athene® Getting Started Guide

Thank you for choosing to download Metron’s athene® ES/1 for System z software.

Background

athene® ES/1 allows an enterprise to optimize on-going capacity, minimize over-spending on hardware, avoid the costs of performance crises, guarantee service levels, and alert on trends to know when a capacity issue will begin to emerge. You can also model how to avoid potential performance problems, evaluate tuning and management strategies in advance, not in crisis mode.

You are invited to use this free download to collect and return data to Metron for a FREE System z Capacity Audit and Projection. This document contains instructions for implementing the athene® ES/1 for System z Acquire data capture module and collecting that data. The download package in total contains:

- athene® ES/1 Getting Started Guide (this document)
- athene® ES/1 Acquire Sample Control Card text file
- athene® ES/1 Acquire zip file containing items to upload to the mainframe

FREE System z Capacity Audit and Projection

Metron’s athene® ES/1 for System z offers a range of features to enable you to analyze System z performance across your entire estate, report and create trends of behavior and analytically model future scenarios to optimize configurations and expenditure.

To receive the FREE System z Capacity Audit and Projection service, please follow the instructions below to collect three to five days of data for a maximum of three System z LPARs. These LPARs can all be on the same machine, or on up to three different ones.

Once the Athene for System z data has been collected, please FTP it to Metron for report generation.

Your FREE System z Capacity Audit and Projection report will be returned to you in approximately five working days.

For technical questions, please contact: actionline@metron-athene.com

Phone:
US: +1-877-athene
UK: +44 (0)1823 259231
FTP Information

All the output files are regular text files so do not need to be transferred in binary or with any special handling.

FTP Site: ftp.metron.co.uk  
User: zoscapacity  
Password: Will be e-mailed to you following registration to download the software

What the athene® ES/1 for System z Acquire does

athene® ES/1 for System z can be installed on any of the IBM System z’s supported releases. Acquire captures performance data from an IBM or compatible mainframe running System z. It works by reading dumped SMF datasets, under control of parameters that tell it what systems to capture data for, possibly what dates and times to bracket the data, and other optional information.

RMF, SMF Record Types and other sources of data for Acquire

Acquire takes data directly from a dumped SMF dataset.

The following RMF and SMF records must be present:

• RMF types 70 subtype 1, 72 subtype 3, and 74 subtype 1

The following record types are optional but recommended:

• SMF type 30 subtypes 1 through 6 (Job/STC/TSU details)
• RMF type 71 (Central and Expanded Storage use)
• RMF type 73 (Channel path use)
• RMF type 74 subtype 4 (Coupling Facility use)
• RMF type 75 (Paging datasets)
• RMF type 78 (Channel-to-Controller connection mapping)
• DB2 type 100 subtype 0 (system data)
• CICS type 110 subtype 1 (transaction records)
• SMF type 113 (Hardware Capacity, Reporting, and Statistics)
Procedures for the installation of the athene® ES/1 System z acquire:

The Acquire distribution comprises two files as per the following list:

<table>
<thead>
<tr>
<th>JCLLIB.XMI</th>
<th>Unloaded JCL library in TSO TRANSMIT format</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 Members</td>
<td>#README, ACQDASDC, ACQDASDS, ACQEDIT, ACQUIREG, ASMGLOBL, CKMOUNT, COLMODEL, COLMULTI, DEDUPSMF, LINKEDIT, LINKGBL, MAKEHFS, MAKEWARE, PUSHDATA, PUSHONE, RUNCKMNT, SAVEDICT, SCAN, SMFIDCHG, USERGBL, USERGBL2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OBJLIB.XMI</th>
<th>Unloaded object library in TSO TRANSMIT format</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Members</td>
<td>ACQOBJnn, ACEOBJnn, DASOBJnn, PSHOBJnn, SMFOBJnn (where nn is the release level, currently 86 for 8.60)</td>
</tr>
</tbody>
</table>

Installing the Acquire JCL

Carry out the following steps to install the JCL library for Acquire.

• Allocate a sequential file on your mainframe. Using ISPF, allocate it as follows:

  Data Set Name       (HLQ).ACQUIRE.JCLLIB.XMI
  Space Units         CYL
  Primary Quantity    1
  Secondary Quantity  1
  Directory Blocks    0
  Record Format       FB
  Record Length       80
  Block Size          8000 (or any other convenient block size).

• Using FTP or similar, upload file JCLLIB.XMI into the file you have just created. You must transmit the file as BINARY data.

• From TSO option 6, issue the command RECEIVE INDS(<filename>) using the name of the file you have just created and uploaded the JCL library into. You will be presented with messages similar to these:

  INMR901I Dataset METRON.AZD0930.JCLLIB from METRON on SYS1
  INMR906A Enter restore parameters or 'DELETE' or 'END' +

• You may accept the name to be used by pressing Enter, or change it by entering:

  DA(<your dataset name>)

• The sample JCL library will then be restored, ready for use. If you can browse the members in this new library then (HLQ).ACQUIRE.JCLLIB.XMI is no longer needed and can be deleted.
Installing the Acquire Programs

Carry out the following steps to create the Acquire program library and link-edit the Acquire programs into it.

- Allocate a sequential dataset on the mainframe to hold the uploaded copy of the issued object code. Using ISPF, allocate it as follows:

  Data Set Name: (HLQ).ACQUIRE.OBJLIB.XMI
  Space Units: CYL
  Primary Quantity: 1
  Secondary Quantity: 1
  Directory Blocks: 0
  Record Format: FB
  Record Length: 80
  Block Size: 8000 (or any other convenient block size).

- Using FTP or similar, upload file OBJLIB.XMI into the file you have just created. You must transmit the file as BINARY data.
- Using TSO option 6 issue the command RECEIVE INDS(<filename>) using the name of the file you have created and uploaded the object code into.
- You will be presented with messages similar to these:
  INMR901I Dataset METRON.AZD0930.OBJLIB from METRON on SYS1
  INMR906A Enter restore parameters or 'DELETE' or 'END' +
- You may accept the name to be used by pressing Enter, or change it by entering: DA(<your dataset name>)
- The object library will then be restored, ready for link-editing. If you browse it you should see members named ACQOBJ86 ACEOBJ86 DASOBJ86 PSHOBJ86 and ASXOBJ86
- Edit the member LINKEDIT in the JCL library, so that the dataset names etc. are in accordance with your site naming conventions. Particularly check the input object and destination load library names match what you intend to use.
- Run the LINKEDIT job. The Acquire programs will be linked, and written to a new file (HLQ).AZD0930.LOADLIB. Check that the job ends with COND CODE = 0000. If so, dataset (HLQ).ACQUIRE.OBJLIB.XMI is no longer needed and can be deleted.
- The load library should contain 5 programs, ACQUIRE, ACQDMON, ACQEDIT, ACQPUSH and ACQSMFEX. Note that ACQDMON is link edited with AC(1), but given the right input parameters it does not actually need APF authorization to work.
Changes to the athene® ES/1 Acquire JCL member COLMULTI

Use the COLMULTI member in the sample JCL library to run Acquire for System z. The following will need to be changed in addition to job name and the location of the Acquire for System z load library:

//SMFDATA DD DSN=YOUR.SMF.DATA,DISP=SHR - Dumped SMF Data
//ATHDATA DD DSN=(HLQ).ACQUIRE.DATA, (etc) - Acquire Output File
//PARMDATA DD * - Acquire Parameters

Example Acquire Parameters

Please use the ones in the separately provided sample file:

*  
  RUNTYPE=MULTI  
  *  
  * Define the targets we wish to process  
  * REPLACE XXX1 XXX2 and XXX3 WITH EACH LPARs SMF ID (SID)  
  * REMOVE ONE OR TWO LINES IF NOT NEEDED  
  TARGET=77777771= XXX1  
  TARGET=77777772= XXX2  
  TARGET=77777773= XXX3

Once the data has been captured, it then can be sent to Metron for analysis. This data should be named as follows:

cccccccc.xxx1.xxx2.xxx3

Where “cccccccc” is your company name and “xxx1” “xxx2” and “xxx3” are either the names of the LPARs or the SMF IDs from where data has been captured. If you captured data from fewer than three systems, simply omit the unneeded items. Please also send in the Acquire job log using FTP, to a file called:

cccccccc.job.log

where “cccccccc” is again your company name.
Notes

Only one FREE System z Capacity Audit and Projection service per organization is available. The Acquire software may be retained and used for capture of data for additional services requested from Metron.

If you would like more detailed analysis and prediction relating to your System z environment, or other platforms, please contact Metron at sales@metron-athene.com to discuss requirements, data capture options and costs for such an additional exercise.