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# Platform SDK Developer's Guide

[Hide Message Attributes in Logs](#)

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# Hide Message Attributes in Logs

This article describes how to hide message attributes on logs generated by your Platform SDK applications.

The new `ToStringHelper` class described here was introduced in release 8.5.300.02 of Platform SDK.

## How to Configure Hidden Attributes

There are two ways to configure hidden attributes within log files generated by Platform SDK, depending on what type of protocols you are working with.

### Working With ESP Protocols

The UCS and EspEmail protocols use `Request3rdServer` and `Event3rdServerResponse` messages from the underlying ESP protocol to transport their messages. Thus, `Request3rdServer` and `Event3rdServerResponse` are printed to logs and `KeyValuePrinter` must be configured to hide any sensitive data in logs.

For example:

```
KeyValueCollection defaultCfg = new KeyValueCollection();
KeyValueCollection specificCfg = new KeyValueCollection();
specificCfg.addString("StructuredText", "hide");
KeyValuePrinter defaultKVPrinter = new KeyValuePrinter(defaultCfg, specificCfg);
KeyValuePrinter.setDefaultPrinter(defaultKVPrinter);
```

This is the standard Genesys [log-filter-data] implementation described by the [Hide or Tag Sensitive Data in Logs](#) article.

In cases where UCS protocol messages are printed out directly (for example, by calling `interactionContent.toString()` in your application code) it is possible to hide sensitive data by using the new `ToStringHelper` class:

```
/// Declare hidden attributes for Protocol message or structure
ToStringHelper.hideAttribute("ContactServer", "InteractionContent", "StructuredText");
```

### Working With Non-ESP Protocols

To hide specific keys from message attributes of `KVLists` type in the logs, configure `KeyValuePrinter`.

To hide protocol messages attributes in logs, use the new `ToStringHelper` class. For example:

```
ToStringHelper.hideAttribute("FlexChat", "EventInfo", "Text");
```

## Using the Application Template Helper to Read Configuration

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### from Config Manager

The Application Template will process the CfgApplication configuration, received from Config Server, and pass that information to ToStringHelper.setHiddenAttributes();.

#### Important

There is no standard format for defining log hidden attributes in Config Manger; only a format for KVLists structure exists).

The example below shows how to specify hidden attributes for log files that can be parsed by the Platform SDK AppTemplate mini-helper. However, you can specify settings in any other suitable format and parse them on your own.

```
[log-hidden-attributes]
<ProtocolName>.<Message Name | Complex Attribute Name> = <Attributes List>
```

For example:

```
[log-hidden-attributes]
ContactServer.InteractionContent = "Text, StructuredText"
ContactServer.SomeMessage = "Attr1, Attr2, Attr-n"
TServer.SomeEvent = "Attr-x"
```

### Usage Sample

```
//Read application from ConfServer and set new log hidden attributes configuration:
String sectionName = "log-hidden-attributes"; //name of config section in the app options
CfgApplication app = confService.retrieveObject(CfgApplication.class, new
CfgApplicationQuery("AppName"));
MessagePrinterHelper.setHiddenAttributes(app.getOptions().getList(sectionName));
...

//Handle updates from Config Server:
if (cfgEvent.getCfgObject() instanceof CfgDeltaApplication) {
    CfgDeltaApplication delta = (CfgDeltaApplication) cfgEvent.getCfgObject();

    //update application configuration state
    app.update(delta);
    ...

    //set new configuration, if "log-hidden-attributes" section has been added\changed\removed
    if(MessagePrinterHelper.isConfigurationChanged(delta, sectionName)) {
        MessagePrinterHelper.setHiddenAttributes(app.getOptions().getList(sectionName));
    }
}
...
}
```