

Environment File Overview

Version 19.72

Environment files contain a series of variables used primarily to identify and point to the infrastructure available to the migration process as well as operational parameters. These variables are stored in a text file and is referenced using its assigned numeric value referred to as either an environment or thread number. Once defined, environment files typically will remain static as the nature of their contents rarely require modification.

Key Variable Contents:

- A single unique staging server name, can be Unix/Linux or Windows based
- Tape application to use or Cloud-GW when migrating only to Cloud or Disk storage
- Path definitions to the tape application binaries on the staging and master tape servers
- Path definitions to the Avamar binaries on the staging server and master tape server
- Destination email addresses where mail notifications will be sent to
- Defines a unique temporary workspace for a thread

During initial ADMe install, Env-1 will be established by default however, key variable contents such as staging, and export server names are left empty as they are unknown at the time therefore, these must be updated manually. To update **Env-1** file using the CLI Menu-UI choose **Env-File Manager** or when using the Web-UI click on Environment tab, highlight Env-1 row and click on **Edit Environment Variables** tool. It is advisable to fully update Env-1 contents prior to establishing additional environments because several variables such as binary paths, mail address, export server and application names will have their contents automatically propagated to the new environment files saving time and promoting accuracy.

When establishing a new environment file from the Web-UI, a dialogue displays the key variables as documented in the table below which can be updated within the Web-UI initial display dialogue while all others are hidden and either defaulted or updated using values propagated from Env-1. When it's necessary to update a hidden variable, use the CLI Menu-UI **Env-File Manager** or the Web-UI **Edit Environment Variables** tool to view and update all available variables as required.

Manual updates to an environment file are not validated by ADMe however, a parse check function is available in the Web-UI Environment tab Wrench tool or CLI Menu-UI or directly at a command prompt with:

adme # -env parse where # represents the environment file number

to be parse checked for valid or invalid entries. The parse checker does not guarantee accuracy but does identify against several known conditions which may not be obvious to detect manually.

Adding a new Environment File

At a minimum, an environment file must be established for each unique staging server name involved. In addition, if more than one migration thread per staging server is to be used, you must establish a file for each of the additional thread names to enable each to be used concurrently.

To add a new file, click on the **Add Environment** tool icon to establish a new Environment file updating the dialogue displayed to adjust the key variables as shown below. For a variable name not displayed in the dialogues, you need to use the **Edit Environment Files** tool after the environment file has been created if needed. Refer to the second table below for a description of all available variables.

Variable Name	Variable Description
Export Server Name	Define the DNS name of your tape master server I.E tape application master server or Avamar target host name when migrating Avamar GSAN data to a target Avamar/DD system. For other scenarios, enter a valid server name that is pingable.
Export Method	From the drop-down list choose the appropriate tape export application or Avamar or Cloud-GW if staging directly to a cloud storage gateway
Staging Sever	Select an appropriate staging server by navigating to it and selecting it by Name, staging servers should be activated under the /ADME domain
Staging Server OS Type	This value is detected automatically based on the client name chosen and assigned to the appropriate variable
Mail To Address	A + sign separated list of email addresses where both ERROR and SUCCESS mail notifications from this environment will be sent.
Mail To Error	A + sign separated list of email addresses where only ERROR mail notifications from this environment will be sent, normally this field is left blank. Its purpose was to facilitate a help desk scenario where only errors were being tracked and a ticket automatically opened based on a given failure.

Once a migration job starts, its associated environment file number will be locked to prevent any other job from accessing it while it's in user which would corrupt its temporary workspace. When multiple jobs are assigned to a given environment number, they must be initiated one at a time waiting for the first to complete before starting another. Refer to BATCH job policy use under the Job Policies tab designed to accommodate automating this scenario.

Multiple jobs can run concurrently but each must be assigned a unique environment file number containing a unique staging server or thread name in each. ADMe provides a procedure to establish additional MCS threads on both Windows and Linux staging servers. Details on how to establish additional MCS threads are found in the ADMe Release Notes & Tools link under the Dashboard tab, review the winthreads2.pdf.

NOTE:

1. It is not supported to allocate the same staging server or MCS staging thread name to multiple environment files to achieve concurrency
2. When updating an Environment files content, never modify the section titled Control File Names, these define its unique control files and temporary workspace which is maintained by ADMe.
3. Several fields from environment file #1 are used as defaults when establishing a new environment file. These include mail-to addresses, tape export server name, export method, binary paths and script timeout all of which will be propagated from Env-1 but can be modified afterwards as required.

Deleting an Environment File

Highlight the appropriate row then click on the **Remove Environment** tool icon. To succeed, it must not be assigned to any existing job policy definitions.

Updating an existing Environment File

Highlight the appropriate row and click on **Edit Environment Variables** tool to allow updating the content of all variables as required.

Variable Name	Variable Description
AVAMAR_UTILNODE_NAME	Hostname of the Avamar Utility node. There may be a need to override the value here from short name to long name based on customer DNS requirements.
HOMEPATH	Install path of Avamar binaries on Utility node
Export Backup Related	
BUSERVER_NAME	DNS name of your tape master server I.E tape application master server or Avamar target host name when migrating Avamar GSAN data to a target Avamar/DD system. This value is propagated automatically from Env-1 when establishing additional environment files.
BACKUPPRODUCT	Export backup product name – Supported values are shown and case sensitive <ol style="list-style-type: none">1. avamar (used for ADS migration)2. arcserv brightstore3. backup exec4. backupexec20125. Cloud-GW6. commvault7. hpdp8. netbackup9. netvault10. networker (default)11. tsm
BACKUPPRODUCTHOMEUNIX	Unix/Linux based export application binary path, leave the default value when not applicable
BACKUPPRODUCTHOMEWIN	Window's application binary path leave the default value when not applicable. The path name defined here must conform to Windows short name 8.3 format. If the install path does not display a corresponding short name when using the following command: dir /X I.E. D:\progra~1\EMCNET~1 You must establish links on the staging server from a CMD prompt opened with Administration privilege using the following example syntax: Note: the quotes shown are required.

	mklink /J "D:\PROGRA~1" "D:\Program Files" mklink /J "D:\PROGRA~1\EMCNET~1" "D:\Program Files\EMC NetWorker"
TAVAINSTALLPATH	Avamar agent base install path on export backup server
TAVADOMAINNAME	<p>Required for Networker server-initiated exports defining a unique dedicated MCS thread to it. It must contain the complete MCS /domain/server-name based on the activated name for it in Avamar.</p> <p>A common scenario when using a Networker master server as a staging server, would be to have multiple MCS threads defined to it one per drive letter to support concurrent staging sessions. In this case, the same unique MCS staging server name present in this environments WINDOWSS variable can be leveraged and reused in this variable as well.</p> <p>If an external staging server is being used, then a unique and dedicated MCS thread to the Networker master server must be established and assigned here.</p>
ENDOFYEAR	Represents a month value 01-12 or a comma separated list such as 01,07 used to invoke an automated End-of-Year export policy when the current month number aligns with the defined value(s)here. Set to 0 when this variable is not to be used.
Staging Server Related	
UNIXSS	<p>Define a unique UNIX/Linux based MCS staging server name which MUST include its domain path name /domain/server-name</p> <p>It can also be set to /VDP but given the VDP appliance is no longer available, this value is considered deprecated.</p>
UNIXINSTALLPATH	<p>Avamar agent install path for Unix/Linux based staging server. This will vary for the various supported OS plugins or when a Linux staging server has multiple MCS threads defined to it.</p> <p>Default path for Linux /usr/local/avamar</p>
TUNIXSS	<p>Define the Unix/Linux plug-in/OS type, supported staging server OS values are as follows:</p> <ol style="list-style-type: none"> 1. AIX 2. FREEBSD 3. HPUX 4. LINUX (default) 5. MAC 6. SCO 7. SOLARIS
WINDOWSS	<p>Define a unique Windows based staging server or MCS name which MUST include its complete domain path name.</p> <p>/domain/server-name</p>

LINUXSS	Name of Linux staging server used for AST based wrapper mode only. This variable and its functionality is deprecated and must be left as n/a
Control Files	Never adjust the auto generated values in the control files section
TMP_PATH	A unique temporary workspace location dedicated to a given environment number
CFG	Client configuration file shared by all environments, contains the client group definitions
LOG	Event log file allocated to a given environment number
PSEUDOCLIENT	Avamar pseudo client definition dedicated to a given environment number. Pseudo clients are critical to ADMe operation and used to provide two-way communication between ADMe and the staging server threads.
Operational Parameters	
CMD_mail	Path to the email program mailx used to send ADMe mail notifications
MAIL_TO	Mail-Recipient-List: Multiple addresses must be separated with a + character and will include both success and failure notifications. This field content will be propagated automatically from Env-1 when establishing additional environment files.
MAIL_TO_ERROR	Mail-Recipient-List: Multiple addresses must be separated with a + character and will send only failure notifications. This field content will be propagated automatically from Env-1 when establishing additional environment files. Normally this field is left empty.
MAIL_FROM	Single auto defined address used as the sender address for a mail notification. The default address used is not a valid customer site address. The default value can be adjusted as required based on customer procedures but is not normally needed.
LOG_SIZE	Numeric value defining the max line count of this environments event log
TIMEDELAYSTAGE	Time delay in seconds between staging progress messages logged in a job policy log file Default=300 seconds which equates to 5 minutes
TIMEDELAYTAPE	Time delay in seconds between export backup progress messages logged in a job policy log file Default=600 seconds which equates to 10 minutes
MAX_RECOVERY_SESSIONS	Numeric value used to limit the number of recovery checkpoints to be maintained. The checkpoint function is only available from the interactive CLI menu.
USE_ALLNODES	Y or N flag to indicate whether to use all storage nodes from a GRID during the staging phase, Default=Y
COLORSCHEME	Best suitable color schemes when using interactive CLI menu based on your putty session setup.

	<p>BG/FG: 1=black/pale-yellow 2=white/black 3=no-color 4 or 5=Job-Manager-Block-Display Def=1</p> <p>This parameter is only read and valid from Env-1.</p>
MYEDITOR	<p>The editor used when using the interactive CLI menu.</p> <p>VI=/bin/vi</p> <p>EMACS=/usr/bin/emacs</p> <p>NANO=/usr/bin/nano (the nano rpm must be installed)</p> <p>This parameter is only referenced from Env-1.</p>
BYDATEPATHXTN	<p>Y or N flag used to determine whether to include retention tag and expiry date within the staging path destination folder name, Default=N. This may be useful when staging to disk only or to cloud based storage directly.</p>
BULOCATION (DO NOT MODIFY)	<p>Defines the home path for ADMe where its configuration, backups, grabs and health-check files are kept.</p> <p>Default=/home/admin/admeadmin. This parameter is only referenced from Env-1.</p>
DEFSTAGELOC	<p>Define a default staging location used within Config Manager or Web-UI Default=F:/ADME.</p> <p>Note: This does NOT refer to the staging path where a backup will be staged to, it is only used to provide a default value when establishing a client group from the UI's. This parameter is only referenced from Env-1.</p>
SCRIPT_TIMEOUT	<p>Max time in seconds a given export or avatar script call used for various plugins can run before it times out, the avatar default=3600 seconds or 1 Hr.</p> <p>When a given export or a large avatar recovery takes 40 Hrs to complete, this value must be large enough to cover the 40 hours. However, an excessively large value is discouraged as this can result in an ADMe job policy potentially running for a substantial amount of time before it reports a possible timeout error condition.</p> <p>A good starting point for this variable is 360000 = 100Hrs.</p>
USER_COMMENT	<p>User defined comment describing the use of this environment file. The string value must not contain spaces therefore use – or _ to provide a continuous string. A common use would be to describe the staging disk capacity dedicated to be used by this thread number.</p> <p>Example: Drv-F-5TB</p>
ARCHIVEUTIL	<p>Specifies the Linux compression tool to use with -archive and -metadata options, gzip is the only verified tool</p>
USE_DATADOMAIN	<p>Y or N flag used to direct ADMe related log and script file BU's to DD, if set to N the Avamar GSAN will be used. When a DD is detected it will automatically be set to Y.</p>
AVAMIGRATE	<p>Used for ADS migrations Avamar to Avamar/DD. Its contents must contain a valid MCS admin credential used to authenticate to the target Avamar system.</p> <p>Example: MCUser MCUser1</p>

Environment Summary Report

An environment summary report shows how environment files are allocated to the various job policies along with their related metadata stats of a jobs last execution. This report is useful in determining workloads assigned to each thread and the plug-in types being used by it. To view the report, click on the **View Summary** tool icon and to email it, click on the mail icon in the upper right.

Wrench Tool Utility

Click on the Wrench tool to access a collection of diagnostics and utility function as described below. Prior to clicking on the tool, you must first highlight an Environment file row# to identify the Environment file number to act on needed for the parse check and credential refresh functions only. The other functions are not environment file specific, however you must still highlight a row# to enter the wrench tool.

- **Environment File Parse Check**

Performs a series of validation checks against the selected environment file contents. It validates staging server name is available and pingable to Avamar, binary paths are validated against known defaults and a warning message displayed when they do not conform. Checks are also made to determine whether a given staging server thread name is defined in other environment files which is not permitted. Check the end of the display output to review any error or warning messages. A parse check can also be performed from the CLI interactive UI as follows or at the Linux prompt.

From the interactive CLI menu UI:

adme -> E-Env-File-Mgr -> #=Enter Env# -> P=Parse check

Directly from the Linux prompt:

adme Env-# -env parse

- **Create an ADMe Grab File**

A grab file is used for problem diagnosis and should be attached to a support ticket and made available to tech support as required. It takes a few seconds to create and the complete path and file name to it will be displayed. Use WinSCP or similar program to retrieve the grab file from the displayed file location on Avamar. Management of the quantity of grab files can be managed from the ADMe CLI interactive menu UI or Linux prompt.

From the interactive CLI menu UI:

adme->A=administration->G=Grabs

Directly from the Linux prompt:

adme -grab

- **Create an ADMe Backup File**

An ADMe backup file is an effective means to protecting your ADMe configuration & log files. In addition to creating a backup file, it will also backup this file to Avamar account name /ADME/ADMEbackups and be retained for 1 year. Using a backup file, the ADMe configuration components can be rolled back to the point in time of the backup or be used to move a complete ADMe configuration to a new Avamar system.

It takes a few seconds to create and the complete path and file name to it will be displayed. Use WinSCP or similar program to retrieve the backup file from the displayed location as needed.

Management of the quantity of backup files can be accomplished from the ADMe CLI interactive menu UI:

From the interactive CLI menu UI:

adme-> A=administration -> B=Backup

Directly from the Linux prompt:

adme -backup

- **ADMe Credential Refresh**

Encrypted credentials used by ADMe against a given staging server thread can become stale if the staging server is rebooted. In order to force a refresh of these proactively the process can be performed against an individual environment file or all environment files. Ensure the environment is idle prior to using this function. ADMe as of version 19.54 will automatically refresh a given environments credentials if detected to be invalid.

Management of the credentials can be managed from the ADMe CLI interactive menu UI or Linux prompt.

From the interactive CLI menu UI:

adme -> A=Administration -> S=Security Refresh (follow the prompts)

Directly from the Linux prompt:

adme -securityrefresh (follow the prompts, will act on all env files)

adme Env-# -securityrefresh (follow the prompts, will act on the specified env file only)

- **Email Home**

This function is currently not available