



Debugging.TV

Frame 0x08

Presenter: Dmitry Vostokov

MEMORY DUMP ANALYSIS SERVICES

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Topics

- Logging WinDbg extension
- Adding your API for logging
- Different logging formats
- Viewing verbose logging extension logs

Tracing Win32 API while debugging a process

Activation Context pattern

Custom Logging

C:\Program Files\Debugging Tools for Windows (x64)\winext\manifest\contexts.h

```
// ++++++  
//  
//             Activation Context API  
//  
// ++++++  
category ActivationContext:  
module KERNEL32.DLL:  
FailOnFalse ActivateActCtx(HANDLE hActCtx, [out] PULONG_PTR lpCookie);  
FailOnFalse DeactivateActCtx(DWORD dwFlags, ULONG_PTR upCookie);
```

C:\Program Files\Debugging Tools for Windows (x64)\winext\manifest\main.h

```
[...]  
#include "contexts.h"
```

Enabling Logging

```
0:001> !logexts.loge
```

```
Windows API Logging Extensions v3.01
Parsing the manifest files...
Location: C:\Program Files\Debugging Tools for Windows (x64)\winext\manifest\main.h
  Parsing file "main.h" ...
  Parsing file "winerror.h" ...
  Parsing file "kernel32.h" ...
[...]
Parsing completed.
Logexts injected. Output: "C:\Users\Training\Desktop\LogExts\"
Logging enabled.
```

```
0:001> !logc d *
```

```
All categories disabled.
```

```
0:001> !logc
```

```
Categories:
```

```
 1 ActivationContext      Disabled
 2 AdvApi32                Disabled
```

```
[...]
```

```
0:001> !logc e 1
```

```
 1 ActivationContext      Enabled
```

Logging Output

```
0:001> !logo
```

```
Logging currently enabled.
```

```
Output directory: C:\Users\Dump Analysis\Desktop\LogExts\
```

```
Output settings:
```

Debugger	Disabled
Text file	Disabled
Verbose log	Enabled

```
0:001> !logo e t
```

Debugger	Disabled
Text file	Enabled
Verbose log	Enabled

```
0:001> !logo e d
```

Debugger	Enabled
Text file	Enabled
Verbose log	Enabled

!Ad Hardcore Technical Support Training

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April 20-23, 2012: **Advanced Windows Memory Dump Analysis**

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