# Table of Contents

Contract
BulkEmail.Domain
EmailStructure
FieldType
IAesOperation
IEmailAddressValidator
IExcelFileReader
IExcelFileWriter
IFileValidator
IRtfToHtmlConverter
IZipTool
BulkEmail.Domain.Entity
ExcelField
ExcellSheet
ExcelRow
Application Logic
BulkEmail.Services
Constant
Constant.Aes
Constant.Akka
Constant.AppSettingKey
Constant.SendGrid
BulkEmail.Services.Actors
Constant
Constant.Dispatcher
DuplicateColumnsValidatorActor
EmailAddressValidatorActor
EmailComposerActor
EmailRootActor

**EmailSenderActor** EmailValidatorRootActor FilePathValidatorActor RequiredFieldValidatorActor RootSystem RowCountValidatorActor RtfToHTMLConverterActor RtfToHTMLConverterRootActor **BulkEmail.Services.Extensions** ExceptionExtension BulkEmail.Services.IoC **TypeNamingConvention** BulkEmail.Services.Messages BaseExcelRowMapping BaseResult<T> BreakerClose BreakerOpen Complete **EmailBody** EmailFieldMapForValidation **EmailSent EmailToSend** ExcelColumnsMapping ExcelRowAndRtfTemplate **ExcelRowCount** ExcelRowEmailAddressMapping ExcelRowFilePathMapping Failed<T> **KillThis Progress** ReliableDeliveryAck<TMessage> ReliableDeliveryEnvelope < TMessage >

SetPrerequisite
Start
SubjectColumnsMapping
Success <t></t>
ValidatedFieldMap
BulkEmail.Services.Utilities
AesOperation
EmailAddressValidator
ExcelFileReader
ExcelFileWriter
FileValidator
RtfToHtmlConverter
ZipTool
SwiftExcel.Custom.Mod
DirectoryHelper
ExcelWriter
ExcelWriterCore
Sheet
Frontend
BulkEmail.UI
EnumAction
GridNavigationPage
Main
UIData
BulkEmail.UI.Actors
CleanUpReportActor
EmailBodyReceiverActor
EmailSentReceiverActor
EmailToSendComposerActor
LabelProgressActor
ProgressActor
UnlockFormActor

# ValidationResultReceiverActor

BulkEmail.UI.Command

**FormCommand** 

MessageStyle

BulkEmail.UI.Forms

formAuthenticate

formBrowse

formEMailMapping

form Email Template

form Email Template Edit

 $form {\sf ExcelValidation Dialog}$ 

formNotification

formPreviewAndSend

form Report

form Save As Dialog

formSettings

# Namespace BulkEmail.Domain

# Classes

Emai	ISh	net	me
СПап	เวน	uci	шч

Data structure for email fields

# **Interfaces**

# **IAesOperation**

Encrypt and Decrypt contract

#### **IEmailAddressValidator**

Email format validator contract

#### **IExcelFileReader**

Excel file reader contract

#### **IExcelFileWriter**

Excel file writer contract

#### **IFileValidator**

File validator contract

# $\underline{IRtfToHtmlConverter}$

Converts rtf template to html contract

# **IZipTool**

Compression contract Used in compressing/decompressing email body in preview email funtionality

# **Enums**

# **FieldType**

# **Class EmailStructure**

Data structure for email fields Inheritance System Object EmailStructure Namespace: BulkEmail.Domain Assembly: BulkEmail.Domain.dll Syntax public class EmailStructure : object **Properties Attachments** Contains an attachment or array of attachments. Attachment will be sent as attachment in email. Declaration public string[] Attachments { get; set; } **Property Value Type** Description System.String[] **BCC** Contains a email or array of emails in BCC field Declaration public string[] BCC { get; set; } **Property Value Type Description** System.String[] CC Contains a email or array of emails in CC field Declaration public string[] CC { get; set; } **Property Value Description Type** System.String[] **Subject** 

Contains a Subject or array of Subjects in Subject field. Arrays are converted in sending to a single email subject.

Declaration

Property Value

Type Description

System.String[]

# **Enum FieldType**

Namespace: BulkEmail.Domain

Assembly: BulkEmail.Domain.dll

Syntax

public enum FieldType : int

# **Fields**

Name Description

Column

EmailAddress

FilePath

None

Row

Subject

# **Interface IAesOperation**

Encrypt and Decrypt contract
Namespace: BulkEmail.Domain
Assembly: BulkEmail.Domain.dll
Syntax
public interface IAesOperation
Methods
DecryptString(String, String)
Decrypts the string. Used in decrypting setting/sendgrid account and key value in configuration
Declaration
<pre>string DecryptString(string key, string cipherText)</pre>
Parameters
Type Name Description
System.String key The key.
System String cipherText The cipher text.
Returns
Type Description
System.String returns decrypted string
EncryptString(String, String)
Encrypts the string. Used in encrypting setting/sendgrid account and key value in configuration
Declaration
<pre>string EncryptString(string key, string plainText)</pre>
Parameters
Type Name Description
System String key The key.
System String plainText The plain text.
Returns

System String return encrypted string

Description

Type

# Interface IEmailAddressValidator

Email format validator contract Namespace: BulkEmail.Domain Assembly: BulkEmail.Domain.dll **Syntax** public interface IEmailAddressValidator Methods IsValid(String) Returns true if email format is valid. Declaration bool IsValid(string email) **Parameters** Description Type Name System String email The email to validate. Returns **Type Description** 

System Boolean true if the specified email is valid; otherwise, false.

# Interface IExcelFileReader

Excel file reader contract

Namespace: BulkEmail.Domain

Assembly: BulkEmail.Domain.dll

**Syntax** 

public interface IExcelFileReader

#### Methods

Read(String, Int32)

Reads the specified excel file path.

Declaration

ExcellSheet Read(string filePath, int sheetIndex)

**Parameters** 

Type Name Description

System String filePath The file path of the excel file.

System.Int32 sheetIndex Index of the excel sheet to be loaded in memory.

Returns

Type Description

**ExcellSheet** 

# **Interface IExcelFileWriter**

Excel file writer contract

Namespace: BulkEmail.Domain

Assembly: BulkEmail.Domain.dll

**Syntax** 

public interface IExcelFileWriter

#### Methods

# Write(ExcellSheet[])

Output excel file base form the specified excell sheet.

Declaration

bool Write(params ExcellSheet[] excellSheet)

**Parameters** 

Type Name Description

ExcellSheet[] excellSheet Array of excell sheets.

Returns

Type Description

System.Boolean

# **Interface IFileValidator**

File validator contract

Namespace: BulkEmail.Domain

Assembly: BulkEmail.Domain.dll

Syntax

public interface IFileValidator

#### Methods

# Exist(String)

Validates if file exists the specified file path.

Declaration

bool Exist(string filePath)

**Parameters** 

Type Name Description

System String file Path The file path to validate.

Returns

Type Description

System.Boolean

# Interface IRtfToHtmlConverter

Converts rtf template to html contract

Namespace: BulkEmail.Domain

Assembly: BulkEmail.Domain.dll

**Syntax** 

public interface IRtfToHtmlConverter

#### Methods

# Convert(String)

Converts the specified RTF to an HTML string content. Email body is composed of HTML.

Declaration

string Convert(string rtf)

**Parameters** 

Type Name Description

System String rtf The RTF template.

Returns

Type Description

System.String

# Interface IZipTool

Compression contract Used in compressing/decompressing email body in preview email funtionality Namespace: BulkEmail.Domain Assembly: BulkEmail.Domain.dll **Syntax** public interface IZipTool Methods Unzip(Byte[]) Decompress the specified bytes. Declaration string Unzip(byte[] bytes) **Parameters** Name Description Type System.Byte[] bytes The bytes. Returns **Type** Description System String Decompress original string content Zip(String) Compress string content Declaration byte[] Zip(string str) **Parameters** Type Name Description System.String str The string content to compress. Returns

Description Type

System.Byte[] Compressed byte[] data

# Namespace BulkEmail.Domain.Entity

# Classes

# **ExcelField**

Holds content value of an excel cell.

# **ExcellSheet**

Represent the data structure of an excel sheet

# **ExcelRow**

Hold content value of an excel row

Class ExcelField Holds content value of an excel cell. Inheritance System Object ExcelField Namespace: BulkEmail.Domain.Entity Assembly: BulkEmail.Domain.dll Syntax public class ExcelField : object **Constructors** ExcelField(String, String) Initializes a new instance of the ExcelField class. Declaration public ExcelField(string name, string value) **Parameters** Type Name **Description** System.String name The column name. System String value The value of excel cell. **Properties** Name Maps to column name in excel **Declaration** public string Name { get; } **Property Value** Type **Description** System.String Value Property to store or assign value of an excel cell. Declaration

**Type Description**System String

**Property Value** 

public string Value { get; }

# Methods

# ToString()

# Declaration

public override string ToString()

# Returns

# Type Description

System.String

# **Class ExcellSheet**

Represent the data structure of an excel sheet

Inheritance

System Object ExcellSheet

Namespace: BulkEmail.Domain.Entity

Assembly: BulkEmail.Domain.dll

Syntax

public class ExcellSheet : object

#### **Constructors**

# ExcellSheet(String, String, IEnumerable<String>, DataTable)

Initializes a new instance of the ExcellSheet class.

#### Declaration

public ExcellSheet(string name, string filePath, IEnumerable<string> columns, DataTable dataTable)

#### **Parameters**

Type	Name	Description
System String	name	The name of the sheet.
System String	filePath	The file path of the loaded excel.
IEnumerable <system str<="" td=""><td>ring&gt; columns</td><td>The columns names in excel.</td></system>	ring> columns	The columns names in excel.

dataTable The data table format in the loaded excel.

#### **Properties**

DataTable

#### Columns

Column names in excel. 1st row in the excel sheet

#### Declaration

```
public IEnumerable<string> Columns { get; }
```

#### **Property Value**

Type Description

IEnumerable<System.String>

#### **FilePath**

The file path of the excel.

#### Declaration

```
public string FilePath { get; }
```

# Type Description System.String Name Sheet name. Declaration public string Name { get; } **Property Value Type** Description System.String Rows Row data from excel. Declaration public IEnumerable<ExcelRow> Rows { get; } Property Value Type Description IEnumerable<<u>ExcelRow</u>> Source DataTable format of the loaded excel file. Declaration public DataTable Source { get; } Property Value Type Description DataTable Methods Add(ExcelRow) Adds the specified excel row. Declaration public void Add(ExcelRow excelRow) **Parameters** Type Name Description

**Property Value** 

ToString()

ExcelRow excelRow The excel row.

#### Declaration

public override string ToString()

Returns

Type Description

System.String

# Class ExcelRow

Hold content value of an excel row Inheritance System Object ExcelRow Namespace: BulkEmail.Domain.Entity Assembly: BulkEmail.Domain.dll Syntax public class ExcelRow : object **Constructors** ExcelRow(Int32) Initializes a new instance of the **ExcelRow** class. Declaration public ExcelRow(int row) **Parameters** Type Name Description System.Int32 row The row index. **Properties Fields** List of excel field values in excel Declaration public IEnumerable<ExcelField> Fields { get; } **Property Value Description Type** IEnumerable<<u>ExcelField</u>> Row Represent row index in excel. Declaration public int Row { get; } **Property Value** 

Type **Description** 

System.Int32

Methods

# Adds the specified excel field. Declaration

public ExcelRow Add(ExcelField excelField)

**Parameters** 

Add(ExcelField)

Type Name Description

ExcelField excelField The excel field.

Returns

Type Description

**ExcelRow** 

ToString()

Declaration

public override string ToString()

Returns

Type Description

System.String

# Namespace BulkEmail.Services

# Classes

# **Constant**

Contains application settings

#### **Constant.Aes**

Contains setting for AES encryption/decrytion

#### Constant.Akka

Contains Akka configuration for number of worker instances

# **Constant.AppSettingKey**

Contains constant for application setting

# **Constant.SendGrid**

Contains Sendgrid settings.

# **Class Constant**

Contains application settings

Inheritance

System.Object Constant

 $Name space: \underline{Bulk Email. Services}$ 

Assembly: BulkEmail.Services.dll

Syntax

public class Constant : object

#### **Extension Methods**

 $\underline{ExceptionExtension.FromHierarchy\!\!<\!\!TSource\!\!>\!\!\!(TSource, Func\!\!<\!\!TSource, Func\!\!<\!\!TSource, Func\!\!<\!\!TSource, Boolean\!\!>\!\!\!)}\\ \underline{ExceptionExtension.FromHierarchy\!\!<\!\!TSource\!\!>\!\!\!(TSource, Func\!\!<\!\!TSource, TSource\!\!>\!\!\!)}$ 

# **Class Constant.Aes**

Contains setting for AES encryption/decrytion

Inheritance

System.Object Constant.Aes

Namespace: BulkEmail.Services

Assembly: BulkEmail.Services.dll

Syntax

public class Aes : object

# **Properties**

Key

Gets the seed key.

Declaration

public static string Key { get; }

**Property Value** 

Type Description

System.String The seed key.

#### **Extension Methods**

#### Class Constant.Akka

Contains Akka configuration for number of worker instances

Inheritance

System.Object Constant.Akka

Namespace: BulkEmail.Services

Assembly: BulkEmail.Services.dll

Syntax

public class Akka : object

# **Properties**

#### **EmailComposerCount**

Gets the email composer count found in configuration. Worker processes request in separate thread.

#### Declaration

```
public static int EmailComposerCount { get; }
```

#### **Property Value**

#### **Type** Description

System.Int32 The email composer count.

#### **EmailWorkerCount**

Gets the email worker count found in configuration. Worker processes request in separate thread.

#### Declaration

```
public static int EmailWorkerCount { get; }
```

#### **Property Value**

#### **Type Description**

System.Int32 The email worker count.

#### **Extension Methods**

# Class Constant.AppSettingKey

Contains constant for application setting

Inheritance

System Object Constant. App Setting Key

Namespace: BulkEmail.Services

Assembly: BulkEmail.Services.dll

Syntax

public class AppSettingKey : object

# **Properties**

#### **EmailComposerCount**

Gets the constant for email composer count.

Declaration

```
public static string EmailComposerCount { get; }
```

**Property Value** 

**Type Description** 

System String returns "EmailComposerCount".

#### **EmailWokerCount**

Gets the constant for email woker count.

Declaration

```
public static string EmailWokerCount { get; }
```

**Property Value** 

**Type Description** 

System String returns "EmailWokerCount".

# **SendGridFromMail**

Gets the constant for send grid from mail.

Declaration

```
public static string SendGridFromMail { get; }
```

Property Value

Type Description

System String returns "SendGridFromMail".

SendGridKey

Gets the constant for send grid key.

Declaration

public static string SendGridKey { get; }

Property Value

Type Description

System String returns "SendGridKey".

#### **Extension Methods**

 $\underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource, Func < TSource, Func < TSource, Boolean > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource, TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > (TSource) < (TSource > (TSource) < (TSource > (TSource) < (TSource) < (TSource > (TSource) < (TSource)$ 

# Class Constant.SendGrid

Contains Sendgrid settings.			
Inheritance			
System Object Constant, SendGrid			
Namespace: BulkEmail.Services			
Assembly: BulkEmail.Services.dll			
Syntax			
<pre>public class SendGrid : object</pre>			
Properties			
FromMail			
Gets email registered in Sendgrid.			
Declaration			
<pre>public static string FromMail { get; }</pre>			
Property Value			
Type Description			
System String Email registered in Sendgrid.			
Key			
Gets the Sendgrid API key.			
Declaration			
<pre>public static string Key { get; }</pre>			
Property Value			
Type Description			
System String API key.			
Entancian Mathada			

# **Extension Methods**

# Namespace BulkEmail.Services.Actors

#### Classes

#### **Constant**

Akka constants

#### **Constant.Dispatcher**

Akka constant for Dispatcher type actor

#### **<u>Duplicate Columns Validator Actor</u>**

Akka Actor for validating duplicate column names in excel sheet

#### **EmailAddressValidatorActor**

Akka Actor for validating email address in excel sheet

#### **EmailComposerActor**

Akka Actor for coordinating email sending Email SenderActor.

Handles queuing of Email SenderActor.

#### **EmailRootActor**

Akka Actor for coordinating multiple email sending to EmailComposerActor.

Result from this actors are generated as email sending excel report.

#### **EmailSenderActor**

Akka Actor for sending email using Sendgrid API

#### **EmailValidatorRootActor**

#### Akka Actor for coordinating validation actors

Row Count Validator Actor, Duplicate Columns Validator Actor, File Path Validator Actor, Email Address Validator Actor, and Required Field Validator Actor.

Result from this actors are displayed as grid data in the frontend UI formExcelValidationDialog.

#### **FilePathValidatorActor**

Akka Actor for validating file path in excel cell

#### **RequiredFieldValidatorActor**

Akka Actor for validating required field in excel

#### **RootSystem**

Singleton Pattern for RootSystem, contains operation start and stop Akka Actor System.

For further information visit site <a href="https://doc.akka.io/docs/akka/current/general/actor-systems.html">https://doc.akka.io/docs/akka/current/general/actor-systems.html</a>

#### **RowCountValidatorActor**

Akka Actor for validating row count excel sheet

#### **RtfToHTMLConverterActor**

Akka Actor for converting RTF email template to compressed HTML.

# **RtfToHTMLConverterRootActor**

 $Akka\ Actor\ for\ coordinating\ conversion\ for\ RTF\ template\ to\ email (HTML)\ {\tt RtfTohtmlConverterActor}.$ 

Result from this actors are displayed frontend UI formPreviewAndSend.

# **Class Constant**

Akka constants

Inheritance

System.Object Constant

 $Name space: \underline{Bulk Email. Services. Actors}$ 

Assembly: BulkEmail.Services.dll

Syntax

public sealed class Constant : object

#### **Extension Methods**

 $\underline{ExceptionExtension.FromHierarchy\!\!<\!\!TSource\!\!>\!\!\!(TSource, Func\!\!<\!\!TSource, Func\!\!<\!\!TSource, Func\!\!<\!\!TSource, Boolean\!\!>\!\!\!)}\\ \underline{ExceptionExtension.FromHierarchy\!\!<\!\!TSource\!\!>\!\!\!(TSource, Func\!\!<\!\!TSource, TSource\!\!>\!\!\!)}$ 

# **Class Constant.Dispatcher**

Akka constant for Dispatcher type actor

Inheritance

System Object Constant. Dispatcher

 $Name space: \underline{Bulk Email. Services. Actors}$ 

Assembly: BulkEmail.Services.dll

Syntax

public sealed class Dispatcher : object

# **Properties**

#### **UIThread**

akka.actor.synchronized-dispatcher constant

Declaration

public static string UIThread { get; }

**Property Value** 

Type Description

System.String

#### **Extension Methods**

# Class DuplicateColumnsValidatorActor

Akka Actor for validating duplicate column names in excel sheet

Inheritance

System.Object
DuplicateColumnsValidatorActor

Namespace: <u>BulkFmail.Services.Actors</u>

Assembly: BulkEmail.Services.dll

Syntax

public class DuplicateColumnsValidatorActor : ReceiveActor

#### Remarks

Validates excel column names if has duplicate by grouping columns by name.

Sends a success result to the Actor caller when no duplicate is found, otherwise sends a failed message.

Listens to ExcelColumnsMapping message type to process request

#### **Constructors**

#### **DuplicateColumnsValidatorActor(IActorRef)**

Initializes a new instance of the <u>DuplicateColumnsValidatorActor</u> class.

#### Declaration

public DuplicateColumnsValidatorActor(IActorRef parent)

**Parameters** 

Type Name Description

IActorRef parent The parent actor reference to reply back messages from validation.

#### **Extension Methods**

#### Class EmailAddressValidatorActor

Akka Actor for validating email address in excel sheet

Inheritance

System Object Email Address Validator Actor

Namespace: Bulk Email. Services. Actors

Assembly: BulkEmail.Services.dll

Syntax

public class EmailAddressValidatorActor : ReceiveActor

#### Remarks

Validates email address using singleton helper Email Address Validator.

Sends a success result to the Actor caller when email format is valid, otherwise sends a failed message.

Listens to ExcelRowEmailAddressMapping message type to process request

#### Examples

```
IActorRef actorRef;
public ActorConstructor(IActorRef actorRef)
{
    this.actorRef = actorRef;
    //listens to message type
    Receive<ExcelRowEmailAddressMapping>(MethodToHandleMessage);
}
public void MethodToHandleMessage(ExcelRowAndRtfTemplate message)
{
    //reply back to actor
    actorRef.Tell(new MessageTypeThatParentListensTo());
}
```

#### **Constructors**

#### EmailAddressValidatorActor(IActorRef, IEmailAddressValidator)

Initializes a new instance of the EmailAddressValidatorActor class.

Declaration

public EmailAddressValidatorActor(IActorRef parent, IEmailAddressValidator validator)

**Parameters** 

Type Name Description

IActorRef parent The parent actor reference to reply back messages from validation.

IEmailAddressValidator validator The email address validator.

#### **Extension Methods**

# Class EmailComposerActor

Akka Actor for coordinating email sending Email SenderActor.

Handles queuing of Email Sender Actor.

Inheritance

System.Object EmailComposerActor

**Implements** 

**IWithUnboundedStash** 

Namespace: BulkEmail.Services.Actors

Assembly: BulkEmail.Services.dll

Syntax

public class EmailComposerActor : ReceiveActor

#### **Constructors**

## EmailComposerActor(IActorRef)

Declaration

public EmailComposerActor(IActorRef actorRef)

**Parameters** 

Type Name Description

IActorRef actorRef

## **Properties**

Stash

Declaration

public IStash Stash { get; set; }

**Property Value** 

**Type Description** 

**IStash** 

Methods

## PreRestart(Exception, Object)

Declaration

protected override void PreRestart (Exception reason, object message)

Parameters

Type Name Description

Exception reason
System.Object message

PreStart()

#### Declaration

protected override void PreStart()

## **Implements**

IWithUnboundedStash

## **Extension Methods**

## Class EmailRootActor

Akka Actor for coordinating multiple email sending to EmailComposerActor.

Result from this actors are generated as email sending excel report.

Inheritance

System.Object **EmailRootActor** 

Namespace: BulkEmail.Services.Actors

Assembly: BulkEmail.Services.dll

Syntax

public class EmailRootActor : ReceiveActor

#### **Constructors**

#### EmailRootActor(IActorRef, IActorRef)

Initializes a new instance of the EmailRootActor class.

#### Declaration

public EmailRootActor(IActorRef progressActor, IActorRef emailSentReceiverActor)

#### **Parameters**

Туре	Name	Description	
IActorRef progressActor		The progress actor.	

IActorRef emailSentReceiverActor The email sent receiver actor.

#### Methods

## PreRestart(Exception, Object)

#### Declaration

protected override void PreRestart (Exception reason, object message)

#### **Parameters**

**Type** Name Description

Exception reason System Object message

#### PreStart()

Create instance of EmailSenderActor base on the application settings.

Is called when an Actor is started. Actors are automatically started asynchronously when created.

#### **Declaration**

protected override void PreStart()

## **Extension Methods**

## Class EmailSenderActor

Akka Actor for sending email using Sendgrid API

Inheritance

System.Object EmailSenderActor

Namespace: BulkFmail.Services.Actors

Assembly: BulkEmail.Services.dll

Syntax

public class EmailSenderActor : ReceiveActor

#### Constructors

## EmailSenderActor(IActorRef, IZipTool)

Initializes a new instance of the EmailSenderActor class.

Declaration

public EmailSenderActor(IActorRef actorRef, IZipTool zipTool)

**Parameters** 

Type Name Description

IActorRef actorRef The actor reference.

IZipTool zipTool The zip tool.

## **Extension Methods**

#### Class EmailValidatorRootActor

Akka Actor for coordinating validation actors RowCountValidatorActor, DuplicateColumnsValidatorActor, FilePathValidatorActor, EmailAddressValidatorActor, and RequiredFieldValidatorActor.

Result from this actors are displayed as grid data in the frontend UI formExcelValidationDialog.

Inheritance

SystemObject EmailValidatorRootActor

Namespace: <u>Bulk Email. Services. Actors</u>

Assembly: BulkEmail.Services.dll

Syntax

public class EmailValidatorRootActor : ReceiveActor

#### Constructors

#### EmailValidatorRootActor(IActorRef, IActorRef, ExcellSheet, EmailStructure)

 $Initializes \ a \ new \ instance \ of the \ \underline{EmailValidatorRootActor} \ class.$ 

#### Declaration

public EmailValidatorRootActor(IActorRef validationResultReceiverActor, IActorRef progressActor, ExcellSheet excelSheet, EmailStructure emailMapping)

#### Parameters

Type Name Description

IActorRef validationResultReceiverActor The validation result receiver actor. Updates the front-end grid control for validation result.

IActorRef progressActor The front-end progress actor to display updates in the ProgressBar control.

ExcellSheet excelSheet The excel sheet to validate.

EmailStructure emailMapping The email mapping from the UI.

#### Methods

#### PreRestart(Exception, Object)

#### Declaration

protected override void PreRestart(Exception reason, object message)

#### Parameters

Type Name Description

Exception reason System.Object message

#### PreStart()

Initialize validation actors. Actor instances are base on the configuration file. Actors process request in separate threads (multi threaded).

Is called when an Actor is started. Actors are automatically started asynchronously when created.

#### Declaration

protected override void PreStart()

## **Extension Methods**

## Class FilePathValidatorActor

Akka Actor for validating file path in excel cell

Inheritance

SystemObject FilePathValidatorActor

Namespace: BulkEmail.Services.Actors

Assembly: BulkEmail.Services.dll

Syntax

public class FilePathValidatorActor : ReceiveActor

#### Remarks

Validates if file exist in provided path.

Sends a success result to the Actor caller when file exist, otherwise sends a failed message.

Listens to ExcelRowFilePathMapping message type to process request

#### Examples

```
IActorRef actorRef;
public ActorConstructor(IActorRef actorRef)
{
    this.actorRef = actorRef;
    //listens to message type
    Receive<ExcelRowFilePathMapping>(MethodToHandleMessage);
}
public void MethodToHandleMessage(ExcelRowFilePathMapping message)
{
    //reply back to actor
    actorRef.Tell(new MessageTypeThatParentListensTo());
}
```

#### **Constructors**

#### FilePathValidatorActor(IActorRef, IFileValidator)

Initializes a new instance of the FilePathValidatorActor class.

Declaration

public FilePathValidatorActor(IActorRef parent, IFileValidator validator)

**Parameters** 

Type Name Description

IActorRef parent The parent actor reference to reply back messages from validation.

IFileValidator validator The validator.

#### **Extension Methods**

# Class RequiredFieldValidatorActor

Akka Actor for validating required field in excel

Inheritance

System Object Required Field Validator Actor

Namespace: BulkEmail.Services.Actors

Assembly: BulkEmail.Services.dll

Syntax

public class RequiredFieldValidatorActor : ReceiveActor

#### Remarks

Validates excel cell if has content.

Sends a success result to the Actor caller when cell has content, otherwise sends a failed message.

Listens to SubjectColumnsMapping message type to process request

#### Examples

```
IActorRef actorRef;
public ActorConstructor(IActorRef actorRef)
{
    this.actorRef = actorRef;
    //listens to message type
    Receive<SubjectColumnsMapping>(MethodToHandleMessage);
}
public void MethodToHandleMessage(SubjectColumnsMapping message)
{
    //reply back to actor
    actorRef.Tell(new MessageTypeThatParentListensTo());
}
```

#### **Constructors**

#### RequiredFieldValidatorActor(IActorRef)

Initializes a new instance of the RequiredFieldValidatorActor class.

Declaration

public RequiredFieldValidatorActor(IActorRef parent)

**Parameters** 

Type Name

Description

IActorRef parent The parent actor reference to reply back messages from validation.

#### **Extension Methods**

# Class RootSystem

Singleton Pattern for RootSystem, contains operation start and stop Akka Actor System.

For further information visit site <a href="https://doc.akka.io/docs/akka/current/general/actor-systems.html">https://doc.akka.io/docs/akka/current/general/actor-systems.html</a>

Inheritance

System Object RootSystem

Namespace: BulkFmail.Services.Actors

Assembly: BulkEmail.Services.dll

Syntax

public sealed class RootSystem : object

## **Properties**

Instance

Declaration

public static RootSystem Instance { get; }

**Property Value** 

Type Description

**RootSystem** 

Methods

GetActorResolver()

Declaration

public IDependencyResolver GetActorResolver()

Returns

Type Description

**IDependencyResolver** 

GetContainer()

Declaration

public IContainer GetContainer()

Returns

Type Description

**IContainer** 

GetHost()

Declaration

public ActorSystem GetHost()

Returns

# Start() Starts Akka Actor System Declaration public void Start() Stop() Stops Akka Actor System

Declaration

Type

public void Stop()

## **Extension Methods**

Description

## Class RowCountValidatorActor

Akka Actor for validating row count excel sheet

Inheritance

System Object RowCount Validator Actor

Namespace: BulkEmail.Services.Actors

Assembly: BulkEmail.Services.dll

Syntax

public class RowCountValidatorActor : ReceiveActor

#### Remarks

Validates excel if has row data to process.

Sends a success result to the Actor caller when row data equal to 1 or more, otherwise sends a failed message.

Listens to ExcelRowCount message type to process request

#### Examples

```
IActorRef actorRef;
public ActorConstructor(IActorRef actorRef)
{
    this.actorRef = actorRef;
    //listens to message type
    Receive<ExcelRowCount>(MethodToHandleMessage);
}
public void MethodToHandleMessage(ExcelRowCount message)
{
    //reply back to actor
    actorRef.Tell(new MessageTypeThatParentListensTo());
}
```

#### **Constructors**

#### RowCountValidatorActor(IActorRef)

Initializes a new instance of the <u>RowCountValidatorActor</u> class.

Declaration

public RowCountValidatorActor(IActorRef parent)

**Parameters** 

Type Name

Description

IActorRef parent The parent actor reference to reply back messages from validation.

#### **Extension Methods**

## Class RtfToHTMLConverterActor

Akka Actor for converting RTF email template to compressed HTML.

Inheritance

System Object

RtfToHTMLConverterActor

Namespace: BulkEmail.Services.Actors

Assembly: BulkEmail.Services.dll

Syntax

public class RtfToHTMLConverterActor : ReceiveActor

#### Remarks

Process the RTF template by replacing <>>> tags with the matching column name from the Excel.

Sends a compressed HTML to the Actor caller.

Listens to ExcelRowAndRtfTemplate message type to process request

#### Examples

```
IActorRef actorRef;
public ActorConstructor(IActorRef actorRef)
{
    this.actorRef = actorRef;
    //listens to message type
    Receive<ExcelRowAndRtfTemplate>(MethodToHandleMessage);
}
public void MethodToHandleMessage(ExcelRowAndRtfTemplate message)
{
    //reply back to actor
    actorRef.Tell(new MessageTypeThatParentListensTo());
}
```

#### **Constructors**

## RtfToHTMLConverterActor(IActorRef, IRtfToHtmlConverter, IZipTool)

Initializes a new instance of the RtfToHTMLConverterActor class.

Declaration

public RtfToHTMLConverterActor(IActorRef actorRef, IRtfToHtmlConverter rtfToHtmlConverter, IZipTool zipTool)

**Parameters** 

Type Name Description

IActorRef actorRef The parent actor reference to reply back processed messages.

IRtfToHtmlConverter rtfToHtmlConverter The RTF to HTML converter.

IZipTool zipTool The zip tool.

## **Properties**

#### RtfToHtmlConverter

Declaration

public IRtfToHtmlConverter RtfToHtmlConverter { get; }

#### **Property Value**

Type Description

IRtfToHtmlConverter

## **Extension Methods**

## Class RtfToHTMLConverterRootActor

Akka Actor for coordinating conversion for RTF template to email(HTML) RtfToHTMLConverterActor.

Result from this actors are displayed frontend UI formPreviewAndSend.

Inheritance

SystemObject RtfToHTMLConverterRootActor

Namespace: BulkEmail.Services.Actors

Assembly: BulkEmail.Services.dll

Syntax

public class RtfToHTMLConverterRootActor : ReceiveActor

#### Constructors

#### RtfToHTMLConverterRootActor(IActorRef, IActorRef, ExcellSheet, String)

Initializes a new instance of the RtfToHTMLConverterRootActor class.

#### Declaration

public RtfToHTMLConverterRootActor(IActorRef progressActor, IActorRef bodyReceiverActor, ExcellSheet excellSheet, string rtf)

#### Parameters

Type	Name	Description
IActorRef	progressActor	The progress actor. Responsible for update of frontend ProgressBar control
IActorRef	bodyReceiverActor	The body receiver actor.
ExcellSheet	excellSheet	The excell sheet.

#### Methods

System.String rtf

## PreRestart(Exception, Object)

#### Declaration

protected override void PreRestart (Exception reason, object message)

The RTF.

#### Parameters

Type Name Description

Exception reason System Object message

## PreStart()

#### Declaration

protected override void PreStart()

#### **Extension Methods**

# Namespace BulkEmail.Services.Extensions

# Classes

ExceptionExtension

Extension helper for exception types

## Class ExceptionExtension

Extension helper for exception types

Inheritance

SystemObject ExceptionExtension

Namespace: <u>BulkEmail.Services.Extensions</u>

Assembly: BulkEmail.Services.dll

Syntax

public static class ExceptionExtension : object

#### Methods

#### FromHierarchy<TSource>(TSource, Func<TSource, TSource>)

Iterates exception chain and returns as a list of IEnumerable exception.

#### Declaration

public static IEnumerable<TSource> FromHierarchy<TSource>(this TSource source, Func<TSource, TSource> nextItem)
where TSource : class

#### Parameters

Type Name Description

TSource source The source.

Func<TSource, TSource> nextItem The next item.

#### Returns

Type Description

IEnumerable<TSource>

Type Parameters

Name Description

TSource The type of the source.

#### FromHierarchy<TSource>(TSource, Func<TSource, TSource>, Func<TSource, Boolean>)

Iterates exception chain and returns as a list of IEnumerable exception.

#### Declaration

public static IEnumerable<TSource> FromHierarchy<TSource>(this TSource source, Func<TSource> nextItem, Func<TSource, bool> canContinue)

#### Parameters

Type Name Description
TSource source The source.

Func<TSource, TSource> nextItem The next item.

Func<TSource, System.Boolean> canContinue The can continue.

#### Returns

Type Description

IEnumerable<TSource>

Type Parameters

Name Description

TSource The type of the source.

# GetaAllMessages(Exception) Getas all messages from exception chain Declaration public static string GetaAllMessages(this Exception exception) Parameters Name Description Type Exception exception The exception. Returns Description Type System.String GetAllErrorAndTrace(Exception) Gets all error and trace from exception chain Declaration public static string GetAllErrorAndTrace(this Exception exception) Parameters Type Name Description Exception exception The exception. Returns Type Description System.String GetAllStacktrace(Exception) Gets all stacktrace from exception chain. Declaration public static string GetAllStacktrace(this Exception exception) Parameters Type Name Description Exception exception The exception.

Returns

Type

System.String

Description

# Namespace BulkEmail.Services.IoC

Classes

**TypeNamingConvention** 

# Class TypeNamingConvention

#### Inheritance

System.Object
TypeNamingConvention

Namespace: BulkEmail.Services.IoC

Assembly: BulkEmail.Services.dll

**Syntax** 

public class TypeNamingConvention : IRegistrationConvention

## Methods

## ScanTypes(TypeSet, Registry)

#### Declaration

public void ScanTypes(TypeSet types, Registry registry)

#### **Parameters**

## Type Name Description

TypeSet types Registry registry

## **Extension Methods**

# Namespace BulkEmail.Services.Messages

#### Classes

## **BaseExcelRowMapping**

Base class for Akka message type for Excel content type

#### BaseResult<T>

#### **BreakerClose**

Akka Close message type for Circuit Breaker messaging pattern

## **BreakerOpen**

Akka Open message type for Circuit Breaker messaging pattern

#### **Complete**

Akka Complete message type for completed request

## **EmailBody**

Akka EmailBody message type for sending email

#### **EmailFieldMapForValidation**

Akka EmailFieldMapForValidation message type for validating excel row content

#### **EmailSent**

Akka EmailSent message type for email sending result

#### **EmailToSend**

Akka EmailToSend message type for email to send

#### **ExcelColumns Mapping**

Akka ExcelColumnsMapping message type for Column type cell

#### **ExcelRowAndRtfTemplate**

Akka ExcellRowAndRtfTemplate message type for excel row and rtf formatted template

#### **ExcelRowCount**

Akka ExcelColumnsMapping message type for Excel row count

## **ExcelRowEmailAddressMapping**

Akka ExcelRowEmailAddressMapping message type for Email Address type cell

#### **ExcelRowFilePathMapping**

Akka ExcelRowFilePathMapping message type for File type cell

## Failed<T>

Akka Failed message type for failed operation of a request

#### **KillThis**

Akka KillThis message type for stopping operation and disposing of Actors

Akka Progress message type for the request progress

ReliableDeliveryAck<TMessage>

Akka acknowledgement message type for AtleastOnceMessage messaging pattern

ReliableDeliveryEnvelope<TMessage>

Akka delivery message type for AtleastOnceMessage messaging pattern

**SetPrerequisite** 

**Start** 

**Progress** 

Akka Start message type for the request operation to start

**SubjectColumnsMapping** 

Akka SubjectColumnsMapping message type for Subject type cell

Success<T>

Akka Success message type for successful operation of a request

**ValidatedFieldMap** 

Akka ValidatedFieldMap message type for validated excel content

# Class BaseExcelRowMapping

Base class for Akka message type for Excel content type

## Inheritance

System Object
Base Excel Row Mapping
Excel Columns Mapping
Excel Row Count
Excel Row Email Address Mapping
Excel Row File Path Mapping
Subject Columns Mapping

Namespace: BulkEmail.Services.Messages

Assembly: BulkEmail.Services.dll

Syntax

public abstract class BaseExcelRowMapping : object

## **Constructors**

## BaseExcelRowMapping(Int32, String, String)

#### Declaration

public BaseExcelRowMapping(int row, string field, string fieldValue)

#### **Parameters**

#### Type Name Description

System.Int32 row System.String field System.String fieldValue

## **Properties**

#### **Field**

#### Declaration

```
public string Field { get; }
```

#### **Property Value**

#### Type Description

System.String

## Row

## Declaration

```
public int Row { get; }
```

#### **Property Value**

#### Type Description

System.Int32

## Value

#### Declaration

public string Value { get; }

**Property Value** 

Type Description

System.String

## **Extension Methods**

## Class BaseResult<T>

# Inheritance System.Object BaseResult<T> Failed<T> Success<T> Namespace: BulkEmail.Services.Messages Assembly: BulkEmail.Services.dll Syntax public abstract class BaseResult<T> : object where T : class **Type Parameters** Name Description **Constructors** BaseResult(T, String, Int64) Declaration public BaseResult(T instance, string message, long traceId) **Parameters Type** Name Description instance System.String message System.Int64 traceId **Properties** Message Declaration public string Message { get; } Property Value Description **Type** System.String **Source Declaration** public T Source { get; } **Property Value**

### **TimeStamp**

**Type Description** 

#### Declaration

```
public DateTime TimeStamp { get; }
```

**Property Value** 

## Type Description

DateTime

#### TraceId

Declaration

```
public long TraceId { get; }
```

**Property Value** 

## Type Description

System.Int64

## **Extension Methods**

## Class BreakerClose

Akka Close message type for Circuit Breaker messaging pattern

Inheritance

SystemObject BreakerClose

Namespace: BulkEmail.Services.Messages

Assembly: BulkEmail.Services.dll

Syntax

public sealed class BreakerClose : object

## **Properties**

Instance

Gets the Close message instance.

Declaration

public static BreakerClose Instance { get; }

**Property Value** 

Type Description

BreakerClose The instance.

## **Extension Methods**

# Class BreakerOpen

Akka Open message type for Circuit Breaker messaging pattern

Inheritance

System Object Breaker Open

 $Name space: \underline{Bulk Email. Services. Messages}$ 

Assembly: BulkEmail.Services.dll

Syntax

public sealed class BreakerOpen : object

## **Properties**

Instance

Gets the Open message instance.

Declaration

public static BreakerOpen Instance { get; }

**Property Value** 

Type Description

BreakerOpen The instance.

## **Extension Methods**

# **Class Complete**

Akka Complete message type for completed request

Inheritance

System.Object Complete

 $Name space: \underline{Bulk Email. Services. Messages}$ 

Assembly: BulkEmail.Services.dll

Syntax

public sealed class Complete : object

## **Properties**

Instance

Gets the Complete message instance.

Declaration

public static Complete Instance { get; }

**Property Value** 

Type Description

Complete The instance.

## **Extension Methods**

# Class EmailBody

Akka EmailBody message type for sending email

Inheritance

System Object EmailBody

Namespace: BulkEmail.Services.Messages

Assembly: BulkEmail.Services.dll

Syntax

public class EmailBody : object

#### **Constructors**

## EmailBody(ExcelRowAndRtfTemplate, Byte[])

Initializes a new instance of the **EmailBody** class.

**Declaration** 

public EmailBody(ExcelRowAndRtfTemplate source, byte[] html)

**Parameters** 

Type Name Description

ExcelRowAndRtfTemplate source The source of excel raw data for email sending.

System Byte[] html The email body to send in compressed HTML.

## **Properties**

#### Content

Declaration

public byte[] Content { get; }

**Property Value** 

Type Description

System.Byte[]

Source

Declaration

public ExcelRowAndRtfTemplate Source { get; }

**Property Value** 

Type Description

**ExcelRowAndRtfTemplate** 

## **Extension Methods**

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>, Func<TSource>, Func<TSource>, Boolean>)



# Class EmailFieldMapForValidation

Akka EmailFieldMapForValidation message type for validating excel row content

Inheritance

System.Object

EmailFieldMapForValidation

Namespace: BulkEmail.Services.Messages

Assembly: BulkEmail.Services.dll

Syntax

public class EmailFieldMapForValidation : object

#### **Constructors**

## EmailFieldMapForValidation(ExcelRow, String[], FieldType)

Initializes a new instance of the EmailFieldMapForValidation class.

#### Declaration

public EmailFieldMapForValidation(ExcelRow excelRow, string[] mappedFields, FieldType fieldType)

#### **Parameters**

Type	Name	Description
------	------	-------------

ExcelRow excelRow The excel row data from excel file.

System.String[] mappedFields The mapped fields from the GUI to validate.

FieldType fieldType Type of field to validate. eg email, filepath

## **Properties**

## ExcelRow

## Declaration

```
public ExcelRow ExcelRow { get; }
```

#### **Property Value**

## Type Description

ExcelRow

## FieldType

#### Declaration

```
public FieldType FieldType { get; }
```

## Property Value

## Type Description

FieldType

## MappedFields

Declaration

public string[] MappedFields { get; }

**Property Value** 

**Type Description** 

System.String[]

## **Extension Methods**

## **Class EmailSent**

Akka EmailSent message type for email sending result

Inheritance

System.Object EmailSent

Namespace: BulkEmail.Services.Messages

Assembly: BulkEmail.Services.dll

Syntax

public sealed class EmailSent : object

#### **Constructors**

## EmailSent(EmailToSend, Boolean, String, Nullable<DateTime>)

Initializes a new instance of the EmailSent class.

#### Declaration

public EmailSent(EmailToSend source, bool result, string message, DateTime? sent = null)

#### **Parameters**

Туре	Name	Description
<u>EmailToSend</u>	source	The source email that was sent.
System.Boolean	result	if set to true [result].
System String	message	The message received from sending. Empty if successful.
System.Nullable <datetime></datetime>	sent	The DateTime when the email sa sent to Sendgrid.

## **Properties**

## Message

Declaration

```
public string Message { get; }
```

**Property Value** 

Type Description

System.String

Sent

Declaration

```
public DateTime Sent { get; }
```

**Property Value** 

Type Description

## Type Description

DateTime

Source

Declaration

public EmailToSend Source { get; }

**Property Value** 

Type Description

**EmailToSend** 

**Success** 

Declaration

public bool Success { get; }

**Property Value** 

Type Description

System.Boolean

## **Extension Methods**

Class EmailToSend Akka EmailToSend message type for email to send Inheritance System.Object EmailToSend Namespace: BulkEmail.Services.Messages Assembly: BulkEmail.Services.dll Syntax public sealed class EmailToSend : object Remarks Use base Builder Pattern to construct email **Constructors** EmailToSend(Int32) Declaration public EmailToSend(int id) **Parameters** Type Name Description System.Int32 id **Properties AttachmentPath** Declaration public string[] AttachmentPath { get; } **Property Value Type** Description System.String[] BCC Declaration public string[] BCC { get; } **Property Value Type** Description System.String[]

## Body

Declaration

```
public EmailBody Body { get; }
```

Type Description

```
EmailBody
CC
Declaration
public string[] CC { get; }
Property Value
              Description
    Type
System.String[]
From
Declaration
public string From { get; }
Property Value
    Type
             Description
System.String
Id
Declaration
public int Id { get; }
Property Value
   Type
            Description
System.Int32
InlineImages
Declaration
public string[] InlineImages { get; }
Property Value
              Description
    Type
System.String[]
Subject
Declaration
public string Subject { get; }
Property Value
    Type
             Description
System.String
```

To

```
Declaration
public string[] To { get; }
Property Value
    Type
              Description
System.String[]
Methods
SetAttachmentPath(String[])
Sets the attachment path of the email.
Declaration
public EmailToSend SetAttachmentPath(string[] path)
Parameters
              Name Description
    Type
System.String[] path The path.
Returns
            Description
   Type
EmailToSend
SetBCC(String[])
Sets the BCC of the email.
Declaration
public EmailToSend SetBCC(string[] bcc)
Parameters
    Type
              Name Description
System.String[] bcc
                    The BCC.
Returns
   Type
            Description
EmailToSend
SetBody(EmailBody)
Sets the body of email.
Declaration
public EmailToSend SetBody(EmailBody emailBody)
Parameters
```

Description

**Type** 

Name

```
Description
  Type
            Name
EmailBody emailBody The email body.
Returns
   Type
             Description
EmailToSend
SetCC(String[])
Sets the cc of the email.
Declaration
public EmailToSend SetCC(string[] cc)
Parameters
    Type
              Name Description
System.String[] cc
                     The cc.
Returns
    Type
             Description
EmailToSend
SetFrom(String)
Sets the From of the email. Default is the email registered in Sendgrid
Declaration
public EmailToSend SetFrom(string from)
Parameters
             Name Description
    Type
System String from From
Returns
    Type
             Description
EmailToSend
SetSubject(String)
Sets the subject of email.
Declaration
public EmailToSend SetSubject(string subject)
Parameters
```

**Type** 

Name Description

# **Type Name Description**System String subject The subject.

Returns

Type Description

**EmailToSend** 

SetTo(String[])

Sets To of the email.

Declaration

public EmailToSend SetTo(string[] to)

**Parameters** 

Type Name Description

System.String[] to To.

Returns

Type Description

**EmailToSend** 

#### **Extension Methods**

 $\underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource, Func < TSource, Func < TSource, Boolean > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource, TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource, TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{ExceptionExtension.FromHierarchy < TSource > (TSource, Func < TSource > )} \\ \underline{Exceptin$ 

# Class ExcelColumnsMapping

Akka ExcelColumnsMapping message type for Column type cell

#### Inheritance

System Object
Base Excel Row Mapping
Excel Columns Mapping

#### **Inherited Members**

BaseExcelRowMapping.Row BaseExcelRowMapping.Field BaseExcelRowMapping.Value

Namespace: <u>BulkEmail.Services.Messages</u>

Assembly: BulkEmail.Services.dll

Syntax

public class ExcelColumnsMapping : BaseExcelRowMapping

#### **Constructors**

### ExcelColumnsMapping(Int32, String, String)

#### Declaration

public ExcelColumnsMapping(int row, string field, string fieldValue)

#### **Parameters**

### Type Name Description

System.Int32 row System.String field System.String fieldValue

#### **Extension Methods**

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>, Func<TSource, Boolean>)
ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>)

### See Also

# Class ExcelRowAndRtfTemplate

Akka ExcellRowAndRtfTemplate message type for excel row and rtf formatted template

Inheritance

System.Object

ExcelRow And Rtf Template

Namespace: BulkEmail.Services.Messages

Assembly: BulkEmail.Services.dll

Syntax

public class ExcelRowAndRtfTemplate : object

#### **Constructors**

### ExcelRowAndRtfTemplate(ExcelRow, String)

Initializes a new instance of the ExcelRowAndRtfTemplate class.

Declaration

public ExcelRowAndRtfTemplate(ExcelRow excelRow, string rtf)

**Parameters** 

Type Name Description

ExcelRow The excel row.

System.String rtf The RTF email body template.

### **Properties**

Row

Declaration

public ExcelRow Row { get; }

**Property Value** 

Type Description

ExcelRow

**Template** 

Declaration

public string Template { get; }

Property Value

Type Description

System.String

### **Extension Methods**

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>, Func<TSource>, Func<TSource>, Boolean>)



### Class ExcelRowCount

Akka ExcelColumnsMapping message type for Excel row count

#### Inheritance

System Object
<a href="mailto:BaseExcelRowMapping">BaseExcelRowMapping</a>
ExcelRowCount

#### Inherited Members

BaseExcelRowMapping.Row BaseExcelRowMapping.Field BaseExcelRowMapping.Value

Namespace: <u>BulkEmail.Services.Messages</u>

Assembly: BulkEmail.Services.dll

Syntax

public class ExcelRowCount : BaseExcelRowMapping

#### **Constructors**

### ExcelRowCount(Int32, String, String)

#### Declaration

public ExcelRowCount(int row, string field, string fieldValue)

#### **Parameters**

### Type Name Description

System.Int32 row System.String field System.String fieldValue

#### **Extension Methods**

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>, Func<TSource, Boolean>)

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>)

### See Also

# Class ExcelRowEmailAddressMapping

Akka ExcelRowEmailAddressMapping message type for Email Address type cell

#### Inheritance

System Object
Base Excel Row Mapping
Excel Row Email Address Mapping

#### **Inherited Members**

BaseExcelRowMapping.Row BaseExcelRowMapping.Field BaseExcelRowMapping.Value

 ${\bf Name space:} \ \underline{{\bf Bulk Email. Services. Messages}}$ 

Assembly: BulkEmail.Services.dll

**Syntax** 

 $\verb"public class ExcelRowEmailAddressMapping": BaseExcelRowMapping"$ 

#### **Constructors**

### ExcelRowEmailAddressMapping(Int32, String, String)

#### Declaration

public ExcelRowEmailAddressMapping(int row, string field, string fieldValue)

#### **Parameters**

#### Type Name Description

System.Int32 row System.String field System.String fieldValue

#### **Extension Methods**

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>, Func<TSource, Boolean>)

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>)

### See Also

# Class ExcelRowFilePathMapping

Akka ExcelRowFilePathMapping message type for File type cell

#### Inheritance

System Object
Base ExcelRow Mapping
ExcelRow File Path Mapping

#### **Inherited Members**

BaseExcelRowMapping.Row BaseExcelRowMapping.Field BaseExcelRowMapping.Value

Namespace: BulkEmail.Services.Messages

Assembly: BulkEmail.Services.dll

Syntax

public class ExcelRowFilePathMapping : BaseExcelRowMapping

#### **Constructors**

### ExcelRowFilePathMapping(Int32, String, String)

#### Declaration

public ExcelRowFilePathMapping(int row, string field, string fieldValue)

#### **Parameters**

### Type Name Description

System.Int32 row System.String field System.String fieldValue

#### **Extension Methods**

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>, Func<TSource, Boolean>)

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>)

### See Also

### Class Failed<T>

Akka Failed message type for failed operation of a request

#### Inheritance

System Object

BaseResult<T>

Failed<T>

#### **Inherited Members**

BaseResult<T>.TraceId

BaseResult<T>.Source

BaseResult<T>.Message

BaseResult<T>.TimeStamp

Namespace: BulkEmail.Services.Messages

Assembly: BulkEmail.Services.dll

#### **Syntax**

public sealed class Failed<T> : BaseResult<T> where T : class

Type Parameters

#### **Name Description**

Т

#### **Constructors**

Failed(T, String, Int64)

#### Declaration

public Failed(T instance, string message, long traceId)

#### Parameters

### Type Name Description

T instance

System String message

System.Int64 traceId

#### **Extension Methods**

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>, Func<TSource, Boolean>)

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>)

### See Also

BaseResult<T>

### **Class KillThis**

Akka KillThis message type for stopping operation and disposing of Actors

Inheritance

SystemObject KillThis

Namespace: Bulk Email. Services. Messages

Assembly: BulkEmail.Services.dll

Syntax

public sealed class KillThis : object

### **Properties**

Instance

Declaration

public static KillThis Instance { get; }

**Property Value** 

Type Description

**KillThis** 

### **Extension Methods**

# **Class Progress**

Akka Progress message type for the request progress

Inheritance

SystemObject Progress

Namespace: Bulk Email. Services. Messages

Assembly: BulkEmail.Services.dll

Syntax

public sealed class Progress : object

### **Properties**

Instance

**Declaration** 

public static Progress Instance { get; }

**Property Value** 

Type Description

**Progress** 

### **Extension Methods**

# Class ReliableDeliveryAck<TMessage>

Akka acknowledgement message type for AtleastOnceMessage messaging pattern

Inheritance

SystemObject

ReliableDeliveryAck<TMessage>

Namespace: <u>BulkEmail.Services.Messages</u>

Assembly: BulkEmail.Services.dll

Syntax

public class ReliableDeliveryAck<TMessage> : object

**Type Parameters** 

Name Description

TMessage The type of the message.

#### **Constructors**

### ReliableDeliveryAck(TMessage, Int64)

Declaration

public ReliableDeliveryAck(TMessage message, long messageId)

**Parameters** 

Type Name Description

TMessage message System.Int64 messageId

### **Properties**

### Message

Declaration

public TMessage Message { get; }

**Property Value** 

Type Description

TMessage

### MessageId

Declaration

public long MessageId { get; }

Property Value

Type Description

System.Int64

### **Extension Methods**

# Class ReliableDeliveryEnvelope<TMessage>

Akka delivery message type for AtleastOnceMessage messaging pattern

Inheritance

System Object

ReliableDeliveryEnvelope<TMessage>

Namespace: <u>BulkEmail.Services.Messages</u>

Assembly: BulkEmail.Services.dll

Syntax

public class ReliableDeliveryEnvelope<TMessage> : object

**Type Parameters** 

Name Description

TMessage The type of the message.

#### **Constructors**

### ReliableDeliveryEnvelope(TMessage, Int64)

Declaration

public ReliableDeliveryEnvelope(TMessage message, long messageId)

**Parameters** 

Type Name Description

TMessage message System.Int64 messageId

### **Properties**

Message

Declaration

public TMessage Message { get; }

**Property Value** 

Type Description

TMessage

MessageId

Declaration

public long MessageId { get; }

Property Value

Type Description

System.Int64

### **Extension Methods**

# Class SetPrerequisite

Inheritance

System.Object SetPrerequisite

 $Name space: \underline{Bulk Email. Services. Messages}$ 

Assembly: BulkEmail.Services.dll

**Syntax** 

public sealed class SetPrerequisite : object

### **Properties**

Instance

Declaration

public static SetPrerequisite Instance { get; }

**Property Value** 

Type Description

<u>SetPrerequisite</u>

### **Extension Methods**

### **Class Start**

Akka Start message type for the request operation to start

Inheritance

System.Object

Start

 $Name space: \underline{Bulk Email. Services. Messages}$ 

Assembly: BulkEmail.Services.dll

Syntax

public sealed class Start : object

### **Properties**

Instance

**Declaration** 

public static Start Instance { get; }

**Property Value** 

**Type Description** 

Start

### **Extension Methods**

# Class SubjectColumnsMapping

Akka SubjectColumnsMapping message type for Subject type cell

#### Inheritance

System Object
<u>BaseExcelRowMapping</u>
SubjectColumnsMapping

#### **Inherited Members**

BaseExcelRowMapping.Row BaseExcelRowMapping.Field BaseExcelRowMapping.Value

Namespace: <u>BulkEmail.Services.Messages</u>

Assembly: BulkEmail.Services.dll

Syntax

public class SubjectColumnsMapping : BaseExcelRowMapping

#### **Constructors**

### SubjectColumnsMapping(Int32, String, String)

#### Declaration

public SubjectColumnsMapping(int row, string field, string fieldValue)

#### **Parameters**

### Type Name Description

System.Int32 row System.String field System.String fieldValue

#### **Extension Methods**

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>, Func<TSource, Boolean>)

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>)

### See Also

### Class Success<T>

Akka Success message type for successful operation of a request

#### Inheritance

System.Object

BaseResult<T>

Success<T>

#### Inherited Members

BaseResult<T>.TraceId

BaseResult<T>.Source

BaseResult<T>.Message

BaseResult<T>.TimeStamp

Namespace: BulkEmail.Services.Messages

Assembly: BulkEmail.Services.dll

#### **Syntax**

public sealed class Success<T> : BaseResult<T> where T : class

Type Parameters

#### **Name Description**

Т

#### **Constructors**

Success(T, String, Int64)

#### Declaration

public Success(T instance, string message, long traceId)

#### Parameters

#### Type Name Description

T instance

System String message

System.Int64 traceId

### **Extension Methods**

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>, Func<TSource, Boolean>)

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>)

#### See Also

BaseResult<T>

# Class ValidatedFieldMap

Akka ValidatedFieldMap message type for validated excel content

Inheritance

System.Object ValidatedFieldMap

Namespace: BulkEmail.Services.Messages

Assembly: BulkEmail.Services.dll

Syntax

public class ValidatedFieldMap : object

#### **Constructors**

### ValidatedFieldMap(BaseExcelRowMapping, String, Boolean)

Initializes a new instance of the ValidatedFieldMap class.

Declaration

public ValidatedFieldMap(BaseExcelRowMapping excelRowMapping, string message, bool valid)

**Parameters** 

Type Name Description

BaseExcelRowMapping excelRowMapping The excel row mapping.

System String message The message. Empty for valid content

SystemBoolean valid if set to true [valid].

### **Properties**

### **ExcelRowMapping**

Declaration

public BaseExcelRowMapping ExcelRowMapping { get; }

**Property Value** 

Type Description

**BaseExcelRowMapping** 

Message

Declaration

public string Message { get; }

Property Value

**Type Description** 

System.String

#### Valid

Declaration

public bool Valid { get; }

**Property Value** 

**Type Description** 

System.Boolean

### **Extension Methods**

# Namespace BulkEmail.Services.Utilities

### Classes

### **AesOperation**

Singleton Pattern for AesOperation, contains operation for encryption and decryption.

#### **EmailAddressValidator**

Singleton Pattern for Email Address Validator, contains operation for validation of email

### **ExcelFileReader**

Singleton Pattern for ExcelFileReader, contains operation for reading excel file.

### **ExcelFileWriter**

Singleton Pattern for ExcelFileWriter, contains operation for writing excel.

#### **FileValidator**

Singleton Pattern for FileValidator, contains operation for validation of file path.

#### **RtfToHtmlConverter**

Singleton Pattern for RtfToHtmlConverter, contains operation for converting rtf to html format.

### **ZipTool**

Singleton Pattern for ZipTool, contains operation for compressing and decompressing.

# **Class AesOperation**

Singleton Pattern for AesOperation, contains operation for encryption and decryption.

Inheritance

System Object Aes Operation

Namespace: Bulk Email. Services. Utilities

Assembly: BulkEmail.Services.dll

Syntax

public sealed class AesOperation : IAesOperation

### **Properties**

#### Instance

Gets the singleton instance of AesOperation.

Declaration

public static IAesOperation Instance { get; }

**Property Value** 

Type Description

 $IA es Operation \ In stance \ of {\tt AesOperation}.$ 

### Methods

#### DecryptString(String, String)

Decrypts the string.

Used in decrypting setting/sendgrid account and key value in configuration

Declaration

public string DecryptString(string key, string cipherText)

Parameters

Type Name Description

System.String key The seed key.

System.String cipherText The cipher text.

Returns

**Type Description** 

System String returns decrypted string

Examples

var decryptedString = AesOperation.Instance.DecryptString(Services.Constant.Aes.Key,"GibberishString")

### EncryptString(String, String)

Encrypts the string.

Used in encrypting setting/sendgrid account and key value in configuration

#### Declaration

public string EncryptString(string key, string plainText)

#### **Parameters**

Type Name Description

System.String key The seed key.

System String plainText The plain text.

#### Returns

Type Description

System String returns encrypted string

#### Examples

var encryptedString = AesOperation.Instance.EncryptString(Services.Constant.Aes.Key, "My Text to Encrypt.")

### **Extension Methods**

### Class EmailAddressValidator

Singleton Pattern for Email Address Validator, contains operation for validation of email

Inheritance

System Object Email Address Validator

Namespace: Bulk Email. Services. Utilities

Assembly: BulkEmail.Services.dll

Syntax

public sealed class EmailAddressValidator : IEmailAddressValidator

### **Properties**

#### Instance

Gets the singleton instance of EmailAddressValidator.

Declaration

public static EmailAddressValidator Instance { get; }

**Property Value** 

Type Description

EmailAddressValidator Instance of EmailAddressValidator.

#### Methods

#### IsValid(String)

Returns true if email is valid format.

Declaration

public bool IsValid(string email)

Parameters

Type Name Description

System.String email The email to validate.

Returns

Type Description

System Boolean true if the specified email is valid; otherwise, false.

#### Examples

var isValid = EmailAddressValidator.Instance.IsValid("my@domain.com");

#### **Extension Methods**

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, Func<TSource, Boolean>)



### Class ExcelFileReader

Singleton Pattern for ExcelFileReader, contains operation for reading excel file.

Inheritance

SystemObject ExcelFileReader

Namespace: Bulk Email. Services. Utilities

Assembly: BulkEmail.Services.dll

Syntax

public sealed class ExcelFileReader : IExcelFileReader

### **Properties**

#### Instance

Gets the singleton instance of ExcelFileReader.

Declaration

public static ExcelFileReader Instance { get; }

**Property Value** 

Type Description

 $\underline{ExcelFileReader}\ Instance\ of \verb|ExcelFileReader|.$ 

### Methods

Read(String, Int32)

Reads the specified excel file path.

Declaration

public ExcellSheet Read(string filePath, int sheetIndex)

Parameters

Type Name Description

System String file Path The file path of the excel file.

System.Int32 sheetIndex Index of the excel sheet to be loaded in memory. Zero index count

Returns

Type Description

ExcellSheet returns ExcellSheet instance

#### Examples

### **Extension Methods**

### Class ExcelFileWriter

Singleton Pattern for ExcelFileWriter, contains operation for writing excel.

Inheritance

System Object ExcelFileWriter

Namespace: BulkEmail.Services.Utilities

Assembly: BulkEmail.Services.dll

Syntax

public sealed class ExcelFileWriter : IExcelFileWriter

### **Properties**

#### Instance

Gets the singleton instance of ExcelFileWriter.

**Declaration** 

```
public static ExcelFileWriter Instance { get; }
```

**Property Value** 

Type Description

ExcelFileWriter Instance of ExcelFileWriter.

#### Methods

#### Write(ExcellSheet[])

Output excel file base form the specified ExcellSheet[]>.

Declaration

public bool Write(params ExcellSheet[] excellSheets)

Parameters

Type Name Description

ExcellSheet[] excellSheets

Returns

Type Description

System Boolean returns true for successful operation

### Examples

```
//create columns
var columns = new List<string> { "To", "Subject" };
var excellSheet = new ExcellSheet("SheetName", "c:\>documents\sample.xlsx", columns, null);
//create row 1 in excel, row 0 is the header/column (defaulted base from the column list)
var row = new ExcelRow(1);
row.Add(new ExcelField("To", "sample text"));
row.Add(new ExcelField("Subject", "sample text2"));
//add row to sheet
```

```
excellSheet.Add(row);
//generate excel file base on filepath
var result = ExcelFileWriter.Instance.Write(excellSheet);
```

### **Extension Methods**

### Class FileValidator

Singleton Pattern for FileValidator, contains operation for validation of file path.

Inheritance

System Object File Validator

Namespace: Bulk Email. Services. Utilities

Assembly: BulkEmail.Services.dll

Syntax

public sealed class FileValidator : IFileValidator

### **Properties**

Instance

Gets the singleton instance of FileValidator.

Declaration

public static FileValidator Instance { get; }

**Property Value** 

Type Description

 $\underline{\textit{FileValidator}}\ \textbf{Instance}\ of \texttt{FileValidator}.$ 

#### Methods

Exist(String)

Validates if file exists the specified file path.

Declaration

public bool Exist(string filePath)

**Parameters** 

Type Name Description

System String file Path The file path to validate.

Returns

**Type Description** 

System.Boolean return true if exist

### **Extension Methods**

### Class RtfToHtmlConverter

Singleton Pattern for RtfToHtmlConverter, contains operation for converting rtf to html format.

Inheritance

System.Object RtfToHtmlConverter

Namespace: Bulk Email. Services. Utilities

Assembly: BulkEmail.Services.dll

Syntax

public sealed class RtfToHtmlConverter : IRtfToHtmlConverter

### **Properties**

#### Instance

Gets the singleton instance of RtfToHtmlConverter.

Declaration

public static RtfToHtmlConverter Instance { get; }

**Property Value** 

Type Description

 $\underline{\textit{RtfToHtmlConverter}}\; \underline{\textit{Instance}\; of} \; \underline{\textit{RtfToHtmlConverter}}.$ 

#### Methods

#### Convert(String)

Converts the specified RTF to an HTML string content. Email body is composed of HTML.

Declaration

public string Convert(string rtf)

Parameters

Type Name Description

System.String rtf The RTF template.

Returns

**Type Description** 

System String return html string content

### **Extension Methods**

# Class ZipTool

Singleton Pattern for ZipTool, contains operation for compressing and decompressing. Inheritance System.Object ZipTool Namespace: Bulk Email. Services. Utilities Assembly: BulkEmail.Services.dll Syntax public sealed class ZipTool : IZipTool **Properties** Instance Gets the singleton instance of <code>ZipTool</code>. Declaration public static ZipTool Instance { get; } **Property Value** Type Description ZipTool Instance of ZipTool. Methods Unzip(Byte[]) Decompress the specified bytes. Declaration public string Unzip(byte[] bytes) Parameters **Type Name Description** System.Byte[] bytes The bytes. Returns Description **Type** System String Decompress to original string content Zip(String)

Declaration

Compress string content

public byte[] Zip(string str)

#### **Parameters**

Type Name Description

System String str The string content to compress.

Returns

Type Description

System.Byte[] Compressed byte[] data

### **Extension Methods**

# Namespace SwiftExcel.Custom.Mod

# Classes

### **DirectoryHelper**

Static helper class for Application

### **ExcelWriter**

 $Concrete\ class\ inherited\ from\ {\tt SwiftExcel.Custom.Mod.ExcelWriterCore}\ to\ add\ support\ for\ writing\ multiple\ sheets\ in\ one\ excel\ file.$ 

### **ExcelWriterCore**

 $Base \ class \ inherited \ from \ {\tt SwiftExcel.Disposable} \ to \ add \ support \ for \ writing \ multiple \ sheets \ in \ one \ excel \ file.$ 

### **Sheet**

 $Inherited\ from\ {\tt SwiftExcel.Sheet}\ to\ add\ functionality\ for\ multiple\ sheet\ support$ 

## Class DirectoryHelper

Static helper class for Application Inheritance System Object DirectoryHelper  $Name space: \underline{SwiftExcel.Custom.Mod}$ Assembly: BulkEmail.Services.dll Syntax public sealed class DirectoryHelper : object **Methods** CheckCreatePath(String) Checks and the create folder structure base from the path. Declaration public static void CheckCreatePath(string path) **Parameters Type** Name Description System.String path The path. DeleteDirectory(String) Deletes the directory. Declaration public static void DeleteDirectory(string path) **Parameters Type** Name Description System String path The path. DeleteFile(String) Deletes the file. Declaration public static void DeleteFile(string path) Parameters

### GetFolderLocation(String)

System.String path The path.

Name Description

**Type** 

# Gets the folder location. **Declaration** public static string GetFolderLocation(string folderName) **Parameters Type** Name Description System String folderName Name of the folder. Returns Description **Type** System.String GetReportFolderLocation() Gets the report folder location. Declaration public static string GetReportFolderLocation() Returns **Description Type** System.String GetTemplateFolderLocation() Gets the template folder location. Declaration public static string GetTemplateFolderLocation() Returns **Type** Description

System.String

### **Extension Methods**

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>, Func<TSource, Boolean>) ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>)

### **Class ExcelWriter**

Concrete class inherited from SwiftExcel.Custom.Mod.ExcelWriterCore to add support for writing multiple sheets in one excel file.

#### Inheritance

System.Object

**ExcelWriterCore** 

ExcelWriter

#### Inherited Members

ExcelWriterCore.Finalized

ExcelWriterCore.FilePath

ExcelWriterCore.Sheets

ExcelWriterCore.OutputPath

ExcelWriterCore.TempOutputPath

ExcelWriterCore.Init()

ExcelWriterCore.Save()

ExcelWriterCore.CreateFolders()

ExcelWriterCore.CreateRels()

ExcelWriterCore.CreateDocProps()

ExcelWriterCore.CreateContentTypes()

ExcelWriterCore.CreateTheme()

ExcelWriterCore.CreateWorkbook()

ExcelWriterCore.CreateExcelStyles()

ExcelWriterCore.StartSheets()
ExcelWriterCore.FinishSheets()

ExcelWriterCore.DisposeCore()

Namespace: SwiftExcel.Custom.Mod

## Assembly: BulkEmail.Services.dll

#### Syntax

public class ExcelWriter : ExcelWriterCore

#### Remarks

Added support for multiple sheet write. Modified code copied from GitHub <a href="https://github.com/RomanPavelko/SwiftExcel">https://github.com/RomanPavelko/SwiftExcel</a>

### Constructors

### ExcelWriter(String, Sheet[])

Initializes a new instance of the ExcelWriter class.

### Declaration

public ExcelWriter(string filePath, params Sheet[] sheets)

#### Parameters

### Type Name Description

System String filePath The file path.

Sheet sheets.

### Methods

### Write(String, Int32, Int32, Int32, DataType)

Writes the specified value in an excel cell in a specific sheet.

### Declaration

public void Write(string value, int col, int row, int sheetIndex, DataType dataType = null)

### **Parameters**

Type Name Description

Type Description Name

System String value The value.

System.Int32 col The col.

SystemInt32 row The row.

SystemInt32 sheetIndex Index of the sheet.

DataType dataType Type of the data.

### WriteFormula(FormulaType, Int32, Int32, Int32, Int32, Int32, Int32)

Writes the formula in an excel cell in a specific sheet.

#### Declaration

public void WriteFormula(FormulaType type, int col, int row, int sourceCol, int sourceRowStart, int sourceRowEnd, int sheetIndex)

#### Parameters

Туре	Name	Description
FormulaType type		The type.
System.Int32 col		The col.
SystemInt32 row		The row.
System Int32 sourceCol		The source col.
System Int32	sourceRowStar	t The source row star
System.Int32	sourceRowEnd	The source row end
System.Int32 sheetIndex		Index of the sheet.

### **Extension Methods**

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>, Func<TSource, Boolean>)  $\underline{ExceptionExtension.FromHierarchy\!\!<\!\!TSource\!\!>\!\!(TSource,Func\!\!<\!\!TSource,TSource\!\!>\!\!)}$ 

### See Also

**ExcelWriterCore** 

## Class ExcelWriterCore

Base class inherited from SwiftExcel.Disposable to add support for writing multiple sheets in one excel file.

Inheritance

SystemObject ExcelWriterCore ExcelWriter

Namespace: SwiftExcel.Custom.Mod

Assembly: BulkEmail.Services.dll

**Syntax** 

public abstract class ExcelWriterCore : Disposable

Remarks

Added support for multiple sheet write. Modified code copied from GitHub <a href="https://github.com/RomanPavelko/SwiftExcel">https://github.com/RomanPavelko/SwiftExcel</a>

### **Constructors**

### ExcelWriterCore(String, Sheet[])

Declaration

protected ExcelWriterCore(string filePath, params Sheet[] sheets)

**Parameters** 

Type Name Description

System String file Path
Sheet[] sheets

**Fields** 

**FilePath** 

Declaration

protected string FilePath

Field Value

**Type Description** 

System.String

**Finalized** 

Declaration

protected bool Finalized

Field Value

**Type Description** 

System.Boolean

### **OutputPath**

Declaration

# CreateTheme()

Declaration

<pre>protected void CreateTheme()</pre>
CreateWorkbook()
Declaration
<pre>protected void CreateWorkbook()</pre>
DisposeCore()
Declaration
<pre>protected override void DisposeCore()</pre>
FinishSheets()
Declaration
<pre>protected void FinishSheets()</pre>
Init()
Declaration
<pre>protected void Init()</pre>
Save()
Declaration
<pre>public void Save()</pre>
StartSheets()
Declaration
<pre>protected void StartSheets()</pre>
Extension Methods
ExceptionExtension.FromHierarchy <tsource>(TSource, Func<tsource, tsource="">, Func<tsource, boolean="">)  ExceptionExtension.FromHierarchy<tsource>(TSource Func<tsource tsource="">)</tsource></tsource></tsource,></tsource,></tsource>

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## **Class Sheet**

Inherited from SwiftExcel. Sheet to add functionality for multiple sheet support

Inheritance

System Object

Sheet

 $Name space: \underline{Swift Excel. Custom. Mod}$ 

Assembly: BulkEmail.Services.dll

Syntax

public class Sheet : Sheet

### **Extension Methods**

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>, Func<TSource, Boolean>)

ExceptionExtension.FromHierarchy<TSource>(TSource, Func<TSource, TSource>)

# Namespace BulkEmail.UI

## Classes

## **GridNavigationPage**

Navigation class for email preview and grid.

Main

## <u>UIData</u>

Store mapped fields from the frontend.

## Enums

## **EnumAction**

Enum Flags used for notification state

## **Enum EnumAction**

Enum Flags used for notification state

Namespace: BulkEmail.UI

Assembly: BulkEmail.UI.dll

**Syntax** 

public enum EnumAction : int

## **Fields**

## Name Description

Close

Start

Wait

# Class GridNavigationPage

Navigation class for email preview and grid.

Inheritance

System.Object GridNavigationPage

Namespace: BulkEmail.UI

Assembly: BulkEmail.UI.dll

Syntax

public sealed class GridNavigationPage : object

## **Properties**

## **PageCount**

Gets the page count.

Declaration

```
public int PageCount { get; }
```

**Property Value** 

Type Description

System.Int32 The page count.

### **PageIndex**

Gets or sets the index of the page.

Declaration

```
public int PageIndex { get; set; }
```

Property Value

**Type Description** 

System.Int32 The index of the page.

### **PageSize**

Gets or sets the size of the page.

Declaration

```
public int PageSize { get; set; }
```

Property Value

Type Description

System.Int32 The size of the page.

**TotalCount** 

Gets or sets the total count.

Declaration

public int TotalCount { get; set; }

Property Value

Type Description

System.Int32 The total count.

# Class Main Inheritance System.Object Main Namespace: BulkEmail.UI Assembly: BulkEmail.UI.dll **Syntax** public class Main : Form **Constructors** Main() Declaration public Main() **Properties IsProcessing** Declaration public bool IsProcessing { get; set; } **Property Value Type** Description System.Boolean Restart Declaration public bool Restart { get; set; } Property Value **Type Description** System.Boolean Methods Dispose(Boolean)

Clean up any resources being used.

**Declaration** 

protected override void Dispose (bool disposing)

**Parameters** 

Description **Type** Name

## LockMenu()

### Declaration

public void LockMenu()

## OpenChildForm(Form)

### Declaration

public void OpenChildForm(Form childForm)

### **Parameters**

## Type Name Description

Form childForm

## UnlockMenu()

### Declaration

public void UnlockMenu()

## Class UIData

Store mapped fields from the frontend. Inheritance System.Object **UIData** Namespace: BulkEmail.UI Assembly: BulkEmail.UI.dll Syntax public class UIData : object **Constructors** UIData() Declaration public UIData() **Properties EmailMapping** Gets or sets the email mapping structure. Declaration public EmailStructure EmailMapping { get; set; } **Property Value Type Description** EmailStructure The email mapping. ExcelSheet Gets or sets the excel sheet for processing Declaration public ExcellSheet ExcelSheet { get; set; } **Property Value** Description Type ExcellSheet The excel sheet. **RTFBody** Gets or sets the RTF body Template

### Declaration

```
public string RTFBody { get; set; }
```

### **Property Value**

## Type Description

System.String The RTF body.

## **TemplateName**

Gets or sets the name of the template name used.

### Declaration

```
public string TemplateName { get; set; }
```

### **Property Value**

## Type Description

System String The name of the template.

### Valid

Gets or sets a value indicating whether this <u>UIData</u> is valid.

### Declaration

```
public bool Valid { get; set; }
```

### **Property Value**

## Type Description

System.Boolean true if valid; otherwise, false.

## Namespace BulkEmail.UI.Actors

### Classes

### CleanUpReportActor

Actor that handles deletion of excel report. Deletes the files older than 6 months.

Execute at application start

### **EmailBodyReceiverActor**

Akka Actor that handles update of EmailBody list in frontend.

### **EmailSentReceiverActor**

Akka Actor that handles email update to the frontend for excel report

### **EmailToSendComposerActor**

Akka Actor that compose email structure for sending.

### **LabelProgressActor**

Actor that handles label text updates in the frontend.

### **ProgressActor**

Actor that handles ProgressBar updates in the frontend.

### **UnlockFormActor**

Actor that handles unlocking of controls in the frontend when processing request is completed.

### **ValidationResultReceiverActor**

Akka Actor that handles updates in frontend ValidatedFieldMap list

## Class CleanUpReportActor

Actor that handles deletion of excel report. Deletes the files older than 6 months.

Execute at application start

Inheritance

System.Object CleanUpReportActor

Namespace: BulkEmail.UI.Actors

Assembly: BulkEmail.UI.dll

Syntax

public class CleanUpReportActor : ReceiveActor

## Constructors

## CleanUpReportActor()

Declaration

public CleanUpReportActor()

## Class EmailBodyReceiverActor

Akka Actor that handles update of EmailBody list in frontend.

Inheritance

System Object EmailBodyReceiverActor

Namespace: BulkEmail.UI.Actors

Assembly: BulkEmail.UI.dll

Syntax

public class EmailBodyReceiverActor : ReceiveActor

### **Constructors**

## EmailBodyReceiverActor(ConcurrentBag<EmailBody>)

Initializes a new instance of the EmailBodyReceiverActor class.

Adds processed email body in UI list when it receives EmailBody message type.

Declaration

public EmailBodyReceiverActor(ConcurrentBag<EmailBody> emailBody)

**Parameters** 

Type Name Description

 $Concurrent Bag \!\!<\!\! Email Body \!\!>\! email Body.$ 

## Class EmailSentReceiverActor

Akka Actor that handles email update to the frontend for excel report

Inheritance

System Object EmailSentReceiverActor

Namespace: BulkEmail.UI.Actors

Assembly: BulkEmail.UI.dll

Syntax

public class EmailSentReceiverActor : ReceiveActor

### **Constructors**

EmailSentReceiverActor(ConcurrentBag<EmailSent>)

Initializes a new instance of the EmailSentReceiverActor class.

Declaration

public EmailSentReceiverActor(ConcurrentBag<EmailSent> sentMail)

**Parameters** 

Type Name Description

ConcurrentBag<EmailSent> sentMail The sent mail. Email update are added here

## ${\bf Class\ Email To Send Composer Actor}$

Akka Actor that compose email structure for sending.

Inheritance

SystemObject

EmailToSendComposerActor

Namespace: BulkEmail.UI.Actors

Assembly: BulkEmail.UI.dll

Syntax

public class EmailToSendComposerActor : ReceiveActor

### **Constructors**

## Email To Send Composer Actor (IActor Ref, UIData, Concurrent Bag < Email Body >)

Initializes a new instance of the <a href="mailToSendComposerActor"><u>EmailToSendComposerActor</u></a> class.

ConcurrentBag<EmailBody> emailBodies

### Declaration

public EmailToSendComposerActor(IActorRef emailSenderActorRef, UIData uIData, ConcurrentBag<EmailBody> emailBodies)

### Parameters

Туре	Name	Description
IActorRef	emailSenderActor	Ref The email sender actor reference.
<u>UIData</u>	ulData	Contains data mapped in the frontend

The email bodies.

## Class LabelProgressActor

Actor that handles label text updates in the frontend.

Inheritance

SystemObject LabelProgressActor

Namespace: BulkEmail.UI.Actors

Assembly: BulkEmail.UI.dll

Syntax

public class LabelProgressActor : ReceiveActor

### **Constructors**

## LabelProgressActor(Action<Int32>)

Initializes a new instance of the <u>LabelProgressActor</u> class.

Calls delegate action when it receives Progress message type.

### Declaration

public LabelProgressActor(Action<int> labelProgressAction)

**Parameters** 

Type Name Description

Action<br/>
System Int32> labelProgressAction The label progress delegate action.

## **Class ProgressActor**

Actor that handles ProgressBar updates in the frontend.

Inheritance

SystemObject ProgressActor

Namespace: BulkEmail.UI.Actors

Assembly: BulkEmail.UI.dll

Syntax

public class ProgressActor : ReceiveActor

### **Constructors**

## ProgressActor(IActorRef, IActorRef, ProgressBar)

#### **Declaration**

public ProgressActor(IActorRef actorRef, IActorRef actorRefLabel, ProgressBar progressBar)

### **Parameters**

Type Name Description

IActorRef actorRefLabel
ProgressBar progressBar

## Class UnlockFormActor

Actor that handles unlocking of controls in the frontend when processing request is completed.

Inheritance

System.Object UnlockFormActor

Namespace: BulkEmail.UI.Actors

Assembly: BulkEmail.UI.dll

Syntax

public class UnlockFormActor : ReceiveActor

### **Constructors**

## UnlockFormActor(Action)

Initializes a new instance of the <u>UnlockFormActor</u> class.

Listens to Complete message type to execute delegate

#### Declaration

public UnlockFormActor(Action unlocFormAction)

**Parameters** 

Type Name Description

Action unlocFormAction The unloc form delegate action.

## Class ValidationResultReceiverActor

Akka Actor that handles updates in frontend ValidatedFieldMap list

Inheritance

SystemObject ValidationResultReceiverActor

Namespace: BulkEmail.UI.Actors

Assembly: BulkEmail.UI.dll

Syntax

public class ValidationResultReceiverActor : ReceiveActor

### **Constructors**

ValidationResultReceiverActor(ConcurrentBag<ValidatedFieldMap>)

**Declaration** 

public ValidationResultReceiverActor(ConcurrentBag<ValidatedFieldMap> emailBody)

**Parameters** 

Type Name Description

ConcurrentBag<ValidatedFieldMap> emailBody

# Namespace BulkEmail.UI.Command

## Classes

**FormCommand** 

Singleton Pattern FormCommand

**Enums** 

**MessageStyle** 

Enum Flags used for notification diplay

## Class FormCommand

Singleton Pattern FormCommand Inheritance System Object FormCommand Namespace: Bulk Email. UI. Command Assembly: BulkEmail.UI.dll Syntax public sealed class FormCommand : object **Properties** Instance Declaration public static FormCommand Instance { get; } **Property Value** Type Description **FormCommand** Methods Close() Closes the desktop application. **Declaration** public void Close() GCCollect() Manual garbage collection. Declaration public void GCCollect() LockDisplayButton\_EnabledChanged(Object, EventArgs) Handles the EnabledChanged event of the IconButton control. Declaration public void LockDisplayButton EnabledChanged(object sender, EventArgs e) **Parameters** Type **Description** Name System Object sender The source of the event.

EventArgs e The instance containing the event data.

## ShowNotification(String, MessageStyle)

Shows the notification message.

### Declaration

public void ShowNotification(string message, MessageStyle messageStyle)

### **Parameters**

Type Name Description

System String message The message.

MessageStyle messageStyle The message style of Success, Error and Info.

## **Enum MessageStyle**

Enum Flags used for notification diplay

Namespace: Bulk Email. UI. Command

Assembly: BulkEmail.UI.dll

Syntax

public enum MessageStyle : int

## **Fields**

Name Description

Error Display error theme in notification.

Info Display information theme in notification

Success Display success theme in notification.

## Namespace BulkEmail.UI.Forms

### Classes

### **formAuthenticate**

Form used for user authentication.

User must have admin role to have a successful authorization.

### **formBrowse**

Form for selecting excel file for processing.

Will return error message when

- \* file is open.
- \* not a valid excel file.

### **formEMailMapping**

Form that handles mapping of excel fields to email fields

Excel columns are dragged to email fields

### **formEmailTemplate**

Form that handles template selection and modification in wizard.

### **formEmailTemplateEdit**

Form that handles creation and modification of existing template.

### **formExcelValidationDialog**

Form that handles excel validation

## **formNotification**

Form that handles application notification.

### **formPreviewAndSend**

### **formReport**

Form that handles listing of excel report from email sending.

### **formSaveAsDialog**

Form that handles Save As Dialog.

### **formSettings**

Frontend UI for Settings Menu

### Class formAuthenticate

Form used for user authentication.

User must have admin role to have a successful authorization.

Inheritance

SystemObject formAuthenticate

Namespace: BulkEmail.UI.Forms

Assembly: BulkEmail.UI.dll

Syntax

public class formAuthenticate : Form

### Constructors

#### formAuthenticate()

Declaration

public formAuthenticate()

### Methods

### Dispose(Boolean)

Clean up any resources being used.

#### Declaration

protected override void Dispose(bool disposing)

Parameters

Type Name Description

System Boolean disposing true if managed resources should be disposed; otherwise, false.

### DuplicateToken(IntPtr, Int32, ref IntPtr)

### Declaration

public static extern bool DuplicateToken(IntPtr ExistingTokenHandle, int SECURITY\_IMPERSONATION\_LEVEL, ref IntPtr DuplicateTokenHandle)

#### Parameters

Type Name Description

IntPtr ExistingTokenHandle

System.Int32 SECURITY IMPERSONATION LEVEL

IntPtr DuplicateTokenHandle

Returns

Type Description

System.Boolean

## Class formBrowse

Form for selecting excel file for processing.

Will return error message when

- \* file is open.
- \* not a valid excel file.

Inheritance

System.Object formBrowse

Namespace: BulkEmail.UI.Forms

Assembly: BulkEmail.UI.dll

Syntax

public class formBrowse : Form

### **Constructors**

## formBrowse(Main, UIData)

Declaration

public formBrowse(Main parentForm, UIData uiData)

**Parameters** 

## Type Name Description

Main parentForm UIData uiData

### Methods

### Dispose(Boolean)

Clean up any resources being used.

Declaration

protected override void Dispose (bool disposing)

**Parameters** 

Type Name Description

## Class formEMailMapping

Form that handles mapping of excel fields to email fields

Excel columns are dragged to email fields

Inheritance

System.Object formEMailMapping

Namespace: BulkEmail.UI.Forms

Assembly: BulkEmail.UI.dll

Syntax

public class formEMailMapping : Form

### **Constructors**

## formEMailMapping(Main, UIData)

Declaration

public formEMailMapping(Main parentForm, UIData uiData)

**Parameters** 

### Type Name Description

Main parentForm

<u>UIData</u> uiData

### **Methods**

### Dispose(Boolean)

Clean up any resources being used.

Declaration

protected override void Dispose(bool disposing)

Parameters

Type Name Description

## Class formEmailTemplate

Form that handles template selection and modification in wizard.

Inheritance

System.Object formEmailTemplate

Namespace: BulkEmail.UI.Forms

Assembly: BulkEmail.UI.dll

Syntax

public class formEmailTemplate : Form

### **Constructors**

## formEmailTemplate(Main, UIData)

**Declaration** 

public formEmailTemplate(Main parentForm, UIData uiData)

**Parameters** 

Type Name Description

Main parentForm UIData uiData

### Methods

### Dispose(Boolean)

Clean up any resources being used.

Declaration

protected override void Dispose(bool disposing)

**Parameters** 

Type Name Description

## Class formEmailTemplateEdit

Form that handles creation and modification of existing template.

Inheritance

System.Object formEmailTemplateEdit

Namespace: BulkEmail.UI.Forms

Assembly: BulkEmail.UI.dll

Syntax

public class formEmailTemplateEdit : Form

### **Constructors**

## formEmailTemplateEdit(Main)

Declaration

public formEmailTemplateEdit(Main parentForm)

**Parameters** 

Type Name Description

Main parentForm

Methods

Dispose(Boolean)

Clean up any resources being used.

Declaration

protected override void Dispose(bool disposing)

Parameters

Type Name Description

## Class formExcelValidationDialog

Form that handles excel validation Inheritance System Object formExcelValidationDialog Namespace: BulkEmail.UI.Forms Assembly: BulkEmail.UI.dll Syntax public class formExcelValidationDialog : Form **Constructors** formExcelValidationDialog(UIData) **Declaration** public formExcelValidationDialog(UIData uiData) **Parameters** Type Name Description **UIData** uiData **Properties IsValid** Declaration public bool IsValid { get; } **Property Value Type Description** System.Boolean Methods Dispose(Boolean) Clean up any resources being used. Declaration protected override void Dispose (bool disposing) **Parameters Description Type** Name System Boolean disposing true if managed resources should be disposed; otherwise, false.

Declaration

OnClosed(EventArgs)

protected override void OnClosed(EventArgs e)

### Parameters

Type Name Description

EventArgs e

## Class formNotification

Form that handles application notification. Inheritance System Object formNotification Namespace: BulkEmail.UI.Forms Assembly: BulkEmail.UI.dll Syntax public class formNotification : Form Constructors formNotification() **Declaration** public formNotification() Methods Dispose(Boolean) Clean up any resources being used. **Declaration** protected override void Dispose(bool disposing) **Parameters Type** Name **Description** System Boolean disposing true if managed resources should be disposed; otherwise, false. ShowErrorNotification(String) Declaration public void ShowErrorNotification(string message) **Parameters Type** Name Description System.String message ShowInfoNotification(String) Declaration public void ShowInfoNotification(string message)

**Type Name Description**System String message

**Parameters** 

## ShowSuccessNotification(String)

### Declaration

public void ShowSuccessNotification(string message)

### Parameters

Type Name Description

System String message

## Class formPreviewAndSend

Inheritance

System.Object formPreviewAndSend

Namespace: BulkEmail.UI.Forms

Assembly: BulkEmail.UI.dll

Syntax

public class formPreviewAndSend : Form

### **Constructors**

### formPreviewAndSend(Main, UIData)

**Declaration** 

public formPreviewAndSend(Main parentForm, UIData uiData)

**Parameters** 

Type Name Description

Main parentForm

**UIData** uiData

### Methods

### BindAttachmentToListView(ExcelRow, EmailStructure)

Declaration

 $\verb"public void BindAttachmentToListView" (ExcelRow row, EmailStructure emailMapping) \\$ 

Parameters

Type Name Description

ExcelRow row

EmailStructure emailMapping

### Dispose(Boolean)

Clean up any resources being used.

Declaration

protected override void Dispose(bool disposing)

**Parameters** 

Type Name Description

# Class formReport

Form tha	ıt handle	es listing o	f exce	l report	from emai	l send	ing.

Inheritance

System.Object formReport

Namespace: BulkEmail.UI.Forms

Assembly: BulkEmail.UI.dll

Syntax

public class formReport : Form

### **Constructors**

formReport()

Declaration

public formReport()

### Methods

## Dispose(Boolean)

Clean up any resources being used.

Declaration

protected override void Dispose (bool disposing)

**Parameters** 

Type Name Description

## Class formSaveAsDialog

Form that handles Save As Dialog. Inheritance System Object formSaveAsDialog Namespace: BulkEmail.UI.Forms Assembly: BulkEmail.UI.dll Syntax public class formSaveAsDialog : Form **Constructors** formSaveAsDialog(String, String, String) Declaration public formSaveAsDialog(string origFileName, string directory, string extension) **Parameters Type** Description Name System String origFileName System String directory System String extension **Properties FileName** Declaration public string FileName { get; } **Property Value** Type Description System.String Methods Dispose(Boolean) Clean up any resources being used. Declaration protected override void Dispose (bool disposing) **Parameters** 

Type Name Description

## **Class formSettings**

Frontend UI for Settings Menu

Inheritance System Object formSettings  $Name space: \underline{Bulk Email. UI. Forms}$ Assembly: BulkEmail.UI.dll Syntax public class formSettings : Form **Constructors** formSettings(Main) **Declaration** public formSettings(Main parent) **Parameters Type Name Description** Main parent Methods Dispose(Boolean) Clean up any resources being used. Declaration protected override void Dispose(bool disposing) **Parameters** 

Type Name Description