
Subject: Re: Syncing or changing BuildingGameObj 'IsDestroyed' state for clients
Posted by [iRANian](#) on Sun, 04 May 2014 09:25:09 GMT

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To find the function epilogue to patch open Renegade and attach OllyDbg, make sure Renegade is already in the main menu. in OllyDbg go to 0x006843E0 then follow the jump at the location. The new scripts 4.1 uses SSE heavily so the instructions for functions look kinda weird. Scroll up to find this kind of pattern at a function prologue:

ORIGINAL RENEGADE CODE AS EXAMPLE, THE TT CODE LOOKS DIFFERENT BUT ACTS THE SAME:

```
mov  al, [esp+20h+var_11]
test al, al
jz   short loc_68431E
mov  al, [ebx+770h]
test al, al
jnz  short loc_68431E
mov  edx, [ebx-8]
lea  ecx, [ebx-8]
call dword ptr [edx+94h]
```

```
pop  edi
pop  esi
pop  ebx
add  esp, 14h
retn 4
```

All you really need is to find the check with 0x770 and a virtual function call to edx+0x94. Patch the epilogue so offset 0x770 is given the content of the byte stack variable that is tested for zero before the test for 0x770 being tested for zero in the code above. In this case:

```
mov  al, [esp+20h+var_11]
test al, al
```

Happens before:

```
jz   short loc_68431E
mov  al, [ebx+770h]
```

So the epilogue needs to be patched so that offset 0x770 is updated with the content of [esp+20h+var_11].

Use OllyDbg to patch the epilogue in memory. then select and copy the patched instructions and

save them somewhere. Undo these memory patches (select the patches and right click -> Undo Selection) then open bandtest.dll with a hex editor, then find the epilogue in of the function in your hex editor by searching for the instruction bytes for the original epilogue (obviously make sure you find the correct one so check if there are multiple matches in the hex editor), replace the original epilogue instruction bytes with the instruction bytes have written down for your modified one. It might also be possible to just memory patch with OllyDbg and use the 'copy to executable' command.

Instruction bytes look like this:

```
64E016C9 8B7424 14      MOV ESI,DWORD PTR SS:[ESP+14]
64E016CD 8A46 0B      MOV AL,BYTE PTR DS:[ESI+B]
64E016D0 8886 70070000  MOV BYTE PTR DS:[ESI+770],AL
64E016D6 5F          POP EDI
64E016D7 5E          POP ESI
64E016D8 5B          POP EBX
64E016D9 83C4 14      ADD ESP,14
64E016DC C2 0400      RETN 4
64E016DD CC          INT3
```

The "8B7424 14" on the first line are 4 bytes for the instruction on the right of the line, "8A46 0B" on the second line are 3 bytes for the instruction on the right of that line etc.

Once done load up the game with the hex edited bandtest.dll and find the epilogue for the BuildingClass::Import_Rare() function again and check if your hex edits match the patched code you wrote down earlier, the code patches you applied with a hex editor.

I've attached a patched bandtest.dll, I have NOT checked if it works correctly with building revival. If the game crashes during startup or just after joining a server the file is incompatible with your version of 4.1.

File Attachments

1) [bandtest.zip](#), downloaded 369 times
