

# Steps to “metricize” an application

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## Objective

The objective of this document is to enumerate the steps that are required to “metricize” any third party application – i.e. enable an application to report metrics data.

LiveMetrics is a LiveLoops library that supports client application setup tracking, usage tracking, data submission, reporting etc. It can also be used in a variety of applications like improving conversions, product usage and more thus helping vendors to gauge user patterns and analyze trends.

The process of enabling any third party application to report metrics data is referred to “*metricizing*” hereafter.

## Details

The process of metricizing an application will be straight-forward and simple. Each application that is to be metricized will be wrapped in a setup called as a *LIVEMETRICS* Wrapper setup. The *LIVEMETRICS* Wrapper setup will act as a container for the end party application that is to be metricized.

The *LIVEMETRICS* Wrapper setup will have the following functions:

- Display a registration form, which will capture the information of the end user as a part of registration
- Display a dialog box that will ask the end user for permission to report metrics data
- Based on whether the end user opts to report metrics data, the requisite files will be installed on the users end machine
- Invoke the third party application setup
- Report metrics data to the server (if the user agrees for metrics data to be collected).

The process of metricizing an application is explained in detail. The process will require NO changes in the sources of the third party application files. The only changes that will be required would need to be done in the sources of the setup file.

## Pre-requisites

The pre-requisite of any third party tool that is to be metricized is:

- Each product should have its own LiveMetrics.ini file.
- Each product should have a unique GUID

## LiveMetrics.ini File

Each setup that is to be metricized requires a **LiveMetrics.ini** file. This file will contain information about the target setup, LiveMessage setting information, XML file upload setting and vendor settings which will in turn be used by the LiveMetrics Wrapper file to identify the product being installed, LiveMessage to be shown etc.

This file is mandatory and should be **created** and then placed into the folder that contains the sources for the setup.

The information that is to be contained in a **LiveMetrics.ini** file is as explained below – it should contain the following mandatory information:

- **Product Information:**

AppName

ProductGUID

Product Name

VersionNumber

SetupTitle

Company Name

ExeName

CompanyBannerName

ShowParticipationDialog

OptIn

SubVersionRegKey

SubVersionRegPath

ShowLiveMessage

BUILDREGKEY

BUILDREGPATH

LiveWareVersion

ShowRegistrationDialog

LiveMetrics

ShowSkipButton

Descriptions of the various fields related to product information are as given below (assuming that an application *Foo* is to be metricized):

Field Name	Description
AppName	This is the name of the application. A folder is created under the <i>Common Files</i> path with the application name. LiveMetrics related files are stored under this folder – E.g. “\Program Files\Common Files\LiveMetrics\Foo\”
ProductGUID	This unique number will be required to identify the product. E.g. of a valid GUID(Globally Unique Identifier) is “2369396E-D169-4706-82CC-836B00B749F2”
ProductName	It is a <b>data</b> of the string value “ <b>ProductName</b> ”, which reflects under “HKEY_CLASSES_ROOT\Installer\Products\<Unique ID>” registry for MSI setups. Otherwise it is a <b>data</b> of the string value “ <b>DisplayName</b> ”, under registry “HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\<GUID>” for other non MSI setups. This string is used to remove duplicate entries in the Add/Remove programs, so this string should be same as that of the product name displayed in the Add/Remove programs.
VersionNumber	This is the version number of the product. For e.g. “1.000.109” is the version number of a product.
SetupTitle	It is the heading for customer participation dialog & the setup.
CompanyName	This is the name of the company to which the product belongs. For e.g. “ABC COMPANY”
ExeName	This is the name of the executable file of target setup. For e.g. “setup.exe”
CompanyBannerName	This is the name which will be shown on the first custom dialog box. For e.g. “ABC CORPORATION”
ShowParticipationDialog	Setting of this flag would determine whether or not to show the participation dialog in the Setup. 1 – The participation dialog will be shown in the Setup. 0 – No participation dialog will be shown in the Setup If the ‘ShowParticipationDialog’ flag is set to 1 i.e. the participation dialog is shown in the setup, then the Opt-In status of the user will be determined on the basis of the option selected by the user - on this screen. In this case the ‘OptIn’ field would not be considered, at all.
OptIn	If the ‘ShowParticipationDialog’ flag is set to 0 i.e. the participation dialog is not shown in the setup, then this flag would determine the Opt – In status of the user. 1 – User has opted for LiveMetrics 0 – User has opted out of LiveMetrics
SubVersionRegKey	Name of the String Value key which contains product subversion.
SubVersionRegPath	Path of registry key which contains product subversion. This Subversion number will be used in segmentation for LiveMessaging

ShowLiveMessage	Setting of this flag would determine whether or not to show the LiveMessage. 1 – LiveMessage will be displayed on the basis of segmentation settings. 0 – LiveMessage will not be displayed in any case, irrespective of all LiveMessage settings.
BUILDREGKEY	Name of the String Value key which contains product Build number. This value will be used in case of LiveUpdates.
BUILDREGPATH	Path of registry key which contains Build number.
LiveWareVersion	This is the version number of the Liveware. For e.g. "4.0" is the version number of a Liveware.
ShowRegistrationDialog	Setting of this flag which type of registration form should be displayed. 0 – This feature will be TURNED OFF. 1 - Registration form with some limited information. 2 - Registration form with some more information. 3 - Registration form with extensive information.
LiveMetrics	Setting of this flag would determine whether or not to upload the .xml files (setup.xml, app.xml and reg.xml) to the server. 1 – Upload all the .xml created files to the server. 0 – Do not upload all the .xml created files to the server.
ShowSkipButton	Setting of this flag will display "Skip" button on registration form 0 – "Skip" button will not be displayed. 1 - "Skip" button will be displayed.

• **LiveMessageSettings**

1. ProductLiveMessageID
2. LIVEMESSAGE\_SERVER\_PATH
3. URL
4. LiveMessageAccessDays
5. ShowOnFirstLaunch

This 'ProductLiveMessageID' can only be created after you have added a Product through the Admin Module. The "ProductID" that you will see – when the product is successfully added to the admin module is the 'ProductLiveMessageID' – which you will need to add here.

Descriptions of the various fields related to LiveMessage setting are as given below:

Field Name	Description
ProductLiveMessageID	This is the unique identifier associated with the product for which the LiveMessage is to be displayed. This information is related to the id associated to a <b>product</b> in the admin pages. This information is stored into registry of LiveMessage settings & in livemetricsconfig.ini file also. For e.g. "1" or "13"
LiveMessage_Server_Path	This is the http folder path i.e. where the .asp file related

	to particular LIVEMESSAGE is located. For e.g. <b>"<a href="http://www.templatezone.com/messages/bin">http://www.templatezone.com/messages/bin</a>"</b>
URL	This is the HOST url, from which website the page is been called. For e.g. <b>"<a href="http://www.templatezone.com">http://www.templatezone.com</a>"</b>
LiveMessageAccessDays	It is the setting related to LiveMessage-display period i.e. frequency of the LiveMessage. For e.g. <b>"7,28"</b>
ShowOnFirstLaunch	This setting would determine whether LiveMessage has to be displayed on the First Launch of the Application. Default set to 1 for showing LiveMessage on the first launch 1- This will display the LIVEMESSAGE for the product, if available – on first launch of application. 0- the LiveMessage would only be displayed after the duration set in LiveMessageAccessDays field. So if LiveMessageAccessDays is set as [7,28] then LiveMessage would be shown for the first time only after 7 days of installation.

- **UploadSettings**

1. NextUploadTime
2. SERVER\_PATH
3. UPLOAD\_PATH
4. UPLOAD\_FREQUENCY
5. LAST\_UPLOADDATE
6. UPLOAD\_COUNT

Descriptions of the various fields related to xml file upload are as given below:

Field Name	Description
NextUploadTime	It is the default time to upload xml file to the server. For e.g. <b>"12:00"</b>
SERVER_PATH	This is url, where the xml file will get uploaded. For e.g. <b>"<a href="http://liveware.pingpointsoftware.com/users/">http://liveware.pingpointsoftware.com/users/</a>"</b>
UPLOAD_PATH	This is folder path on server, with above specified url, in which the xml file will get uploaded. For e.g. <b>"metricsfiles"</b>
UPLOAD_FREQUENCY	It is the difference between the LAST_UPLOADDATE & current date, which take decision whether to upload xml file to server or not. For e.g. <b>"0"</b>
LAST_UPLOADDATE	This indicates the last date on which the xml file was uploaded to the server. By default this date is the today's date. <b>"YYYY-MM-DD"</b>
UPLOAD_COUNT	It shows how many times files have been uploaded to the server. By default it should be set to zero. <b>"0"</b>

- **Customization**

1. Color
2. ImagePath

Descriptions of these couple of fields related to Customization are as given below:

Field Name	Description
Color	This hexadecimal value of color which will be shown at the bottom of LIVEMESSAGE window above the banner image. E.g. <b>#FFFFFF0</b>
ImagePath	This URL will direct to banner image which will be displayed on LIVEMESSAGE at bottom. The image size should exactly equal to <b>608X30 pixels</b> with <b>96 dpi</b> resolution.

- **VendorInfo**

1. ID
2. NAME
3. PASSWORD

Descriptions of the various fields related to vendor are as given below:

Field Name	Description
ID	This is the unique identification number associated with the vendor. For e.g. <b>"1001"</b>
NAME	It is the name of the vendor. For e.g. <b>"testuser"</b>
PASSWORD	It is the password of the Vendor, but keep it is <b>blank</b> .

Information provided in the *LiveMetrics.ini* file is used to map a user with a product via a GUID and thus track usage data.

- **Updates**

1. EnableUpdate
2. BuildType

Descriptions of the various fields related to Updates are as given below:

Field Name	Description
EnableUpdate	Setting of this flag would determine whether User had opted for Live Updates or not. 1 – User had opted for Live Updates. 0 – User had not opted for Live Updates.
BuildType	This flag would determine the Live Update selection procedure, in case of more than one updates are available on Server. 1 – User had opted for Latest Update. 0 – User had opted for Lowest among all the applicable updates.

A sample “LiveMetrics.ini” file packaged in the sources of a dummy application called Foo is as shown below.



```

LiveMetrics - Notepad
File Edit Format View Help
[ProductInfo]
AppName=FOO
ProductGUID=AB416AC5-D091-4A06-9458-D2E043C8694E
ProductName=FOO
VersionNumber=4.5
SetupTitle=FOO
CompanyName=ABC, Inc
ExeName=setup.exe
CompanyBannerName=ABC, Inc
ShowParticipationDialog=0
OptIn=1
LiveWareVersion=2.0
SUBVERSIONREGKEY=
SUBVERSIONREGPATH=
ShowLiveMessage=1
ShowRegistrationDialog=0
ShowSkipButton=1
LiveMetrics=0
BUILDREGKEY=Build
BUILDREGPATH=HKEY_CURRENT_USER\Software\ABC\FOO\Edition\Pro

[LiveMessageSettings]
PRODUCTLIVEMESSAGEID=2
LIVEMESSAGE_SERVER_PATH=http://liveware.pingpointsoftware.com/messages/bin
URL=http://liveware.pingpointsoftware.com
LiveMessageAccessDays=0,28
ShowOnFirstLaunch=1
UpdateLiveMessageStatus=1

[UploadSettings]
NextUploadTime=12:00
SERVER_PATH=http://liveware.pingpointsoftware.com/Users/
UPLOAD_PATH=common/metricsfiles
UPLOAD_FREQUENCY=0
LAST_UPLOADDATE=
UPLOAD_COUNT=0

[VendorInfo]
ID=
NAME=
PASSWORD=

[Customization]
Color=#FFFFFF0
ImagePath=http://www.templatezone.com/messages/Demo-LiveWare/Banner.jpg

[Updates]
EnableUpdate=1
BuildType=0

```

Figure 1: LiveMetrics.ini file

Once this file has been created, it should be placed in the folder containing the setup sources.

## Setup sources

The setup sources will ONLY need to be modified as far as shortcuts to an application are concerned. Basically, all shortcuts to the application or any related files will need

to be modified to now invoke their target applications via the wrapper executable installed by LiveMetrics. This process is explained in greater detail below.

### Modification of shortcuts

Shortcuts for a target application can be metricized to collect data for the application. Shortcuts are placed by the setup program and need to be modified if the application is to collect metrics data. Modification for a shortcut has to be done in the setup sources of the target application.

If a shortcut for an application is NOT to be metricized, then NO modification is necessary in setup sources.

To modify an existing shortcut of the application, follow the steps given below:

Identify all shortcuts to the application that are to collect metrics data in the setup sources.

Modify the shortcut(s) in the following manner:

**"<wrapperpath>"<space>"<appname> <parameterlist>..."**

Where:

- **<wrapperpath>** is the path where *LiveMetrics* wrapper is installed. The LM wrapper will always exist in the *Common Files* path – i.e. "*\Program Files\Common Files\LiveMetrics\<appname>LMWrapper.exe*". In case of application Foo it will be "*\Program Files\Common Files\LiveMetrics\Foo\LMWrapper.exe*"
- **<space>** is blank space that should be provided after the <wrapperpath>
- **<appname>** is the third party application that is to be launched on clicking the shortcut. This information will be read from the *LiveMetrics.ini* provided with the package. In case of the Foo application, it will be <space>"*C:\WINDOWS\system32\Foo.exe*"
- **<parameterlist>** indicates the list of parameters that are to be passed to the application. If Foo requires a parameter *"/a /s"* to be passed, then this information needs to be entered in the following manner:  
"*\Program Files\Common Files\LiveMetrics\<appname>LMWrapper.exe*"  
<space>"*\WINDOWS\system32\Foo.exe /a/s*"

An example for a modified shortcut is given below.

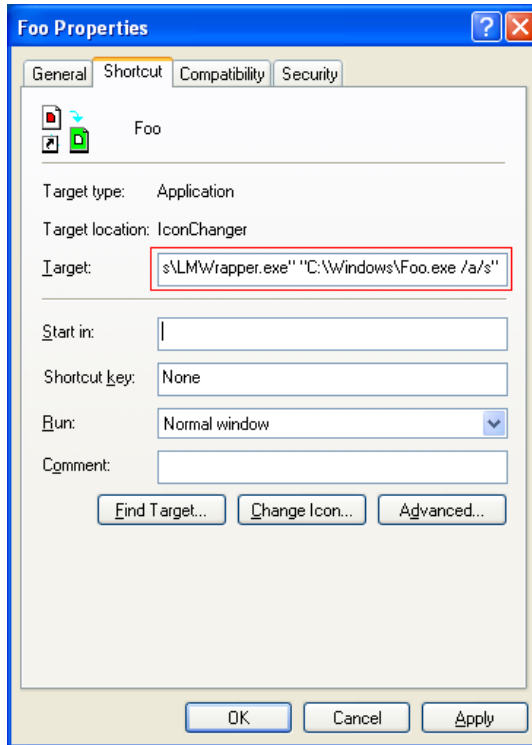


Figure 2: Shortcut path

With these simple changes, the application is ready to be metricized.

**To create the Live Metrics Install folder and copy application setup sources**

Copy the setup sources of the Live Metrics install into any folder, i.e.: extract the 'LMWrapper.zip' file into any folder on the machine (say 'Foo'). In this folder, create a folder called "Application Sources" as shown in the figure.

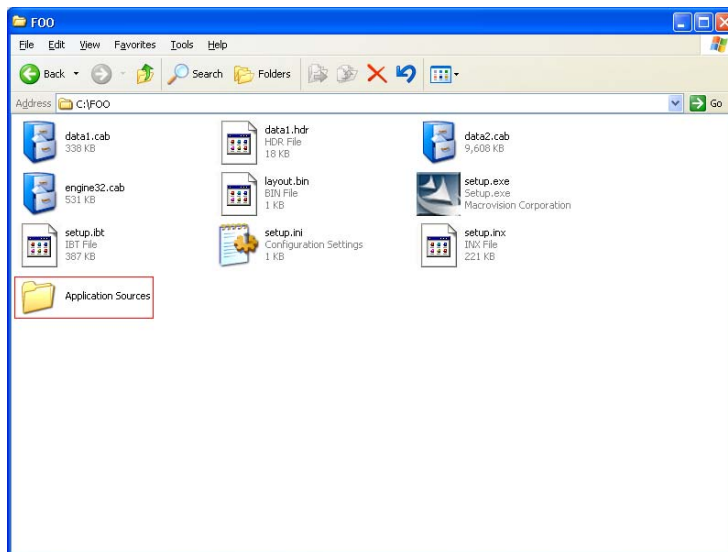


Figure 3: Target application folder for metricize

Copy setup files, of the application that is to be metricized, of the target application into this folder (i.e.: the 'Application Sources' folder).  
 Also, copy the LiveMetrics.ini file (which you would have created, as explained on page 3, above) into this folder.



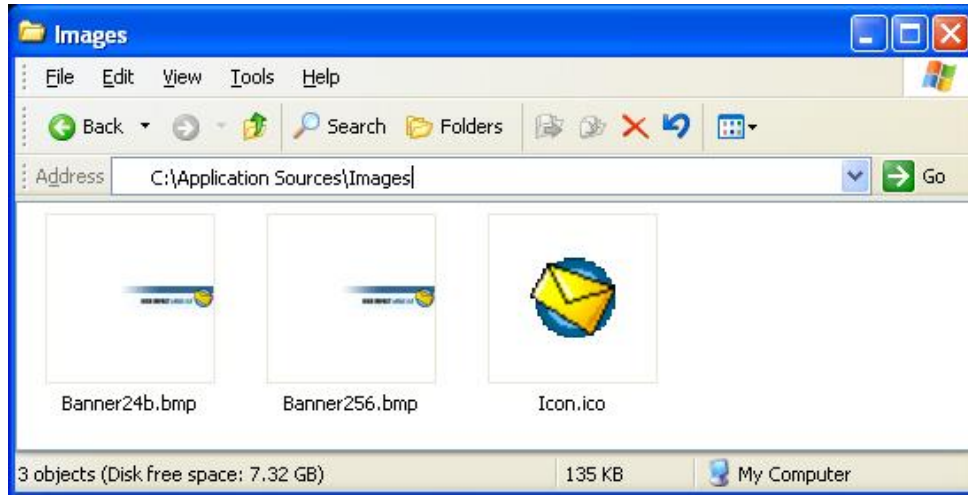
Figure 4: LiveMetrics.ini file in Application sources

### Branding

To display the logo or banner on setup dialogs, create "Images" folder inside the "Application Sources" folder with 2 images with different resolutions & Icon.ico file of the application.

The specifications for the images are as follows:

Image Name	Width (pixel)	Height (pixel)	Resolution (dpi)
Banner24b	497	65	72
Banner256	497	65	96



*Figure 4: "Images" folder in application sources folder*

**NOTE:** Please place both images into the "Images" folder.

This is the last step in the process. The application that is to be metricized is ready for distribution.