

# Sample from.... Installing, Managing and Troubleshooting Windows Server 2008 R2

Presented by Mark Minasi

To get the whole course, go to  
[www.minasi.com/2008R2audio](http://www.minasi.com/2008R2audio)  
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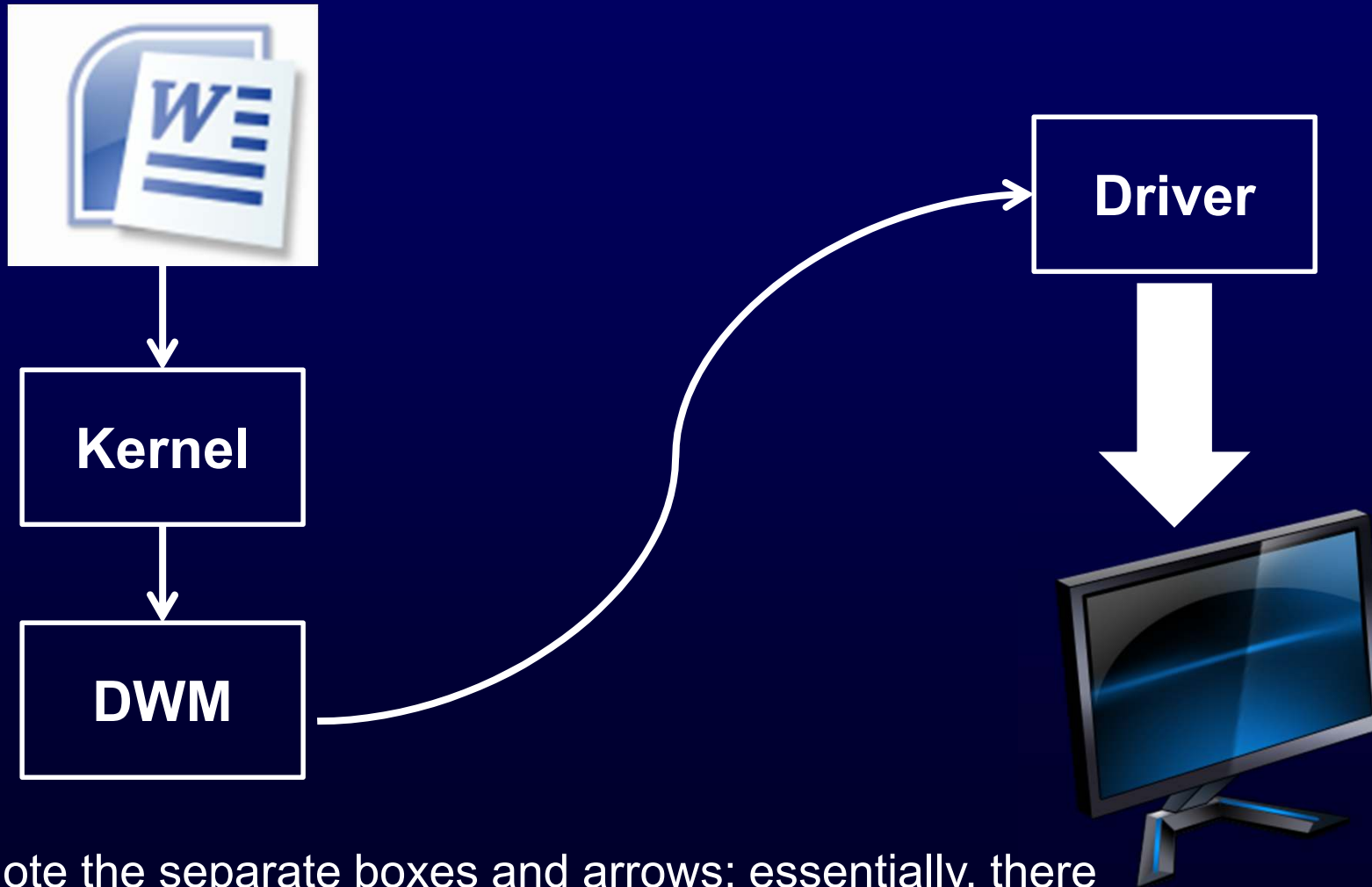
# Printer Driver Isolation

solving an old problem

- Since NT 3.51, printer drivers have run inside the Spooler service's process
- This has led to a sort of undesirable set of circumstances...

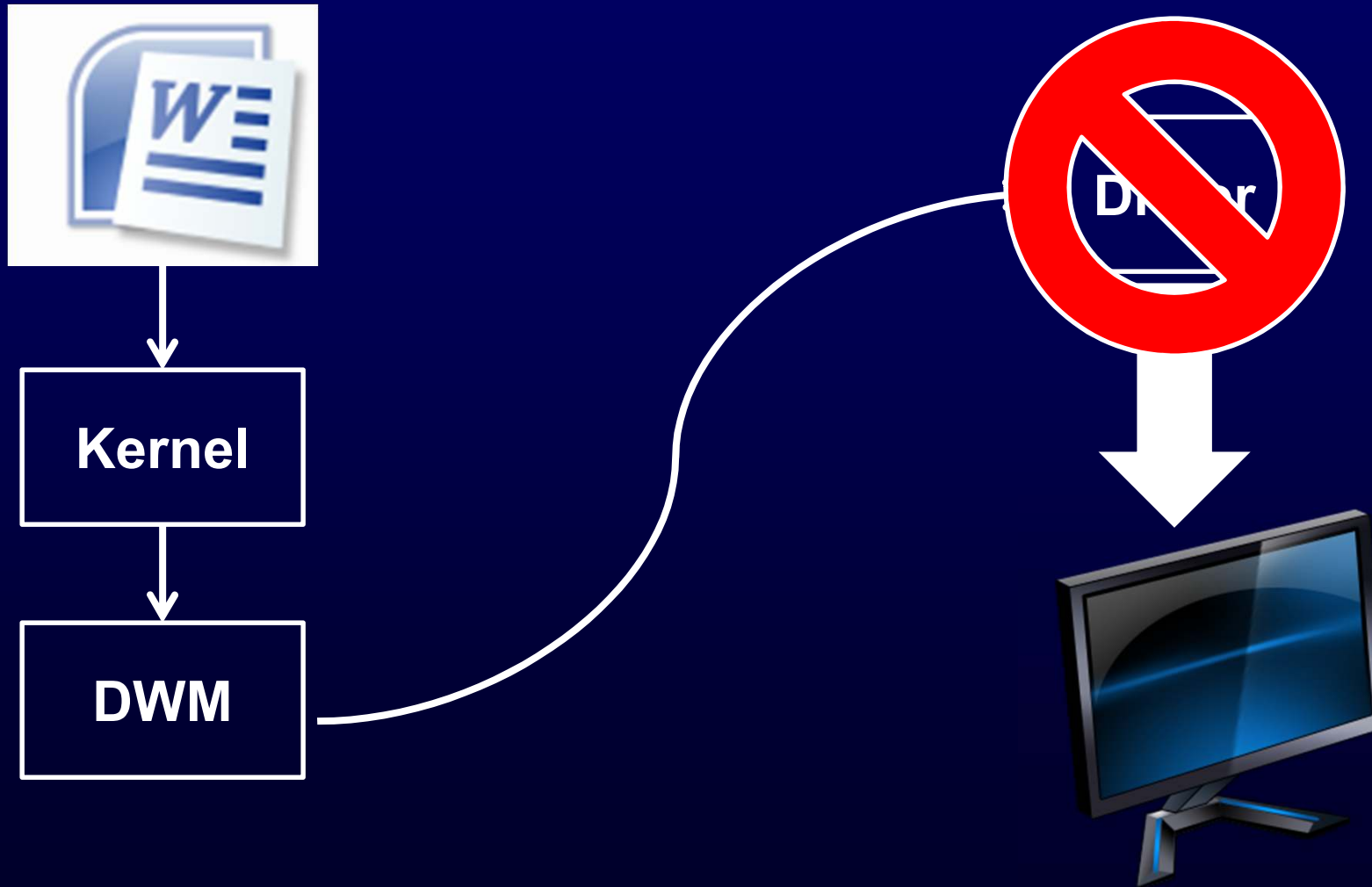
# The Usual Driver Model

(massively simplified)

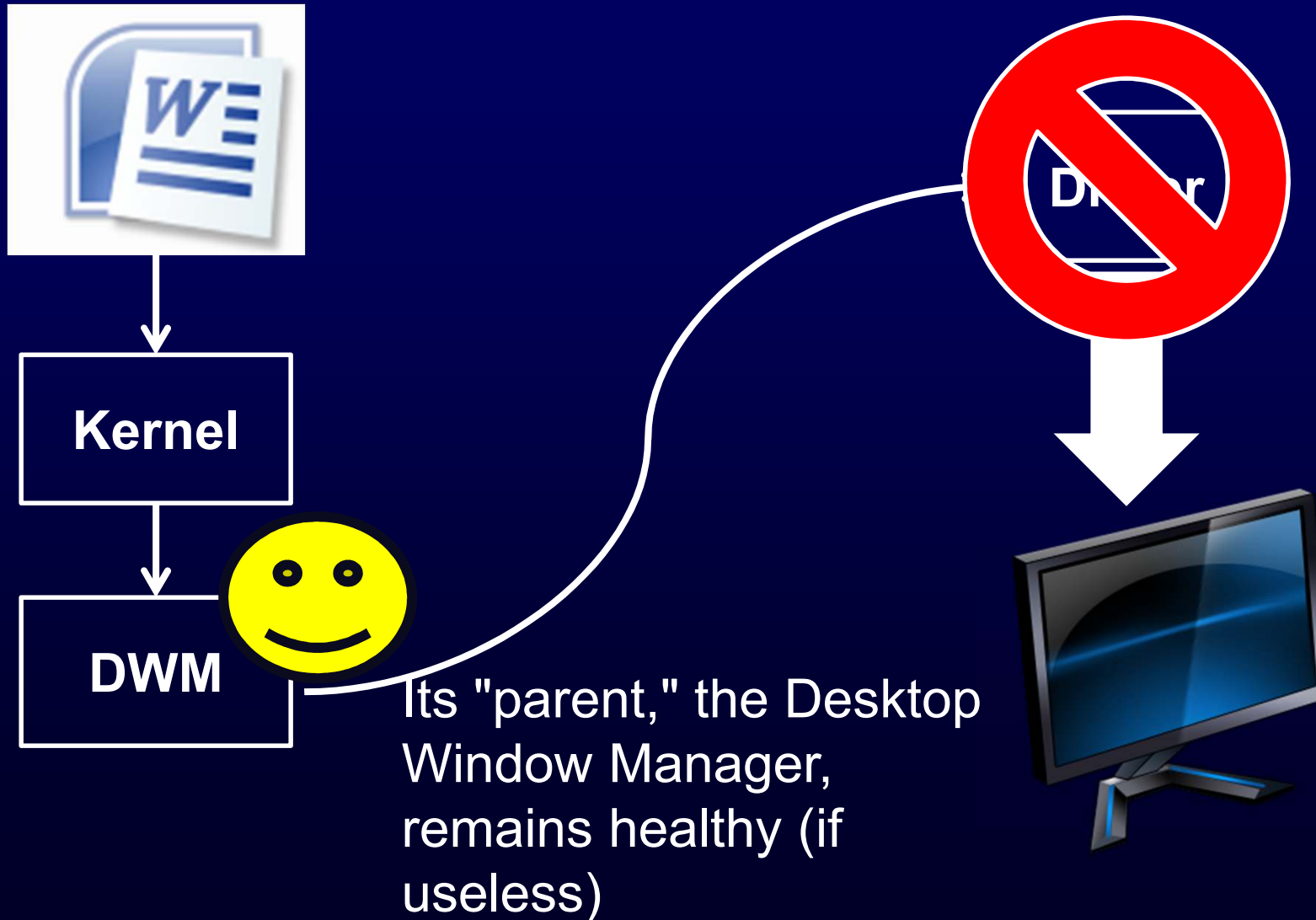


Note the separate boxes and arrows; essentially, there are "walls" between these components

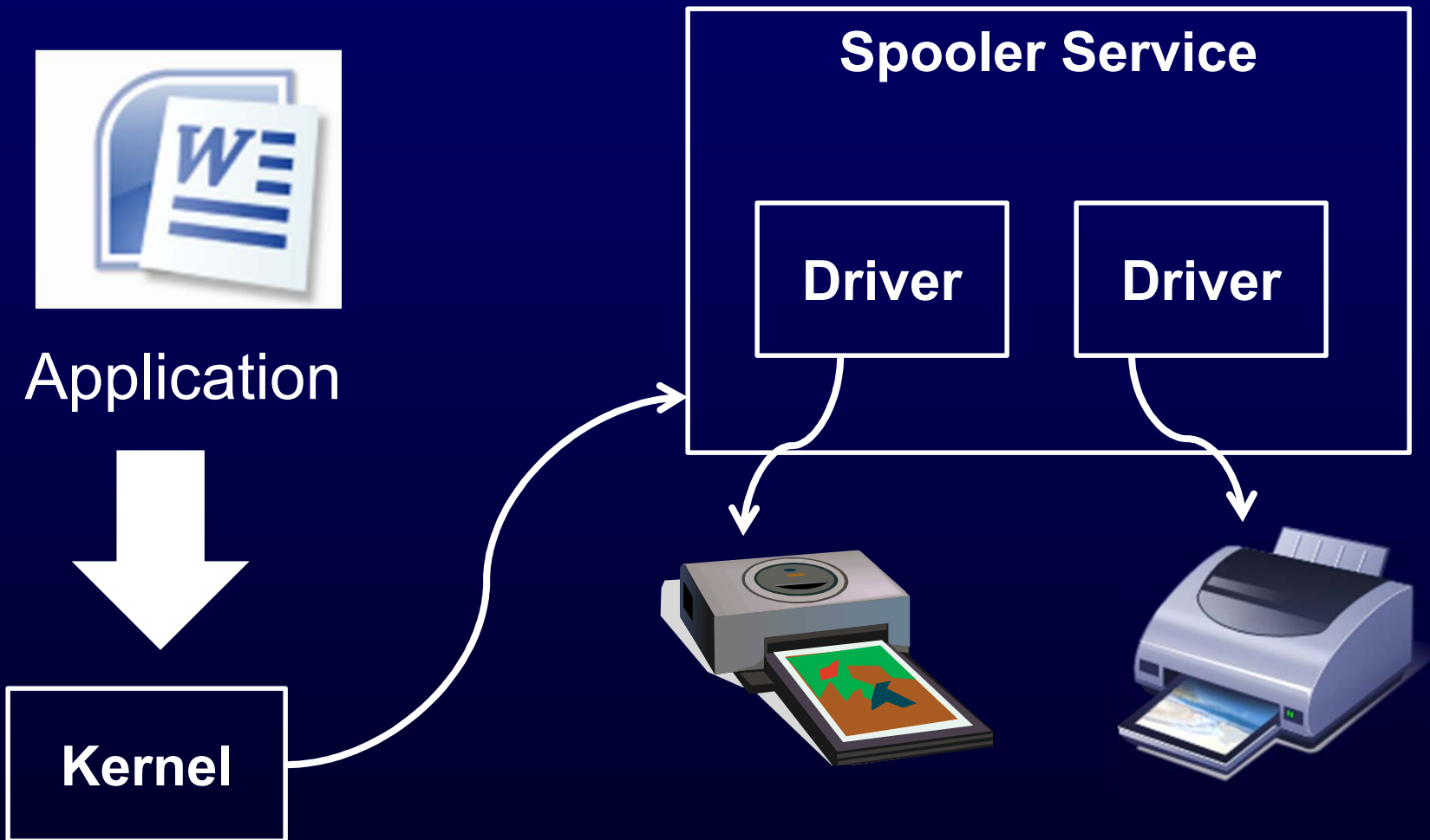
# So if the video driver dies...



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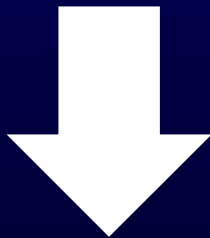
# The Printer Driver Model, Pre-R2



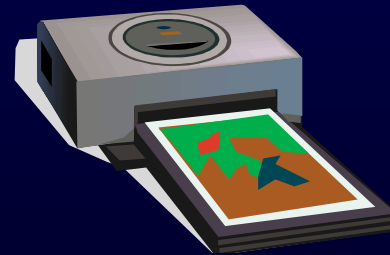
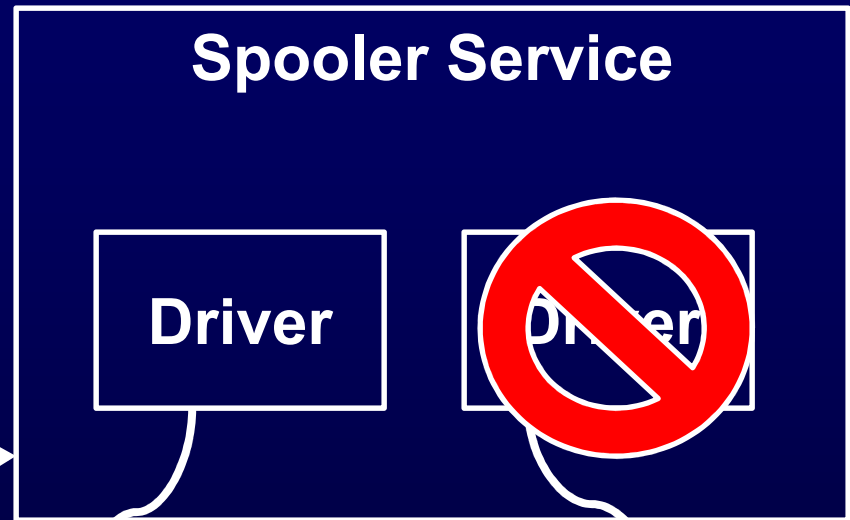
# If a Print Driver Fails...



Application



Kernel

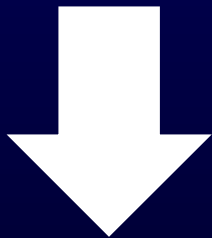


it doesn't just keep things to itself...

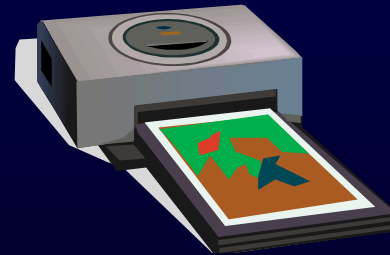
# If a Print Driver Fails...



Application



Kernel

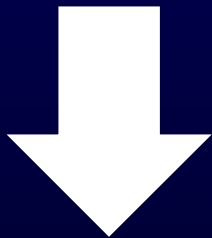


It kills any other  
printer drivers...

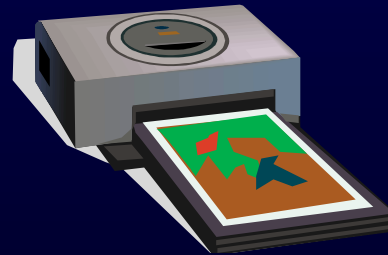
# If a Print Driver Fails...



Application



Kernel



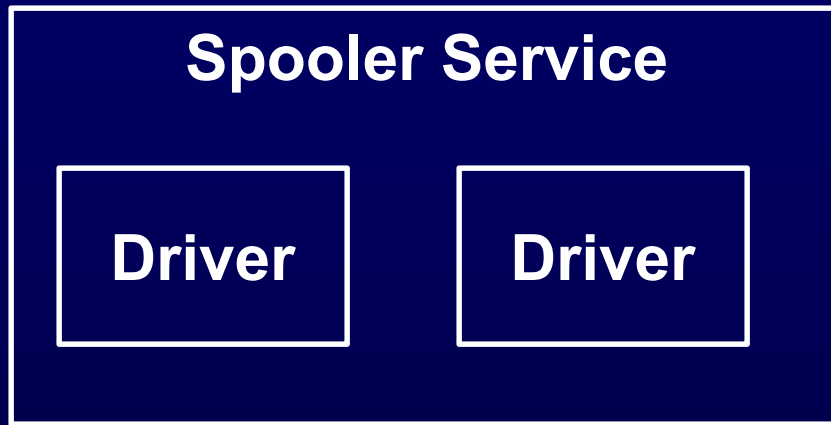
And "poisons" the whole spooler process

# Printer Driver Isolation

what R2 offers

- Under Server 2008 R2, you may be able to isolate printer drivers into instances of `printisolationhost.exe`
- Thus, if a driver crashes, it only takes down its process and not Spooler
- However, in theory some drivers just plain insist on being in the Spooler process, as we'll see
- R2 offers several options for using `printisolationhost`

# R2's Default Model



"Driver\*" = a driver that declares itself "isolate-able"

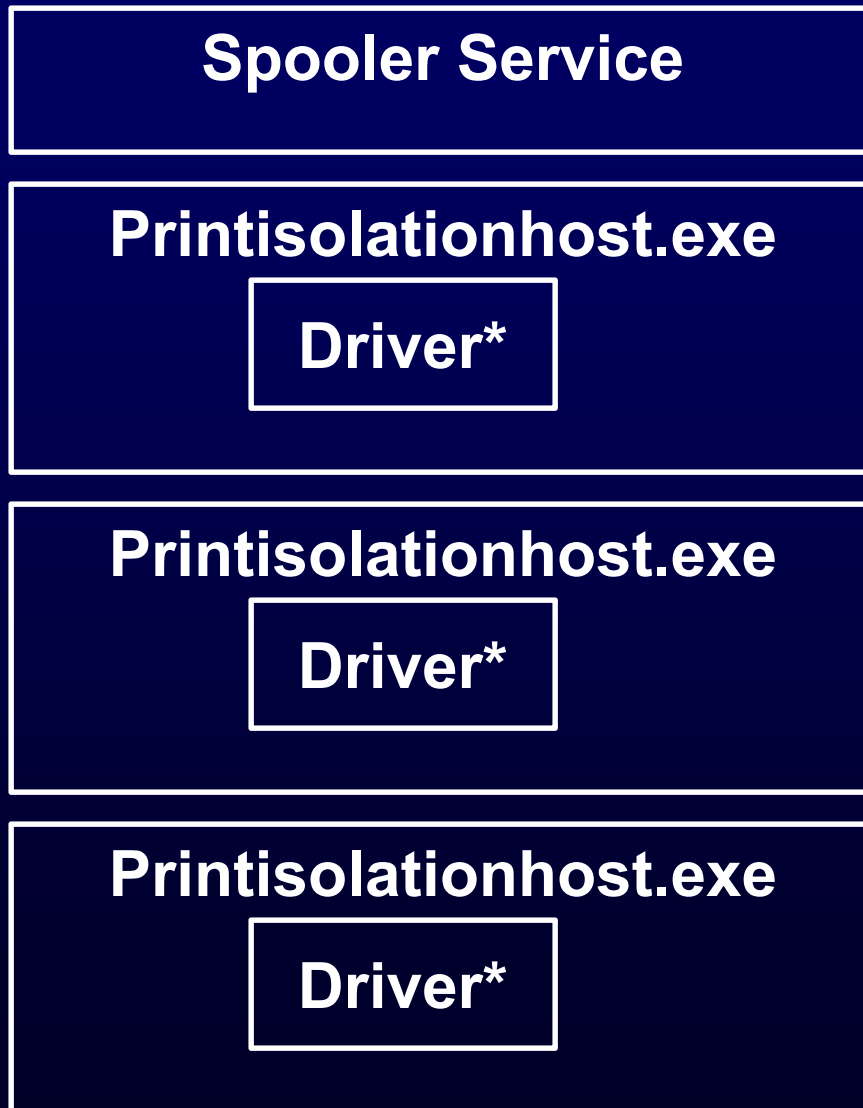
This is called the "shared" isolation model

The drivers that still reside in the spooler process will still take down the whole mess if they die

# Notes on the "Shared" Model

- As in the pre-R2 world, if a driver in a printisolationhost dies, it takes down the entire printisolation host (but not, of course, the Spooler process)
- So there's a more extreme model...

# R2's "Isolated" Model



In this "isolated" model, you tell R2 to set up a separate printisolationhost for each driver

Of course, you can mix and match