



KONICA MINOLTA

Driver Isolation Mode

- White Paper -

Service Operation / Engineering Group
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Revision History

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1. Products

General printer driver technology

2. Information

Since Windows 7 a new printer driver feature has been adapted. It is called "Driver Isolation Mode". This isolation mode provides a kind of "sandbox", for example on a server, in which a printer driver is running. Advantage of this driver isolation mode is that if there would be a major problem only this printer driver crashes and not the whole system/the complete print spooler process.

To understand this function better, let us use the following scenario:

A customer has different printer with different drivers installed on a server. These printer drivers do not support the isolation mode activated by default. If a client is printing a document which crashes the spooler, no other driver can be used on the server as the complete spooler process is crashed. Therefore the administrator has to restart the whole spooler service.

If these drivers are running in an isolation mode, only the isolated driver will crash and all other printers can be used regardless of the crashed isolated driver.

Without driver isolation mode:

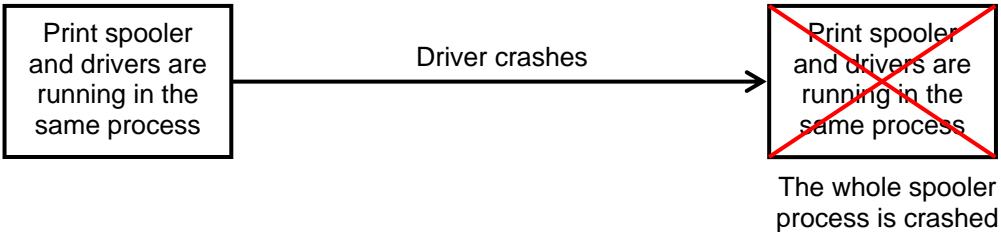


Figure 2-1 Driver crash without Driver Isolation Mode

With driver isolation mode:

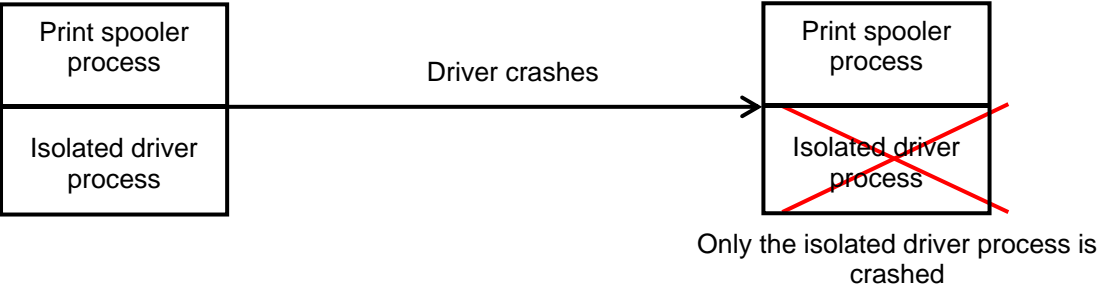


Figure 2-2 Driver crash with Driver Isolation Mode

3. Further Information

Konica Minolta drivers support driver isolation, however not enabled by default.

Currently the below mentioned driver do support this function switched on by default (set to “Shared”)

| Model | Emulation | Version | Switched on by default |
|-------------------------------|-----------|----------------|------------------------|
| Universal Printer Driver | PCL | From 2.20.0.0 | Yes |
| | PS | From 2.20.0.0 | Yes |
| bizhub PRO 951 | PCL | From 1.1.0.0 | Yes |
| | PS | From 2.0.220.0 | Yes |
| bizhub PRESS 1250/ PRESS 1052 | PCL | From 1.1.1.0 | Yes |
| | PS | From 2.0.220.0 | Yes |
| bizhub PRESS C7000 | XPS | From 2.0.7.0 | Yes |
| | PS | N/A | |
| bizhub PRESS C8000 | XPS | From 2.0.7.0 | Yes |
| | PS | N/A | |

Figure 3-1 KONICA MINOLTA Shared Driver Isolation Mode capable drivers

To check if a driver supports the driver isolation mode activated by default, you can have a look to the corresponding INF file. If the INF file contains the keyword “DriverIsolation” then it supports this function and it is activated by default

To understand this setting better, please find below information about each setting of the driver isolation mode:

| Driver Isolation mode | Meaning |
|-----------------------|---|
| Shared | The driver runs in a process shared with other printer drivers but separated from the spooler process |
| Isolated | The driver runs in a process only for this driver, separated from the spooler process and not shared with other drivers |
| None | The driver runs in the spooler process |

Figure 3-2 Driver Isolation Mode settings

For more information about the driver isolation mode, please refer to <http://msdn.microsoft.com>

4. Workaround

Even if this function is not activated by default with our Emperon drivers, it is possible to use it with the following procedures:

4.1. Specify the driver isolation mode by INF file

This procedure is officially not supported due to the fact that the INF file of a driver has to be changed. Due to this, the driver also loses the WHCK certification. Anyway, you can do it by your own risk.

```

6
7 [Version]
8 Signature="$Windows NT$"
9 Provider=%KM%
10 ClassGUID={4D36E979-E325-11CE-BFC1-08002BE10318}
11 Class=Printer
12 CatalogFile.ntamd64=KOB__J__.CAT
13 DriverVer=06/24/2013,2.30.0.0
14 DriverIsolation=2

```

Figure 4-1-1 Driver Isolation Mode in INF

By adding the driver isolation line as visible in the picture, this function will be set to default ("DriverIsolation=2" means set to "Shared"). But please keep in mind that the driver loses its WHCK certification.

4.2. Administrate this function via GPO

There are two different ways how to set up the isolation mode via group policies:

4.2.1 Driver Isolation can completely disabled by GPO

This setting is called "*Execute print drivers in isolated processes*"

- Enable or not set = Allow Print Driver Isolation to be possible (depends on the INF file or Print Management Console)
- Disable = Disable complete Print Driver Isolation

4.2.2 Driver Isolation can be overridden by GPO

This setting is called "*Override print driver execution compatibility setting reported by print driver*"

- Disable or not set = Print Driver Isolation will be used according to INF file.
- Enabled = Shared Print Driver isolation will be attempted even if INF reports DriverIsolation=0

4.3. By Print Management Console

You can specify the settings mentioned in “Further information” for each driver.

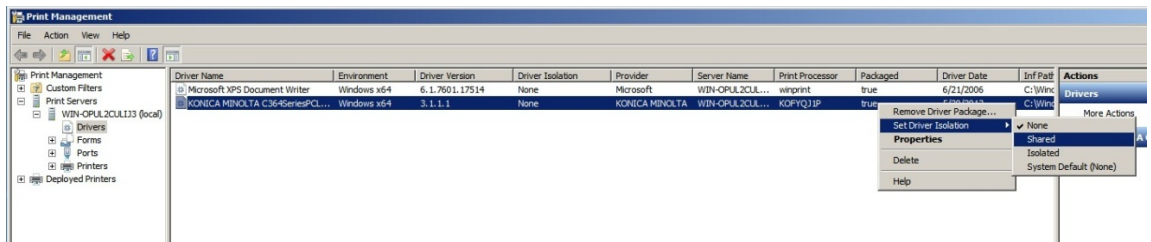


Figure 4-3-1 Driver Isolation Mode in Print Management Console

So as a conclusion, even if the driver does not activate the isolation mode by INF file (set to 2) it can still be used by the following method:

- Editing INF to add “DriverIsolation=2” (lose WHCK)
- Changing GPO “Override print driver execution compatibility setting reported by print driver” = Enable (will affect all drivers)
- Use Print Management Console to change the setting for each driver independently (must be done for each driver)

5. Updates

Latest / updated version of this document can always be found at:
<https://www.konicaminolta.eu/dlark>