VMS Software

VSI Application Control and Management System (ACMS) V5.4

Release Notes

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Operating Systems: VSI OpenVMS x86-64 Version 9.2-3 + Update V3 or higher
VSI OpenVMS IA-64 Version 8.4-2L1 or higher

Software Version: VSI Application Control and Management System V5.4

Kit Names: ACMSDEVX_054
ACMSRTOX_054
ACMSDEVI_054
ACMSRTOI_054

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1. Introduction

VSI is pleased to introduce Application Control and Management System (ACMS) V5.4 for VSI OpenVMS.

VSI ACMS is a transaction processing and application management system for OpenVMS. It provides an integrated environment for developing, deploying, and managing transaction-processing applications, including tools for application definition, task management, security, resource management, and distributed processing.

ACMS applications are defined using the Application Definition Utility (ADU), which provides a framework for defining application tasks, workspaces, processing steps, and supporting resources.

This document describes the changes introduced with VSI ACMS V5.4. For information about installing and using ACMS, refer to the ACMS documentation set available at https://docs.vmssoftware.com/.

2. Requirements

VSI ACMS V5.4 can be installed by a suitably privileged user on systems running one of the following VSI OpenVMS versions:

- VSI OpenVMS x86-64 Version 9.2-3 + Update V3 or higher
- VSI OpenVMS IA-64 Version 8.4-2L1 or higher

Additionally, the development version of VSI ACMS V5.4 requires a supported data repository:

- OpenVMS x86-64 requires VSI Data Dictionary V1.2-03 or higher
- OpenVMS IA-64 supports either VSI Data Dictionary V1.2-03 or higher or Oracle Common Data Dictionary

3. What's New in VSI ACMS V5.4

- VSI ACMS V5.4 introduces support for VSI OpenVMS x86-64.

  On OpenVMS IA-64, VSI ACMS V5.4 is functionally equivalent to VSI ACMS V5.3-5, with the addition of VDD support and the fixes and enhancements described in these release notes.

  VSI ACMS V5.4 on OpenVMS x86-64 is functionally equivalent to VSI ACMS V5.4 on OpenVMS IA-64, except for the limitations described in *Section 4, "Known Issues and Limitations"*.

- VSI ACMS V5.4 introduces support for the VSI Data Dictionary (VDD).

  The minimum supported version of VDD is V1.2-03. On OpenVMS x86-64, ACMS supports VDD only. On OpenVMS IA-64, ACMS supports either VDD or Oracle Common Data Dictionary (CDD).

  For additional information, refer to the VDD documentation set available at https://docs.vmssoftware.com/.

  Note

  ACMS ADU uses the repository configured for the current user process. On OpenVMS IA-64, the default repository is CDD. To configure a process to use VDD, run:

```
$ @SYS$STARTUP:VDD$SETUP_USER_ENV
```

To revert to using CDD, run:

```
$ @SYS$STARTUP:VDD$SETUP_USER_ENV OFF
```

On OpenVMS x86-64, CDD is not available. Therefore, users *must* run VDD$SETUP_USER_ENV before using ACMS ADU with VDD.

4. Known Issues and Limitations

4.1. OpenVMS x86-64 Link Requirement

Important

On OpenVMS x86-64 systems, the main application images of all ACMS server and agent applications *must* be loaded in the P0 memory region. To achieve this, link your ACMS applications via the following command:

```
$ LINK/SEGMENT_ATTRIBUTE=CODE=P0
```

ACMS will crash if you do not perform this action.

This restriction is expected to be permanent for ACMS on OpenVMS x86-64 systems.

4.2. OpenVMS x86-64 Limitations

The following limitations apply to VSI ACMS V5.4 on OpenVMS x86-64:

- The AVERTZ sample application cannot currently be built or run on OpenVMS x86-64 systems because it depends on Oracle CDD and Oracle Rdb, which are not currently supported on OpenVMS x86-64.
- If the logical name DECC$FILE_SHARING is defined during application build, the **`ACMSADU BUILD APPLICATION`** command may produce an empty object file. The resulting object file will be zero blocks in size.
- Oracle Trace is not available on OpenVMS x86-64. Any ACMS functionality or user application that depends on Oracle Trace is not supported.
- Register dumps written in the SWL log may contain incorrect register values. This information is expected to be removed from SWL logs in a future release.
- ACMS images cannot be installed as resident images on OpenVMS x86-64. The RESIDENT parameter is ignored, and the following message is displayed:

  ```
  $ @SYS$STARTUP:ACMSTART RESIDENT
  ACMSTART-I-NOTSUPPORTED, RESIDENT is not supported on OpenVMS x86-64 systems
  ```

  This restriction is expected to be permanent for ACMS on OpenVMS x86-64 systems.

5. Bug Fixes and Enhancements

The following sections describe bug fixes and enhancements introduced in VSI ACMS V5.4 and earlier VSI ACMS releases.

In ACMS V5.4

- In rare situations, the ACMS kernel mode exit handler could cause a system crash if an exception occurred during rundown processing. This issue has been corrected.
- Performance improvements have been made to the internal communication mechanisms used between ACMS agents and servers.

In ACMS V5.3-5

Issues with STDL generation. Some of the changes made in ACMS V5.3-2 to fix a reported problem with STDL generation for certain data types (as noted here) turned out to be breaking the data types for the right and left separate numeric. To fix this, the STDL files generation for those data types has been restored to the pre-V5.3-2 behaviour.

This issue was reported and fixed in VSI NetSuite NS4661/Jira ACMS-24.

In ACMS V5.3-4

The ACMS tracing mechanism that uses Oracle Trace has been updated and now functions correctly.

This issue was reported and fixed in VSI NetSuite NS2321/Jira ACMS-16.

In ACMS V5.3-3

- Introduced support for VSI TCP/IP V10.6. The ACMS Remote Management components have been built against both HPE TCP/IP and VSI TCP/IP. During ACMS installation, images for both implementations of TCP/IP are installed. At run time, the implementation of TCP/IP will be determined, and the correct images will be used.
- The calculated value for the ACMS parameter MSS_POOLSIZE would not allow the IVP to run under the following conditions:
  - A new ACMS installation
  - A system with a very high MAXPROCESSCNT

  This bug was originally reported and fixed in ACMS V5.3-2 (as noted here) but was revisited in ACMS V5.3-3 because the fix introduced in ACMS V5.3-2 did not work in the situations listed above.

In ACMS V5.3-2

- The ACMS IVP would fail if certain ACMSGEN parameters were calculated improperly based on the corresponding VMS SYSGEN parameters. Specifically, MSS_POOLSIZE is based on MAXPROCESSCNT and on systems with a large MAXPROCESSCNT, MSSPOOLSIZE is too low. The problem is that the ACMSIVP does not use site-specific ACMSGEN parameters, and instead uses the default ACMSGEN values. The fix is to always use the site-specific ACMSGEN parameters for the ACMS IVP.

This issue was reported and fixed in VSI external Bugzilla #1236.

- STDL generation for certain data types was not consistent with what was generated in previous versions of ACMS. See below for the fix for QuiX QXCM1001162971. That fix happened after HPE ACMS V5.1B was released, and was not released to all ACMS customers by HPE. That fix broke STDL generation for scaled integer data types. This VSI fix preserves the packed decimal fix and restores the prior, correct behaviour of STDL generation for scaled integers.

  This issue was reported and fixed in VSI external Bugzilla #1324.

- Non-privileged users were unable to debug ACMS tasks, getting the following error:

```
$ ACMS/DEBUG VR_TASK_GROUP
ACMSDBG> START VR_UPDATE_SERVER
Terminal is in SERVER VR_UPDATE_SERVER
%ACMSDBG-I-SPDIED, Server VR_UPDATE_SERVER stopped unexpectedly
-LOGIN-F-FILEACC, error accessing system authorization file
```

  This issue was reported and fixed in VSI external Bugzilla #1398.

In ACMS V5.3-1

In the ACM$TASK_INFORMATION data structure, the device name field was inadvertently increased by one byte. This caused the applications built on ACMS versions prior to VSI ACMS V5.3 to fail due to a misalignment in ACM$TASK_INFORMATION. Applications that were built or rebuilt on VSI ACMS V5.3 would work properly.

This issue was reported and fixed in VSI external Bugzillas #1161 and #1148.

In ACMS V5.3

These fixes were released as patches for HPE ACMS V5.1B but were not included in VSI ACMS V5.2, as VSI ACMS V5.2 was based on HPE ACMS V5.1B.

- The **`ACMSATR LIST`** command generates a large number of alignment faults.

  This issue was reported and fixed in QXCM1001296226.

- ACMS generates incorrect STDL for Packed Decimal data type. With this fix, ACMS will now generate the correct STDL for packed decimal data.

  This issue was reported and fixed in QXCM1001162971.

- Alignment faults in ACMSEXC process. With this fix, the ACMSEXC process no longer produces alignment faults.

  This issue was reported and fixed in QXCM1001189746.

- ACMS process crashes with NATFAULT in TIE$SHARE. With this fix, processes should no longer crash with a foot NATFAULT in TIE$SHARE.

  This issue was reported and fixed in QXCM1001339184.