

# **LibSledLuaPlugin API Reference**

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This document provides information about the API elements that are used in the successful implementation of LibSledLuaPlugin.



**Note:**

The specifications contained in this document are subject to change without prior notice.

Version	Revision Date	Author(s)	Comments
1.0	30-July-08	Sage Knowles, Patrick O'Leary	1st release
2.0	August-2010	Risa Galant, Patrick O'Leary	Major updates for SLED 3.5
5.0.0	Apr-14	Gary Staas	Updates for 5.0.0. Update format.
5.1.0	Oct-14	Gary Staas	Updates for 5.1.0.
5.1.2	Feb-15	Gary Staas	Open source version.

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# About the LibSledLuaPlugin API Reference

This document provides information about the API elements that are used in implementing LibSledLuaPlugin. Use this document as a reference to the specifics of the API—such as its functions, data structures, type definitions, and defined symbols. This is a C API.

All of the information in this document is taken from comments in the header (\*.h) files that are located in the components\sce\_sled\src\sledluaplugin directory.

## LuaPlugin Class

LuaPlugin is the class for the Lua plugin object that allows debugging Lua scripts during run time. To debug Lua scripts with SLED in an application, the application must create a LuaPlugin instance when it runs. The SLED GUI communicates with LuaPlugin instances.

## What Is and Is Not Included in this Reference

This reference document contains information that is most useful for using components of the LibSledLuaPlugin API. Header files that contain information that is mostly for internal use, or platform-specific information that is defined elsewhere, are not included in this reference. If you are digging into the code in more depth, you can look in the header files for the additional information.

The following LibSledLuaPlugin header files in components\sce\_sled\src\sledluaplugin are included in this reference document and contain the public API:

- params.h
- sledluaplugin.h

Most of the information from items tagged with the following identifiers is not included in this reference document:

- private
- protected

Look in the header files if you want more information about the private and protected class members, or any of the files that are not included in this reference.

---

## Related Documentation

The following documentation, available on SHIP, contains useful information about using the SLED and Lua Toolset.

- *Getting Started with SLED*
- *SLED User's Guide*
- *SLED Plugin Guide*

---

# Introduction

---

# Library Summary

---

## Library Contents

---

Item	Description
<a href="#">sce</a>	sce namespace.
<a href="#">sce::Sled</a>	SLED namespace.
<a href="#">sce::Sled::VarExcludeFlags</a>	Namespace to scope variable exclude flags.
<a href="#">sce::Sled::LuaPlugin</a>	Class describing a Lua plugin instance.
<a href="#">sce::Sled::LuaPluginConfig</a>	LuaPlugin configuration parameters.

---

# Defines



---

## Define Summary

---

Define	Value	Description
SCE_LIBSLEDLUAPLUGIN_VER_MAJOR	5	Major version.
SCE_LIBSLEDLUAPLUGIN_VER_MINOR	1	Minor version.
SCE_LIBSLEDLUAPLUGIN_VER_REVISION	1	Revision version.
SCE_LIBSLEDLUAPLUGIN_VER_OTHER	0	Extra version number.
SCE_LIBSLEDLUAPLUGIN_ID	1	Id of LibSledLuaPlugin. The ID must be the same between this library and the Sled.Lua.dll.
SCE_LIBSLEDLUAPLUGIN_NAME	"SLED Lua Plugin"	Plugin name.

---

## **sce namespace**

---

# Summary

## sce

---

sce namespace.

### Definition

---

```
namespace sce {}
```

### Description

---

Namespace for sce classes and functions.

### Inner Classes, Structures, and Namespaces

---

Item	Description
<a href="#">sce::Sled</a>	SLED namespace.

---

## **sce::Sled namespace**

# Summary

## sce::Sled

SLED namespace.

### Definition

```
namespace sled {}
```

### Description

Namespace for [Sled](#) classes and functions.

### Function Summary

Function	Description
<a href="#">debuggerAddLuaPlugin</a>	Add <a href="#">LuaPlugin</a> to SledDebugger.
<a href="#">luaPluginCreate</a>	Create <a href="#">LuaPlugin</a> instance.
<a href="#">luaPluginDebuggerBreak</a>	Force breakpoint on specific lua_State and send data via TTY.
<a href="#">luaPluginDebuggerBreak</a>	Force breakpoint on next lua_State that runs an instruction and send data via TTY.
<a href="#">luaPluginGetId</a>	Get ID of plugin.
<a href="#">luaPluginGetName</a>	Get name of plugin.
<a href="#">luaPluginGetVarExcludeFlags</a>	Get current variable exclude flags.
<a href="#">luaPluginGetVersion</a>	Get plugin version information.
<a href="#">luaPluginIsMemoryTracerRunning</a>	Check whether memory tracer is running.
<a href="#">luaPluginIsProfilerRunning</a>	Check whether profiler is running.
<a href="#">luaPluginMemoryTraceNotify</a>	Provide way to report Lua allocations to library for tracking with memory tracer.
<a href="#">luaPluginRegisterLuaState</a>	Register lua_State* with library.
<a href="#">luaPluginRequiredMemory</a>	Calculate size in bytes required for <a href="#">LuaPlugin</a> instance based on configuration structure.
<a href="#">luaPluginResetMemoryTrace</a>	Reset internal memory trace list.
<a href="#">luaPluginResetProfileInfo</a>	Reset internal profile information list.
<a href="#">luaPluginSetVarExcludeFlags</a>	Set variable exclude flags.
<a href="#">luaPluginShutdown</a>	Shut down <a href="#">LuaPlugin</a> instance.
<a href="#">luaPluginUnregisterLuaState</a>	Unregister lua_State* from library.

### Inner Classes, Structures, and Namespaces

Item	Description
<a href="#">sce::Sled::LuaPlugin</a>	Class describing a Lua plugin instance.
<a href="#">sce::Sled::LuaPluginConfig</a>	<a href="#">LuaPlugin</a> configuration parameters.
<a href="#">sce::Sled::VarExcludeFlags</a>	Namespace to scope variable exclude flags.

---

# Type Definitions

## ChopCharsCallback

---

Typedef for chop characters callback function.

### Definition

---

```
#include <params.h>
namespace sce {
    namespace Sled {
        typedef const char * (*ChopCharsCallback)(
            const char *pszFilePath
        );
    }
}
```

### Arguments

---

*pszFilePath* Path to file

### Return Values

---

None

### Description

---

Typedef for a chop characters callback function.

---

# EditAndContinueCallback

---

Typedef for an edit and continue callback function.

## Definition

---

```
#include <params.h>
namespace sce {
    namespace Sled {
        typedef const char * (*EditAndContinueCallback)(
            const char *pszFilePath,
            void *pUserData
        );
    }
}
```

## Arguments

---

<i>pszFilePath</i>	The relative path of the file that needs to be reloaded
<i>pUserData</i>	Optional user-controlled userdata

## Return Values

---

A const char\* to the contents of the reloaded file

## Description

---

Typedef for an edit and continue callback function. This function alerts the user that they need to load a specific file synchronously, because LibSledLuaPlugin needs to operate on the contents. [EditAndContinueCallback\(\)](#) returns a const char\* to the contents of that file to LibSledLuaPlugin for processing.

## See Also

---

[EditAndContinueFinishCallback](#)

---

# EditAndContinueFinishCallback

---

Typedef for edit and continue callback function.

## Definition

---

```
#include <params.h>
namespace sce {
    namespace Sled {
        typedef void (*EditAndContinueFinishCallback)(
            const char *pszFilePath,
            void *pUserData
        );
    }
}
```

## Arguments

---

<i>pszFilePath</i>	The relative path of the file that needs to be reloaded
<i>pUserData</i>	Optional user-controlled userdata

## Return Values

---

None

## Description

---

Typedef for an edit and continue callback function. This function synchronously loads the file. Call this function after regular edit and continue callback processing has finished so that memory can be freed, if necessary.

## See Also

---

[EditAndContinueCallback](#)



---

# UserDataCallback

---

Typedef for user data callback function.

## Definition

---

```
#include <params.h>
namespace sce {
    namespace Sled {
        typedef const char * (*UserDataCallback)(
            void *pLuaUserData,
            void *pUserData
        );
    }
}
```

## Arguments

---

<i>pLuaUserData</i>	Lua userdata
<i>pUserData</i>	Optional user-controlled userdata

## Return Values

---

None

## Description

---

String describing the Lua user data that is sent back to SLED. This string shows up in the "Value" column of the respective [Globals/Locals/Upvalues/etc.] window.

---

# UserDataFinishCallback

---

Typedef for user data callback function.

## Definition

---

```
#include <params.h>
namespace sce {
    namespace Sled {
        typedef void (*UserDataFinishCallback)(
            void *pLuaUserData,
            void *pUserData
        );
    }
}
```

## Arguments

---

<i>pLuaUserData</i>	Lua user data
<i>pUserData</i>	Optional user-controlled userdata

## Return Values

---

None

## Description

---

Typedef for a user data callback function. Call this function after regular user data callback processing has finished so that memory can be freed, if necessary.

---

# Functions

## debuggerAddLuaPlugin

---

Add [LuaPlugin](#) to SledDebugger.

### Definition

---

```
#include <sledluaplugin.h>
namespace sce {
    namespace Sled {
        int32_t debuggerAddLuaPlugin(
            SledDebugger *debugger,
            LuaPlugin *plugin
        );
    }
}
```

### Calling Conditions

---

Not multithread safe.

### Arguments

---

*debugger*    SledDebugger to use  
*plugin*       [LuaPlugin](#) to use

### Return Values

---

Value	Description
SCE_SLED_ERROR_OK	Success
SCE_SLED_ERROR_NULLPARAMETER	Null debugger or plugin

### Description

---

Add a [LuaPlugin](#) to the SledDebugger. It's a helper method, because [LuaPlugin](#) is an incomplete type and the SledDebugger `debuggerAddPlugin()` method is expecting a SledDebuggerPlugin instance.

### See Also

---

[luaPluginCreate](#)

---

# luaPluginCreate

---

Create [LuaPlugin](#) instance.

## Definition

---

```
#include <sledluaplugin.h>
namespace sce {
    namespace Sled {
        int32_t luaPluginCreate(
            const LuaPluginConfig *config,
            void *location,
            LuaPlugin **outLuaPlugin
        );
    }
}
```

## Calling Conditions

---

Not multithread safe.

## Arguments

---

<i>config</i>	A configuration structure that details the settings to use
<i>location</i>	The location in memory in which to place the <a href="#">LuaPlugin</a> instance. It must be as big as the value returned by <a href="#">luaPluginRequiredMemory()</a> .
<i>outLuaPlugin</i>	The <a href="#">LuaPlugin</a> instance that is created

## Return Values

---

Value	Description
SCE_SLED_ERROR_OK	Success
SCE_SLED_ERROR_NULLPARAMETER	Null configuration structure
SCE_SLED_ERROR_INVALIDCONFIGURATION	Invalid value in the configuration structure

## Description

---

Create a [LuaPlugin](#) instance.

## See Also

---

[luaPluginRequiredMemory](#), [luaPluginShutdown](#), [debuggerAddLuaPlugin](#)

---

# luaPluginDebuggerBreak

---

Force breakpoint on specific lua\_State and send data via TTY.

## Definition

---

```
#include <sledluaplugin.h>
namespace sce {
    namespace Sled {
        int32_t luaPluginDebuggerBreak(
            LuaPlugin *plugin,
            lua_State *luaState,
            const char *pszText
        );
    }
}
```

## Calling Conditions

---

Not multithread safe.

## Arguments

---

*plugin*      [LuaPlugin](#) to use  
*luaState*    Pointer to a lua\_State  
*pszText*     Data to send via TTY

## Return Values

---

Value	Description
SCE_SLED_ERROR_OK	Success
SCE_SLED_ERROR_NULLPARAMETER	Null plugin

## Description

---

Force a breakpoint on a specific lua\_State and send data via TTY.

---

# luaPluginDebuggerBreak

---

Force breakpoint on next lua\_State that runs an instruction and send data via TTY.

## Definition

---

```
#include <sledluaplugin.h>
namespace sce {
    namespace Sled {
        int32_t luaPluginDebuggerBreak(
            LuaPlugin *plugin,
            const char *pszText
        );
    }
}
```

## Calling Conditions

---

Not multithread safe.

## Arguments

---

*plugin*     [LuaPlugin](#) to use  
*pszText*   Data to send via TTY

## Return Values

---

Value	Description
SCE_SLED_ERROR_OK	Success
SCE_SLED_ERROR_NULLPARAMETER	Null plugin

## Description

---

Force a breakpoint on the next lua\_State that runs an instruction and send data via TTY.

## See Also

---

[luaPluginGetVarExcludeFlags](#), [luaPluginGetVarExcludeFlags](#)

---

# luaPluginGetId

---

Get ID of plugin.

## Definition

```
#include <sledluaplugin.h>
namespace sce {
    namespace Sled {
        int32_t luaPluginGetId(
            const LuaPlugin *plugin,
            uint16_t *outId
        );
    }
}
```

## Calling Conditions

Multithread safe.

## Arguments

*plugin*    [LuaPlugin](#) to use  
*outId*    A number greater than zero

## Return Values

Value	Description
SCE_SLED_ERROR_OK	Success
SCE_SLED_ERROR_NULLPARAMETER	Null plugin or outId

## Description

Get ID of the plugin. The ID must be unique across all other language plugins. The ID 0 (zero) is reserved for the SledDebugger class.

## See Also

[luaPluginGetName](#), [luaPluginGetVersion](#)

---

# luaPluginGetName

---

Get name of plugin.

## Definition

```
#include <sledluaplugin.h>
namespace sce {
    namespace Sled {
        int32_t luaPluginGetName(
            const LuaPlugin *plugin,
            const char **outName
        );
    }
}
```

## Calling Conditions

Multithread safe.

## Arguments

*plugin*     [LuaPlugin](#) to use  
*outName*    The name of the plugin

## Return Values

Value	Description
SCE_SLED_ERROR_OK	Success
SCE_SLED_ERROR_NULLPARAMETER	Null plugin or outName

## Description

Get the name of the plugin.

## See Also

[luaPluginGetId](#), [luaPluginGetVersion](#)



---

# luaPluginGetVarExcludeFlags

---

Get current variable exclude flags.

## Definition

```
#include <sledluaplugin.h>
namespace sce {
    namespace Sled {
        int32_t luaPluginGetVarExcludeFlags(
            const LuaPlugin *plugin,
            int32_t *outFlags
        );
    }
}
```

## Calling Conditions

Not multithread safe.

## Arguments

*plugin*     [LuaPlugin](#) to use  
*outFlags*   Current variable exclude flags

## Return Values

Value	Description
SCE_SLED_ERROR_OK	Success
SCE_SLED_ERROR_NULLPARAMETER	Null plugin or outFlags

## Description

Get the current variable exclude flags.

## See Also

[luaPluginSetVarExcludeFlags](#), [luaPluginDebuggerBreak](#)

---

# luaPluginGetVersion

---

Get plugin version information.

## Definition

```
#include <sledluaplugin.h>
namespace sce {
    namespace Sled {
        int32_t luaPluginGetVersion(
            const LuaPlugin *plugin,
            Version *outVersion
        );
    }
}
```

## Calling Conditions

Multithread safe.

## Arguments

*plugin*        [LuaPlugin](#) to use  
*outVersion*   The plugin's version information

## Return Values

Value	Description
SCE_SLED_ERROR_OK	Success
SCE_SLED_ERROR_NULLPARAMETER	Null plugin or outVersion

## Description

Get the plugin version information.

## See Also

[luaPluginGetId](#), [luaPluginGetName](#)

---

# luaPluginIsMemoryTracerRunning

---

Check whether memory tracer is running.

## Definition

---

```
#include <sledluaplugin.h>
namespace sce {
    namespace Sled {
        int32_t luaPluginIsMemoryTracerRunning(
            const LuaPlugin *plugin,
            bool *outResult
        );
    }
}
```

## Calling Conditions

---

Not multithread safe.

## Arguments

---

*plugin*            [LuaPlugin](#) to use  
*outResult*        True if the memory tracer is running; false if it is not running

## Return Values

---

Value	Description
SCE_SLED_ERROR_OK	Success
SCE_SLED_ERROR_NULLPARAMETER	Null plugin or outResult

## Description

---

Check whether or not the memory tracer is running.

## See Also

---

[luaPluginIsProfilerRunning](#), [luaPluginResetMemoryTrace](#),  
[luaPluginMemoryTraceNotify](#)

---

# luaPluginIsProfilerRunning

---

Check whether profiler is running.

## Definition

---

```
#include <sledluaplugin.h>
namespace sce {
    namespace Sled {
        int32_t luaPluginIsProfilerRunning(
            const LuaPlugin *plugin,
            bool *outResult
        );
    }
}
```

## Calling Conditions

---

Not multithread safe.

## Arguments

---

*plugin*      [LuaPlugin](#) to use  
*outResult*   True if the profiler is running; false if it is not running

## Return Values

---

Value	Description
SCE_SLED_ERROR_OK	Success
SCE_SLED_ERROR_NULLPARAMETER	Null plugin or outResult

## Description

---

Determine whether or not the profiler is running.

## See Also

---

[luaPluginIsMemoryTracerRunning](#), [luaPluginResetProfileInfo](#)

---

# luaPluginMemoryTraceNotify

---

Provide way to report Lua allocations to library for tracking with memory tracer.

## Definition

---

```
#include <sledluaplugin.h>
namespace sce {
    namespace Sled {
        int32_t luaPluginMemoryTraceNotify(
            LuaPlugin *plugin,
            void *userData,
            void *oldPtr,
            void *newPtr,
            std::size_t oldSize,
            std::size_t newSize,
            bool *outResult
        );
    }
}
```

## Calling Conditions

---

Not multithread safe.

## Arguments

---

<i>plugin</i>	<a href="#">LuaPlugin</a> to use
<i>userData</i>	A pointer to user data (not currently used for anything)
<i>oldPtr</i>	A pointer to old memory being deallocated
<i>newPtr</i>	A pointer to new memory being allocated
<i>oldSize</i>	Old memory size
<i>newSize</i>	New memory size
<i>outResult</i>	True if information is logged; false if memory tracer is not running

## Return Values

---

Value	Description
SCE_SLED_ERROR_OK	Success
SCE_SLED_ERROR_NULLPARAMETER	Null plugin or outResult

## Description

---

Provide a way to report Lua allocations to the library for tracking using the memory tracer. Call this function from the allocator that is making all the Lua allocations, deallocations, and reallocations.

## See Also

---

[luaPluginIsMemoryTracerRunning](#), [luaPluginResetMemoryTrace](#)

---

# luaPluginRegisterLuaState

---

Register `lua_State*` with library.

## Definition

```
#include <sledluaplugin.h>
namespace sce {
    namespace Sled {
        int32_t luaPluginRegisterLuaState(
            LuaPlugin *plugin,
            lua_State *luaState,
            const char *luaStateName = 0
        );
    }
}
```

## Calling Conditions

Not multithread safe.

## Arguments

<i>plugin</i>	<a href="#">LuaPlugin</a> to use
<i>luaState</i>	Pointer to a <code>lua_State</code>
<i>luaStateName</i>	A name for the <code>lua_State</code> . This name shows up on the <code>lua_State</code> GUI in SLED to help easily identify the <code>lua_State</code> .

## Return Values

Value	Description
<code>SCE_SLED_ERROR_OK</code>	Success
<code>SCE_SLED_ERROR_NULLPARAMETER</code>	Null plugin
<code>SCE_SLED_LUA_ERROR_NODEBUGGERINSTANCE</code>	No debugger instance (not added to a <code>SledDebugger</code> instance)
<code>SCE_SLED_LUA_ERROR_INVALIDLUASTATE</code>	<code>lua_State</code> is null
<code>SCE_SLED_LUA_ERROR_DUPLICATELUASTATE</code>	<code>lua_State</code> is already registered
<code>SCE_SLED_LUA_ERROR_OVERLUASTATELIMIT</code>	No space for <code>lua_State</code>

## Description

Register a `lua_State*` with the library. Lua states must be registered with the library if they are to be debugged.

## See Also

[luaPluginUnregisterLuaState](#)

---

# luaPluginRequiredMemory

---

Calculate size in bytes required for [luaPlugin](#) instance based on configuration structure.

## Definition

---

```
#include <sledluaplugin.h>
namespace sce {
    namespace Sled {
        int32_t luaPluginRequiredMemory(
            const luaPluginConfig *config,
            std::size_t *outRequiredMemory
        );
    }
}
```

## Calling Conditions

---

Not multithread safe.

## Arguments

---

<i>config</i>	The configuration structure that details the settings to use
<i>outRequiredMemory</i>	The amount of memory that is needed for the <a href="#">luaPlugin</a> instance

## Return Values

---

Value	Description
SCE_SLED_ERROR_OK	Success
SCE_SLED_ERROR_NULLPARAMETER	Null configuration structure
SCE_SLED_ERROR_INVALIDCONFIGURATION	Invalid value in the configuration structure

## Description

---

Calculate the size in bytes required for a [luaPlugin](#) instance based on a configuration structure.

## See Also

---

[luaPluginCreate](#)

---

# luaPluginResetMemoryTrace

---

Reset internal memory trace list.

## Definition

---

```
#include <sledluaplugin.h>
namespace sce {
    namespace Sled {
        int32_t luaPluginResetMemoryTrace(
            LuaPlugin *plugin
        );
    }
}
```

## Calling Conditions

---

Not multithread safe.

## Arguments

---

*plugin* [LuaPlugin](#) to use

## Return Values

---

Value	Description
SCE_SLED_ERROR_OK	Success
SCE_SLED_ERROR_NULLPARAMETER	Null plugin

## Description

---

Reset the internal memory trace list.

## See Also

---

[luaPluginIsMemoryTracerRunning](#), [luaPluginResetProfileInfo](#),  
[luaPluginMemoryTraceNotify](#)



---

# luaPluginResetProfileInfo

---

Reset internal profile information list.

## Definition

---

```
#include <sledluaplugin.h>
namespace sce {
    namespace Sled {
        int32_t luaPluginResetProfileInfo(
            LuaPlugin *plugin
        );
    }
}
```

## Calling Conditions

---

Not multithread safe.

## Arguments

---

*plugin* [LuaPlugin](#) to use

## Return Values

---

Value	Description
SCE_SLED_ERROR_OK	Success
SCE_SLED_ERROR_NULLPARAMETER	Null plugin

## Description

---

Reset the internal profile information list.

## See Also

---

[luaPluginIsProfilerRunning](#), [luaPluginResetMemoryTrace](#)

---

# luaPluginSetVarExcludeFlags

---

Set variable exclude flags.

## Definition

```
#include <sledluaplugin.h>
namespace sce {
    namespace Sled {
        int32_t luaPluginSetVarExcludeFlags(
            LuaPlugin *plugin,
            int32_t flags
        );
    }
}
```

## Calling Conditions

Not multithread safe.

## Arguments

<i>plugin</i>	<a href="#">LuaPlugin</a> to use
<i>flags</i>	An OR'd set of variable groups to exclude from processing and sending when hitting a breakpoint

## Return Values

Value	Description
SCE_SLED_ERROR_OK	Success
SCE_SLED_ERROR_NULLPARAMETER	Null plugin

## Description

Set the variable groups to exclude from processing and sending when hitting a breakpoint.

## See Also

[luaPluginGetVarExcludeFlags](#), [luaPluginDebuggerBreak](#)

---

# luaPluginShutdown

---

Shut down [luaPlugin](#) instance.

## Definition

---

```
#include <sledluaplugin.h>
namespace sce {
    namespace Sled {
        int32_t luaPluginShutdown(
            luaPlugin *plugin
        );
    }
}
```

## Calling Conditions

---

Not multithread safe.

## Arguments

---

*plugin* The [luaPlugin](#) instance to shut down

## Return Values

---

Value	Description
SCE_SLED_ERROR_OK	Success
SCE_SLED_ERROR_NULLPARAMETER	Null plugin

## Description

---

Shut down a [luaPlugin](#) instance.

## See Also

---

[luaPluginCreate](#)

---

# luaPluginUnregisterLuaState

---

Unregister `lua_State*` from library.

## Definition

---

```
#include <sledluaplugin.h>
namespace sce {
    namespace Sled {
        int32_t luaPluginUnregisterLuaState(
            LuaPlugin *plugin,
            lua_State *luaState
        );
    }
}
```

## Calling Conditions

---

Not multithread safe.

## Arguments

---

*plugin*     [LuaPlugin](#) to use  
*luaState*   Pointer to a `lua_State`

## Return Values

---

Value	Description
<code>SCE_SLED_ERROR_OK</code>	Success
<code>SCE_SLED_ERROR_NULLPARAMETER</code>	Null plugin
<code>SCE_SLED_LUA_ERROR_NODEBUGGERINSTANCE</code>	No debugger instance (not added to a <code>SledDebugger</code> instance)
<code>SCE_SLED_LUA_ERROR_INVALIDLUASTATE</code>	<code>lua_State</code> is null
<code>SCE_SLED_LUA_ERROR_LUASTATENOTFOUND</code>	<code>lua_State</code> is not registered

## Description

---

Unregister a `lua_State*` from the library. Lua states must be registered with the library if they are to be debugged.

## See Also

---

[luaPluginRegisterLuaState](#)

---

**sce::Sled::VarExcludeFlags namespace**

---

# Summary

## sce::Sled::VarExcludeFlags

---

Namespace to scope variable exclude flags.

### Definition

---

```
namespace VarExcludeFlags {}
```

### Description

---

Namespace to scope variable exclude flags. Variable exclude flags exclude certain variable groups from being processed and sent to SLED when execution stops on a breakpoint.

---

# Enumerated Types

## Enum

---

Variable exclude flags for execution stops on a breakpoint.

### Definition

---

```
#include <params.h>
namespace sce {
    namespace Sled {
        namespace VarExcludeFlags {
            enum Enum {
                kNone = 0,
                kGlobals = (1 << 1),
                kLocals = (1 << 2),
                kUpvalues = (1 << 3),
                kEnvironment = (1 << 4)
            };
        }
    }
}
```

### Enumeration Values

---

Macro	Value	Description
kNone	0	Do not exclude any variable groups. This is the default behavior.
kGlobals	(1 << 1)	Exclude processing and sending global variables.
kLocals	(1 << 2)	Exclude processing and sending local variables.
kUpvalues	(1 << 3)	Exclude processing and sending upvalue variables.
kEnvironment	(1 << 4)	Exclude processing and sending environment table variables.

### Description

---

Variable exclude flags exclude certain variable groups from being processed and sent to SLED when execution stops on a breakpoint.

---

## **sce::Sled::LuaPlugin class**



---

# Summary

## sce::Sled::LuaPlugin

---

Class describing a Lua plugin instance.

### Definition

---

```
#include <sledluaplugin_class.h>
class LuaPlugin {};
```

### Description

---

Widely used class encapsulating the internals of a Lua plugin instance. Instantiate a [LuaPlugin](#) from a [LuaPluginConfig](#).

This class is closed, and its internal data is not accessible.

The following are the main functions handling SledDebugger:

[sce::Sled::luaPluginCreate\(\)](#): Create [LuaPlugin](#) instance.

[sce::Sled::luaPluginRequiredMemory\(\)](#): Calculate size in bytes required for [LuaPlugin](#) instance based on configuration structure.

[sce::Sled::luaPluginShutdown\(\)](#): Shut down [LuaPlugin](#) instance.

[sce::Sled::luaPluginGetId\(\)](#): Get ID of plugin.

[sce::Sled::luaPluginRegisterLuaState\(\)](#): Register lua\_State\* with library.

[sce::Sled::luaPluginUnregisterLuaState\(\)](#): Unregister lua\_State\* from library.

[sce::Sled::luaPluginIsProfilerRunning\(\)](#): Check whether profiler is running.

[sce::Sled::luaPluginIsMemoryTracerRunning\(\)](#): Check whether memory tracer is running.

[sce::Sled::luaPluginDebuggerBreak\(\)](#): Force breakpoint on specific lua\_State and send data via TTY.

[sce::Sled::luaPluginMemoryTraceNotify\(\)](#): Provide way to report Lua allocations to library for tracking with memory tracer.

[sce::Sled::debuggerAddLuaPlugin\(\)](#): Add [LuaPlugin](#) to SledDebugger.

For the full list of [LuaPlugin](#) functions, see [sce::Sled](#).

---

## **sce::Sled::LuaPluginConfig struct**

---

# Summary

## sce::Sled::LuaPluginConfig

---

[LuaPlugin](#) configuration parameters.

### Definition

---

```
#include <params.h>
struct LuaPluginConfig {};
```

### Description

---

Configuration parameters for [LuaPlugin](#).

### Fields

---

#### Public Instance Fields

<code>uint16_t</code> <i>maxBreakpoints</i>	Maximum number of breakpoints.
<code>uint16_t</code> <i>maxEditAndContinueEntryLen</i>	Maximum length of an edit and continue entry.
<code>uint16_t</code> <i>maxEditAndContinues</i>	Maximum number of scripts that can be modified when stopped on a breakpoint while debugging.
<code>uint16_t</code> <i>maxLuaStateNameLen</i>	Maximum length of a Lua state name.
<code>uint16_t</code> <i>maxLuaStates</i>	Maximum number of Lua states that can be debugged.
<code>uint32_t</code> <i>maxMemTraces</i>	Maximum number of memory traces to hold in memory.
<code>uint16_t</code> <i>maxNumVarFilters</i>	Maximum number of variable filters.
<code>uint16_t</code> <i>maxPatternsPerVarFilter</i>	Maximum number of patterns per filter.
<code>uint16_t</code> <i>maxProfileCallStackSize</i>	Maximum call stack depth.
<code>uint16_t</code> <i>maxProfileFunctions</i>	Maximum number of functions to profile.
<code>uint32_t</code> <i>maxSendBufferSize</i>	Maximum size, in bytes, of the send buffer (1024 recommended at a minimum)
<code>uint16_t</code> <i>maxVarFilterPatternLen</i>	Maximum length of a single pattern in a filter.
<code>uint32_t</code> <i>maxWorkBufferSize</i>	Maximum size of the work buffer (1024 recommended at a minimum)
<code>int32_t</code> <i>numPathChopChars</i>	The number of characters to strip off the beginning of a path string.
<code>void *</code> <i>pEditAndContinueUserData</i>	Edit and continue callback userdata.
<a href="#">ChopCharsCallback</a>	Modified path to compare breakpoint against.
<code>pfnChopCharsCallback</code>	
<a href="#">EditAndContinueCallback</a>	Edit and continue callback function.
<code>pfnEditAndContinueCallback</code>	
<a href="#">EditAndContinueFinishCallback</a>	Edit and continue finish callback function.
<code>pfnEditAndContinueFinishCallback</code>	

### Methods Summary

---

Methods	Description
<a href="#">LuaPluginConfig</a>	<a href="#">LuaPluginConfig</a> constructor.

---

# Constructors and Destructors

## LuaPluginConfig

---

[LuaPluginConfig](#) constructor.

### Definition

---

```
#include <params.h>
inline LuaPluginConfig();
```

### Return Values

---

None

### Description

---

Constructor to initialize items.