



ActiveVOS 6 Database Sizing Planning Document

AN ACTIVE ENDPOINTS TECHNICAL NOTE

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Introduction

This document contains the information about ActiveVOS 6 database tables used to support process persistence. These tables will grow over time and planning for growth is recommended. Use this document to help you in your planning.

The content is organized by the size of growth of tables: high, medium and low. The Appendix provides the baseline size of the database using MySQL and ActiveVOS 6.0.2.1.

High Growth Tables

#1 **Table Name:** [AeProcessLogData](#)

Description: Contains the log of the process execution. In Other words, would contain entry for every activity.

Factors Influencing Growth: This table is controlled by process log settings (None/Execution/Execution with Data/Full). It will contain entries for every activity been performed in the process. The table growth will be very large if the logging is set to Full/Execution with Data.

#2 **Table Name:** [AeVariable](#)

Description: Contains serialized data of a variable during the current execution.

Factors Influencing Growth: Depends on the number of variables and size of data moving in the process.

#3 **Table Name:** [AeProcess](#)

Description: This table contains the process state details of the process.

Factors Influencing Growth: Depends on the number of instances in the process, created in the system.

Medium Growth Tables

#1 Table Name: [AeAlarm](#)

Description: Contains scheduled alarms from a process. Contains one row for every <wait> or <onAlarm> activity that is currently active from all running process instances. You can view the list of active alarms by the Monitor > Process Monitoring > Alarm Queue entry in the ActiveVOS console.

Factors Influencing Growth: The entries are added when the alarm is scheduled, but subsequently are deleted when the alarm finishes its execution.

#2 Table Name: [AeAttachment](#)

Description: Contains the generic attachment item entries for the messages.

Factors Influencing Growth: Depends on the number of attachments in the process.

#3 Table Name: [AeB4PTask](#)

Description: This is the main table for tasks. It stores tasks data. There should be one row per task. This table is also used by the inbox listing page.

Factors Influencing Growth: Depends on number of human tasks, notifications (via PA or escalation handlers).

#4 Table Name: [AeB4PTaskACL](#)

Description: Contains access control list for a task - usually one row per user (or group) per task.

Factors Influencing Growth:

#5 Table Name: [AeB4PTaskEvent](#)

Description: This table contains information about the people activity and a link to the task in the tasks table. There is one entry per peopleActivity execution.

Factors Influencing Growth: depends on number of human tasks (people activity).

#6 **Table Name:** [AeB4PTaskEventDetail](#)

Description: Contains task event (history) data. This represents a "log" of the actions that were performed against a human task.

Factors Influencing Growth: Depends on number of human tasks and number of times one interacts with a task (e.g. using WHHT API via Inbox).

#7 **Table Name:** [AeCatalog](#)

Description: The catalog table stores all deployed non BPEL resources such as WSDL, XSD, config documents, binary objects such as Jars.

Factors Influencing Growth: Depends on the number of resources included in the project.

#8 **Table Name:** [AeDeploymentLog](#)

Description: The log obtained from the process deployment.

Factors Influencing Growth: Can grow depending on the deployment errors.

#10 **Table Name:** [AeLock](#)

Description: The lock table stores server locks for operations that need to be synchronized within the server or across servers in a cluster.

Factors Influencing Growth: They are the internal locks for controlling resources between nodes in a cluster environment

#11 **Table Name:** [AePartnerLinks](#)

Description: Contains the partner link definitions that are defined by a process deployment.

Factors Influencing Growth: Depends on the number of partner definitions within the process.

#12 **Table Name:** [AePlan](#)

Description: Contains all versions of deployed process.

Factors Influencing Growth: Depends on the number of the times the plan is deployed.

#13 **Table Name:** [AePlanResource](#)

Description: Contains resource definitions that were deployed with a process.

Factors Influencing Growth: Depends on the resources defined in the plan.

#14 **Table Name:** [AeProcessJournal](#)

Description: Contains the entries for changes to the process since it was last persisted. Allows the system to recover in the event of engine failure. In terms of performance, it saves from writing entire state of the process. It will restore last saved persistence, in case of recovery.

Factors Influencing Growth: Journal entries get deleted once the process state is persisted.

#15 **Table Name:** [AeQueuedReceive](#)

Description: Contains a list of inbound messages which have not yet been processed.

Factors Influencing Growth: Depends on the number of receives that have been queued.

(Tables (16-20) below are used to temporarily persist the runtime state of currently executing invoke activities. The absolute size of these tables would be medium under very heavy load in a large cluster and will shrink and grow depending on the number of concurrent activities that are executing work at any given moment.)

#16 **Table Name:** [AeWsrnStateTracker](#)

Description: Stores sequence state data needed for wsrn protocol.

#17 **Table Name:** [AeMomMessage](#)

Description: Stores message data for internal messaging server.

#18 **Table Name:** [AeSubscription](#)

Description: Stores subscription data for internal messaging server.

#19 **Table Name:** [AeTransmissionTracker](#)

Description: Stores transmission id and data needed for durable invokes and durable reply.

#20 **Table Name:** [Aecoordination](#)

Description: Stores state required for subprocess coordination.

#21 **Table Name:** [AePojo](#)

Description: This table contains serialized POJO for stateful POJO's.

Factors Influencing Growth: The growth of AePojo depends on whether or not the customer uses stateful POJO's in their processes. Once the scope of the POJO invoke completes, the rows should be

removed from this table by the POJO manager. This table could take up lots of disk space since the POJO column is a BLOB, so size will vary depending on the size of the POJO's they are maintaining state for.

#22 **Table Name:** [AeIndexedPropertyForVal](#)

Description: Stores the actual values for properties associated with a process instance. For example, a property named SocialSecurityNumber may have a value of 123-45-6789 in a process 10. This table is used in conjunction with the AeIndexedProperty and AeIndexedPropertyForPlan tables to allow filtering of processes by their associated property values.

Factors Influencing Growth: This table could be very large depending on the number of properties that been tracked for a process and the size of the value. For example, if you are tracking SocialSecurityNumber and plan on 100,000 process instances to be stored you would need 1,100,000 characters of storage. Not by itself large but it can add up.

Small Growth Tables

#1 **Table Name:** [AeLicense](#)

Description: Contains the license information of the server.

Factors Influencing Growth: There can be only one entry per server.

(The tables (2-4) below are used to store deployment information and rows are inserted only when new processes or partner definitions are deployed, so the growth rate should be low and depends on how often users deploy new bprs.)

#2 **Table Name:** [AeProcessDefInfo](#)

Description: Contains details about the activities within a deployed process, such as activity type, location enclosing scope, to support reporting.

#3 **Table Name:** [AeServiceAllowedRoles](#)

Description: Stores the allowed roles required to access a particular service within the engine.

#4 **Table Name:** [AeGlobalPdefs](#)

Description: Stores deployed partner definition files.

#5 **Table Name:** [AeConfigSettings](#)

Description: Contains only the entries for the engine configuration document which differ from that which was deployed with the server in aeEngineConfig.xml.

Factors Influencing Growth: Depends on the changes the user makes to the engine properties.

#6 **Table Name:** [AeCounter](#)

Description: Contains the next available block of counter values for the various counters used in the engine.

Factors Influencing Growth: Will grow only if the max values for the internal sequences for the process id/deployment id, etc is to be altered.

#7 **Table Name:** [AeDeploymentGroup](#)

Description: Definition for a deployment group which allows isolation of processes/resources within the same database. Not actively used at the moment.

#8 **Table Name:** [AeEngine](#)

Description: Information which defines the ActiveVOS engine.

Factors Influencing Growth: Typically one entry per engine. If it's a cluster, it would be one for each node. It is likely to grow only if there are more nodes in the cluster.

#9 **Table Name:** [AeScheduler](#)

Description: Contains definitions for scheduled process executions.

Factors Influencing Growth: The table would include data only if there are any processes scheduled.

#10 **Table Name:** [AeService](#)

Description: Service definitions which are capable of being invoked on the server.

Factors Influencing Growth: Typically one entry per process (depending on My Role).

#11 **Table Name:** [AeURNValues](#)

Description: Contains URN mappings which are replaced during process execution.

Factors Influencing Growth: Depends on the mappings defined in the configuration settings.

#12 **Table Name:** [AeMetalInfo](#)

Description: Contains the Meta Information about the DataBase Type and version.

Factors Influencing Growth: One entry for an instance of the server.

#13 **Table Name:** [AeB4PTaskAttachments](#)

Description: Keeps a copy of attachments associated with a human task. This table is populated after the task has reached a final state.

Factors Influencing Growth: Depends on the number of attachments associated with a human task.

#14 **Table Name:** [AeEventFilter](#)

Description: Event filters for business properties; these are filters that are added via the PDD eventing tab. An event filter is added to a deployment (PlanId) at a particular location (LocationId) in the process model. Events have a name (Name) and a unique identifier (FilterId).

Factors Influencing Growth: The growth will depend on how often the Eventing tab is used in the PDD and how many processes have been deployed.

#15 **Table Name:** [AeFilterProcessState](#)

Description: Event filter process states are used to determine when an event should be fired. So for a particular filterId this table holds all the activity states that cause an event to fire, ie. Ready_To_Execute or Executing for example.

Factors Influencing Growth: The growth will depend on how often the Eventing tab is used in the PDD and how many processes have been deployed.

#16 **Table Name:** [AeFilterPropertiesXref](#)

Description: Table that cross references Event filters to indexedProperties. Events sent to the complex event processing (CEP) engine have a default set of properties, but the user can define additional business properties based on data from the process model by configuring them in the PDD using the Indexed Properties tab and the Eventing tab.

Factors Influencing Growth: The growth will depend on how often the Eventing tab is used in the PDD and how many processes have been deployed.

#17 **Table Name:** [AeIndexedProperty](#)

Description: Stores property names and types for filtering of processes by their associated properties. For example a property name SocialSecurityNumber may be of type String.

Factors Influencing Growth: The table grows only when new properties are added to the system through deploying new processes which contain new property names.

#18 **Table Name:** [AeFilterPropertiesXref](#)

Description: Stores the list of properties that are associated with a deployed process. A property by itself can span many processes but the association of a property with a specific process deployment is achieved by this table. It describes the property to variable and path within a variable association for a process deployment.

Factors Influencing Growth: The table grows when a new process, which has associated properties, is deployed.

View Details

The Views are used for the reporting purposes. They are based on the tables mentioned above.

#1 **View Name:** [AeActivityDurationView](#)

View Purpose: View of activity runtime duration in milliseconds.

#2 **View Name:** [AeB4PTaskAcView](#)

View Purpose: View of durations for people Tasks.

#3 **View Name:** [AeB4PTaskDateView](#)

View Purpose: View over task table which interprets time in milliseconds and using columns as timestamps.

#4 **View Name:** [AeB4PTaskDurationView](#)

View Purpose: View of durations for B4P Tasks.

#5 **View Name:** [AeB4PTaskSummaryView](#)

View Purpose: Task summary view used for reporting.

#6 **View Name:** [AeHourlyTaskView](#)

View Purpose: Contains view of task activity grouped in hourly buckets.

#7 **View Name:** [AelmaResponseDurationView](#)

View Purpose: View inbound message activity response times in milliseconds.

#8 **View Name:** [AeIndexedPropertiesView](#)

View Purpose: Contains View of indexed property values for each process id.

#9 **View Name:** [AePast24B4PTaskDurationView](#)

View Purpose: View of durations for B4P Tasks.

#10 **View Name:** [AePast24ProcessView](#)

View Purpose: View of user processes over past 24 hour period.

#11 **View Name:** [AeUserProcessView](#)

View Purpose: View which makes it easier to filter out system process used for reporting.

Summary/Conclusion

The document includes of all the tables and views as of ActiveVOS version 6.0.2.1.

About Active Endpoints

Active Endpoints (www.activevos.com) is the leading developer of visual orchestration systems. VOS empowers line of business project teams to create applications using services and industry standards, making their businesses more agile and effective. Active Endpoints' ActiveVOS promotes mass adoption of SOA-enabled applications by focusing on accelerating project delivery time with a standards-based, easy to use system. Active Endpoints is headquartered in Waltham, MA with development facilities in Shelton, CT.

To find out how Active Endpoints can help your business, visit <http://www.activevos.com>, call +1 781 547 2900, or email us at <mailto:info@activevos.com>.

Appendix – Baseline Database Size

The following are the details of a fresh instance of the ActiveVOS 6.0.2 database for MySQL. The table sizes (in bytes) are all the same. Also the initial table size would be different for each DBMS.

Database: ActiveVOS602

table: aealarm
table size: 16384
Index size: 65536
Total size: 81920

table: aeattachment
table size: 16384
Index size: 16384
Total size: 32768

table: aeb4ptask
table size: 16384
Index size: 81920
Total size: 98304

table: aeb4ptaskacl
table size: 16384
Index size: 0
Total size: 16384

table: aeb4ptaskattachments
table size: 16384
Index size: 0
Total size: 16384

table: aeb4ptaskevent
table size: 16384
Index size: 0
Total size: 16384

table: aeb4ptaskeventdetail
table size: 16384
Index size: 16384
Total size: 32768

table: aeb4ptaskkeywords
table size . . . : 16384
Index size . . . : 0
Total size . . . : 16384

table: aecatalog
table size . . . : 16384
Index size . . . : 32768
Total size . . . : 49152

table: aeconfigsettings
table size . . . : 16384
Index size . . . : 16384
Total size . . . : 32768

table: aecoordination
table size . . . : 16384
Index size . . . : 32768
Total size . . . : 49152

table: aecounter
table size . . . : 16384
Index size . . . : 0
Total size . . . : 16384

table: aedeploymentgroup
table size . . . : 16384
Index size . . . : 16384
Total size . . . : 32768

table: aedeploymentlog
table size . . . : 16384
Index size . . . : 49152
Total size . . . : 65536

table: aeengine
table size . . . : 16384
Index size . . . : 16384
Total size . . . : 32768

table: aeeventfilter
table size . . . : 16384
Index size . . . : 16384
Total size . . . : 32768

table: aefilterprocesstate
table size . . . : 16384
Index size . . . : 0
Total size . . . : 16384

table: aefilterpropertiesxref
table size . . . : 16384
Index size . . . : 16384
Total size . . . : 32768

table: aeglobalpdefs
table size . . . : 16384
Index size . . . : 16384
Total size . . . : 32768

table: aeindexedproperty
table size . . . : 16384
Index size . . . : 32768
Total size . . . : 49152

table: aeindexedpropertyforplan
table size . . . : 16384
Index size . . . : 32768
Total size . . . : 49152

table: aeindexedpropertyvalue
table size . . . : 16384
Index size . . . : 16384
Total size . . . : 32768

table: aelicense
table size . . . : 16384
Index size . . . : 0
Total size . . . : 16384

table: aelock
table size . . . : 16384
Index size . . . : 16384
Total size . . . : 32768

table: aemetainfo
table size . . . : 16384
Index size . . . : 0
Total size . . . : 16384

table: aemommessage
table size . . . : 16384
Index size . . . : 0
Total size . . . : 16384

table: aepartnerlinks
table size . . . : 16384
Index size . . . : 16384
Total size . . . : 32768

table: aeplan
table size . . . : 16384
Index size . . . : 49152
Total size . . . : 65536

table: aeplanresource
table size . . . : 16384
Index size . . . : 0
Total size . . . : 16384

table: aeppojo
table size . . . : 16384
Index size . . . : 16384
Total size . . . : 32768

table: aeprocess
table size . . . : 16384
Index size . . . : 131072
Total size . . . : 147456

table: aeprocessattachment
table size . . . : 16384
Index size . . . : 16384
Total size . . . : 32768

table: aeprocessdefinfo
table size . . . : 16384
Index size . . . : 49152
Total size . . . : 65536

table: aeprocessjournal
table size . . . : 16384
Index size . . . : 49152
Total size . . . : 65536

table: aeprocesslog
table size . . . : 16384
Index size . . . : 16384
Total size . . . : 32768

table: aeprocesslogdata
table size . . . : 16384
Index size . . . : 16384
Total size . . . : 32768

table: aequeuedreceive
table size . . . : 16384
Index size . . . : 65536
Total size . . . : 81920

table: aescheduler
table size . . . : 16384
Index size . . . : 16384
Total size . . . : 32768

table: aeservice
table size . . . : 16384
Index size . . . : 16384
Total size . . . : 32768

table: aeserviceallowedroles
table size . . . : 16384
Index size . . . : 16384
Total size . . . : 32768

table: aesubscription
table size . . . : 16384
Index size . . . : 0
Total size . . . : 16384

table: aetransmissiontracker
table size . . . : 16384
Index size . . . : 0
Total size . . . : 16384

table: aeurnvalues
table size . . . : 16384
Index size . . . : 16384
Total size . . . : 32768



table: aevariable
table size : 16384
Index size : 0
Total size : 16384

table: aewsrnstatetracker
table size : 16384
Index size : 49152
Total size : 65536

database size is: 1769472 bytes
or
database size is: 2 MB