

Ivanti Automation Quick Start Guide for Ivanti Endpoint Manager Connector







1.0.0

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Chapter 1: Introduction

The Ivanti Automation connector for Ivanti Endpoint Manager provides Automation tasks to allow the administrator to create and manage automated workflows of Endpoint tasks including software and patch workloads. The connector task could be combined with other built in Automation tasks to provide comprehensive automated workflows.

-  Ivanti Endpoint Manager Device ([List All](#))
-  Ivanti Endpoint Manager Package ([Install](#), [List All](#), [Get ID](#), [Get Name](#))
-  Ivanti Endpoint Manager Settings ([List Patch & Distribution Settings](#), [List Reboot Settings](#))
-  Ivanti Endpoint Manager task ([New](#), [Execute](#), [Schedule](#), [Add Targets](#), [Delete](#), [List All](#), [Get ID](#), [Get Name](#))

A working knowledge of Ivanti Automation & Endpoint Manager is required. For more information on creating Ivanti Automation modules and runbooks refer to the Automation online help and Administration guides.

Chapter 2: Installing the Connector

1. Download the connector from the Ivanti Marketplace. Use the filter on the left side of the Marketplace home page to narrow your search.
2. Download the Automation connector importer utility from [here](#).
3. Launch the installer and follow connector installation steps.
4. Once installed open the Ivanti Automation console → Setup → Add-ons
Confirm that Ivanti Automation Connector for Ivanti Endpoint Manager is listed.

Chapter 3: Prerequisites

To be able to use the Connector for Ivanti Endpoint Manager the following is required:

3.1 Ivanti Automation 2019.3

Ivanti Automation Global Variables

The following global variable are required:

Name	Type	Notes
Ivanti Endpoint Manager Host	text	Hostname of the EPM server
Ivanti Endpoint Manager Username	text	User name to access EPM via Automation tasks.
Ivanti Endpoint Manager Password	password	Password of Ivanti Endpoint Manager Username
Ivanti Endpoint Manager Client ID	text	Refer to Endpoint Manager on how to obtain Client ID
Ivanti Endpoint Manager Client Secret	text	Refer to Endpoint Manager on how to obtain Client Secret

3.2 Ivanti Endpoint Manager

Minimum version 2018.x

Proper user rights & API access configured.

3.3 Other

Microsoft Windows PowerShell 5.0

Chapter 4: Detailed task description

The following provides detail description and usage for each of the Automation tasks included in the connector.

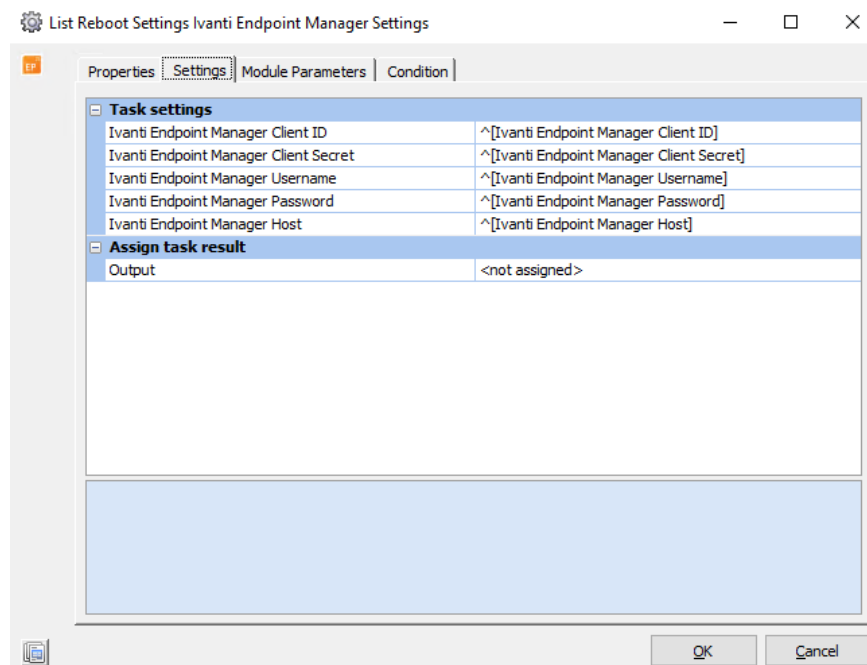
Tip:

- Creating module parameters for the task allows you to reuse a module in multiple runbooks. This is very useful especially if you need to customize the default fields to fit your environment.
- Select the Module Parameters tab and “autocreate unused” module parameters this creates module parameters and associates the parameters with the task fields.

4.1 Settings & Configurations

4.1.1 Task: List Reboot Settings

Returns list of reboot settings configurations available to user for task creation and package installation requests



Inputs

- None

Outputs

- Returns list of Reboot Settings configurations to the output console as JSON object

Example output:

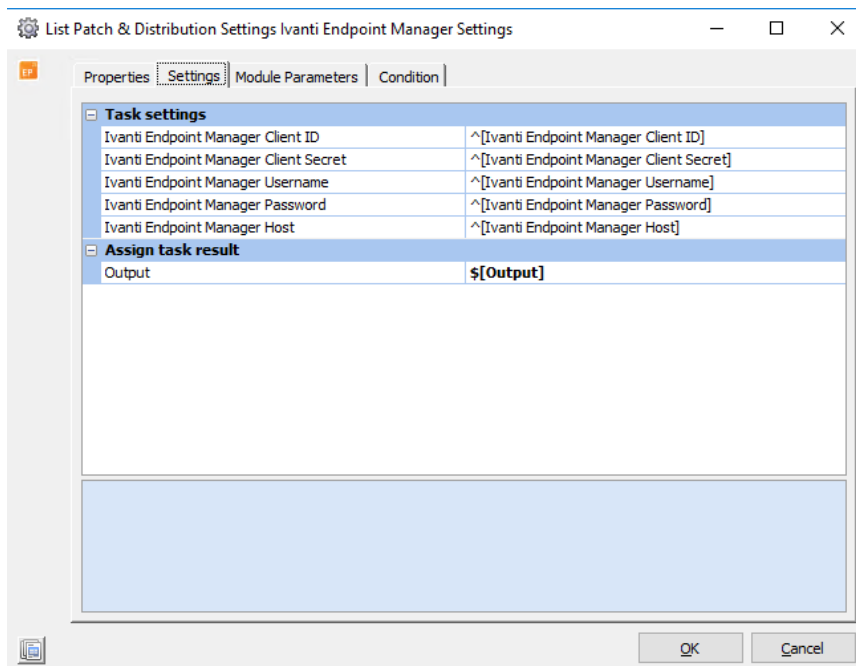
```

{
  "Id": 12,
  "Name": "Reboot settings 12",
  "Guid": "Computer4_v1",
  "Values": {
    "Keys": [
      "AllowUserDeferReboot",
      "AllowUserDeferRebootTimeout",
      "EnableAutoReboot",
      "EnablePrompt",
      "RebootAction",
      "RebootMessage",
      "ShowSystemTray",
      "SuppressWURebootMsg",
      "__Importing__"
    ],
    "Values": [
      "true",
      "999999",
      "false",
      "true",
      "ifneeded",
      "Ivanti has detected that this computer should be
rebooted.",
      "true",
      "false",
      "true"
    ]
  }
}

```

4.1.2 Task: List Distribution and Patch Settings

Returns list of distribution and patch settings configurations available to user for task creation and package installation requests



Inputs

- None

Outputs

- Returns list of distribution and patch settings to the output console as JSON object

Example output:

```

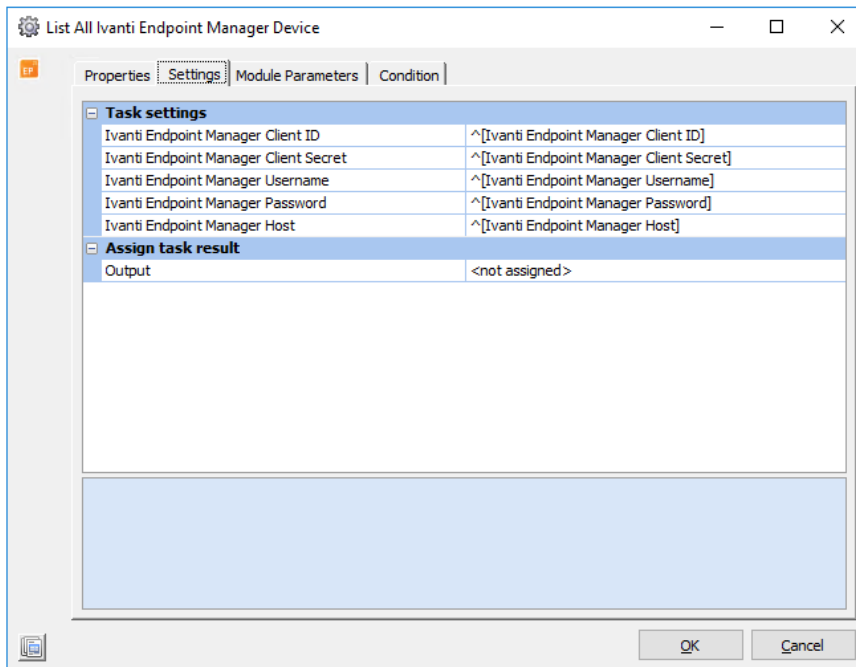
{
  "Id": 12,
  "Name": "Distribution and Patch Settings 12",
  "Guid": "Computer4_v3",
  "Values": {
    "Keys": [
      "abortIfPreRepairFails",
      "abortPostIfPreRepairFails",
      "AllowUserCancelRepair",
      "AllowUserCancelScan",
      "AutoCloseTimeout",
      "autofix",
      "AutoRepairTimeout",
      "BeforeDownload",
      "BeforeRepair",
      "DefaultRepairTimeoutAction",
      "DeferAppCount",
      "DeferForContentProcesses",
      "DeferIfFullScreen",
      "DeferTillLogon",
      "DistEnableOffline",
      "DistSchedule_IPChange_Enabled",
      "DistSchedule_IPChange_Freq",
      "DistSchedule_IPChange_IPChange",
      "DistSchedule_Login_Enabled",
      "DistSchedule_Login_Freq",
      "DistSchedule_Login_RandomDelayHours",
      "DistSchedule_Login_UserLoginEvent",
      "DistSchedule_Timed_BandwidthEnabled",
      "DistSchedule_Timed_BandwidthType",
      "DistSchedule_Timed_DayOfMonthEnabled",
      "DistSchedule_Timed_DayOfMonthEnd",
      "DistSchedule_Timed_DayOfMonthStart",
      "DistSchedule_Timed_DayOfWeekEnabled",
      "DistSchedule_Timed_DayOfWeekEnd",
      "DistSchedule_Timed_DayOfWeekStart",
      "DistSchedule_Timed_Enabled",
      "DistSchedule_Timed_FrequencyEnabled",
      "DistSchedule_Timed_FrequencyType",
      "DistSchedule_Timed_FrequencyValue",
      "DistSchedule_Timed_HourOfDayEnd",
      "DistSchedule_Timed_HourOfDayStart",
      "DistSchedule_Timed_MachineState",
      "DistSchedule_Timed_MachineState_Readable",
      "DistSchedule_Timed_MinDelayMinutes",
      "DistSchedule_Timed_RandomDelayChecked",
      "DistSchedule_Timed_RandomDelayHours",
      "DistSchedule_Timed_StartDate",
      "DistSchedule_Timed_StartTimeEnabled",
      "DistSchedule_Timed_TimeOfDayEnabled",
      "EnableDpdTrace",
      "EnableLdapCSA",
      "EnableLDAPGroup",
    ],
    "Values": [
      "true",
      "true",
      "false",
      "false",
      "60",
      "true",
      "-1",
      "NotifyUser",
      "JustBegin",
    ]
  }
}

```

4.2 Device

4.2.1 Task: List All

Returns list of devices



Inputs

- None

Outputs

- Returns list of devices accessible to user as JSON object to output console

Example output:

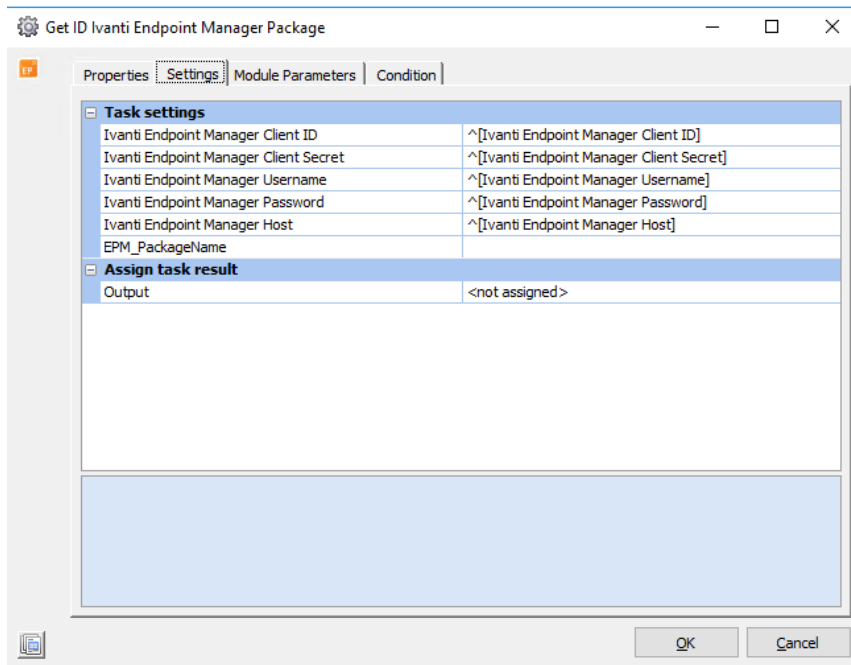
```
{
  "id": 999,
  "guid": "{8888C79F-8B07-3B33-B11C-T970F3A3333}",
  "type": "Virtual Server",
  "deviceName": "Computer 4",
  "displayName": "Computer 4",
  "hostName": "Computer4.server.com",
  "domainName": "",
  "address": "000.111.222.333",
  "primaryOwner": "Computer4\\JohnDoe",
  "lastLogonDate": "0001-01-01T00:00:00",
  "osType": "Microsoft Windows Server 2016 Server 64-bit",
  "ldmsManaged": 1,
  "hwMonitoringType": "ASIC2",
  "hwLastScanDate": "2020-05-18T11:20:04-07:00",
  "swLastScanDate": "2020-05-18T11:20:47-07:00",
  "installed": "Yes",
  "manufacturer": "Microsoft Corporation",
  "modelName": "Hyper-V UEFI Release v1.0",
  "ramTotal": 1111,
  "processorType": "Processor Model Information Inc.",
  "assetTag": "1111-2222-3333-4444-5555",
  "serialNum": "1111-2222-3333-4444-5555",
  "serviceTag": "1111-2222-3333-4444-5555",
  "expressServiceCode": "409245098234059823409582345098234509845",
  "model": "Virtual Machine",
}
```

```
"warrantyEndDate": "0001-01-01T00:00:00" }
```

4.3 Package

4.3.1 Task: Get ID

Gets ID value of named package



Inputs

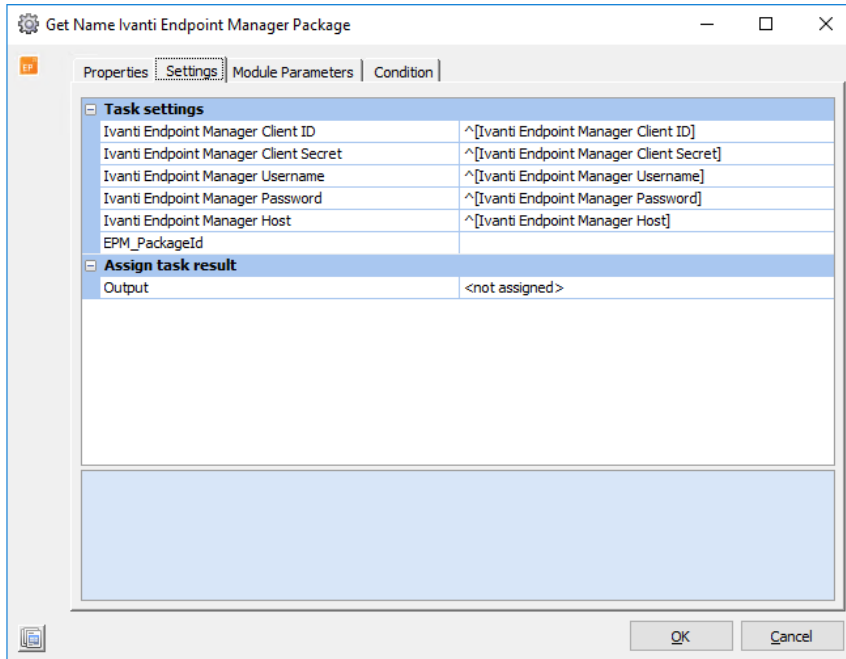
- Package Name [EPM_PackageName] (Required)
- Name of package as it appears inside of EPM (Required). *Note: if the name does not match exactly, the package will not be found. Additionally, if name matches more than one package in EPM, naming conflict will need to be resolved manually in EPM before package can be referenced by name only in Ivanti Automation.*

Outputs

- [EPM_PackageId] variable is populated with package ID matching the package name provided
- Package ID value is written to the output console

4.3.2 Task: Get Name

Gets name of package specified by ID



Inputs

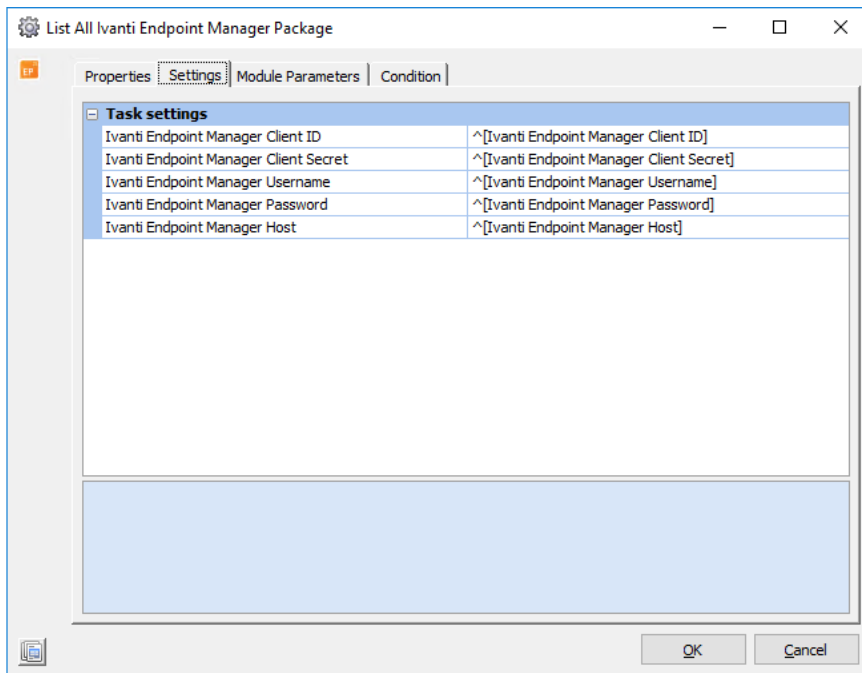
- Package ID [EPM_PackageId] (Required)

Outputs

- [EPM_PackageName] is populated with package name matching the package ID provided
Package name is written to output console as plain text

4.3.3 *Task: List*

Lists all packages available to user



Inputs

- None

Outputs

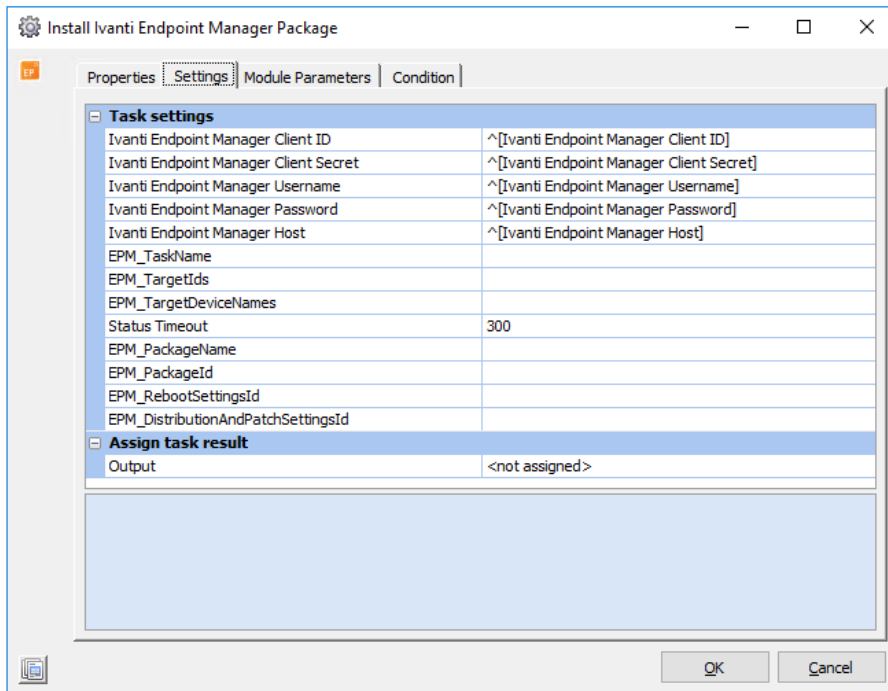
- Writes list of packages available to user as JSON to output console

Example output:

```
{
  "Id": 999,
  "OwnerId": 1,
  "Type": "MSI",
  "Name": "Firefox x64",
  "Description": "Firefox x64",
  "PrimaryFile": "http://server1/folder/files/Firefox Setup 74.0.msi",
  "CommandLine": "/i /passive /norestart",
  "Install": 1,
  "TimeoutEnabled": 1,
  "TimeoutPeriod": 1,
  "DisableClientQueue": 0,
  "ReturnCodeTemplateId": 1,
  "ArchitectureOptions": "2",
  "ApplicationVendor": "",
  "EstDownloadTime": "",
  "EstInstallTime": "",
  "RebootExpected": "No",
  "PackageLogo": "",
  "CategoryId": 0,
  "Revision": 3,
  "LastSavedBy": "Computer4\\JohnDoe",
  "LastSavedDate": "2020-03-26T13:57:49.07-07:00",
  "EMTag": ""
}
```


4.3.4 Task: Install

Sends installation request to a target device.



Inputs

- Task Name [EPM_TaskName] (Required)
 - Name of task to be sent to target device. A new task will be created with this name in EPM prior to being sent to the device.
- Package specifier [EPM_PackageId] or [EPM_PackageName] (Required)
 - Package to add to task and install on target device must be specified. It can be specified via package name or ID but will return an error if they do not match, or if package name matches more than one package available in EPM.
- Target Devices [EPM_TargetId] or [EPM_TargetDeviceNames] (Required)
 - Can be provided by name or ID, but not both. Can also be provided as either a list of device IDs or a list of device names separated by a semi-colon.

Example: EPM_TargetIds = 1

Example: EPM_TargetIds = '1;4;6;8'

Example: EPM_TargetDeviceNames = 'Computer1'

Example: EPM_TargetDeviceNames = 'Computer2;Computer4;DeviceName998'

Outputs

- [Output] variable is set to a JSON object containing information on each device where the request was sent including the device name, device ID, ID of the task that was sent to each machine, and the final installation status.

Note: The timeout setting will default to 5 minutes per device if none is specified. If the output is returning with 'InstallStatus' values for most devices of 'TimedOut', but devices are eventually completing the installation, this timeout value should be increased.

Additional note: As of v0.1, requests for installation status are run consecutively. If all devices time out while pending installation, the task may pend for up to the timeout setting multiplied by the number of devices where the installation request is being sent.

Example output:

```
[
  {
    "DeviceId": 3,
    "InstallStatus": "Done"
```

```
"TaskName": "Test task",
"TaskId": 105,
"DeviceName": "DeviceName998"
},
{
"DeviceId": 2,
"InstallStatus": "TimedOut(Active)",
"TaskName": "Test task",
"TaskId": 105,
"DeviceName": "Computer4"
}
]
```

- In addition to the output variable, the above JSON result object is sent to the output console. There will also be some additional messages including whether the task was created and started successfully, if target objects were added to the task successfully, and a message that the task was started

Notes:

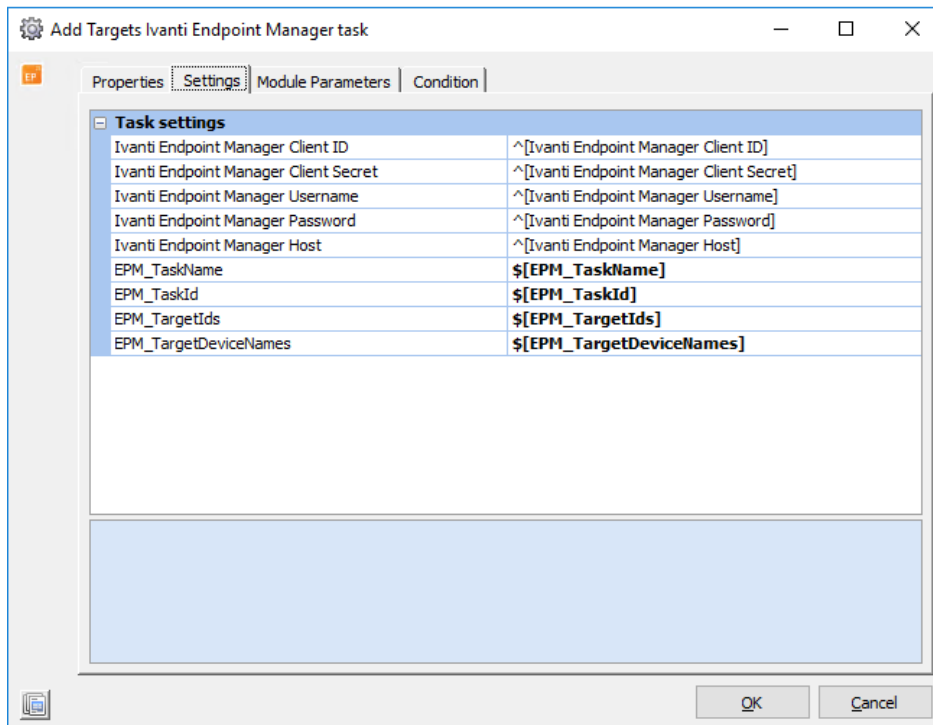
The first steps to the package installation request process are simply a combination of simpler operations. This task will be broken down into each of its individual steps for clarity.

1. Create Task - Task is created in EPM with the package provided. Name for new task is the task name provided by user.
2. Add Targets to Task - Adds the specified targets to the newly created task
3. Execute Task - Starts the specified task
4. Monitor Task Status - Monitors the task status and returns the results

4.4 Task

4.4.1 Task: Add Device(s)

Add targets to existing task



Inputs

- Task identifier [EPM_TaskName] or [EPM_TaskId] (Required)
 - Can be provided by either task name, task ID, or both. Inputs must match if both are provided. If specified by task name, and more than one task exists by that name in EPM, task must be specified by ID or naming conflict resolved in EPM before proceeding.
- Target Devices [EPM_TargetIds] or [EPM_TargetDeviceNames] (Required)
 - Can only provide either IDs or names. Can be provided as single value or as a list of semicolon-separated values.

Outputs

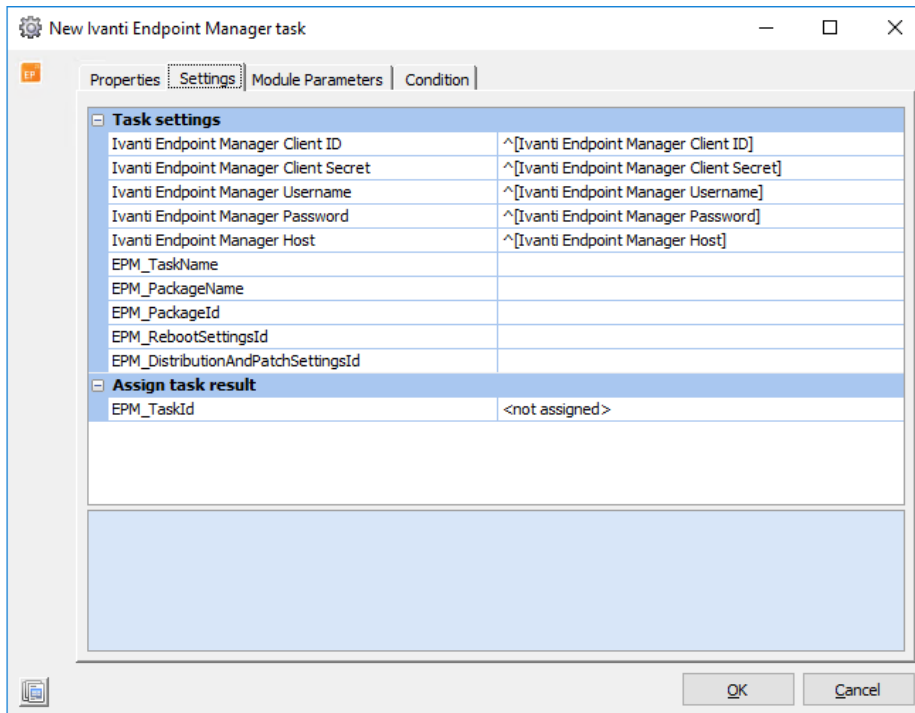
- Outputs success messages to the console when targets are added to the task

Example console output:

```
Target device Computer4 successfully added to task
Target device Computer3 successfully added to task
Target device DeviceName334 successfully added to task
```

4.4.2 Task: New

Creates new task in EPM



Inputs

- Task Name [EPM_TaskName] (Required)
 - Name for task as it will appear inside of EPM manager console
- Package [EPM_PackageId] or [EPM_PackageName] (Required)
 - Can be provided by name, ID or both- but will return an error if they do not match or if the name provided matches more than one package in EPM. If this is the case, the ID must be provided, or the duplicate name resolved inside of EPM before proceeding.

Outputs

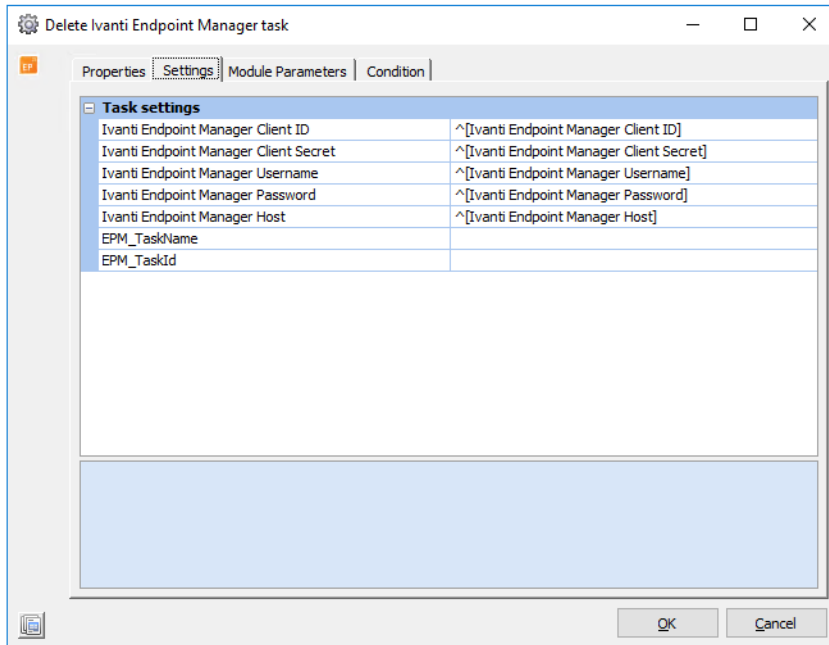
- [EPM_TaskId] variable within IA is populated with newly created task ID value
- Newly created task ID value is written out to the console

Example console output:

```
Task with ID '264' created in EPM
```

4.4.3 Task: Delete

Delete the specified task from EPM



Inputs

- Task specifier [EPM_TaskName] or [EPM_TaskId] (Required)
 - Can be provided by name, ID, or both, but tasklet will return an error if they either do not match, none is provided, or name matches more than one task in EPM. If the latter is the case, the task must be specified by ID, or the name conflict resolved in the EPM console before proceeding.

Outputs

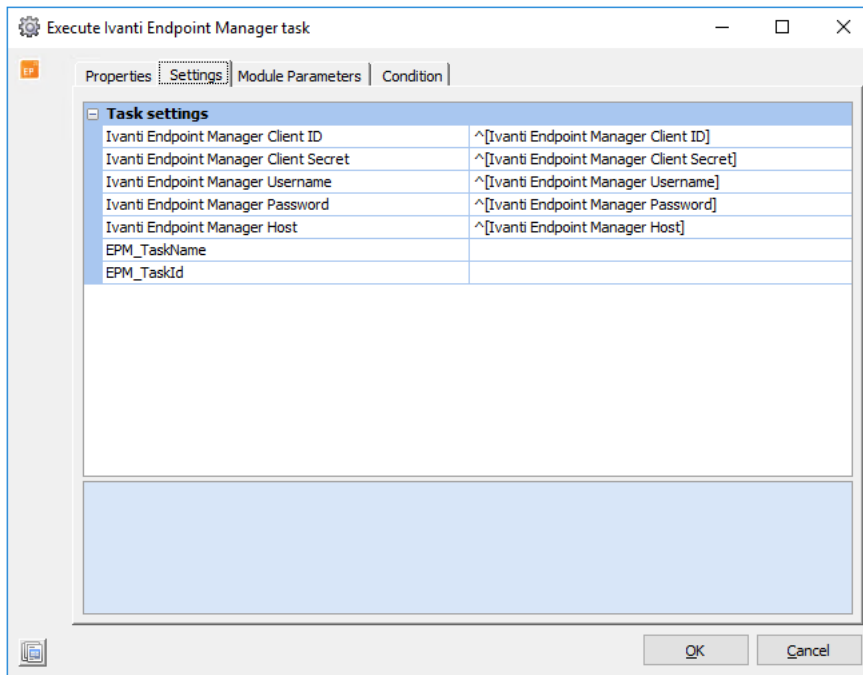
- Writes message to console notifying the user that the deletion was successful

Example console output:

```
Task ID 264 successfully deleted
```

4.4.4 Task: Execute

Start a task immediately



Inputs

- Task specifier [EPM_TaskName] or [EPM_TaskId] (Required)
 - Can be provided by name, ID, or both, but tasklet will return an error if they either do not match, none is provided, or name matches more than one task in EPM. If the latter is the case, the task must be specified by ID, or the name conflict resolved in the EPM console before proceeding.

Outputs

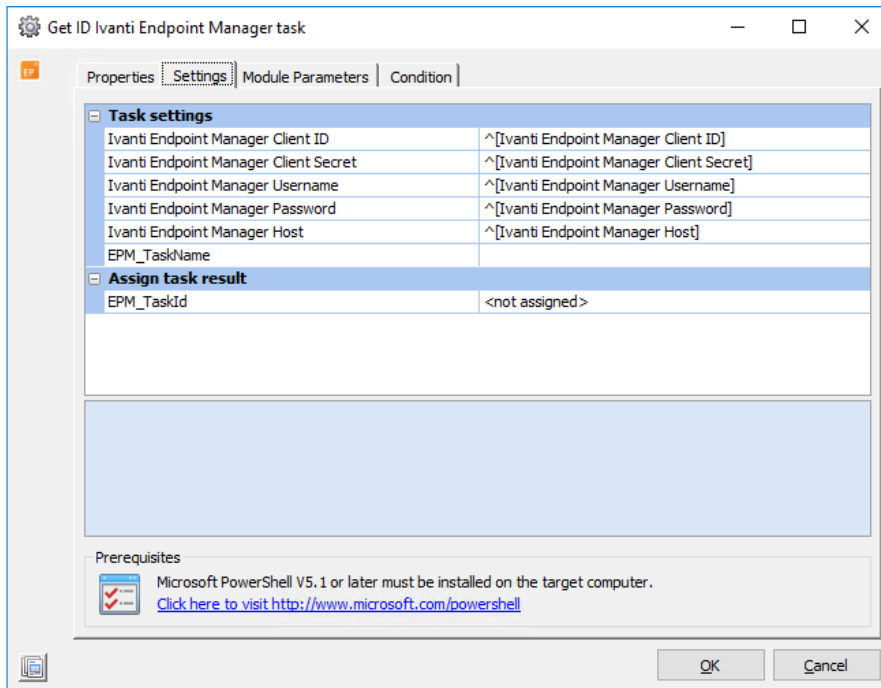
- If there are no errors, the following message will be displayed in the output console:

Example console output:

Task ID '264' started

4.4.5 Task: Get ID

Gets ID value of named task



Inputs

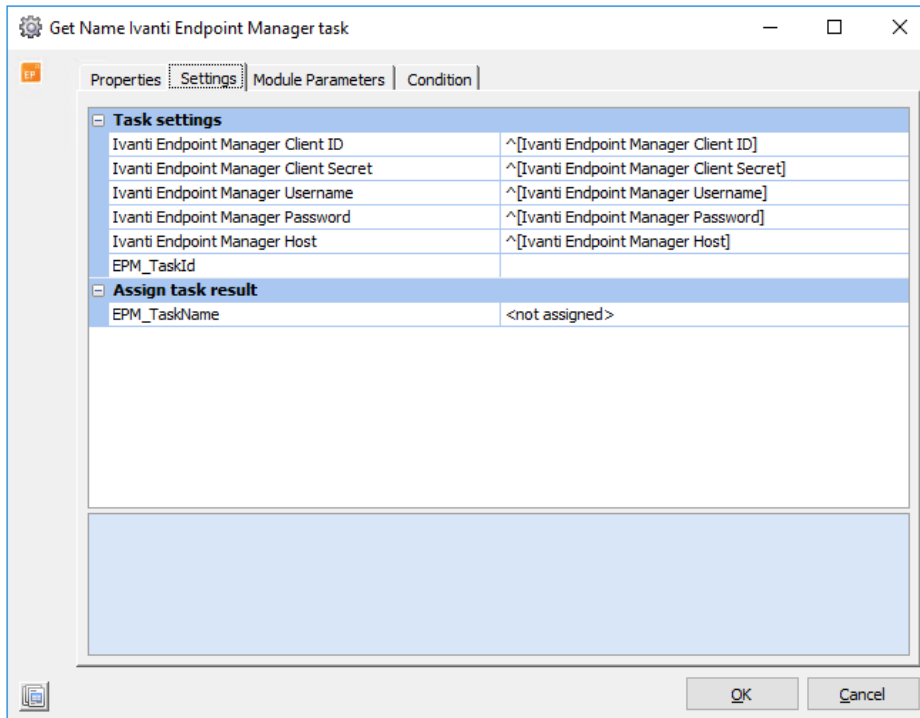
- Task Name [EPM_TaskName] (Required)
 - Name of task as it appears inside of EPM (Required). *Note: if the name does not match exactly, the task will not be found*

Outputs

- [EPM_TaskId] variable is populated with task ID matching the task name provided
- Task ID value is written to the output console

4.4.6 Task: Get Name

Gets name of task specified by ID value



Inputs

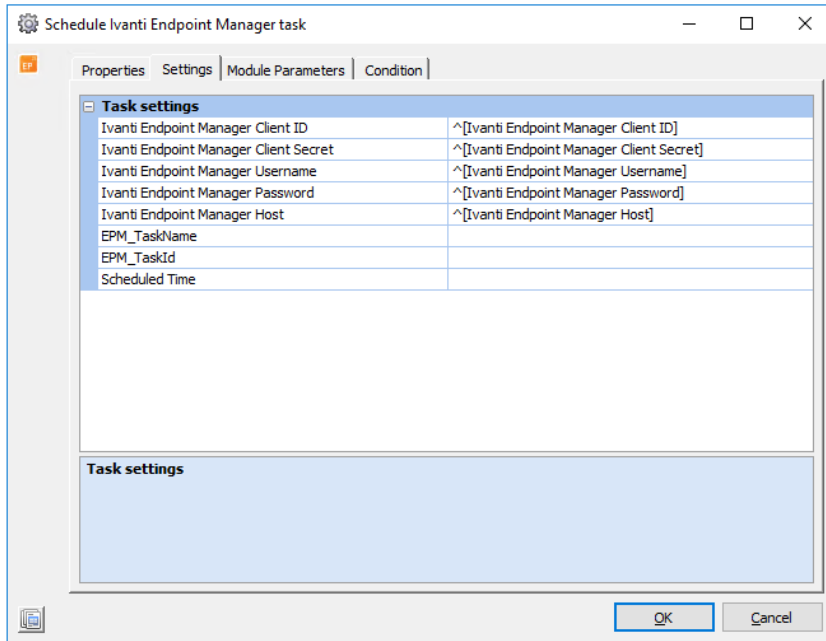
- Task ID [EPM_TaskId] (Required)

Outputs

- [EPM_TaskName] is populated with task name matching the task ID provided
- Task name is written to output console as plain text

4.4.7 Task: Schedule

Schedule a task to start at a later time



Inputs

- Task specifier [EPM_TaskName] or [EPM_TaskId] (Required)
 - Can be provided by name, ID, or both, but tasklet will return an error if they either do not match, none is provided, or name matches more than one task in EPM. If the latter is the case, the task must be specified by ID, or the name conflict resolved in the EPM console before proceeding.
- Scheduled start time [Scheduled Time] (Required)
 - Start time must be in a standardized date-time format. Task scheduling is time zone aware, so if time zone is not specified, the task will attempt to resolve the time zone on the client machine and format the provided date-string properly

Outputs

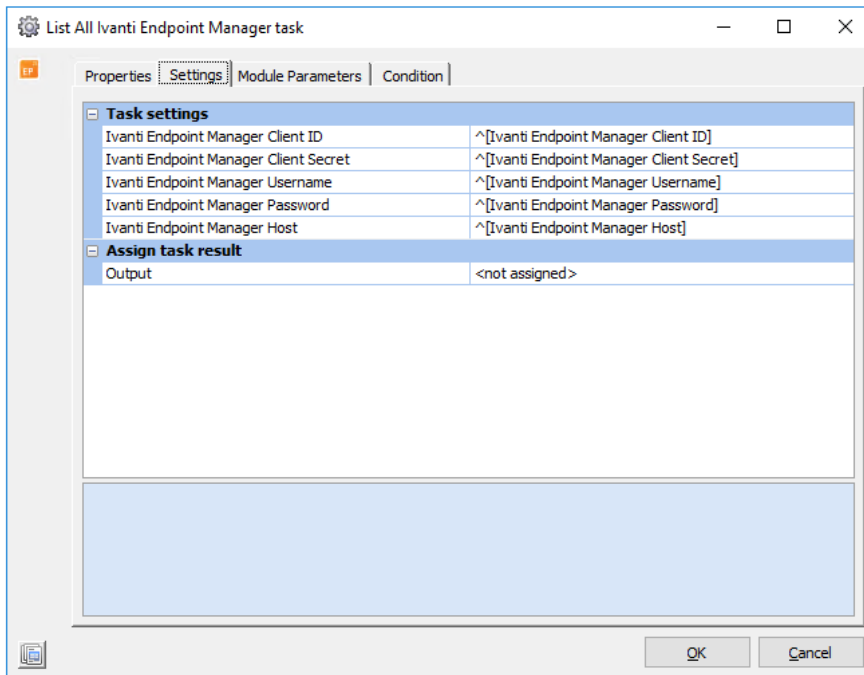
- Writes to console output to indicate that the task was scheduled. If task was scheduled in the past, the task will automatically start, similar to running 'Task - Execute'. If this happens, the console will indicate that the task has started.

Example console output:

```
Task ID '270' set to start at '2020-05-20T00:00:00.0000000-07:00'
```

4.4.8 Task: List All

Lists all tasks available to the user in EPM



Inputs

- None

Outputs

- Returns list of tasks to the output console as JSON

Example output:

```
{
  "Id": 9,
  "OwnerId": 3,
  "Name": "Test task",
  "Status": "PULL_AVAILABLE",
  "WakeDevices": "NO_WAKEUP",
  "TimeZoneAware": true,
  "StartTime": "2020-05-18T10:41:18-07:00",
  "PackageId": 999,
  "RescheduleType": "Failed",
  "RebootSettingsId": null,
  "DistributionAndPatchSettingsId": null,
  "RebootSettingsGuid": "Computer4_v1",
  "DistributionAndPatchSettingsGuid": "Computer4_v10",
  "CustomMessage": null,
  "UseAcceleratedPush": false
}
```

Chapter 5: More information

You can find more documentation at <https://www.ivanti.com/support/product-documentation>. Useful reading includes:

- **Ivanti Automation 2020.1 Administration Guide:**
- **Ivanti Endpoint Manager Admin Online Help.**