will be used to help identify the resource.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
resource_last_name	String	No	<resource_last_name>	<p>Specifies the last name of the resource.</p> <p>If:</p> <ul style="list-style-type: none"> A resource_id value <i>is not</i> specified -and if- A resource_login_id value <i>is not</i> specified -and if- A resource_email value <i>is not</i> specified, or multiple resources have the same e-mail address <p>Then:</p> <p>The combination of the resource_last_name and resource_first_name values are used to identify the resource.</p> <p>Otherwise:</p> <p>The resource cannot be found and an error results.</p>
resource_first_name	String	No	<resource_first_name>	<p>Specifies the first name of the resource.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
<i>PROJECT_DESCRIPTOR</i>				
All of the values can be NULL if you do not want to filter on the project.				
If you want to filter on a project, either the project_id and the project_name should be specified. If the project_id and the project_name are both NULL, the project will default to “Operations Project.” An error results if there is no project with the name “Operations Project.”				
project_id	String	No	<project_ID>	Specifies the ID for the project. If specified and there are no matches, an error results.
project_name	String	No	<project_name>	Specifies the name for the project. If: A project_id value <i>is not</i> specified -and if- A project_name value <i>is</i> specified Then: This data used to help identify the project. An error results if a match is not found.
project_manager	String	No	<project_manager>	Specifies the name of the manager of the project.

Name	Data Type	Value Required?	Placeholder or Constant	Description
project_status	String	No	<project_status>	<p>Specifies the status of the project.</p> <p>Valid values match those configured for your EnterpriseTrack application and there is no default value.</p> <p>Some <i>examples</i> of the status for are project are:</p> <ul style="list-style-type: none"> • Active • On Hold • Cancelled • Completed-Post Realization • Closed-In Realization
project_program	String	No	<project_program>	<p>Specifies the name of the program associated with the project.</p>
activity_descriptor	Object	Yes	Not applicable	<p>This <i>object</i> specifies the details of the activity.</p> <p>At least one value must be specified.</p> <p>See “activity_descriptor” for details.</p>
time_category_descriptor	Object	Yes	Not applicable	<p>This <i>object</i> specifies the category for the effort.</p> <p>See “time_category_descriptor” for details.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
<i>ACTIVITY_DESCRIPTOR</i>				
activity_id	String	Yes	<act_id>	<p>Specifies the activity ID to match.</p> <p>The value is <i>not</i> case sensitive.</p> <p>For internal activities, this corresponds to the EnterpriseTrack activity ID.</p> <p>For external activities, this corresponds to the unique ID assigned for the activities tracked outside of the EnterpriseTrack application.</p> <p>For miscellaneous activities, this corresponds to the Enterprise category name.</p> <p>An error results if no matching activity ID for the specified resource is found.</p>
activity_desc	String	No	<act_desc>	<p>Specifies the <i>external</i> activity description to match.</p> <p>For internal or miscellaneous activities, this can be NULL.</p> <p>For external activities, this should match the name of the activity assigned in the EnterpriseTrack application.</p>
role_descriptor	Object	Yes	Not applicable	<p>This <i>object</i> specifies the role.</p> <p>See “role_descriptor” for details.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
effort_descriptor	Object	Yes	Not applicable	This <i>object</i> specifies the effort details. See “effort_descriptor” for details.

ROLE_DESCRIPTOR

All of the values can be NULL if you do not want to filter on the role.

If the **role_id** and the **role_desc** are both NULL and the resource has multiple roles in the specified project, an error results.

role_id	String	No	<role_ID>	Specifies the role ID to match. An error results if no matching role ID for the specified resource is found.
role_desc	String	No	<role_desc>	Specifies the role description to match. An error results if no matching role description for the specified resource is found.

Name	Data Type	Value Required?	Placeholder or Constant	Description
<i>EFFORT_DESCRIPTOR</i>				
update_action_code	String	Yes	<action_code>	<p>Specifies how the values (for total_hours and overtime_hours) should be used.</p> <p>Valid values are:</p> <ul style="list-style-type: none">• REPLACE <p>Replace disregards the existing value and updates using the new value.</p> <ul style="list-style-type: none">• INCREMENT <p>Increment adds the new value to the existing value, then updates using the new sum.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
date	Date	Yes	<date>	<p>Specifies the date to be assigned to the effort.</p> <p>If:</p> <p style="padding-left: 20px;">The effort is tracked using EnterpriseTrack timesheets, then the effort will be revised for the specified date.</p> <p>Else if:</p> <p style="padding-left: 20px;">The effort is tracked as activities, then either:</p> <ul style="list-style-type: none"> • The effort will be revised for the week in which the date occurs. <p style="text-align: center;">-or-</p> <ul style="list-style-type: none"> • The date will be ignored, and the effort will be revised for that activity.
total_hours	Integer	Yes	<total_hrs>	<p>Specifies the number of non-overtime hours to include.</p> <p>See update_action_code for additional detail.</p>
overtime_hours	Integer	No	<ot_hrs>	<p>Specifies the number of overtime hours to include.</p> <p>See update_action_code for additional detail.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
notes	String	No	<notes>	<p>Specifies the remarks to be included with the effort.</p> <p>If:</p> <p style="padding-left: 40px;">Activities are tracked using EnterpriseTrack timesheets, the note will be appended to the timesheet notes.</p> <p>Otherwise:</p> <p style="padding-left: 40px;">The note will be appended to the activity comments.</p>

TIME_CATEGORY_DESCRIPTOR

time_category_desc	String	Optionally required (see description)	<time_cat>	<p>Required only if operation_type has one of the following values:</p> <ul style="list-style-type: none"> • NON_PROJECT • NON_WORKING_TIME <p>Specifies the description of the category.</p>
effort_descriptor	Object	Yes	Not applicable	<p>This <i>object</i> specifies the effort details.</p> <p>See “effort_descriptor” for details.</p>

INPUT EXAMPLE

The syntax for the UpdateResourceEffort data input parameters is as follows.

```
{
  "global_properties":
  {
    "api_version": "et-integration-api-1.0",
    "char_set": "<char_set>",
    "date_format": "<date_format>",
    "language": "<lang>"
  },
  "application_data":
  {
    "source_application_descriptor":
    {
      "source_app": "<source_App>",
      "source_ref_unique_id": "<source_ID>",
      "source_ref_description": "<source_desc>",
      "source_ref_type": "<source_type>"
    },
    "security_descriptor":
    {
      "authorization_policy": "<auth_policy>",
      "authorization_policy_given_resource_descriptor":
      {
        "resource_id": "<auth_resource_ID>",
        "resource_login_id": "<auth_resource_login_ID>",
        "resource_email": "<auth_resource_email>",
        "resource_first_name": "<auth_resource_last_name>",
        "resource_last_name": "<auth_resource_first_name>"
      }
    },
    "resource_descriptor":
    {
      "resource_id": "<resource_ID>",
      "resource_login_id": "<resource_login_ID>",
      "resource_email": "<resource_email>",
      "resource_first_name": "<resource_last_name>",
      "resource_last_name": "<resource_first_name>"
    },
    "project_descriptor":
    {
      "project_id": "<project_ID>",
      "project_name": "<project_name>",
      "project_manager": "<project_manager>",
      "project_status": "<project_status>",
      "project_program": "<project_program>",
      "activity_descriptor":
      {
        "activity_id": "<act_id>",
        "activity_desc": "<act_desc>",
        "role_descriptor":
        {
          "role_id": "<role_ID>",
          "role_desc": "<role_desc>"
        }
      }
    }
  }
}
```

```
    },
    "effort_descriptor":
    {
        "update_action_code": "<action_code>",
        "date": "<date>",
        "total_hours": "<total_hrs>",
        "overtime_hours": "<ot_hrs>",
        "notes": "<notes>"
    }
},
"time_category_descriptor":
{
    "time_category_desc": "<time_desc>",
    "effort_descriptor":
    {
        "update_action_code": "<action_code>",
        "date": "<date>",
        "total_hours": "<total_hrs>",
        "overtime_hours": "<ot_hrs>",
        "notes": "<notes>"
    }
}
},
"time_category_descriptor":
{
    "time_category_desc": "<time_desc>",
    "effort_descriptor":
    {
        "update_action_code": "<action_code>",
        "date": "<date>",
        "total_hours": "<total_hrs>",
        "overtime_hours": "<ot_hrs>",
        "notes": "<notes>"
    }
}
},
"operation_type": "<op_type>",
"test_mode": "<test_mode>"
}
}
```

This is an example with values for the placeholders.

```
{
  "global_properties":
  {
    "api_version": "et-integration-api-1.0",
    "char_set": "ISO-8859-1",
    "date_format": "yyyy/MM/dd",
    "language": "en"
  },
  "application_data":
  {
    "source_application_descriptor":
    {
      "source_app": "hp quality center",
      "source_ref_unique_id": "WEWEWWW1222",
      "source_ref_description": "this is related to new calls",
      "source_ref_type": "support call"
    },
    "security_descriptor":
    {
      "authorization_policy": "authorize_with_login_resource",
      "authorization_policy_given_resource_descriptor":
      {
        "resource_id": "",
        "resource_login_id": "",
        "resource_email": "",
        "resource_first_name": "don",
        "resource_last_name": "adams"
      }
    },
    "resource_descriptor":
    {
      "resource_id": "",
      "resource_login_id": "",
      "resource_email": "",
      "resource_first_name": "don",
      "resource_last_name": "adams"
    },
    "project_descriptor":
    {
      "project_id": "4",
      "project_name": "",
      "project_manager": "",
      "project_status": "",
      "project_program": "",
      "time_category_descriptor":
      {
        "time_category_desc": " ",
        "effort_descriptor":
        {
          "date": " ",
          "total_hours": " ",
          "overtime_hours": " ",
          "update_action_code": " ",
          "notes": " "
        }
      }
    }
  }
}
```

```
    },
    "activity_descriptor":
    {
      "activity_id": "JXHQDCCGSVHPC",
      "activity_desc": "new act",
      "role_descriptor":
      {
        "role_id": "",
        "role_desc": "Network Admin"
      }
    },
    "effort_descriptor":
    {
      "update_action_code": "INCREMENT",
      "date": "2012/10/11",
      "total_hours": "10.5",
      "overtime_hours": "5",
      "notes": "some notes"
    }
  },
  "operation_type": "EXTERNAL_ACTIVITY",
  "test_mode": "false"
}
}
```

OUTPUT PARAMETERS

The results of the UpdateResourceEffort function are provided in JSON data format. The following table details the name/value pairs.

Name	Data Type	Description
global_properties	Object	This <i>object</i> lists the global settings for your EnterpriseTrack instance. See “ <i>global_properties Object</i> ” for details.
application_data	Object	This <i>object</i> provides the results. See “ <i>application_data</i> ” for details.

APPLICATION_DATA

et_transaction_id	String	This is the unique EnterpriseTrack transaction ID that is stored in the audit tables.
result_code	String	Provides the result code for the completion status of the function.
result_reason	String	If the function is successful, NULL is returned. Otherwise, the reason for the error is returned.
project_descriptor	Object	This <i>object</i> contains the details of the project. See “ <i>project_descriptor</i> ” for details.
timesheet_descriptor	Object	This <i>object</i> contains the details of the timesheet. This is provided only if the effort is tracked using EnterpriseTrack timesheets. See “ <i>timesheet_descriptor</i> ” for details.

PROJECT_DESCRIPTOR

project_id	Integer	Provides the ID for the project.
project_name	String	Provides the name for the project.

Name	Data Type	Description
project_manager	String	Provides the name of the manager of the project.
project_status	String	<p>Provides the status of the project.</p> <p>Valid values match those configured for your EnterpriseTrack application and there is no default value.</p> <p>Some <i>examples</i> of the status for are project are:</p> <ul style="list-style-type: none"> • Active • On Hold • Cancelled • Completed-Post Realization • Closed-In Realization
project_program	String	Provides the name of the program associated with the project.
activity_descriptor	Object	<p>This <i>object</i> contains the details of an activity.</p> <p>See “activity_descriptor” for details.</p>
time_category_descriptor	Object	<p>This <i>object</i> contains the details of the time category of an activity.</p> <p>See “time_category_descriptor” for details.</p>

ACTIVITY_DESCRIPTOR

activity_id	String	Provides the ID of the activity.
activity_desc	String	Provides the description of the activity.
activity_total_effort	Integer	Provides the total number of hours (to date) for the activity.
activity_name	String	Provides the name of the activity.

TIME_CATEGORY_DESCRIPTOR

time_category_desc	String	Provides the description of the time category.
--------------------	--------	--

Name	Data Type	Description
effort_descriptor	Object	This <i>object</i> specifies the effort details. See “effort_descriptor” for details.

EFFORT_DESCRIPTOR

update_action_code	String	<p>Specifies how the values for total_hours and overtime_hours should be used.</p> <p>Valid values are:</p> <ul style="list-style-type: none"> • REPLACE Replace disregards the existing value and updates using the new value. • INCREMENT Increment adds the new value to the existing value, then updates using the new sum.
date	Date	<p>Specifies the date to be assigned to the effort.</p> <p>If:</p> <p style="padding-left: 40px;">The effort is tracked using EnterpriseTrack timesheets, then the effort will be revised for the specified date.</p> <p>Else if:</p> <p style="padding-left: 40px;">The effort is tracked as activities, then either:</p> <ul style="list-style-type: none"> • The effort will be revised for the week in which the date occurs. <p style="padding-left: 40px;">-or-</p> <ul style="list-style-type: none"> • The date will be ignored, and the effort will be revised for that activity.
total_hours	Integer	<p>Specifies the number of non-overtime hours to include.</p> <p>See update_action_code for additional detail.</p>
overtime_hours	Integer	<p>Specifies the number of overtime hours to include.</p> <p>See update_action_code for additional detail.</p>

Name	Data Type	Description
notes	String	<p>Specifies the remarks to be included with the effort.</p> <p>If:</p> <p style="padding-left: 40px;">Activities are tracked using EnterpriseTrack timesheets, the note will be appended to the timesheet notes.</p> <p>Otherwise:</p> <p style="padding-left: 40px;">The note will be appended to the activity comments.</p>

TIMESHEET_DESCRIPTOR

timesheet_id	String	Provides the ID of the activity.
timesheet_start_date	Date	Provides the start date of the activity.
timesheet_end_date	Date	Provides the end date of the activity.
timesheet_total_hours	Integer	Provides the total number of hours (to date) for the activity.
timesheet_overtime_hours	Integer	Provides the total number of overtime hours (to date) for the activity
timesheet_approver	String	Provides the name of the timesheet approver.

OUTPUT EXAMPLES

The syntax for the JSON formatted parameters from a successful UpdateResourceEffort function is similar to the following.

```
{
  "global_properties":
  {
    "char_set": "<some_character_set>",
    "date_format": "<some_date_format>",
    "language": "<some_language>",
    "api_version": "et-integration-api-1.0",
    "effort_unit": "<some_units_for_effort>"
  },
  "application_data":
  {
    "et_transaction_id": "<some_unique_ID>",
    "result_code": "<result_code>",
    "result_reason": "<result_reason>",
    "project_descriptor":
    {
      "project_id": "<project_ID>",
      "project_name": "<project_name>",
      "project_manager": "<manager_name>",
      "project_status": "<project_status>",
      "project_program": "<list_of_program_names>",
      "activity_descriptor":
      {
        "activity_name": "<activity_name>",
        "activity_id": "<activity_ID>",
        "activity_total_effort": "<total_effort>"
      }
    },
    "timesheet_descriptor":
    {
      "timesheet_id": "<timesheet_ID>",
      "timesheet_start_date": "<timesheet_start_date>",
      "timesheet_end_date": "<timesheet_end_date>",
      "timesheet_approver": "<timesheet_approver_name>",
      "timesheet_total_hours": "<total_hours>",
      "timesheet_overtime_hours": "<overtime_hours>"
    }
  }
}
```

UPDATEACTIVITY FUNCTION

The UpdateActivity function updates the activity data based on the details you specify in the input parameters.

INVOCATION PARAMETERS

The parameters for the invocation of the UpdateActivity function are described in the following table. Unless otherwise specified, all values are not case sensitive.

Name	Data Type	Placeholder or Constant	Description
api_name	String	updateactivity	Specifies the name of the Integration function.
input_type	String	JSON	Specifies the data format for the input parameters.
output_type	String	JSON	Specifies the data format for the output parameters.
input_data	String	<input_params>	Specifies the location of the input parameters. This value is case sensitive.

INVOCATION EXAMPLE

The syntax for the invocation of the UpdateActivity function is as follows.

```
<api_session>?api_name=updateactivity&input_type=JSON
&output_type=JSON&input_data=<input_params>
```

INPUT PARAMETERS

The input parameters described in the following table provide the search criteria (filter data) to identify the activity, as well as to specify the updated effort data you want to commit.

This information should be provided in the JSON formatted data specified by *<input_params>*. Unless otherwise specified, all values are not case sensitive.



This function includes a “test” feature (see **test_mode**) that allows you to verify that the information you include in the input parameters can be successfully committed. Since there is no mechanism to “roll back” invalid data, you are encouraged to “test” the data before actually committing any updates.

Name	Data Type	Value Required?	Placeholder or Constant	Description
global_properties	Object	Yes	Not applicable	This <i>object</i> specifies the global settings for your EnterpriseTrack instance. See “global_properties Object” for details.
application_data	Object	Yes	Not applicable	This <i>object</i> specifies the search criteria. See “application_data” for details.

APPLICATION_DATA

source_application_descriptor	Object	Yes	Not applicable	This <i>object</i> specifies the information you want stored in the audit table. See “source_application_descriptor” for details.
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Name	Data Type	Value Required?	Placeholder or Constant	Description
security_descriptor	Object	Yes	Not applicable	<p>This <i>object</i> specifies the authentication information to be verified.</p> <p>See “security_descriptor” for details.</p>
resource_descriptor	Object	Yes	Not applicable	<p>This <i>object</i> specifies the resource.</p> <p>An error results in the event a matching resource cannot be found.</p> <p>See “resource_descriptor” for details.</p>
project_descriptor	Object	Yes	Not applicable	<p>This <i>object</i> specifies the project details.</p> <p>See “project_descriptor” for details.</p>
operation_type	String	Yes	<op_type>	<p>Specifies the type of operation.</p> <p>Valid values are:</p> <ul style="list-style-type: none"> • INTERNAL_ACTIVITY • EXTERNAL_ACTIVITY
test_mode	Boolean	No	<test_mode>	<p>Indicates whether or not this invocation of this function is merely a test.</p> <p>Valid values are:</p> <ul style="list-style-type: none"> • TRUE • FALSE (default) <p>If test_mode is FALSE, then the updates <i>will be committed</i> in the EnterpriseTrack database.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
<i>SOURCE_APPLICATION_DESCRIPTOR</i>				
source_app	String	Yes	<source_App>	Specifies the name of the source application.
source_ref_unique_id	String	Yes	<source_ID>	Specifies the ID of the caller of the Integration function.
source_ref_description	String	Yes	<source_desc>	Specifies the description of the caller of the Integration function.
source_ref_type	String	Yes	<source_type>	Specifies the reference type of the caller of the Integration function.

Name	Data Type	Value Required?	Placeholder or Constant	Description
<i>SECURITY_DESCRIPTOR</i>				
authorization_policy	String	Yes	<auth_policy>	<p>Specifies the authorization policy to be used.</p> <p>Valid values are:</p> <ul style="list-style-type: none"> • AUTHORIZE_WITH_LOGIN_RESOURCE Execute using the permissions of the logged in Integration user. • AUTHORIZE_WITH_RECORD_LOCATOR_RESOURCE Execute using the permissions of the resource specified in resource_descriptor. • AUTHORIZE_WITH_AUTHORIZATION_POLICY_GIVEN_RESOURCE Execute using the permissions of the resource specified in authorization_policy_given_resource_descriptor.

Name	Data Type	Value Required?	Placeholder or Constant	Description
authorization_policy_given_resource_descriptor	Object	Optionally required (see description)	Not applicable	<p>Required only if authorization_policy has the following value:</p> <ul style="list-style-type: none"> AUTHORIZE_WITH_AUTHORIZATION_POLICY_GIVEN_RESOURCE <p>This <i>object</i> specifies the resource whose permissions should be used to execute the function.</p> <p>See “authorization_policy_given_resource_descriptor” for details.</p>

AUTHORIZATION_POLICY_GIVEN_RESOURCE_DESCRIPTOR

resource_id	String	No	<auth_resource_ID>	<p>Specifies the resource ID of the authorized resource.</p> <p>If:</p> <p style="padding-left: 20px;">A resource_id value <i>is</i> specified</p> <p>Then:</p> <p style="padding-left: 20px;">All other parameters are ignored.</p> <p>Otherwise:</p> <p style="padding-left: 20px;">The other resource_descriptor parameters will be used to help identify the resource.</p>
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Name	Data Type	Value Required?	Placeholder or Constant	Description
resource_login_id	String	No	<auth_resource_login_ID>	<p>Specifies the login ID of the authorized resource.</p> <p>If:</p> <p style="padding-left: 20px;">A resource_id value <i>is not</i> specified</p> <p style="padding-left: 20px;">-and if-</p> <p style="padding-left: 20px;">A resource_login_id value <i>is</i> specified</p> <p>Then:</p> <p style="padding-left: 20px;">All other parameters are ignored.</p> <p>Otherwise:</p> <p style="padding-left: 20px;">The other resource_descriptor parameters will be used to help identify the resource.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
resource_email	String	No	<auth_resource_email >	<p>Specifies the e-mail address of the authorized resource.</p> <p>If:</p> <ul style="list-style-type: none"> A resource_id value <i>is not</i> specified -and if- A resource_login_id value <i>is not</i> specified -and if- A resource_email value <i>is</i> specified <p>Then:</p> <p>All other parameters are ignored <i>unless</i> multiple resources use the same e-mail address.</p> <p>Otherwise:</p> <p>The other resource_descriptor parameters will be used to help identify the resource.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
resource_last_name	String	No	<auth_resource_last_name>	<p>Specifies the last name of the authorized resource.</p> <p>If:</p> <ul style="list-style-type: none"> A resource_id value <i>is not</i> specified -and if- A resource_login_id value <i>is not</i> specified -and if- A resource_email value <i>is not</i> specified, or multiple resources have the same e-mail address <p>Then:</p> <p>The combination of the resource_last_name and resource_first_name values are used to identify the resource.</p> <p>Otherwise:</p> <p>The resource cannot be found and an error results.</p>
resource_first_name	String	No	<auth_resource_first_name>	<p>Specifies the first name of the authorized resource.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
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RESOURCE_DESCRIPTOR

A value for at least one of the parameters must be provided.

resource_id	String	No	<resource_ID>	<p>Specifies the resource ID of the resource.</p> <p>If:</p> <p style="padding-left: 20px;">A resource_id value <i>is</i> specified</p> <p>Then:</p> <p style="padding-left: 20px;">All other parameters are ignored.</p> <p>Otherwise:</p> <p style="padding-left: 20px;">The other resource_descriptor parameters will be used to help identify the resource.</p>
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Name	Data Type	Value Required?	Placeholder or Constant	Description
resource_login_id	String	No	<resource_login_ID>	<p>Specifies the login ID of the resource.</p> <p>If:</p> <p style="padding-left: 20px;">A resource_id value <i>is not</i> specified</p> <p style="padding-left: 20px;">-and if-</p> <p style="padding-left: 20px;">A resource_login_id value <i>is</i> specified</p> <p>Then:</p> <p style="padding-left: 20px;">All other parameters are ignored.</p> <p>Otherwise:</p> <p style="padding-left: 20px;">The other resource_descriptor parameters will be used to help identify the resource.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
resource_email	String	No	<resource_email>	<p>Specifies the e-mail address of the resource.</p> <p>If:</p> <ul style="list-style-type: none"> A resource_id value <i>is not</i> specified -and if- A resource_login_id value <i>is not</i> specified -and if- A resource_email value <i>is</i> specified <p>Then:</p> <p>All other parameters are ignored <i>unless</i> multiple resources use the same e-mail address.</p> <p>Otherwise:</p> <p>The other resource_descriptor parameters will be used to help identify the resource.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
resource_last_name	String	No	<resource_last_name>	<p>Specifies the last name.</p> <p>If:</p> <p style="padding-left: 20px;">A resource_id value <i>is not</i> specified</p> <p style="padding-left: 20px;">-and if-</p> <p style="padding-left: 20px;">A resource_login_id value <i>is not</i> specified</p> <p style="padding-left: 20px;">-and if-</p> <p style="padding-left: 20px;">A resource_email value <i>is not</i> specified, or multiple resources have the same e-mail address</p> <p>Then:</p> <p style="padding-left: 20px;">The combination of the resource_last_name and resource_first_name values are used to identify the resource.</p> <p>Otherwise:</p> <p style="padding-left: 20px;">The resource cannot be found and an error results.</p>
resource_first_name	String	No	<resource_first_name>	<p>Specifies the first name.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
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PROJECT_DESCRIPTOR

All of the values can be NULL if you do not want to filter on the project.

If you want to filter on a project, either the **project_id** and the **project_name** should be specified. If the **project_id** and the **project_name** are both NULL, the project will default to “Operations Project.” An error results if there is no project with name **Operations Project**.

project_id	String	No	<project_ID>	Specifies the ID for the project. If specified and there are no matches, an error results.
project_name	String	No	<project_name>	Specifies the name for the project. If: A project_id value <i>is not</i> specified -and if- A project_name value <i>is</i> specified Then: This data used to help identify the project. An error results if a match is not found.
project_manager	String	No	<project_manager>	Specifies the name of the manager of the project.

Name	Data Type	Value Required?	Placeholder or Constant	Description
project_status	String	No	<project_status>	<p>Specifies the status of the project.</p> <p>Valid values match those configured for your EnterpriseTrack application and there is no default value.</p> <p>Some <i>examples</i> of the status for are project are:</p> <ul style="list-style-type: none"> • Active • On Hold • Cancelled • Completed-Post Realization • Closed-In Realization
project_program	String	No	<project_program>	<p>Specifies the name of the program associated with the project.</p>
activity_descriptor	Object	Yes	Not applicable	<p>This <i>object</i> specifies the details of the activity.</p> <p>At least one value must be specified.</p> <p>See “activity_descriptor” for details.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
<i>ACTIVITY_DESCRIPTOR</i>				
activity_id	String	Yes	<act_ID>	<p>Specifies the activity ID to match.</p> <p>The value is <i>not</i> case sensitive.</p> <p>For internal activities, this corresponds to the EnterpriseTrack activity ID.</p> <p>For external activities, this corresponds to the unique ID assigned for the activities tracked outside of the EnterpriseTrack application.</p> <p>For miscellaneous activities, this corresponds to the Enterprise category name.</p> <p>An error results if no matching activity ID for the specified resource is found.</p>
activity_percent_completion	Number	No	<act_percent>	Specifies the percentage completion of the activity.
status_descriptor	Object	No	Not applicable	<p>This <i>object</i> specifies the status of the activity.</p> <p>See “status_descriptor” for details.</p>

<i>STATUS_DESCRIPTOR</i>				
status_id	String	No	<act_ID>	Provides the ID of the status.
status_desc	String	No	<act_desc>	Provides the description of the status.

INPUT EXAMPLES

The syntax for the UpdateActivity data input parameters is as follows.

```
{
  "global_properties":
  {
    "api_version": "et-integration-api-1.0",
    "char_set": "<char_set>",
    "date_format": "<date_format>",
    "language": "<lang>"
  },
  "application_data":
  {
    "source_application_descriptor":
    {
      "source_app": "<source_App>",
      "source_ref_unique_id": "<source_ID>",
      "source_ref_description": "<source_desc>",
      "source_ref_type": "<source_type>"
    },
    "security_descriptor":
    {
      "authorization_policy": "<auth_policy>",
      "authorization_policy_given_resource_descriptor":
      {
        "resource_id": "<auth_resource_ID>",
        "resource_login_id": "<auth_resource_login_ID>",
        "resource_email": "<auth_resource_email>",
        "resource_last_name": "<auth_resource_last_name>",
        "resource_first_name": "<auth_resource_first_name>"
      }
    },
    "resource_descriptor":
    {
      "resource_id": "<resource_ID>",
      "resource_login_id": "<resource_login_ID>",
      "resource_email": "<resource_email>",
      "resource_last_name": "<resource_last_name>",
      "resource_first_name": "<resource_first_name>"
    },
    "project_descriptor":
    {
      "project_id": "<project_ID>",
      "project_name": "<project_name>",
      "project_manager": "<project_manager>",
      "project_status": "<project_status>",
      "project_program": "<project_program>",
      "activity_descriptor":
      {
        "activity_id": "<act_ID>",
        "activity_percent_completion": "<act_percent>",
        "status_descriptor":
        {
          "status_id": "<act_ID>",
          "status_desc": "<act_desc>"
        }
      }
    }
  }
}
```

```

    }
  },
  "operation_type": "<op_type>",
  "test_mode": "<test_mode>"
}
}

```

This is an example with values for the placeholders.

```

{
  "global_properties":
  {
    "api_version": "et-integration-api-1.0",
    "char_set": "ISO-8859-1",
    "date_format": "",
    "language": "en"
  },
  "application_data":
  {
    "source_application_descriptor":
    {
      "source_app": "hp quality center",
      "source_ref_unique_id": "WEWEWWW1222",
      "source_ref_description": "this is related to calls",
      "source_ref_type": "support call"
    },
    "security_descriptor":
    {
      "authorization_policy": "authorize_with_login_resource",
      "authorization_policy_given_resource_descriptor":
      {
        "resource_id": "JBCDQVW5QMV9F",
        "resource_login_id": "",
        "resource_email": "",
        "resource_first_name": "John",
        "resource_last_name": "Smith"
      }
    },
    "resource_descriptor":
    {
      "resource_id": "JBCDQVW5QMV9F",
      "resource_login_id": "",
      "resource_email": "",
      "resource_first_name": "",
      "resource_last_name": ""
    },
    "project_descriptor":
    {
      "project_id": "1",
      "project_name": "ExampleA",
      "activity_descriptor":
      {
        "activity_id": "JABC5V9JSF4SP",
        "activity_percent_completion": "38",
        "status_descriptor":
        {

```

```

        "status_id": "Closed",
        "status_desc": ""
    }
},
"operation_type": "INTERNAL_ACTIVITY",
"test_mode": "FALSE"
}
}

```

OUTPUT PARAMETERS

The results of the UpdateActivity function are provided in JSON data format. The following table details the name/value pairs.

Name	Data Type	Description
global_properties	Object	This <i>object</i> lists the global settings for your EnterpriseTrack instance. See “global_properties Object” for details.
application_data	Object	This <i>object</i> provides the results. See “application_data” for details.

APPLICATION_DATA

et_transaction_id	String	Provides the unique EnterpriseTrack transaction ID that is stored in the audit tables.
result_code	String	Provides the result code for the completion status of the function.
result_reason	String	If the function is successful, NULL is returned. Otherwise, the reason for the error is returned.
project_descriptor	Object	This <i>object</i> provides the details of the project. See “project_descriptor” for details.

PROJECT_DESCRIPTOR

project_id	Integer	Provides the ID for the project.
project_name	String	Provides the name for the project.

Name	Data Type	Description
project_manager	String	Provides the name of the manager of the project.
project_status	String	Provides the status of the project.
project_program	String	Provides the names of the programs associated with the project.
activity_descriptor	Object	This <i>object</i> contains the details of an activity. See “activity_descriptor” for details.

ACTIVITY_DESCRIPTOR

activity_id	String	Provides the ID for the activity.
activity_name	String	Provides the name of the activity.
activity_status	String	Provides the status of the activity.
activity_percent_completion	Number	Provides the percentage completion of the activity.
activity_actual_start_date	Date	Provides the actual start date of the activity.
activity_actual_end_date	Date	Provides the actual end date of the activity.

OUTPUT EXAMPLE

This is an example of the JSON formatted parameters from a successful UpdateActivity function.

```
{
  "global_properties":
  {
    "api_version": "et-integration-api-1.0",
    "char_set": "ISO-8859-1",
    "date_format": "MMM/dd/yyyy",
    "language": "en",
    "effort_unit": "hours"
  },
  "application_data":
  {
    "et_transaction_id": "JCDEJ58N2QMKW",
    "result_code": "SUCCESS",
    "result_reason": "",
    "project_descriptor":
    {
      "project_id": "1",
      "project_name": "it_test",
      "project_manager": "john, smith",
      "project_status": "Active",
      "project_program": "",
      "activity_descriptor":
      {
        "activity_id": "JEFGRC SKL3DTH",
        "activity_name": "Rollout Project Preparation",
        "activity_status": "Open",
        "activity_percent_completion": "63",
        "activity_actual_start_date": "",
        "activity_actual_end_date": ""
      }
    }
  }
}
```

GETFINANCEDATA FUNCTION

The GetFinanceData function fetches the data that is equivalent to the “Project Finances Element Monthly Detail Report” and corresponds to the search criteria (filter data) you specify in the input parameters.

INVOCATION PARAMETERS

The parameters for the invocation of the GetFinanceData function are described in the following table. Unless otherwise specified, all values are not case sensitive.

Name	Data Type	Placeholder or Constant	Description
api_name	String	getfinancedata	Specifies the name of the Integration function.
output_type	String	<output_type>	Specifies the data format for the output parameters. Valid values are: <ul style="list-style-type: none"> • CSV • XLS
input_data	String	<input_params>	Specifies the location of the input parameters. This value is case sensitive.

INVOCATION EXAMPLE

The syntax for the invocation of the GetFinanceData function is as follows.

```
<api_session>?api_name=getfinancedata&output_type=<output_type>
&input_data=<input_params>
```

INPUT PARAMETERS

The input parameters described in the following table provide the search criteria (filter data) needed to identify the data you want.

This information should be provided in the JSON formatted data specified by *<input_params>*. Unless otherwise specified, all values are not case sensitive.

Name	Data Type	Value Required?	Placeholder or Constant	Description
global_properties	Object	Yes	Not applicable	This <i>object</i> lists the global settings for your EnterpriseTrack instance. See “global_properties Object” for details.
application_data	Object	Yes	Not applicable	This <i>object</i> lists the search criteria and provides the results. See “application_data” for details.

APPLICATION_DATA

pcs	String	No	<i><pcs></i>	Specifies the initiative attribute for the project.
project_id	Integer	No	<i><project_ID></i>	Specifies the project ID.
project_name	String	No	<i><project_name></i>	Specifies the project name.
project_keyword	String	No	<i><project_keyword></i>	Specifies a keyword associated for the project.
project_status	String	No	<i><project_status></i>	Specifies one (or more) status values for the project. Multiple values should be separated by commas.

Name	Data Type	Value Required?	Placeholder or Constant	Description
project_on_time_status	String	No	<project_on_time_status>	Specifies one (or more) status values for the project. Multiple values should be separated by commas.
project_org_descriptor	Object	No	Not applicable	This <i>object</i> specifies the organization information. See “project_org_descriptor” for details.
project_start_date_from	Date	No	<start_from>	Specifies the beginning date for the range of start dates. This filters on actual (if present) or planned activity date.
project_start_date_to	Date	No	<start_to>	Specifies the beginning date for the range of start dates. This filters on actual (if present) or planned activity dates.
planned_realization_date_from	Date	No	<end_from>	Specifies the beginning date for the range of end dates. This filters on actual (if present) or planned activity dates.
planned_realization_date_to	Date	No	<end_to>	Specifies the ending date for the range of end dates. This filters on actual (if present) or planned activity dates.
project_classification_descriptor	Object	No	Not applicable	This <i>object</i> specifies the project classification. See “project_classification_descriptor” for details.

Name	Data Type	Value Required?	Placeholder or Constant	Description
project_methodology_descriptor	Object	No	Not applicable	<p>This <i>object</i> specifies the project methodology.</p> <p>See “project_methodology_descriptor” for details.</p>
program	String	No	<program>	<p>Restricts the search to include only those projects in this program.</p>
finance_detail_level	String	No	<detail_level>	<p>Specifies the level of finance elements to report.</p> <p>Valid values are:</p> <ul style="list-style-type: none"> • Total (default) • Group • Category • Element
show_upper_levels	Boolean	No	<show_levels>	<p>If finance_detail_level has a value of Category, this indicates whether or not to include the group in the report.</p> <p>Value values are:</p> <ul style="list-style-type: none"> • TRUE (default) • FALSE
rpt_currency	String	No	<currency>	<p>Specifies the type of currency to use.</p> <p>The default is USD.</p>
fin_templates	String	No	<template>	<p>Specifies one (or more) finance templates to use.</p> <p>Multiple values should be separated by commas.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
finance_date_range_from	Date	No	<range_from>	Specifies the beginning date for the finance data that is to be reported.
finance_date_range_to	Date	No	<range_to>	Specifies the ending date for the finance data that is to be reported.
finance_dataset	String	No	<dataset>	<p>Specifies which data stream should be considered.</p> <p>Valid values are:</p> <ul style="list-style-type: none"> • CURRENT (default) • PLAN
finance_snapshot_name	String	No	<snapshot>	<p>If finance_dataset has a value of PLAN, this specifies the name of the finance snapshot that should be used for the report.</p>
starting_month	Date	No	<start_mo>	<p>Specifies the beginning month to be shown in the month-by-month breakdown.</p> <p>The default is the beginning of the <i>previous</i> fiscal year.</p>
no_of_months	Integer	No	<num_mo>	<p>Specifies the number of months to be included in the month-by-month breakdown.</p> <p>The default is 36.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
<i>PROJECT_ORG_DESCRIPTOR</i>				
division	String	No	<division>	<p>Specifies one (or more) level 1 fields configured for the project hierarchy.</p> <p>Multiple values should be separated by commas.</p>
business_unit	String	No	<bus_unit>	<p>Specifies one (or more) level 2 fields configured for the project hierarchy.</p> <p>Multiple values should be separated by commas.</p>
sub_business_unit	String	No	<sub_unit>	<p>Specifies one (or more) level 3 fields configured for the project hierarchy.</p> <p>Multiple values should be separated by commas.</p>
location	String	No	<location>	<p>Specifies one (or more) level 4 fields configured for the project hierarchy.</p> <p>Multiple values should be separated by commas.</p>
region	String	No	<region>	<p>Specifies one (or more) level 5 fields configured for the project hierarchy.</p> <p>Multiple values should be separated by commas.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
<i>PROJECT_CLASSIFICATION_DESCRIPTOR</i>				
project_source	String	No	<proj_source>	<p>Specifies one or more project sources for the the associated <i>initiative</i>.</p> <p>Multiple values should be separated by commas.</p>
functional_area	String	No	<proj_area>	<p>Specifies one or more functional areas for the associated <i>initiative</i>.</p> <p>Multiple values should be separated by commas.</p>
products	String	No	<products>	<p>Specifies one or more products for the the associated <i>initiative</i>.</p> <p>Multiple values should be separated by commas..</p>
process	String	No	<process>	<p>Specifies one or more processes for the the associated <i>initiative</i>.</p> <p>Multiple values should be separated by commas.</p>
<i>PROJECT_METHODODOLOGY_DESCRIPTOR</i>				
phase_type	String	No	<phase_type>	<p>Specifies one (or more) top level activities configured for the associated <i>initiative</i>.</p> <p>This field is dependent on the initiative and will be ignored is the initiative is NULL.</p> <p>Multiple values should be separated by commas.</p>

Name	Data Type	Value Required?	Placeholder or Constant	Description
project_type	String	No	<proj_type>	<p>Specifies one (or more) project types configured for the associated <i>initiative</i>.</p> <p>This field is dependent on the initiative and will be ignored is the initiative is NULL.</p> <p>Multiple values should be separated by commas.</p>
roadmap	String	No	<roadmap>	<p>Specifies one (or more) roadmaps configured for the associated <i>initiative</i>.</p> <p>This field is dependent on the initiative and will be ignored is the initiative is NULL.</p> <p>Multiple values should be separated by commas.</p>

INPUT EXAMPLES

The syntax for the GetFinanceData data input parameters is as follows.

```
{
  "global_properties":
  {
    "char_set": "<char_set>",
    "date_format": "<date_format>",
    "language": "<lang>"
    "api_version": "et-integration-api-1.0",
  },
  "application_data":
  {
    "pcs": "<pcs>",
    "project_id": "<project_ID>",
    "project_name": "<project_name>",
    "project_keyword": "<project_keyword>",
    "project_status": "<project_status>",
    "project_on_time_status": "<project_one_time_status>",
    "project_org_descriptor":
    {
      "division": "<division>",
      "business_unit": "<bus_unit>",
      "sub_business_unit": "<sub_unit>",
      "location": "<location>",
      "region": "<region>"
    },
    "project_start_date_from": "<start_from>",
    "project_start_date_to": "<start_to>",
    "planned_realization_date_from": "<end_from>",
    "planned_realization_date_to": "<end_to>",
    "project_classification_descriptor":
    {
      "project_source": "<proj_source>",
      "functional_area": "<proj_area>",
      "products": "<products>",
      "process": "<process>"
    },
    "project_methodology_descriptor":
    {
      "phase_type": "<phase_type>",
      "project_type": "<proj_type>",
      "roadmap": "<roadmap>"
    },
    "program": "<program>",
    "finance_detail_level": "<detail_level>",
    "show_upper_levels": "<show_levels>",
    "rpt_currency": "<currency>",
    "fin_templates": "<template>",
    "finance_date_range_from": "<range_from>",
    "finance_date_range_to": "<range_to>",
    "finance_dataset": "<dataset>",
    "finance_snapshot_name": "<snapshot>",
    "starting_month": "<start_mo>",
    "no_of_months": "<num_mo>"
  }
}
```

```

    }
  }
}

```

This is an example with values for the placeholders.

```

{
  "global_properties":
  {
    "char_set": "utf-8",
    "date_format": "yyyy/MM/dd",
    "language": "en",
    "api_version": "et-integration-api-1.0",
  },
  "application_data":
  {
    "pcs": "it",
    "project_id": "1",
    "project_name": "",
    "project_keyword": "",
    "project_status": "",
    "project_on_time_status": "",
    "project_org_descriptor":
    {
      "division": "",
      "business_unit": "",
      "sub_business_unit": "",
      "location": "",
      "region": ""
    },
    "project_start_date_from": "",
    "project_start_date_to": "",
    "planned_realization_date_from": "",
    "planned_realization_date_to": "",
    "project_classification_descriptor":
    {
      "project_source": "",
      "functional_area": "",
      "products": "",
      "process": ""
    },
    "project_methodology_descriptor":
    {
      "phase_type": "",
      "project_type": "",
      "roadmap": ""
    },
    "program": "",
    "finance_detail_level": "TOTAL",
    "show_upper_levels": "TRUE",
    "rpt_currency": "",
    "fin_templates": "",
    "finance_date_range_from": "",
    "finance_date_range_to": "",
    "finance_dataset": "CURRENT",
    "finance_snapshot_name": "PLAN",
    "starting_month": "",
  },
}

```

```
    "no_of_months": "12"  
  }  
}
```

OUTPUT PARAMETERS

The output of the GetFinanceData function is provided in a file that uses either CSV or XLS data format.

OUTPUT EXAMPLE

The CSV and XLS files from a successful GetFinanceData function provide the data as two rows of data. The first row provides the names of the fields in the report, and the second row provides the values for the corresponding fields.

An exceptionally simplified excerpt from a CSV file is as follows:

```
Project Id,Project Name,Initiative,Project Status,...,Mar/2013,Apr/2013  
4,COST_Basic_External,IT,Active,... 0.00,0.00
```

PRECONFIGURED REMOTE REPORTS

The EnterpriseTrack application includes a collection of advanced reports that extract data to be used for integration purposes. This data can be used periodically, and programmatically, to import EnterpriseTrack updates to other third-party applications such as PeopleSoft, Oracle, Asset Management, ITSM systems, and so forth.

Several formats for the report output are supported, including Microsoft Excel, PDF and CSV.

INVOCATION

The syntax for the invocation of the Remote Reports is as follows.

```
https://<server>/SiteWand/Submission/<account_name>/etws/ReportRPC?
login_id=<login_id>&report_name=<report_path>
```

where:

Placeholder	Description
<server>	Specifies the IP address or hostname of the server hosting your EnterpriseTrack instance.
<account_name>	Specifies the account name (or company name) of your EnterpriseTrack instance.
<login_id>	Specifies your EnterpriseTrack login ID. The case sensitivity for this value conforms to that used by your EnterpriseTrack system.
<pwd>	Specifies the password corresponding to your EnterpriseTrack login ID. The case sensitivity for this value conforms to that used by your EnterpriseTrack system.
<report_path>	Specifies the path for the report output. The case sensitivity for this value conforms to that used by your EnterpriseTrack system.



The /SiteWand/Submission portion of the URL *is* case sensitive. Unless otherwise noted, all other text in the URL *is not* case sensitive.

This is an example with values for the placeholders.

```
https://ABC.example.com/SiteWand/Submission/CompanyDEF/etws/ReportRPC?  
login_id=jSmith&report_name=/Reports/Global/Reports/  
Listing Reports/Idea Listing
```

INPUT

Parameters cannot be passed to customize or filter the reports at the time of execution. The report should be set up with proper default filters prior to the execution of the Remote Report.

OUTPUT

The output of the function call is a stream of content type determined by the report's output. If the report output is HTML, then the output is a text/html stream. If the report output is Excel, then the output is a binary stream of content type application/vnd.ms-excel.



Parameters cannot be passed for this functionality. The report(s) should be set up with the desired default filters prior to the execution of this function.

APPENDIX A

STATUS MESSAGE DETAILS

Once an Integration function completes, one of the following messages is provided. For your convenience, the table is sorted alphabetically based on the `result_code` included in the output from the Integration function.

Result Code	Result Reason	Description	Corrective Action
ERR_APPROVED_TIMESHEET_EXISTS	Once a timesheet has been approved, no updates can be made.	Timesheet already approved	From an interactive EnterpriseTrack session, re-open the timesheet. Then the update can be made from either an interactive session or using the Integration API.
ERR_AUTHENTICATION	You specified invalid login information.	Login failed	Specify valid (case-sensitive) values for both of the following:
	Login ID is required. Please provide a value.	Login ID required	<ul style="list-style-type: none">• <code>user_login_id=<login_id></code>• <code>password=<pwd></code>

Result Code	Result Reason	Description	Corrective Action
ERR_AUTHENTICATION (continued)	Password is required. Please provide a value.	Password required	Specify valid (case-sensitive) values for both of the following: <ul style="list-style-type: none"> • user_login_id=<login_id> • password=<pwd>
	The login ID/password combination is not valid. Please try again.	Password expired	Reset or obtain a new password.
	Unauthorized access to the integrate-dispatcher.	Not logged in	Verify that you are logged in successfully before executing the API.
	Unauthorized access to the execute report.		

ERR_AUTHORIZATION_POLICY	Authorization policy cannot be blank.	Authorization policy required	Specify one of the following values: <ul style="list-style-type: none"> • authorize_with_login_resource • authorize_with_record_locator_resource • authorize_with_authorization_policy_given_resource
	The authorization policy code passed is invalid, it should have the value as "authorize_with_login_resource", "authorize_with_record_locator_resource", or "authorize_with_authorization_policy_given_resource".	Invalid authorization policy	
	The user credentials (provided in Authorization_Policy_User_Source) do not match to any existing user in the system.	Could not authorize user	Specify valid (case-sensitive) values for both of the following: <ul style="list-style-type: none"> • user_login_id=<login_id> • password=<pwd>

ERR_AUTHORIZATION_POLICY (continued)	The user credentials provided does not have permission to Execute APIs as Proxy.	Insufficient permission for authorized user	Obtain the necessary permission(s).
	In case of timesheet operation, the authorization resource should be same as resource whose effort is being updated.	Users did not match	Log in with the credentials of the resource whose effort is being updated .
ERR_BLANK_WORK_ASSIGNMENT_DESC	The activity name is missing.	Activity name required	Specify a value for activity name.
ERR_BLANK_WORK_ASSIGNMENT_ID	The external work assignment ID is missing.	External work assignment ID required	Specify a value for external work assignment ID.
ERR_BLANK_WORK_ASSIGNMENT_TYPE	The activity type is missing.	Activity type required	Specify a value for activity type.
ERR_CANNOT_ASSIGN_RESOURCE_AS_ACTIVITY_OWNER	Resource can not be assign as activity owner due to allowed role restriction for this activity.	Unable to assign given resource as activity owner.	Verify that the resource role has the necessary permission(s). -or- Retry with different role and resource.

ERR_INVALID_ACTIVITY_PERCENT_COMPLETION	The activity percent completion should have a valid numeric value between 0 and 100.	Invalid activity percent completion value	Verify that you specified an integer or floating point value between 0 and 100 (inclusive).
ERR_INVALID_ACTIVITY_STATUS	The activity status passed is not valid.	Invalid activity status	Determine what values are configured for your EnterpriseTrack application. Then, specify one of the configured values.
ERR_INVALID_AET_FOR_ACTIVITY	The activity AET should be one of Timesheet, Resource Level (Detail), or Resource Level (Summary).	Invalid activity effort type	Specify one of the following values: <ul style="list-style-type: none"> • Timesheet • Resource Level (Detail) • Resource Level (Summary)

ERR_INVALID_API	The Integration function name that you specified is not valid.	Invalid function name	<p>If you have not successfully logged in, all function names (other than Login) are considered invalid.</p> <p>If your login has succeeded, specify one of the following values:</p> <ul style="list-style-type: none"> • Logout • GetActivityAssignments • UpdateResourceEffort • UpdateActivity • GetFinanceData
	Integration function name is required. Please provide a value.	API function name required	
ERR_INVALID_API_VERSION	The API version information you specified is not supported.	Invalid API version number	<p>Specify the following value:</p> <ul style="list-style-type: none"> • et-integration-api-1.0
	API version is missing. Please provide valid API version.	API version required	
ERR_INVALID_BUSINESS_SUB_UNIT	The values given for project {businessUnitUIName} field are not valid.	Invalid business subunit	Specify a valid business subunit.
ERR_INVALID_BUSINESS_UNIT	The values given for project {businessUnitUIName} field are not valid.	Invalid business unit	Specify a valid business unit.

ERR_INVALID_CONFIG	The API '{api_name}', does not have any configured permission.	Invalid permission	Obtain the necessary permission(s).
ERR_INVALID_CONFIG_ACTIVITY_TYPE	The associated project initiative does not have the activity type configured as "EXTERNAL_WA."	No matching external work assignment	Contact your EnterpriseTrack administrator and request that the application be configured to allow integration activities.
	The work assignment type passed is invalid. It should have the value as INTERNAL or EXTERNAL.	Invalid work assignment type	Contact your EnterpriseTrack administrator and request that the application be configured to allow integration activities.
ERR_INVALID_DATA	The format of your JSON data is not correct.	Invalid data format	Verify that: <ul style="list-style-type: none"> • The format you specified corresponds to the format of the data you provided. • The format of the data you provided conforms to the standard for that format. • You have actually provided data, or included enough data to identify a unique result.
	Input data is required. Please provide a value.	Input data required	
	The information provided did not identify a unique category for timesheet data.	More category data required	
	Invalid location for char-set. It should be first attribute in global-properties	Invalid char-set location	

ERR_INVALID_DATA (continued)	Invalid char_set. System supports the format: {encoding_format }	Unsupported char-set	Verify that: <ul style="list-style-type: none"> • The format you specified corresponds to the format of the data you provided. • The format of the data you provided conforms to the standard for that format. • You have actually provided data, or included enough data to identify a unique result.
ERR_INVALID_DATE	The date cannot be blank.	Date required	Specify a a value for the date.
ERR_INVALID_DATE_FORMAT	The format of the data you provided does not correspond to the format specified in the global_properties object.	Invalid date format	Verify that the format you specified corresponds to the format of the data you provided.
	The date format cannot be blank.	Date format required	Specify a value for the date format.

ERR_INVALID_DATE_PERIOD	Data cannot be entered for the week earlier than project start week.	Date before project start date	Verify that the: <ul style="list-style-type: none"> • Date is not earlier than the project start date. • Date is not after the project realization date.
	Data cannot be entered for the week later than project realization week.	Date after project realization date	
ERR_INVALID_DIVISION	The values given for project {divisionUIName} field are not valid.	Invalid division	Specify a valid division.
ERR_INVALID_FUNCTIONAL_AREA	The values given for project {functionalAreaUIName} field are not valid.	Invalid functional area	Specify a valid functional area.
ERR_INVALID_INCLUDE_CLOSED_WA	The include closed work assignment (include_closed_wa) passed is invalid. It should have the value of TRUE or FALSE.	Invalid include closed work assignment	Specify one of the following values: <ul style="list-style-type: none"> • TRUE • FALSE
ERR_INVALID_INCLUDE_EXTERNAL_WA	The include external work assignment (include_external_wa) passed is invalid. It should have the value of TRUE or FALSE.	Invalid include external work assignment	

ERR_INVALID_LANGUAGE	The language ID passed is not supported.	Invalid language ID	Specify a valid language ID.
ERR_INVALID_LOCATION	The values given for project {locationUIName} field are not valid.	Invalid location	Specify a valid location.
ERR_INVALID_MAX_ROWS	The data provided for input max rows is not a valid number.	Invalid max rows	Verify that the max rows value is a positive integer
ERR_INVALID_OPERATION_TYPE	The Work Assignment type passed is invalid, it should have the value as INTERNAL or EXTERNAL.	Invalid work assignment type	Specify one of the following values: <ul style="list-style-type: none"> • INTERNAL • EXTERNAL
	The work assignment type passed is invalid. It should have the value of INTERNAL, EXTERNAL, PROJECT_TIME_CATEG, NON_PROJECT_TIME_CATEG, or NON_WORKING_TIME_CATEG.	Invalid work assignment type	Specify one of the following values: <ul style="list-style-type: none"> • INTERNAL • EXTERNAL PROJECT_TIME_CATEG • NON_PROJECT_TIME_CATEG • NON_WORKING_TIME_CATEG

ERR_INVALID_OVERTIME_HOURS	Overtime hours is invalid. Please provide only positive numbers.	Invalid overtime hours format	Verify that: <ul style="list-style-type: none"> • The value for the number of hours is a positive integer. • Overtime hours do not exceed the total hours.
	The number of overtime hours cannot exceed the number of total hours.	Overtime hours exceed total hours	
ERR_INVALID_PCS	The values given for project "PCS" field are not valid.	Invalid PCS	Specify a valid PCS.
ERR_INVALID_PHASE	The values given for project {phaseUIName} field are not valid.	Invalid phase	Specify a valid phase.
ERR_INVALID_PROCESS	The values given for project {processUIName} field are not valid.	Invalid process	Specify a valid process.
ERR_INVALID_PRODUCTS	The values given for project {productUIName} field are not valid.	Invalid product(s)	Specify a valid product(s).
ERR_INVALID_PROJECT	The project information you specified does not match any existing project.	No matching project found	Verify that all information you specified corresponds to an existing project.

ERR_INVALID_PROJECT_ON_TIME_STATUS	The values given for project on time status field are not valid.	Invalid project on time status	Specify a valid project on time status.
ERR_INVALID_PROJECT_SOURCE	The values given for project {projectSourceUIName} field are not valid.	Invalid project source	Specify a valid project source.
ERR_INVALID_PROJECT_STATUS	The values given for project status field are not valid.	Invalid status	Determine what values are configured for your EnterpriseTrack application. Then, specify one of the configured values.
ERR_INVALID_PROJECT_TYPE	The values given for project type field are not valid.	Invalid project type	Specify a valid project type.
ERR_INVALID_REGION	The values given for project {regionUIName} field are not valid.	Invalid region	Specify a valid region.
ERR_INVALID_RESOURCE	The resource information you specified does not match any existing resource.	No matching resource found	Verify that all information you specified corresponds to an existing resource.
ERR_INVALID_ROADMAP	The values given for project {roadmapUIName} field are not valid.	Invalid roadmap	Specify a valid roadmap.

ERR_INVALID_ROLE	The role information you specified does not match any existing role.	No matching role found	Verify that all information you specified corresponds to an existing role
ERR_INVALID_TEAM_MEMBER	The combination of role and resource information you specified cannot be matched.	No match found for this combination of role and resource	Verify that all information you specified exists for the resource you specified.
ERR_INVALID_TOTAL_HOURS	Total hours is invalid. Please provide only positive numbers.	Invalid total hours format	Verify that the value for the number of hours is a positive integer.
ERR_INVALID_TOTAL_OVERTIME_HOURS	The data provided for the total or overtime hours is not an integer	Invalid total overtime hours format	Verify that the value for the number of hours is a positive integer.
ERR_INVALID_UPDATE_ACTION_CODE	The update action code that you specified is not supported.	Invalid update action code	Specify one of the following values: <ul style="list-style-type: none"> • REPLACE • INCREMENT
ERR_NO_DATA_TO_UPDATE	Both percent completion and activity status cannot be blank.	No data to update	Specify values for the percent completion and activity status.
ERR_NON_EXISTING_ACTIVITY	The activity ID you specified does not exist	Activity ID not found	Verify that you have specified a valid activity ID.

ERR_PERMISSION	Your credentials do not include permission to perform revisions to one (or more) of the following : <permission_name>	Insufficient permission.	Obtain the necessary permission(s) from your EnterpriseTrack administrator.
ERR_PROJECT_CLOSED	The current project status does not allow this operation.	Project closed.	Verify that you specified an Open (or equivalent) project.
ERR_PROJECT_LOCKED	Updates are not allowed on this project since it has been locked for MS Project updates.	Project locked for MSP update	Once the synchronization is complete, you can try again.
ERR_RESOURCE_NOT_ACTIVITY_OWNER	The work assignment you specified is assigned to a different resource.	Resource not assigned to this activity	Verify that the activity you specified is assigned to the resource you specified.

ERR_TIMESHEET_ENTRY_NOT_ALLOWED	Timesheets are not enabled for this resource.	Timesheet disabled for this resource	Verify that timesheets are enabled for the resource.
	A manager is not assigned to the resource, therefore timesheets cannot be created.	Manager not assigned to resource	From an interactive EnterpriseTrack session, assign a manager to the resource, then try again.
	Timesheets are not enabled for this resource.	Resource cannot enter timesheet	From an interactive EnterpriseTrack session, enable the Can enter timesheet option for this resource or the project team.
	The user does not have adequate permission to enter Non Project/Non Working Time.	The user does not have permission for Non Project/Non Working Time	Obtain the necessary permission(s).
	The resource does not have permission to enter project level time.	Insufficient permission	Obtain the necessary permission(s).

ERR_TIMESHEET_ENTRY_NOT_ALLOWED (continued)	Your credentials do not include permission to either create or edit timesheets for this resource.	Insufficient permission	Obtain the necessary permission(s).
	The resource does not have permission to enter activity level time.	Insufficient permission	Obtain the necessary permission(s).
ERR_TIMESHEET_EXCESS_HOURS	The number of hours cannot exceed the daily limit configured in the EnterpriseTrack application.	Number of hours exceeds daily limit	Verify the: <ul style="list-style-type: none"> • Number of hours currently reported for the resource • Maximum number of hours configured for your EnterpriseTrack instance
ERR_UNSUPPORTED_INPUT_FORMAT	The input format that you specified is not supported.	Invalid input format	Specify a valid data format for the following: <ul style="list-style-type: none"> • <code>input_type=<in_type></code> See the function documentation for supported formats.
	Input type is required. Please provide a value.	Input format required	Specify a value for the input type.

ERR_UNSUPPORTED_OUTPUT_FORMAT	The output format that you specified is not supported.	Invalid output format	Specify a valid data format for the following: <ul style="list-style-type: none"> • output_type=<out_type> See the function documentation for supported formats.
	Output type is required. Please provide a value.	Output format required	Specify a value for the output type.
ERR_UPDATE_ACTIVITY	(Message corresponds to that found in the EnterpriseTrack UI.)	Failed to update activity	Follow the recommendation.
ERR_WORK_ASSIGNMENT_LOCKED	Updates are permitted only to Open work assignments.	Closed work assignment	Verify that you have specified a work assignment that is open (or the equivalent).
SUCCESS	(Null)	Successful execution of Integration function.	No action required.
SYSTEM_ERROR	Operation has failed. Contact the system administrator.	Unexpected system error	Please contact system administrator.