

IBM® z/VM® V6.4 Support and CA VM:Secure™ for z/VM - 3.2

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Thanks!

Thanks to the team of people that worked on getting the changes and the new release out the door.

CA VM development team

Marketing

And all the other folks at CA that turn on all the bits that get software to the outside world

Our customers

IBM

Topics

- z/VM V6.4 Support in CA z/VM products
- z/VM V6.4 Support details for VM:Secure 3.2
- Introduction of VM:Secure 3.2 enhancements

z/VM V6.4 Support

For all z/VM related products, see compatibility matrix on Customer Support Online

<https://www.ca.com/us/services-support/ca-support/ca-support-online/mainframe-compatibilites/zvm-compatibility-matrix.html>

Most products don't require anything over what was required for z/VM V6.3
Some do require an upgrade or maintenance

z/VM Version 6 Release 4 Support – non VM:Manager suite

- CA Top Secret® for z/VM 12.1; plus RO91296
- CA ACF2™ r12 for VM ServicePack 5 (1611)
 - The Product Maintenance Letter is at: <https://support.ca.com/phpdocs/7/148/RI92913.pdf>
 - The prerequisite for ACF2 installation is CA Common Infrastructure Services (CIS) r1 ServicePack 6 (101112E9001)
 - Noted in the PML
- CA MICS® 14.0; plus RO92191 (toleration support) and RO91879 (z13 and SMT support)
 - RO92191 - The VM release validation module is updated to identify MONITOR data generated by z/VM systems running z/VM Version 6 Release 4 in order to prevent the following MICSLOG Warning message:
VMC00307W UNRECOGNIZED VM VERSION: V06R4M0
 - RO91879 - Updates are required for the CA MICS VM/CMS Analyzer Option to support the changes to existing z/VM Monitor records, and to process new z/VM Monitor and Account records introduced by IBM for the z13 CPC in support of Simultaneous Multithreading (SMT).
 - These new and changed records are introduced via IBM APARs VM65586 and VM65696 and part of z/VM V6.4.

z/VM V6.4 Support – CA VM:Manager suite

- CA Mainframe VM Product Manager 1.2; plus RO90041 (included in CA RS RO92416)
 - VMNDLK: Directory Reader Diagnose for z/VM V6.4
 - Updated Installation Guide regarding upgrading, and coexistence with multiple z/VM releases
- CA VM:Spool™ V/Seg Plus Feature 1.7; plus RO90120
 - CP Dependent TXTLIB and Assemblies for z/VM V6.4
 - Updated Installation Guide regarding upgrading, and coexistence with multiple z/VM releases
- CA Explore® Performance Management for z/VM 5.0; plus RO92576
 - z/VM V6.4 Compatibility – EXPSYS64 MODULE
- CA VM:Secure™ for z/VM 3.2
 - Required for z/VM V6.4, previous VM:Secure/VM:Director releases are not supported.

VM:Secure for z/VM Version 3 Release 2

- z/VM V6.4 related changes
- Enhancements

VM:Secure 3.2 - z/VM V6.4 Related Changes

- MACHINE Z – to designate guests as Z architecture only
- Upgrade in Place – Added support for new calls from IBM to our Upgrade in Place user exit and documentation changes.
- HCPRWPR – LOGON password prompt changes
- Support for IBM diagnose X'A0' subcode X'54' to retrieve a passticket to use for a LOGON
 - We support this for z/VM V6.3 or V6.4 when running with VM:Secure 3.2 replacement CP text decks
- Support for IBM QUERY CPSERVICE

MACHINE Z

- MACHINE Z – to designate guests as Z architecture only
- New MACHINE architecture Z
 - Directory statement - MACHINE Z
- Only valid to use in directories if you are running on z/VM V6.4. Otherwise VM:Secure will give an error.
 - In mixed SSI environments you must code your directory for the earliest release of z/VM running in the cluster
- Support added for MACHINE record in entries as well as definition for globalopts that defines the MACHINE setting to take if none is specified for directory entry.
 - If no MACHINE setting and no GLOBALOPTS the (new) default is MACHINE ESA (used to be MACHINE 370)
- Where there is a selection for the setting, we've put Z in as one of the selections (MANAGE screens)
- Added to SMAPI support

Upgrade in Place z/VM V6.4 Support

- Upgrade in Place – Added new exit logic to VM:Secure’s upgrade in place user exit, UPGDMIXT.
 - ENTRY GET with LOCK
 - ENTRY REPLACE
 - ENTRY UNLOCK
- Must upgrade to VM:Secure 3.2 on the system they are upgrading.
 - Customers can run VM:Secure 3.1 CP replacement decks with VM:Secure 3.2 Service machine (Support for Upgrade in Place) if running with VM:Secure 3.1 1510 CA RS and also have on RO71656, RO71657 and RO71658. If not they will need to put the CP version appropriate text decks from VM:Secure 3.2 into their CP Nucleus.
- VM:Secure Administration wiki updated to give new instructions for z/VM V6.4 Upgrade in Place with the product

HCPRPWPR – Password prompt changes

- Fixes problem of giving a user too much information when an invalid user or invalid password is entered. Before z/VM V6.4 CP tells you which is the problem.
 - Added as new call point in HCPRPW
 - Called by CP LOGON/LOGONBY/XAUTOLOG/AUTOLOG processing to allow entry of a password early in the process
 - Our logic gathers password and puts it into the ACIPARMS plist
 - Password available to service machine during rules processing

HCPRPWPR – Password prompt changes (continued)

- Now when you enter a bad user and/or bad password you get:

HCPLGA050E LOGON unsuccessful--incorrect userid and/or password

*NOTE: XAUTOLOG and AUTOLOG still give messages from CP that are specific to invalid password or invalid user ID.

*CAUTION: If VM:Secure DELAYLOG is configured to cause a delay between prompts for a bad password, this can reverse the changes IBM made and make a person trying to break in aware that a password is bad.

Due to this, we recommend you change DELAYLOG to 0 or delete the DELAYLOG SECURITY CONFIG file record to allow it to default to 0.

CP QUERY CPSERVICE Command

- CP QUERY CPSERVICE display service applied to the running z/VM system
- Made changes to allow VM:Secure modifications to CP (replacement text decks) to be seen
- MODID referenced in the installation section for the Rules Facility displayed in the Local Modifications section of the output

```
QUERY CPSERVICE lcl lc*  
Local modification  
LCLVS64  
LCLX032  
Ready; T=0.01/0.01 11:13:16
```

- No external changes to VMXCPG
 - Packaged slightly different - replacement text files are no longer supplied in a TXTLIB
 - VMXCPG changed to to pre-pend a “LCL” Control Record to each TEXT file
 - LCL Control Record that results in the MODID for VM:Secure being included in the CP QUERY SERVICE output.

CP QUERY CPSERVICE Command (Continued)

- The format of the pre-pended “LCL” control record is as follows:

```
LCLX032 LCL LCLX032 * (RPD630) Level: R070231 -CA VM:Secure- Date: 6 Oct 2016
```

```
LCLX032 LCL LCLX032 * (RPG630) Level: X031236 -CA VM:Secure- Date: 6 Oct 2016
```

- The “LCL” Control Record is valid and supported in ALL supported releases of z/VM, regardless of whether the release of z/VM supports the CP QUERY CPSERVICE command.
- Therefore, VMXCPG includes (pre-pends) the LCL Control Record to the TEXT files generated regardless of the z/VM release requested.
- Although the QUERY CPSERVICE output only displays the MODID, the complete LCL Control Record is visible in the CLOAD MAP (for all releases of z/VM).

CP QUERY CPSERVICE Command (Continued)

- Example of what will be found in CLOAD MAP:

```
CPLOAD      MAP      K5  VP 133  Trunc=133 Size=103080 Line=27212 Col=1 Alt=0
27212 LCLX032 LCL LCLX032 * (RPG640) LEVEL: X032470 -CA VM:SECURE- DATE: 6 OCT
27213 ----- 33 line(s) not displayed -----
27246 LCLX032 LCL LCLX032 * (RPI640) LEVEL: X032464 -CA VM:SECURE- DATE: 6 OCT
27247 ----- 354 line(s) not displayed -----
27601 LCLX032 LCL LCLX032 * (RWA640) LEVEL: X032464 -CA VM:SECURE- DATE: 6 OCT
27602 ----- 21101 line(s) not displayed -----
48703 LCLX032 LCL LCLX032 * (RPD640) LEVEL: X032470 -CA VM:SECURE- DATE: 6 OCT
48704 ----- 43 line(s) not displayed -----
48747 LCLX032 LCL LCLX032 * (RPW640) LEVEL: X032464 -CA VM:SECURE- DATE: 6 OCT
48748 ----- 54333 line(s) not displayed -----
03081 * * * End of File * * *
```


Enhancements and other VM:Secure 3.2 changes

- Dynamic reconfiguration for Enable Record
- VMXGNR – Change placement of comments at the end of an entry
- No more support for z/VM V6.1 in CP deck replacements
- PASSCHNG user exit called by NOLOG command
- SUBCONFIG entry create/delete through MANAGE screens
- Diagnose x'A0', Subcode x'60' Enhancement
- Diagnose x'A0', Subcode x'54' Support for Passtickets

Enhancements and other VM:Secure 3.2 changes (continued)

- Signal Shutdown Support
- END User Exit
- Support for the Image_Definition_XXXXXX_DM SMAPI APIs
- CHGMDISK support for DEVNO defined disks
- Convert to one product – removal of VM:Director

Dynamic Reconfiguration for ENABLE

- Before this update ENABLE record only read and acted on at VM:Secure initialization.
 - COUPLE
 - PWPHRASE
 - FOR
 - TRSOURCE
 - RDEVCTRL – Real device access (DEDICATE/CP ATTACH)
- With this update ENABLE record changes are updated dynamically – no more needing to ‘bounce’ VMSECURE service machine to make it so

Dynamic Reconfiguration for ENABLE (continued)

- Documentation – See VM:Secure 3.2 Release Notes and also Reference documentation for the ENABLE configuration file changes
- VMXCPG – If VMXCPG finds VMXRPI Configuration for items you can ENABLE you get message DMSVMX866W

DMSMVE226I End of PDS move

DMSVMX866W PWPHRASE ignored in VMXRPI CONFIG. Use ENABLE PWPHRASE in SECURITY CONFIG file.

DMSVMX866W COUPLE ignored in VMXRPI CONFIG. Use ENABLE COUPLE in SECURITY CONFIG file.

VMXGNR and comments

- VMXGNR – populates VM:Secure directory database from USER DIRECT input
- Comments that are after the end of USER A in a USER DIRECT will now go with USER A vs. being put in the entry for USER B. Customers no longer need to make sure their comments in USER DIRECT are within the entry for a user, they can come between 2 entries.
- This works better for new IBM supplied USER DIRECT files that have subconfig information worked in as comments along with the IDENTITY entry they go with.
- Documentation updates – See VM:Secure/VM:Director 3.2 Release notes and VMXGNR utility information in the Reference Wiki

De-support of z/VM 6.1.0

- IBM EOS in 2013
- VM:Secure 3.2 no longer supplies a z/VM V6.1
 - Removed selection from VMXCPG
 - Removed z/VM V6.1 related CP replacement text decks

NOLOG command call to PASSCHNG user exit

- Added call to password change user exit to the NOLOG command
- Allows synchronization of that change along with other password changes
- Follows the standards of the current parameter list passed to the user exit
 - No changes
 - NOLOG passed as exit caller

MANAGE – SUBCONFIG creation and deletion

- Prior to VM:Secure 3.2 customers could update SUBCONFIG entries through MANAGE and SUBCONFIG screens
 - Could not create SUBCONFIG entries through MANAGE
 - Had to use ADDENTRY
 - Could not delete SUBCONFIG entries through MANAGE
 - Had to use DELENTY
 - Customer requested MANAGE screens support all aspects of SUBCONFIG maintenance
 - Added this support in VM:Secure 3.2
 - MANAGE identity – gives new selection 1 to create a SUBCONFIG
 - MANAGE subconfig – gives new selection 5 to remove this SUBCONFIG

MANAGE – SUBCONFIG creation

```
MANAGE                               Manager Selection Menu                               VM:Secure
-----
                                     Identity: YVOID           Manager: DEMYV01
                                     +-----+
                                     | Selection:           For Device: 191 |
                                     +-----+

1 Add a new SUBCONFIG entry           6 Move a Minidisk
2 Define and Format a New Minidisk    7 Edit Directory Comments
3 Select User/Identity/Subconfig Menu 8 Review the Directory Entry
4 Scratch a Minidisk                 9 Redefine a Minidisk in Place
5 Hold or Remove a Userid           10 Work with Shared File System

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-----
PA1: Cancel           PF1: Help           PF3: Quit           PF10: Print           PF12: End
```

MAN0002S – SUBCONFIG creation

- All fields must be filled in – no defaults
 - * for member name only valid for SSI ready
 - 1 system SSI enabled must put member name
- Subconfig name, skeleton and member fields are all validated in the macro
 - Prevents ugly directory update errors later
- All normal authorization checking done to make sure user can manage the subconfig etc.
- BUILD record for this SUBCONFIG automatically added to the IDENTITY

MAN0002S – SUBCONFIG creation screen

```
MAN0002S                Define a New Subconfig                VM:Secure
-----
                                Identity: YVOID

                                +-----+
                                |         |
                                | New Subconfig Name: |
                                |         |
                                | Skeleton Name:       |
                                |         |
                                | Member name:         |
                                |         |
                                +-----+

                                Note: All fields must be specified.

-----
PA1: Cancel      PF1: Help      PF3: Quit      PF10: Print      PF12: End
```

MANAGE – SUBCONFIG deletion

```
MANAGE                               Manager Selection Menu                               VM:Secure
-----
                               Subconfig: YVOID-1   Manager: DEMYV01
                               +-----+
                               | Selection:          For Device: 191 |
                               +-----+

1                               6 Move a Minidisk
2 Define and Format a New Minidisk  7 Edit Directory Comments
3 Select User/Identity/Subconfig Menu  8 Review the Directory Entry
4 Scratch a Minidisk                9 Redefine a Minidisk in Place
5 Remove a Subconfig                10

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-----
PA1: Cancel      PF1: Help      PF3: Quit      PF10: Print      PF12: End

User 'YVOID-1' was not removed.
```

MAN0004S – SUBCONFIG deletion

- YES/NO answers validated
- SCRATCH user exit called to see if deletion allowed
- Minidisks deleted and formatted/not formatted as indicated
- SUBCONFIG entry deleted from directory
- BUILD statement for this SUBCONFIG deleted from the IDENTITY entry

MAN0004S – SUBCONFIG delete with minidisks

```
MAN0004S                                Remove a Subconfig Entry                                VM:Secure
-----
                                Subconfig YVOID-1      Minidisks: 1

+-----+
| Do you want to format the minidisk?          YES |
| Do you want to wait while formatting?        YES |
+-----+

-----
PA1: Cancel      PF1: Help      PF3: Quit      PF10: Print      PF12: End
```

MAN0004S – SUBCONFIG delete no minidisks

```
MAN0004S                               Remove a Subconfig Entry                               VM:Secure
-----
                               Subconfig YVOID-1           Minidisks: 0

+-----+
| Do you want to remove the entry?                YES |
+-----+

-----
PA1: Cancel           PF1: Help           PF3: Quit           PF10: Print           PF12: End
```

Diagnose x'A0', Subcode x'60' Enhancement

- This subcode is used by servers to change logon password for another user ID
- PASSWORD Exit can reject the change and stack an explanatory message
- Problem is there is no way for the server to get the message so it can deal with it appropriately
- Enhancement causes the stacked message to be buffered in the diagnose parameter block

Diagnose x'A0', Subcode x'60' Enhancement

- Sample program VMXA060 XASSEMBL was updated to show how to get the buffered message
- The 67 byte length limit of the stacked message was removed. The PASSWORD exit can now stack up to 255 bytes
 - Message VMX313I will still show the 1st 67 characters of the message
- USER and MANAGE screens will show as much of the message that they can
- Up to 255 bytes is buffered in the diagnose parameter block

Diagnose x'A0', Subcode x'54' Passticket Support

- A Passticket is a temporary, one time use, logon password
- Support for this Diagnose was added for IBM RACF in z/VM V6.4
 - Will be supplied as a field update for RACF z/VM 6.3.0
- We added support for this in VM:Secure 3.2 for anyone that wants to use this diagnose
 - Our implementation is functionally compatible with IBM's version
 - We have provided support for this in z/VM V6.4 and z/VM V6.3 CP replacement decks
 - Only available in VM:Secure (with security management)

Diagnose x'A0', Subcode x'54' Passticket Support (continued)

- VM:Secure passtickets only work on the system on which they were created
 - Usage must be implemented separately on each member of an SSI cluster
- The diagnose returns the passticket for a specified user ID
 - The user who the passticket is for can then use it to logon to their z/VM id
 - Must be used in 1 minute and can only be used one time
- The diagnose must be issued on an authorized virtual machine
 - A new rule, ACCEPT userid PASSTICK must exist in a System rule file to authorize its use
 - MUST have an explicit ACCEPT – no defaults apply

Signal Shutdown Support

- Enabled by PRODUCT configuration file record SIGNALSH YES
 - Default if no record is NO – support not enabled
 - Can go back and forth in configuration (enable/disable etc)
- New messages indicate when support is enabled and disabled and when a signal shutdown has been received
 - VMXSGS1606I The signal shutdown service is enabled.
 - VMXSGS1607I The signal shutdown service is disabled.
 - VMXSGS1605I Shutdown signal received; shutdown in 60 seconds

Signal Shutdown Support (continued)

- Signal Shutdown causes normal product END
 - Ongoing processes will be allowed to finish
- On SSI, SIGNAL SHUTDOWN must be done on system where you want VMSECURE to be shutdown
 - END (unless you use LOCAL prefix) goes to MASTER. Signal Shutdown always goes to VMSECURE on system you issue the CP command on
 - Use SIGNAL SHUTDOWN to avoid ending the wrong VMSECURE service machine
- CP QUERY SIGNALS SHUTDOWN VMSECURE
 - To check to see if it is enabled for shutdown signals

Signal Shutdown Support (continued)

```
query signals shutdown vmsecure
```

Userid	Signal	Signal Status	Signalled By	Timeout Remaining
VMSECURE	SHUTDOWN	Not enabled	-	-

```
Ready;
```

```
query signals shutdown vmsecure
```

Userid	Signal	Signal Status	Signalled By	Timeout Remaining
VMSECURE	SHUTDOWN	Enabled	-	-

```
Ready;
```

END user exit

- Allows for customization during product END
 - USEREXIT END filename filetype (PRODUCT CONFIG)
 - Lets users wait or reject ending the product based on their selected criteria
- Works with or without Signal Shutdown
 - They are independent items – can be used alone or together
- Gives customers a way to check that other users or service machines are logged off before allowing the product to be shutdown.

END user exit (continued)

- Exit parameters
 - Process owner
 - END or SIGNAL
 - User that requested VMSECURE END or CP SIGNAL SHUTDOWN
 - Expiration in seconds of a SIGNAL SHUTDOWN
 - This field is 0 if the call is made due to the VMSECURE END command
 - FORCE or NOFORCE depending on use of END FORCE
 - FORCE if someone used END with the FORCE operand
 - Signal shutdown requests to end always have NOFORCE

END user exit (continued)

- Exit returns
 - RC 0 – end the product
 - RC 4 – wait n seconds and call the exit again
 - Seconds to wait stacked from exit
 - Product defaults to 5 seconds if wait time not stacked or invalid
 - RC 8 – Do not END the product
- Exit can be written in REXX (EXEC) or Assembler (TEXT)
 - Sample VMXEXITN XEXEC supplied
 - Simple logic showing how to gather and use input parameters and return to product

Support for Image_Definition_XXXXX_DM SMAPI calls

- Added support for the 4 calls we were missing
 - Image_Definition_Create_DM
 - Image_Definition_Delete_DM
 - Image_Definition_Query_DM
 - Image_Definition_Update_DM
- Important to have these in place for customers wanting to interface CA VM:Secure to IBM Open Cloud, Cloud Manager Appliance or IBM Wave
 - any application driving directory updates through the SMAPI service

CHGMDISK Support for DEVNO devices

- CHGMDISK entryid vaddr DEVNO rdev devtype * * mode rp wp mp
 - Allows change of
 - RDEV
 - DEVTYPE
 - MODE
 - Disk passwords
 - Can't change from DEVNO to some other disk (perm/T-DISK/V-DISK)
 - No formatting
 - Side benefit of SMAPI implementation – we decided to expose this for customer use

VM:Director Product Conversion

- With VM:Secure 3.2 we are removing the VM:Director product and only supplying VM:Secure
 - Directory management with VM:Secure product is exactly the same
 - It has ALWAYS been the exact same code with a little 'makeup' to make it VM:Director
 - It has ALWAYS been the same logic, no subcommand or processing changes
 - Simplification of CA processes
 - More time for development vs. required duplicate ptf's and second product attention
 - Less problems with ptf collisions
- One time manual conversion process
- 2 Conversion methods documented in VM:Secure 3.2 (without security management) Installation Guide
 - Preferred – Convert to VM:Secure and service virtual machine VMSECURE
 - Easier product to service machine identification and this is the default
 - If you have a lot of automation using VMDIRECT drone you can convert to the product VM:Secure but keep the service virtual machine name VMDIRECT.

VM:Director Product Conversion – Documentation set title changes

Objective was to keep separation of commands in the documentation sets as they are today so users only get the ‘view’ of the product pieces they are running

For those running with Rules: CA VM:Secure

- CA VM:Secure 3.2 for z/VM (With Security Management)

For those that currently use VM:Director

- CA VM:Secure 3.2 for z/VM (Without Security Management)

VM:Director Product Conversion – New Utility

- New utility VMXQSVM EXEC that goes on the public disk that gathers drone name to be used for communication from SMAPI and Upgrade in Place user exits.
 - VMSECURE/VMDIRECT was hardcoded before
 - This allows drone name to be gathered dynamically
 - VMXQSVM productname will give the drone name associated.
 - Productname from VMSEVER NAMES
 - Will only get first definition of product
 - Runs from CMS command line and as a REXX function
 - Meant for IBM user exits so not a documented exec but is in the list of files that must be available for SMAPI workers

VM:Director Product Conversion Process

- Conversion instructions include
 - Before conversion requirements and recommendations
 - Conversion instructions
 - Different section for each time you switch to where the conversion is being done
 - On product or VMANAGER
 - Post conversion cleanup – getting rid of VM:Director product
 - How to back out of the conversion
 - We converted and backed out of conversion many times during our testing

Convert and change Service Machine name to VMSECURE

- Preferred method
 - Service virtual machine name is same as product name
 - Just an effort to standardize to a common name for product and service virtual machine
 - No technical reason – it will work the same whether they call the service MACHINE VMDIRECT or VMSECURE or ‘whatever’
 - You’ve always been able to call the service machine ‘something else’ with manual updates
 - However, customers will have to always reconcile the service machine VMDIRECT with the documentation for VMSECURE if they retain VMDIRECT service machine name
 - Easier for customers to reconcile documentation and product usage

Convert and change Service Machine name to VMSECURE

- Before converting
 - **Caution:** Once this conversion is started you cannot make directory updates other than what this process requires until the conversion is complete.
 - At a minimum, ensure that you are running CA Mainframe VM Product Manager 1.2 and have applied PTF RO77112.
 - Gather any VM:Secure maintenance to date so you can apply and deploy updated logic
 - Back up all VMDIRECT disks and also run VMXBKP01
 - Keep resultant USER DIRECT in a place where an authorized user can run DIRECTXA the worst happens and you have to restore to a good directory
 - Make sure you have sufficient disk space to install product
 - ~ the same as VMDIRECT uses
 - Check installation requirements for exact space requirements

Convert and change Service Machine name to VMSECURE

- Before converting (continued)
 - Find software that calls VMDIRECT
 - This will need to be changed to call VMSECURE once the conversion is complete
 - Identify all VM:Manager Suite products that interface with VMDIRECT
 - After conversion, they need to have their configuration information point to VMSECURE vs. VMDIRECT as the service virtual machine name
 - *Note – Keep the 'product' name in these product records to be VMDIRECT
 - This ensures correct operation with a directory management product vs. an ESM
 - If you manage SFS with VMDIRECT, you will need to change authorizations on SFS to be for VMSECURE vs. VMDIRECT
 - If you are using an ESM with VMDIRECT, create permissions for VMSECURE as you would for VMDIRECT
- At this point, the conversion process would be started
 - See VM:Secure 3.2 (without security management) Installation wiki for conversion process details

Convert and keep the VMDIRECT Service Machine name

- Best path for customers that have a lot of automation associated with VMDIRECT
- Easier (fewer) steps to convert but customer will always have to reconcile VMSECURE in doc to VMDIRECT and have a product and service machine name that don't match

Convert and keep the VMDIRECT Service Machine name

- Before converting
 - **Caution:** Once this conversion is started you cannot make directory updates other than what this process requires until the conversion is complete.
 - At a minimum, ensure that you are running CA Mainframe VM Product Manager 1.2 and have applied PTF RO77112.
 - Gather any VM:Secure maintenance to date so you can apply and deploy updated logic
 - If you are running in an SSI environment the product software disks must be shared by all VMSECURE service machines in the cluster
 - You will need to have alternate product disks defined
 - Verify current runtime disks are primary
 - If not, VMDEPLOY VMDIRECT to PRIMARY to allow back out if needed
 - Back up all the VMDIRECT minidisks and run VMXBKP01 to create a USER DIRECT

Convert and keep the VMDIRECT Service Machine name

- Before converting (continued)
 - Install the ZVMX032A SERVLINK
 - Do not VMDEPLOY
 - AUDITEXT
 - Last chance to gather audit data as VMDIRECT
 - END the product
 - LOGOFF VMDIRECT
 - If on SSI, END and LOGOFF all the VMSECURE service machines on the cluster
- At this point, the conversion process would be started
 - See VM:Secure 3.2 (without security management) Installation wiki for conversion process details

Currently Planned Ideas for VM:Secure

- Enhancements we weren't able to get into VM:Secure 3.2 due to release date requirements for z/VM V6.4 support availability
- These will likely go in as ptf's to 3.2 but there is no ETA associated with them - will be done as resources and priorities allow them to be incorporated
 - Allow USERPASS/TERMPASS user exits to return an expiration date for rules put in place based on return code from user exits to reject LOGON.
 - VMXBKP01 locking management
 - Backup utility should check for outstanding locks and give RC indicating locked state vs going into wait state for the locks
 - Create a utility 'like' VMXBKP01 to create a USER DIRECT file for external processing
 - No locking to gather this file
 - No passwords in file
 - DASD Allocation user exit
 - To allow standards enforcement of minidisk allocations

z/VM Product Discussion and Ideation

<https://communities.ca.com>

Select - Mainframe Virtualization community

To view discussions on product use and ideas (enhancement) requests for the products

Origin of most VM:Secure 3.2 non z/VM V6.4 related ideas

For each product listed you can see ideas customers and CA staff have documented and the current status (i.e.: currently planned, wish listed etc.)