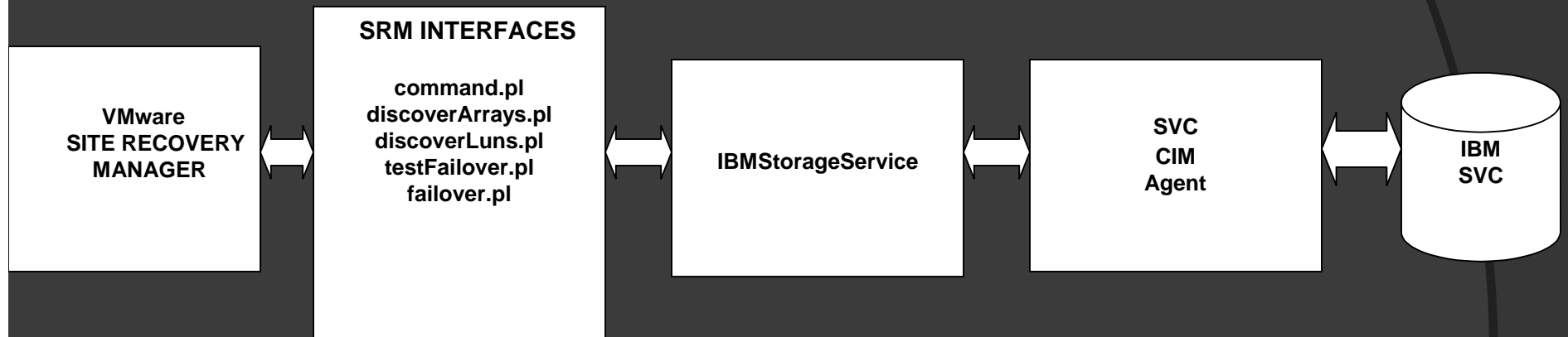


**IBM SYSTEMSTORAGE SAN VOLUME  
CONTROLLER  
STORAGE REPLICATION ADAPTER  
FOR  
VMware SRM**

# High-Level Block Diagram



# Storage Documentation

IBM SAN Volume Controller Administration Guide

<http://www.redbooks.ibm.com/redbooks/pdfs/sg246423.pdf>

# Storage Pre Requisites

- Copy services licenses installed (MetroMirror/GlobalMirror, FlashCopy)
- Create MetroMirror/GlobalMirror target volumes
- Create MetroMirror/GlobalMirror relationships between source & target volumes
- Space availability on the array (in the same mdisk group as the MetroMirror/GlobalMirror target volumes)
- The MetroMirror/GlobalMirror relationships **MUST** be in “consistent\_synchronized” state
- The CIM agent must be installed and configured

# Adapter Installation & Configuration

Refer to the installation and user's guide provided with the installer

# Adapter Behavior

## a) Consistency Groups?

- Not supported at this time

## b) Initiator Lists ?

- Should be defined on the storage arrays

## c) Snapshots vs. Clones during test & recovery

- Snapshots for test recovery

## d) (Manual) Failback procedure?

- Refer to the Failback section in the user's guide

# Troubleshooting

- ⦿ **The CIMOM password or username is incorrect** Bad username and or password
- ⦿ **EXT\_ERR\_AUTHENTICATION** Bad username and or password
- ⦿ **Failed to connect to CIMOM/EXT\_ERR\_UNABLE\_TO\_CONNECT** Serious problem while the adapter tries to communicate with the CIM agent. Check the status of the CIM agent, try re-starting “IBM System Storage SAN Volume Controller Pegasus Server” service from the services panel. If that doesn't work, check the IP connectivity between the VC server and the CIM server. Also make sure the CIM port specified in the configure array screen is in fact configured. For this, log into the server where the CIM agent is running and run this command....

C:\Program Files\IBM\svccconsole\cimagent\pegasus\bin\svccimcli.exe lsconfig

This command should show both secure and unsecure ports configured. As the adapter only supports secure ports, make sure the secure port specified during array configuration and the one configured match.

- ⦿ For all other error codes, refer to the error code file IBMSVC\_ErrorCodes.txt for what they mean
- ⦿ **FOR ALL EXCEPTIONS**, please capture the message and call IBM support.

# Basic Array Administration

- a) Target Lun Creation
- b) Creating MetroMirror/GlobalMirror Relationships
- c) Checking the MetroMirror/GlobalMirror Status



# Adapter Work-Flow

- a) Adapter interaction with SRM
  - Refer to the work-flow diagram
- b) Expected exit status for success
  - Zero
- c) Possible exit status
  - 204 Exception (CIM problem)
  - 203 Exception (Check for other vendor specific error codes before this exception in the log file for additional info)
  - Other vendor specific error codes
- d) Vendor specific error codes and descriptions of what they mean can be found in IBMSVC\_ErrorCodes.txt file

# TestFailover VS Failover

In case of test failover, the adapter creates a FlashCopy (snapshot) of the MetroMirror/GlobalMirror (remote mirror) volumes on the recovery site array and then promotes the snapshot luns to the recovery ESX server

For failover, the adapter breaks MetroMirror/GlobalMirror (remote mirror) relationships, the target volumes are then promoted to the recovery ESX server.