IBM FlashCache Storage Accelerator 2.2.0

Release Notes for Virtual

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Overview

Introduction

These release notes describe the details concerning the IBM FlashCache Storage Accelerator 2.2.0 release, including known issues that may be encountered while using this product.

What's new in this release

New features and functionality in this release include:

- IBM Flash Management Console updated to SLES 11 SP3
- Support for ESXi 5.1 U2 and 5.5 U1
- Autocache—allows new VMs added to a host to automatically start caching in host-based mode, or allows a VM configured for host-based caching to automatically start caching new VMDKs or new volumes.
- Firewall port management during installation—during installation IBM FlashCache Storage Accelerator can temporarily open http access to the ESXi server and then close it after installation completes.
- Support for installations and upgrades using VMware vSphere Update Manager (VUM)
- CLI commands added to disable read cache updating (also known as "cache pollution avoidance") for applications like backup. (See the disablereadupdate command below and in the Administrator Guide.)
- Versioning added to installation files
- Warnings added to not cache Cluster Shared Volumes (CSV)
- Modifications to the IBM Flash Management Console GUI:
    - Licensing page moved to Datacenter tab
    - By default, Manage Caching link shows only IBM High IOPS Adapters or Enterprise Value Flash Adapters or SSDs as cache device selections. A filter is available to show all devices in the system.
- New CLI commands:
    - `enableautocache` and `disableautocache`
    - `gethostfirewallsetting` and `sethostfirewallsetting`—displays the httpClient services setting on the host and allows it to be changed
    - `hypercachestats`—displays cache read and write statistics for the host
    - `pervmdkstats`—displays stats for the specified VM that is running in host-based caching mode
    - `disablereadupdate` and `enablereadupdate`—disable or enable updates to the read cache on a host without invalidating the existing read cache

    - VM "readupdate" commands
        - `disablediskreadupdate`—disables read updates to the disk layer of the read cache on a VM without invalidating the existing cache
        - `enablediskreadupdate`—enables read updates to the disk layer of the read cache on a VM
        - `disablefilereadupdate`—disables read updates to the file layer of the read cache on a VM without invalidating the existing cache
        - `enablefilereadupdate`—enables read updates to the file layer of the read cache on a VM
        - `disablevolumereadupdate`—disables read updates to the volume layer of the read cache on a VM without invalidating the existing cache
        - `enablevolumereadupdate`—enables read updates to the volume layer of the read cache on a VM
- Modified CLI commands:
    - `package` (host)—supports a --`forcemodifyfirewallsetting` to temporarily change the httpClient services setting on the host during installation. Additionally the `package` command no longer caches all VMs by default during installation.
    - `listluns`—displays cache devices that can be used for caching unless used with the --`all` option and then all the LUNs in the host will be displayed.
- Multiple bug fixes (see Issues Resolved)

System Requirements

VMware vCenter versions

- All VMware supported versions of vCenter 5.0, 5.1, 5.5

Attention!

Use of the vSphere Web Client is only supported with vCenter 5.5.

VMware ESXi hosts

- ESXi 5.0, 5.0 U1, 5.0 U2, 5.0 U3, 5.1, 5.1 U1, 5.1 U2, 5.5, 5.5 U1

Attention!

IBM's ESXi 5.0 U2 Custom Image is not supported.

Microsoft Windows operating systems supported for guest-based caching

- Windows Server 2012
- Windows Server 2012 R2
- Windows Server 2008 x64 with all SPs
- Windows Server 2008 R2 x64 with all SPs

Attention!

No 32-bit operating systems are supported.

Linux distributions supported for guest-based caching

- RHEL 5.6, 5.7, 5.8, 5.9, 5.10, 6.1, 6.2, 6.3, 6.4, 6.5
- SLES 11 SP2 and SP3

Attention!

No 32-bit operating systems are supported.

Operating systems only supported with host-based caching

In addition to the operating systems supported by guest-based caching, the following VM operating systems are supported by host-based caching:

- Windows Server 2003
- SLES 11 SP1

Attention!

No 32-bit operating systems are supported.

IBM FlashCache Storage Accelerator scalability

When caching and managing a large number of VMs with IBM FlashCache Storage Accelerator be aware of the following:

- Due to the size of the host display window, it can be challenging to manage more than 10 VMs in guest-based caching mode. If you have more VMs, consider managing them using CLI commands which are documented in the *IBM FlashCache Storage Accelerator 2.2.0 Administrators Guide*.
- Due to the size of the host display window, it can be challenging to manage more than 100 VMs in host-based caching mode. If you have more VMs, consider managing them using CLI commands which are docmented in the *IBM FlashCache Storage Accelerator 2.2.0 Administrators Guide*.

IBM FlashCache Storage Accelerator issues resolved

The following issues have been resolved in the IBM FlashCache Storage Accelerator 2.2.0 release.

Issue	Description
Fix	Fixed an issue with the frequency of statistics collection.
Fix	Fixed a condition that required an internet connection in order to download additional root certificates during installation
Fix	Fixed a problem where the IBM Flash Management Console was displaying templates in the VM grid.
Fix	Fixed a problem where the IBM FlashCache Storage Accelerator caching was disabled due to internal errors.
Fix	Fixed a problem where "caching" radio button was not displaying on Live graphs.
Fix	Fixed a memory management issue in the IBM Flash Management Console.
Fix	Fixed a problem where VMs could fail to boot after attaching host-based caching.
Fix	Fixed a problem where Live charts was displaying incorrectly calculated performance statistics.
Fix	Fixed a problem where failover was unsuccessful when IBM FlashCache Storage Accelerator was installed in a NetApp SRA environment.
Fix	Fixed a problem where VMs in host-based caching mode on ESXi 5.5 would hang after running for 49 days.

The following issues were resolved in the IBM FlashCache Storage Accelerator 2.1.3 release.

Issue	Description
Fix	Fixed a problem where DNS information was being incorrectly displayed in the output of `iot system --doctor`
Fix	Fixed a problem where DNS server IP addresses used by the IBM Flash Management Console could not be changed.
Fix	Fixed a problem where the character "$" was not supported in the password of the IBM Flash Management Console.
Fix	Fixed a problem where an Oracle database would not vMotion correctly between two caching hosts.
Fix	Improved error message when invalid server specified during vCenter registration.

Issue	Description
Fix	Fixed a condition where changing cache configuration on a VM could take several hours. In previous versions, changing the host caching configuration would result in a snapshot of each volume that was being cached. As this was a time consuming process, a different method was implemented that did not use snapshots, resulting in much faster caching configuration changes.
Fix	Fixed a problem where the IBM Flash Management Console incorrectly attempted to register with vCenter using the hostname localhost.
Fix	Fixed a problem re-registering the IBM Flash Management Console with vCenter.
Fix	Fixed a problem where IBM FlashCache Storage Accelerator was incorrectly trying to cache shared VMDKs in host-based caching mode. When selecting VMs for host-based caching that have both shared and non-shared VMDK, all non-shared VMDKs will be selected for caching but you will need to manually reboot or vMotion the VMs to start caching.
Fix	Fixed a problem where a large number of VMs communicating with vCenter at once could crash vCenter. An algorithm to batch requests was implemented in the IBM Flash Management Console.
Fix	Fixed a problem where the IBM Flash Management Console incorrectly displayed the number of licenses available.
Fix	Fixed a problem where the IBM Flash Management Console user interface incorrectly reported no caching on Windows 2012 VMs.
Fix	Fixed a problem where the IBM Flash Management Console did not correctly handle orphaned VMs in vCenter.
Fix	Fixed a problem where Live Performance graphs were not showing accurate Capacity Utilization, Offload Rate, and Hits Rate.
Fix	The IBM Flash Management Console screen refresh rate has been improved. This was accomplished by reducing the latency in gathering data from vCenter.
Fix	Fixed a problem where agent crash dumps could be overwritten.
Fix	Fixed a problem where IBM FlashCache Storage Accelerator could not run on IBM's version of ESXi 5.1
Fix	Fixed a problem where the IBM Flash Management Console did not correctly keep track of the latest version of the caching software on ESXi hosts.
Fix	Fixed a problem where upgrades from 2.0.x would crash.
Fix	Fixed a problem where IBM FlashCache Storage Accelerator would interfere with the resumption of normal reads and writes to primary storage in the event of a cache device failure.
Fix	Fixed a problem where vMotioned VMs were not correctly updated in the IBM

Issue	Description
	Flash Management Console.
Fix	The IBM Flash Management Console now shows package version instead of driver version on Windows
Fix	Fixed a problem where "Host Offline" alerts were not generated when a host went offline.
Fix	Fixed a problem in the IBM Flash Management Console where agent would go offline when displaying Live performance graphs for caching with IO running.
Fix	Fixed a problem where the Virtual Disk Service (VDS.exe) would cause high CPU usage.
Fix	Fixed a problem where the Manage Caching link would not display on the IBM Flash Management Console.
Fix	Improved responsiveness in the “Live” tab. This alleviates the “Buffering…. Please wait” issue.
Fix	Fixed a problem with guest-based caching on VMs with more than one network card.
Fix	Fixed a problem where the Manage Caching link did not display because the host was erroneously perceived to be in an offline state

IBM FlashCache Storage Accelerator known issues

This section describes issues you may encounter when using the IBM FlashCache Storage Accelerator 2.2.0 release.

VMs need to be set to "No caching" before converting to templates

If you create a template from a VM that is configured for host-based caching, any VMs created from that template will not cache correctly and will display error messages. Set any VMs that are configured for host-based caching to "No Caching" before converting them to templates.

Changes to ManagedObjectReference will required management server reset

If the ManagedObjectReference on an ESXi host is changed after the management server has registered with vCenter, unexpected behavior may occur in the configuration and monitoring of VMs on the server. To resolve this situation, run **iot system --reset** and then re-register the IBM Flash Management Consolewith the vCenter.

With a very large vCenter installation, some attempts to manage caching will fail due to a scalability issue

This problem can occur if you are trying to to manage more than 100 VMs in a single operation. If you are affected by this issue, manage caching on your VMs using CLI commands.

Communication with a VM in guest-based caching mode requires VM to have a valid IP address

Proper communication between VM in guest caching mode and ioSphere requires that the VMs have valid IP addresses assigned to them. Networking should be configured properly on your VMs.

Older Versions of ESXi require VM reboot or vMotion to autocache VMDks

In versions of ESXi that are earlier than 5.0.0 build 914586 or 5.1.0 build 1065491, the autocache feature may fail to start caching on new VMDKs added to VMs. In these situations, you will need to reboot or vMotion the VM to start caching on new VMDKs.

Registering IBM FlashCache Storage Accelerator with a different vCenter

The preferred way to register IBM FlashCache Storage Accelerator with a different vCenter is to unregister with the current vCenter and register with the new vCenter. However, if the vCenter that you are currently registered with is powered off or otherwise unavailable, you will not be able to unregister using the IBM Flash Management Console GUI.

To register IBM FlashCache Storage Accelerator with a new vCenter, when the currently registered vCenter is unavailable, perform the following steps:

1. SSH in to the management server console as user root.
2. On the command line enter **`iot system --reset`**
3. After the IBM Flash Management Console restarts, register the new vCenter using either the IBM Flash Management ConsoleGUI or the CLI.

Attention!

The `--reset` command returns the IBM Flash Management Console to the default factory settings. It will remove any vCenter registrations and it will reset the IBM Flash Management Console password to the default.

Logical Volume Manager (LVM) "device already mounted" messages can be ignored

For RHEL6 VMs that are configured for guest-based caching, you may see a message in the boot log saying that the LVM device is already mounted. For example, the message may look something like this:

```
"Mounting filesystems: mount: /dev/mapper/<vg>-<lv> already mounted or /<mountpoint>
busy"
"mount: according to mtab, /dev/ibca is already mounted on /<mountpoint>"
```

These messages can be safely ignored.

Updating guest-caching software from 2.1.x to 2.2.0 on a Linux VM may change guest caching priority

The Guest Caching Priority of Linux VMs may be changed to the default setting of Medium after updating the guest caching software from 2.1.x to 2.2.0. The caching priority can be reset manually after the update.

Update host software operation stalls and then times out

If the vCenter has disabled host alerts and events, the update host software operation will complete but it the progress and completion of the operation will not be correctly displayed. We strongly recommend not disabling any host alerts or events in the vCenter.

Hot remove request for a virtual machine's SCSI device may fail

Enabling or disabling host based caching might fail due to a SCSI device hot-remove request failure. If this occurs, an error message displays with the details of the SCSI controller that needs to be removed manually.

Failing to install a driver for an added NIC on a Linux VM causes guest OS and IBM Flash Management Console to be out of sync

IBM FlashCache Storage Accelerator requires Linux VMs to have drivers installed for all NICs in the VMs. Adding a NIC to a previously configured VM and not installing the NIC driver can cause a VM identifier to change, resulting in loss of communication with the IBM Flash Management Console.

With vSphere web client some IBM Flash Management Console pop-ups are displayed in new tabs

In some instances, depending on the browser you are using, pop-ups from the IBM Flash Management Console running in the vSphere web client, can be displayed in new tabs. Unfortunately, this behavior is controlled entirely by the vSphere web client and the browser.

Failing to reserve memory for IBM High IOPS Adapter driver can cause ESXi crash

When installing IBM High IOPS Adapter driver for IBM High IOPS Adapters or Enterprise Value Flash Adapters installed in an ESXi server, you must limit the memory resources available to the user system resource pool so that VMs do not consume memory needed by the IBM High IOPS Adapter driver. Failing to do so can result in an out of memory condition on the ESXi server that can cause it to crash (e.g. PSOD).

An IBM High IOPS Adapter's canonical identifier can change during host reboots

In some cases rebooting a caching ESXi host may cause VMware's canonical identifier for an IBM High IOPS Adapter to change. For example, the identifier for the device could change from `mpx.vmhba35:C0:T0:L0` to `mpx.vmhba36:C0:T0:L0`. If this happens to an IBM High IOPS Adapter you are using for caching, IBM FlashCache Storage Accelerator will remove the device from its list of cache devices. You will need to use the IBM Flash Management Console graphical user interface (GUI) or command line interface (CLI) to re-select the cache device (with its new cannonical identifier).

With Windows guest-based caching, selecting a disk for caching that is already caching at the volume level displays an incorrect error message

On a Windows VM that is using guest-based caching, selecting a disk for caching that is already caching at the volume level causes the IBM Flash Management Console to display the following message: "The specified object is already selected for caching at the disk level." The message should read "The specified object is already selected for caching at the **volume** level."

Switching a VM to host-based caching may require manually power cycling or vMotioning the VM

If the ESXi host version is below 5.0 U2 (build 914586) or 5.1 U1 (build 1065491), there is a VMware bug that requires the user to manually power cycle or vMotion a VM when switching to host-based caching.

In these cases, the IBM Flash Management Console can configure caching but fails to enable it. A warning message displays informing the user that caching has not been enabled and that the VM needs to be vMotioned or power cycled. After taking one of these actions, caching will be automatically enabled on the VM.

Switching caching method on the same VM more than once requires a "No Caching" step

At any time you can change the caching method of a VM from host-based caching to guest-based caching, or vice versa. However, before changing the caching method on the same VM a second time, you need to change the caching method to "No Caching" first and then select the new caching method. Switching between host-based and guest-based caching method on the same VM multiple times without the intervening "No Caching" step can result in the cache failing to work.

When using guest-based caching with vSphere replication, exclude the IOT_VDEV VMDK

For VMs that are being replicated with vSphere replication, configuring guest-based caching on a replicated VM or making any changes to a replicated VM's VMDKs will require VM replication reconfiguration to get the source and target in sync.

If you are replicating a VM, and then you enabled guest-based caching on the VM, the IBM FlashCache Storage Accelerator adds the 1MB `IOT_VDEV_xxxx` VMDK causing the VM to be out of sync. In these instances, you will need to go through the replication reconfiguration process to get the VM back in sync.

If you have enabled guest-based caching on a VM, and then you include it in replication, be sure to uncheck the "Enable disk replication" box for the the 1MB `IOT_VDEV_xxxx` VMDK.

In large vCenter environments VMs using Microsoft Internet Explorer version 8 can display script errors.

Microsoft Internet Explorer version 8 is minimally support by IBM FlashCache Storage Accelerator. Upgrading the VM's browser to Internet Explorer 9 or higher will resolve the script errors.

IBM ESXi 5.0 U2 custom image not supported

IBM FlashCache Storage Accelerator is not support on IBM's version of ESXi 5.0 U2. Customers using IBM's version of ESXi 5.0 U2 will need to upgrade to U3 in order to use IBM FlashCache Storage Accelerator.

During a format operation, the attach operation status displays incorrectly

When formatting a device to factory capacity, the interface indicates that the attach operation is at 10%. The display is incorrect. The attach operation completes, but the task status does not reflect it.

"Device not found" message for Attach operation incorrect

When performing the Attach operation, an error message may indicate "Device not found".However, the Attach operation has been successfully completed.

Detaching active cache device puts IBM FlashCache Storage Accelerator in an inconsistent state

Do not detach an IBM High IOPS Adapter that is being used as a cache device. If you must detach the device, first unassign it as a caching device, then detach it.

Classic Solutions tab in vSphere web client may require manual browser refresh

If the content of the Classic Solutions tab in the vSphere web client goes blank, you will need to manually refresh the page in your browser to redisplay the content of the tab.

When installing guest-based caching on Windows 2008 R2 Standard, you may be prompted for a second reboot.

When provisioning guest-based caching or installing the guest package on a Windows 2008 R2 Standard VM, if there is a need for a Paravirtual SCSI controller driver upgrade, you will be a prompted for a second reboot in VM console. For the purposes of caching, you can ignore this second reboot prompt as it does not affect caching operations.

Maximum available hypervisor caching size is 2.14 TB

If you are using a cacje devoce that is greater than 2.14TB as a cache device, IBM FlashCache Storage Accelerator will only use 2.14TB of the device for host-based caching. The remainder of the space can be used for guest-based caching.

For VMs using host-based caching, the combined size of all the cache devices in use will not be more than 2.14TB. However, any additional capacity can be used for VMs utilizing guest-based caching.

IBM FlashCache Storage Accelerator performance declines on VMs using snapshots

Performance on VMs which utilize snapshots decline due to the overhead of the ESXi server creating and managing child VMDKs for the snapshots. To maximize the performance of a VM caching with IBM FlashCache Storage Accelerator software, it is recommended that you minimize the use of VMware snapshots in production environments.

VMware Auto Deploy is currently not supported for IBM FlashCache Storage Accelerator

IBM FlashCache Storage Accelerator does not support vCenter servers in linked mode

If your vCenter is using linked mode, you can either take the vCenter server out of linked mode before installing IBM FlashCache Storage Accelerator or you can register the IBM Flash Management Console with only one vCenter and only use that vCenter to manage caching.

Improper DNS configuration can cause problems with the IBM Flash Management Console plug-in

Proper deployment of the IBM Flash Management Console plug-in for vCenter relies heavily on proper DNS configuration. Name resolution problems could cause the plug-in to appear to fail until the DNS issues are resolved.

When using a 2TB VLUN device, harmless I/O errors may appear on the console

When using a 2TB VLUN, the I/O error messages similar to those shown below may display in the console logs. These messages are harmless and can be safely ignored.

```
May 16 15:11:42 localhost kernel: end_request: I/O error, dev sdc, sector
2048
May 16 15:11:42 localhost kernel: end_request: I/O error, dev sdc, sector
2056
May 16 15:11:42 localhost kernel: end_request: I/O error, dev sdc, sector
2048
May 16 15:11:42 localhost kernel: end_request: I/O error, dev sdc, sector
4294960896
May 16 15:11:42 localhost kernel: end_request: I/O error, dev sdc, sector
4294960896
```

"Failed to connect to management server" error

If you see the "Failed to connect to management server" error, it may be that the Tomcat service has stopped running. You can determine this from the command line of the IBM Flash Management Console by entering the `iot system --doctor` command and examining the output. If the output of the command indicates that the Tomcat service is not running, restart it by entering the following command:

```
sudo /etc/init.d/vme2 restart
```

Moving VLUN VMDK bus location can cause the wrong VMDK to be used as a VLUN

Do not change the location of the IBM FlashCache Storage Accelerator VLUN VMDK on the virtual SCSI bus (by editing VM settings in the vSphere client).

Manually uninstalling IBM FlashCache Storage Accelerator components from a host is not reflected in vCenter

Do not manually remove components of IBM FlashCache Storage Accelerator from an ESXi host. vCenter will continue to show that the components are installed even though you have removed them.

Temporary alerts may display when switching from Cache All to Custom Caching

A temporary alert may display if you switch from the default Cache All setting to a Custom Caching setting. This alert will only display for a few seconds and can be safely ignored.

IBM Flash Management Console version number may be incorrect in Summary tab

After updating the IBM Flash Management Console, the version number displayed on the Summary tab in the vSphere client for the IBM Flash Management Console may be incorrect. To determine the version of IBM Flash Management Console that is currently installed, perform the following steps:

1. In the vSphere client click the IBM Flash Management Console VM in the inventory tree, and then click the Console tab.

2. From the Console tab, on the blue IBM Flash Management Console VM screen, login as root. (The password for the root user for this VM was set at install time.)

3. Display the version number by entering the following on the command line:

   `fio-msrv --version`

vCenter network setting changes

If the vCenter name used in registration cannot be resolved by the IBM Flash Management Console, the user may see one of following messages:

- "session expired" in the IBM Flash Management Console tab
- "invalid host reference" in the IBM Flash Management Console tab
- "http error" in the IBM Flash Management Console tab
- no content at all in the IBM Flash Management Console tab

This situation can be caused by a network setting change such as a DNS change.

To correct this situation, perform the following steps:

1. Login to the IBM Flash Management Console as user *iotcli* using the password *iotcli*

2. Reset the registration by entering:

   `iot system --reset`

3. After the IBM Flash Management Console restarts, use IBM Flash Management Consoleto re-register the IBM Flash Management Console with the vCenter.

4. Close the vSphere client (if it is open) and then re-open it.
5. From the IBM Flash Management Console CLI run **`iot --system doctor`** and verify that there are no errors in the output.

IBM Flash Management Console name change or IP address change requires registration reset

If you change the host name of the IBM Flash Management Console (e.g. using the **`iot system --sethostname`** command), or the IP address changes (e.g. a DHCP lease expires), it will break the server's registration with vCenter.

Attention!

If you are using IBM Flash Management Console remote access to manage clients, you will need to put new access keys on the clients after performing the registration reset.

GUI registration reset

Perform the following steps to reset the registration with the GUI:

1. Open a browser to the IBM Flash Management Console user interface and log in.
2. In the user interface, click on the **Settings** tab and then click **Remote Access**.
3. Choose the host name or IP address you would like the IBM Flash Management Console to use from the **Host Name** drop-down.
4. If you used a custom SSL certificate, update the custom certificate and key files for the new host name.
5. Click **Save** and the IBM Flash Management Console will restart.
6. Login to the IBM Flash Management Console.
7. In the user interface, click on the **Settings** tab and then click **vCenter Server**.
8. Click **Unregister**. Ignore any errors saying that the server was not registered.
9. Enter the vCenter information and click **Register**.
10. Re-open the vSphere client.

CLI registration reset

Perform the following steps to reset the registration with the CLI:

1. Login in to the IBM Flash Management Console as user *iotcli* with password *iotcli*
2. From the command line enter:

```
 iot vmp -va <vCenterName> -vu <vCenterUser> -vp
<vCenterPassword> -ur
```

3. From the command line enter:

```
iot vmp -va <vCenterName> -vu <vCenterUser> -vp
<vCenterPassword> -rs
```

4. From the command line enter the following commands:

```
sudo /etc/init.d/vme2 restart
```

5. Re-open the vSphere client.

Network setting changes may result in "session expired" error messages.

If the vCenter name used in registration cannot be resolved by the IBM Flash Management Console, the user may see the error message "session expired please log in again" while navigating inside the plugin. This can be caused by a network setting change such as a DNS change.

To correct this situation, perform the following steps:

1. Login to the IBM Flash Management Consolethrough the CLI.

2. Get the VMP ID by entering the following command: **`iot list --vmp`**

3. Enter the following command:

```
psql ioSphereVME2 VME2Server -c "update iospherevme2.vm_platform
set address='<FQDN_vCenter>' where id=<VMP_ID>;"
```

   where

   FQDN_vCenter -- is the fully qualified name of the vCenter that IBM FlashCache Storage Accelerator is registered with.

   VMP_ID -- is the VMP ID that was returned by the command in step 2.

4. Restart the IBM Flash Management Console by entering: **`sudo /etc/init.d/vme2 restart`**

After the management server restarts the error message should no longer appear.

IBM FlashCache Storage Accelerator can only format one cache device at a time.

You will need to wait until a selected cache device is completely formatted before formatting the next one. The agent software can crash if more than one device is formatting.

The "Cache All" feature of the IBM Flash Management Console only caches volumes that contain file systems.

For Windows and Linux VMs, when selecting "Cache All" in the IBM Flash Management Console user interface, only volumes which contain a file system will be cached. Volumes without file systems can be added manually.

Registering IBM Flash Management Console with more than one vCenter is an unsupported configuration

Only register IBM Flash Management Console with one vCenter.

IBM FlashCache Storage Accelerator cannot attach a cache device to Linux VMs with paravirtual SCSI controllers

Because of a limitation in the VMware paravirtual SCSI driver (PVSCSI), you will need to choose a different SCSI controller type for the Linux VM.

Download location

Support related documentation is available at:

http://www.ibm.com/supportportal

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