



# Windows API Exploitation Recipes for Red – Blue Teams

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# Requesting Elevation: ShellExecuteEx()

# Solving the Problem Permanently!

- Program starts
- Detects if its running privileged
- No? relaunch itself!
- Alternately, have a manifest file which forces this when invoked

# Runtime Checking and Re-Launch

- Runtime Checking for Privileges
  - Covered in last videos
- Re-Launch requesting for Privileges
  - ShellExecuteEx

# ShellExecuteEx()

## ShellExecuteEx function

Performs an operation on a specified file.

### Syntax

C++

```
BOOL ShellExecuteEx(  
    _Inout_ SHELLEXECUTEINFO *pExecInfo  
);
```

[https://msdn.microsoft.com/en-us/library/windows/desktop/bb762154\(v=vs.85\).aspx](https://msdn.microsoft.com/en-us/library/windows/desktop/bb762154(v=vs.85).aspx)

# SHELLEXECUTEINFO

```
typedef struct _SHELLEXECUTEINFO {
    DWORD      cbSize;
    ULONG      fMask;
    HWND       hwnd;
    LPCTSTR    lpVerb;
    LPCTSTR    lpFile;
    LPCTSTR    lpParameters;
    LPCTSTR    lpDirectory;
    int        nShow;
    HINSTANCE  hInstApp;
    LPVOID     lpIDLList;
    LPCTSTR    lpClass;
    HKEY       hkeyClass;
    DWORD      dwHotKey;
    union {
        HANDLE hIcon;
        HANDLE hMonitor;
    } DUMMYUNIONNAME;
    HANDLE     hProcess;
} SHELLEXECUTEINFO, *LPSHELLEXECUTEINFO;
```

[https://msdn.microsoft.com/en-us/library/windows/desktop/bb759784\(v=vs.85\).aspx](https://msdn.microsoft.com/en-us/library/windows/desktop/bb759784(v=vs.85).aspx)

# Thank You!

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