In ITM 6.3, the History Collection Configuration window has a different look and feel than it does in earlier versions of ITM V6. For one thing, you no longer explicitly start and stop historical data collection for the historical attribute groups. Another difference is that you need to explicitly distribute the historical data collection attribute groups to your managed systems.

This technote shows you how to configure historical data collection for your ITCAM for Transactions agents.

Contents

Tutorial Introduction

Step 1 -- Open the History Collection Configuration Window

In the TEP console, click the History Collection Configuration icon in the TEP toolbar. The History Collection Configuration window displays (see Figure 1).
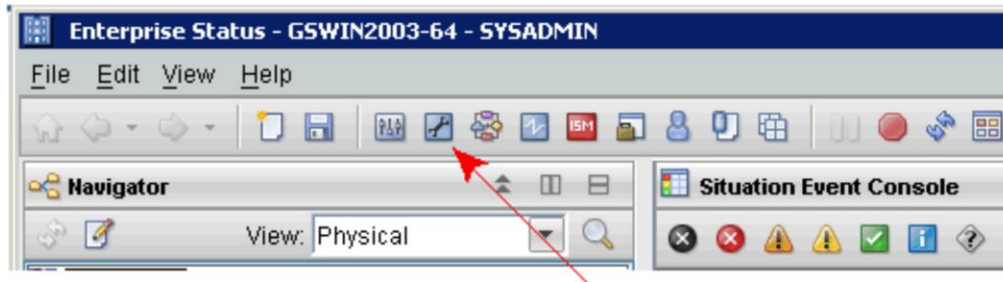

Figure 1 History Collection Configuration Icon

Click the plus (+) sign to the left of an agent category, like Robotic Response Time (see Figure 2)
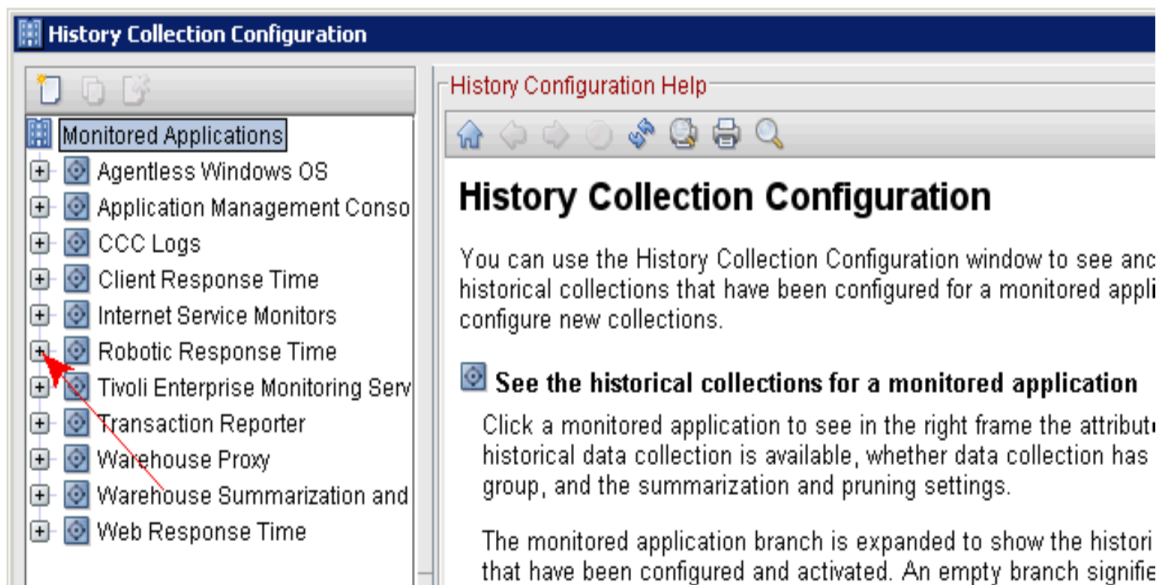

Figure 2 History Collection Attribute Groups

Step 3 -- Examine the Initial Configuration Options

Select an existing collection setting name (1). These collection setting names act as a handle to the historical attribute groups. Each collection setting name points to a single historical attribute group. In this example, the collection setting **RRT Application** (1) allows you to configure the settings for the **RRT Application Status** attribute group (2). (See Figure 3.)

Notice that these configuration settings now have a Distribution tab (3).

Through the collection setting, you distribute the historical attribute group to managed systems, and configure the collection interval and location, and the warehouse interval (4).

Notice that the History Collection Configuration window displays a name in the lower right corner (5). This name identifies the binary historical data persistence file for this attribute group. See "Binary History Files" later in this technote. Also, refer to your ITCAM for Transactions User's Guide for a description of the metrics for these attribute groups.

Note: For best TDW performance, IBM recommends that you collect historical data at the agent (TEMA). Set the collection interval to 5 minutes and the warehouse interval to 1 hour. These settings process the data incrementally. In high-capacity production environments, configuring your system to post data to the TDW once or twice a day can overburden your system.
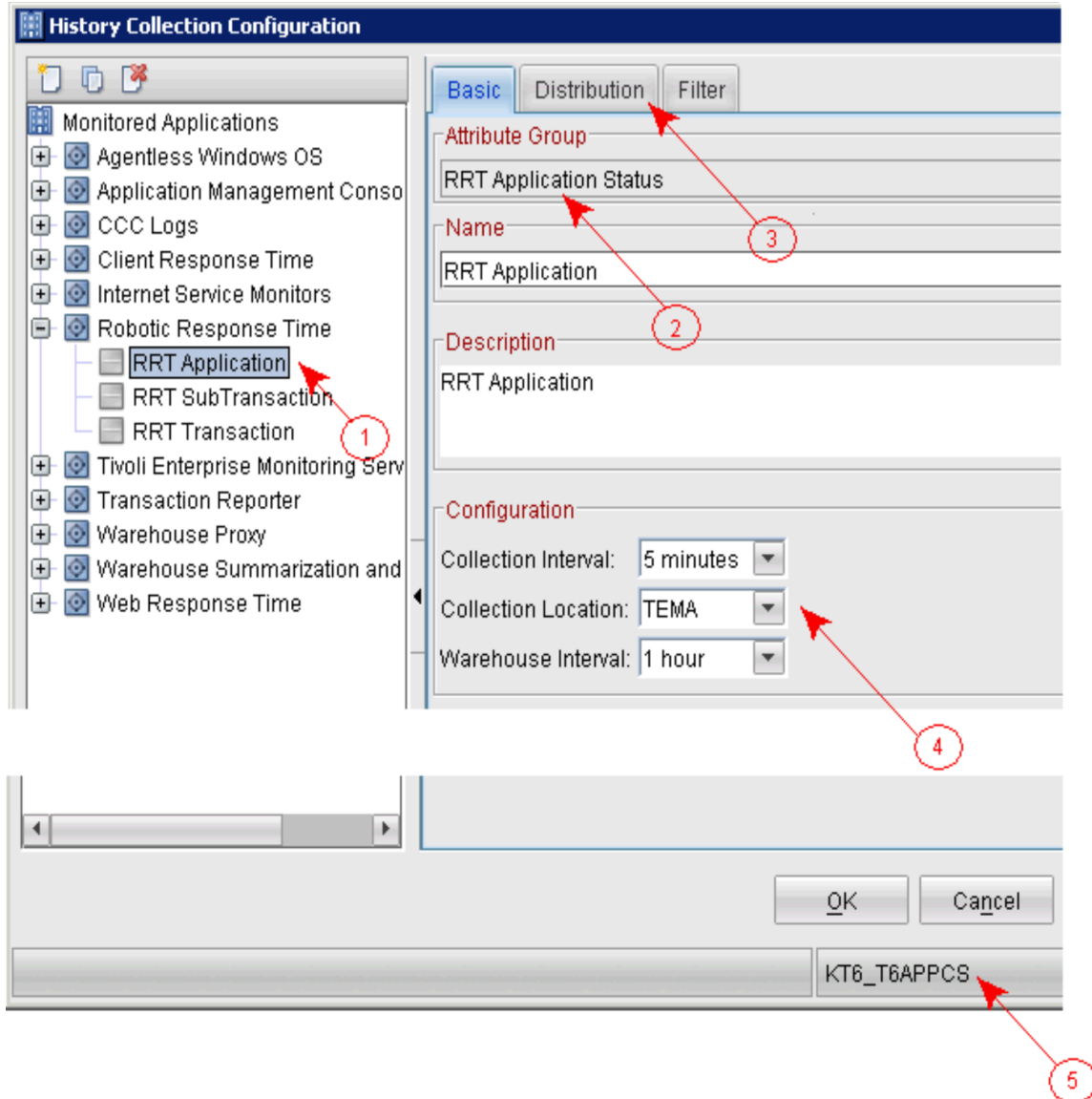
Figure 3 Initial Configuration Options

Open the Distribution tab. Click the radio button (1) to collect historical data on the agent or on the hub TEMS (see Figure 4). IBM recommends that you collect the historical data on the agent. Select available managed systems (2). When you select a managed system, the left arrow (3) is enabled. Click the left arrow to move selected managed systems from the Available list into the left column. Historical data collection starts on the managed systems in the left column after you click **Apply**.

Click **Apply** to save your distribution changes, or click **Cancel** to discard distribution changes you have made for the current attribute group.
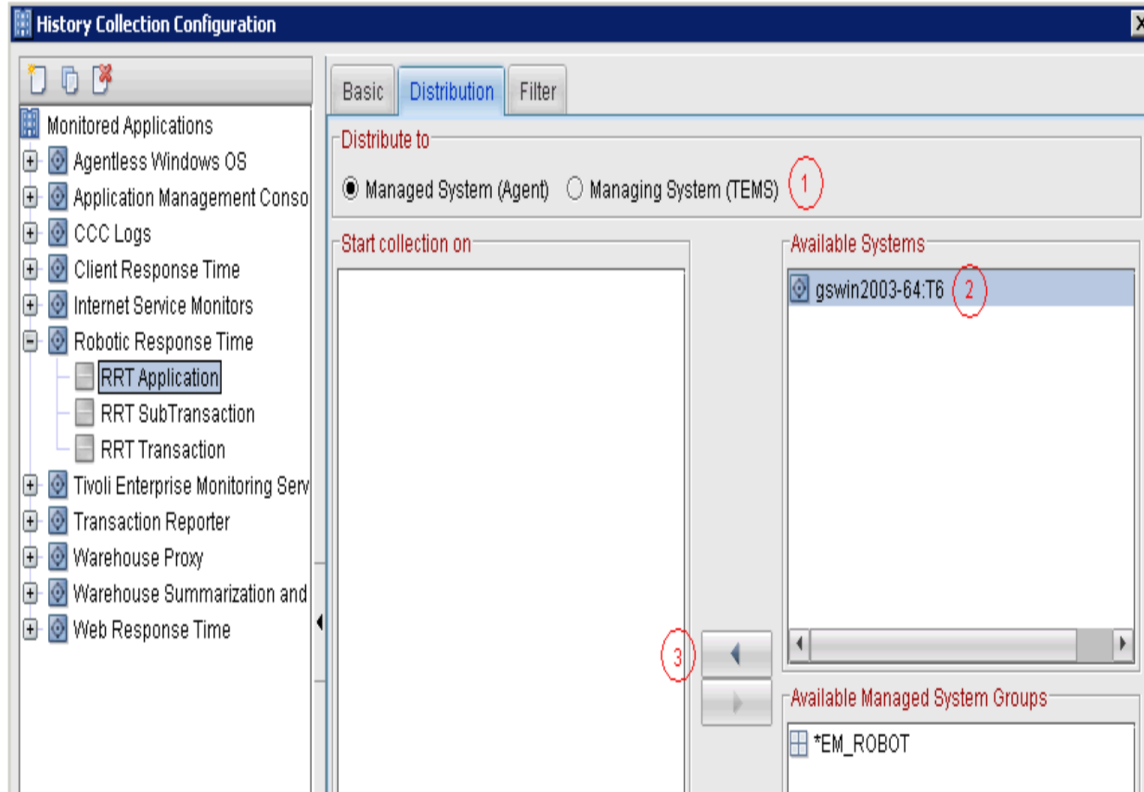

Figure 4 Distribute Historical Data Collection Metric

Notice that the icon to the left of the collection setting name turns green (see Figure 5). A gray icon indicates that an attribute group for this collection setting has not been distributed to a managed system.
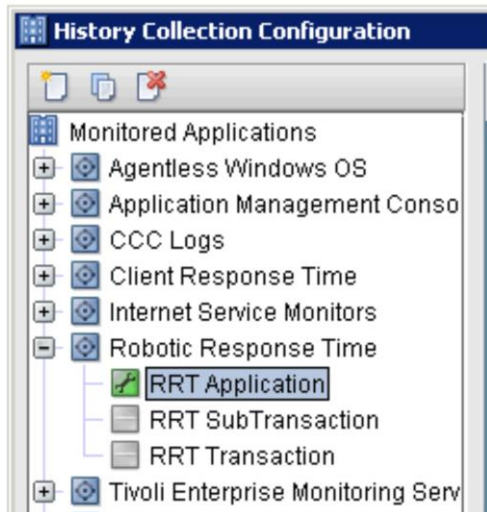
Figure 5 History Distribution Status Icons

Step 5 -- Open the Summarization and Pruning Configuration Panel

Select the major node, such as **Robotic Response Time**. In this example, notice that 3 collection settings are available:

RRT Application
RRT SubTransaction
RRT Transaction

For each collection setting, the available attribute groups are displayed in the upper right panel (see Figure 6). Notice that none of these groups has been configured. Also note that some of these attribute groups have not yet been associated with a collection setting name.

Implementing Historical Data Collection in ITM 6.3

Figure 6 History Attribute Settings

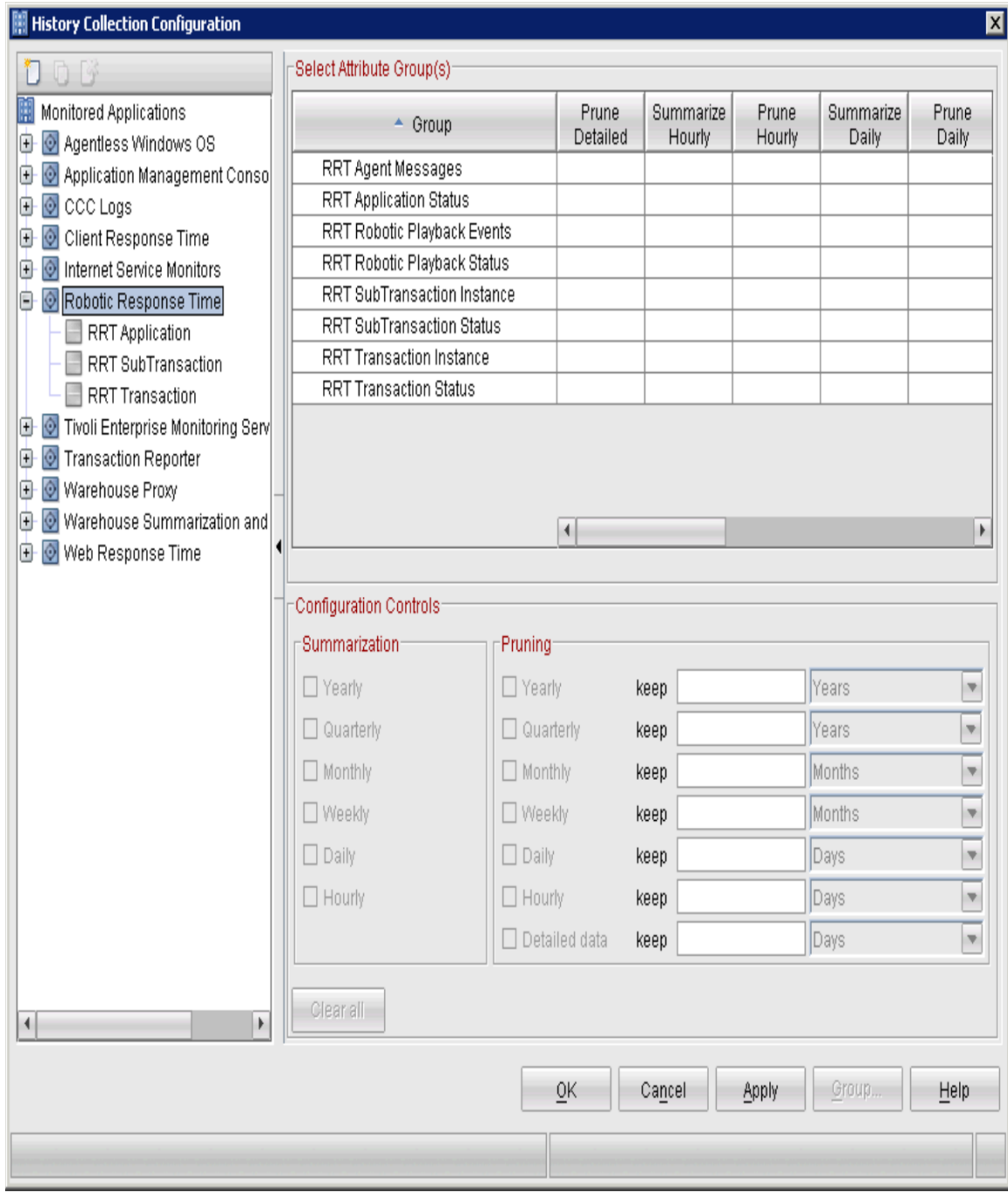Important! This panel configures the retention interval for the selected metric in the TDW (see Figure 7). Ensure that summarization intervals are matched with pruning intervals.

(1) Select the agent category.

(2) Select the attribute group.

(3) Add a checkmark to checkboxes to select summarization intervals. In this example, we selected Hourly, Daily, and Weekly. Or, uncheck the summarization intervals you no longer need. Note that each category causes a different table to be created in the TDW. This example causes these TDW tables to be created:

RRT_Transaction_Instance
RRT_Transaction_Instance_D
RRT_Transaction_Instance_H
RRT_Transaction_Instance_W

(4) Add a checkmark to checkboxes to select pruning intervals (or uncheck pruning intervals you no longer need). The summarization and pruning intervals must be matched. For example, if you select the Daily summarization interval, but you do not select the Daily pruning interval, the Daily table for the selected attribute group continues to grow in the TDW until you manually prune it.

(5) Select how long you want to retain these metrics. From the dropdown menu, select Days, Months, or Years.

Click **Apply** to save your changes, or click **Cancel** to discard your changes. Click **OK** only if you want to exit the History Collection Configuration window.
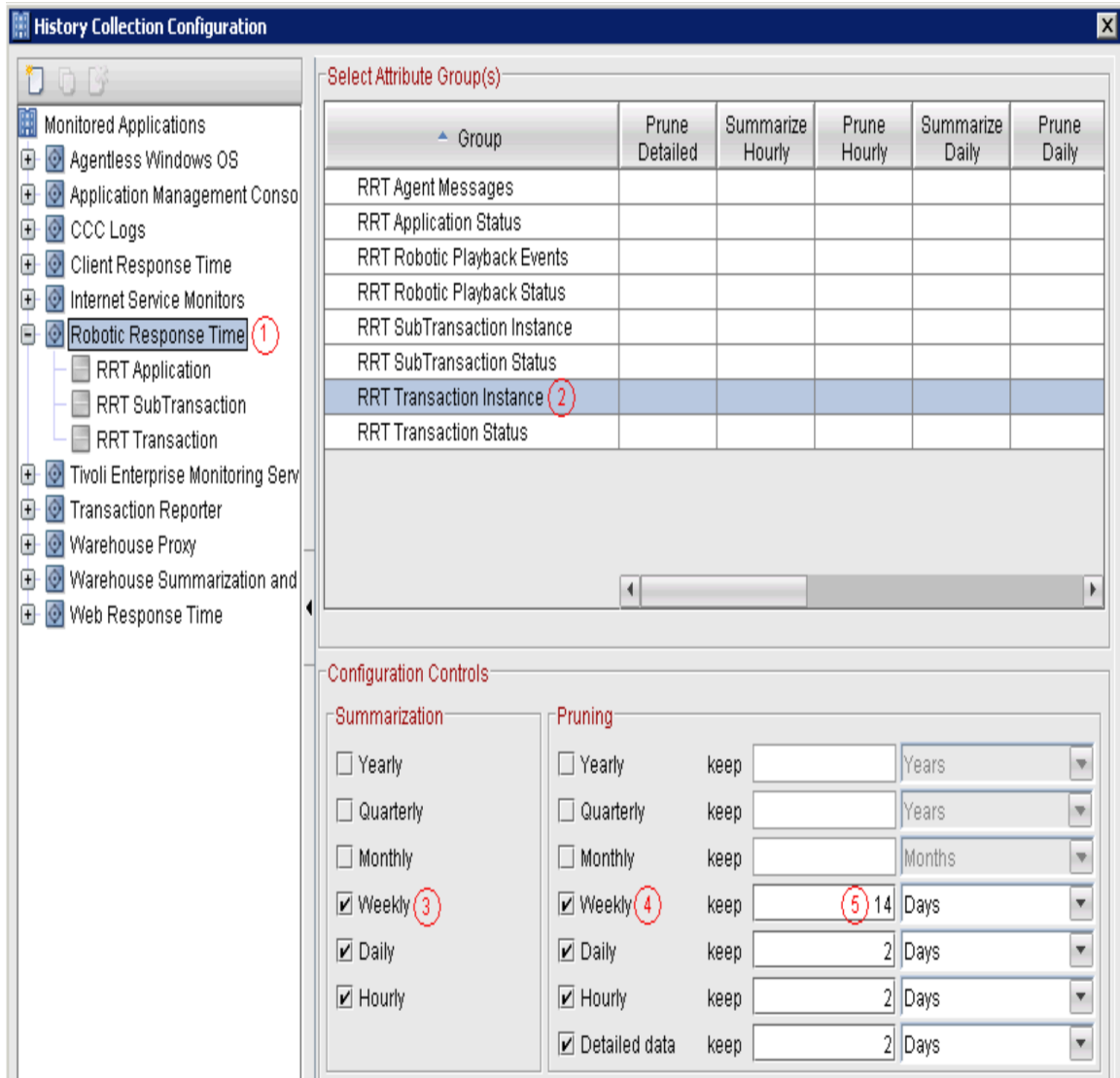
Figure 7 Summarization and Pruning Retention Intervals

Implementing Historical Data Collection in ITM 6.3

Observe that your new historical data collection intervals now display in the upper right pane (see Figure 8).
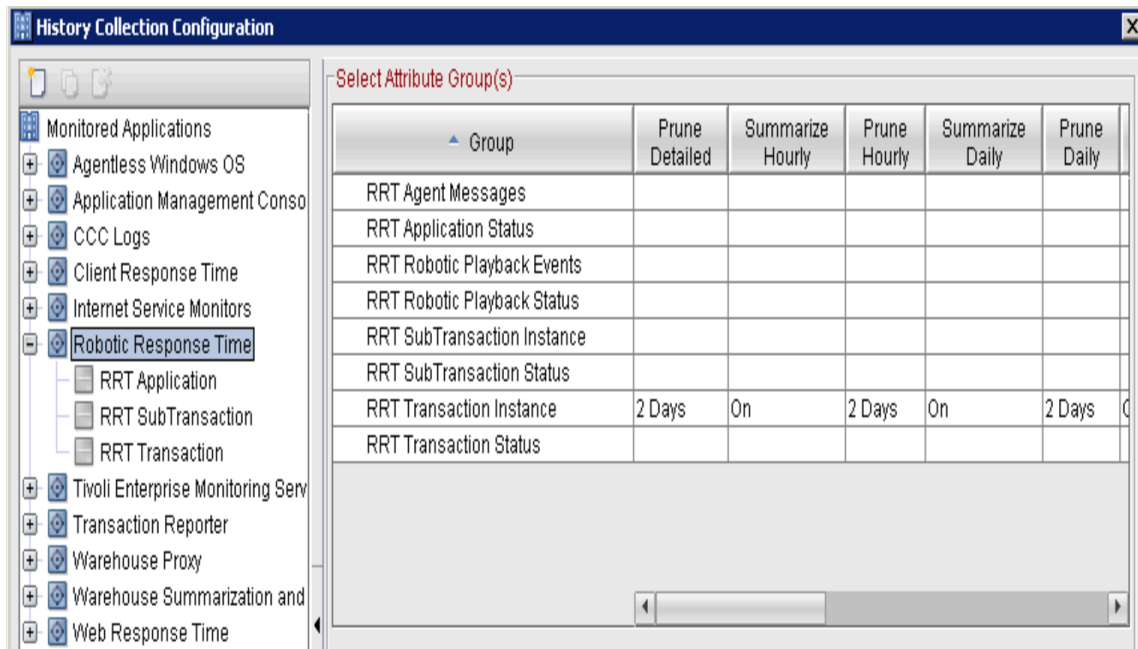

Figure 8 New Historical Data Collection Intervals

Tip: Historical data is retained on the agent (or on the TEPS) for the last 24 hours when an historical metric has been distributed to RRT agents. Even though you are able to display that historical data in the TEP workspaces, no historical data is posted to the TDW until you configure summarization and pruning intervals for that metric.

For example, for the Robotic Response Time Group (1), the RRT Application collection setting (2) has been distributed to managed systems -- as noted by the green icon (see Figure 9). This collection setting name points to the RRT Application Status attribute group (3). However, although the RRT Application Status attribute group (3) is running, no pruning or summarization intervals have been configured. Consequently, no historical data is actually being posted to the TDW for this metric. You are only able to display historical data for that metric in TEP workspaces for the past 24 hours.

Tip: Avoid this configuration scenario. Collection intervals have been configured for the RRT Transaction Instance group (4), but the group is not collecting data, because the group has not been distributed to managed systems.
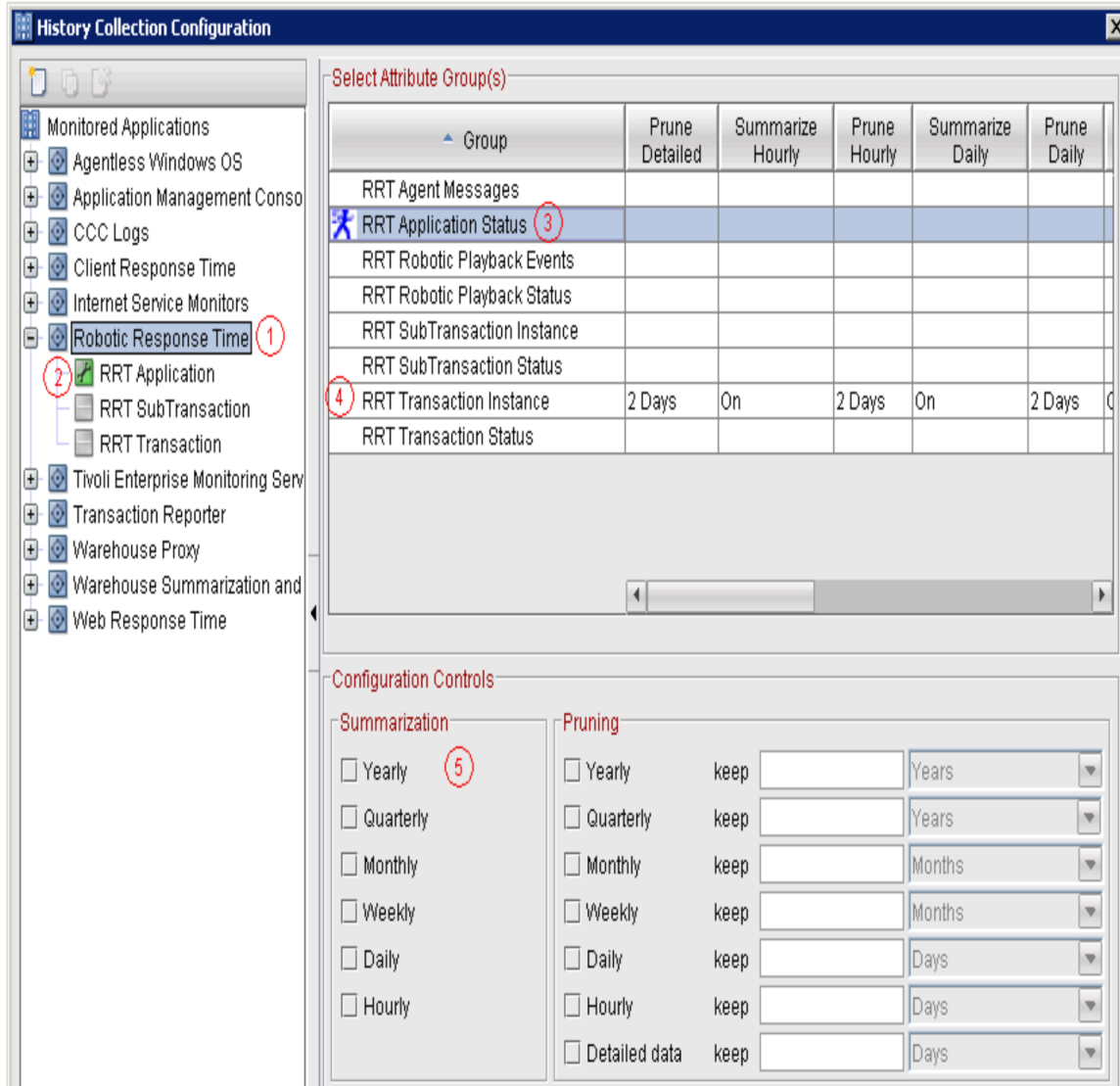
Figure 9 History Configuration Example

Implementing Historical Data Collection in ITM 6.3

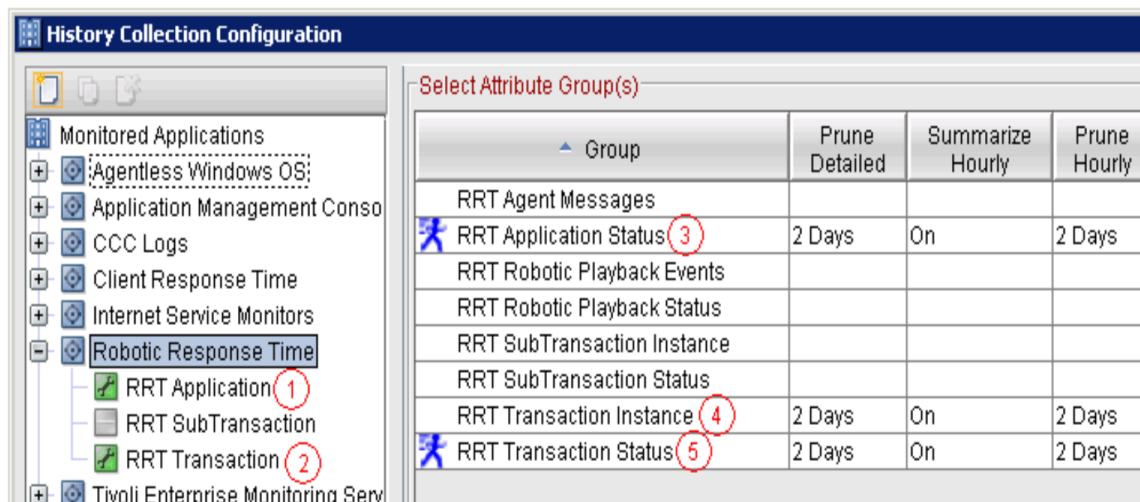What's wrong with this picture (see Figure 10)?

Figure 10 Review History Configuration

You distributed managed systems to collection settings **RRT Application** (1) and **RRT Transaction** (2), as noted by the green icon to the left of the group names. In this example, the **RRT Application** collection setting points to the **RRT Application Status** attribute group (3). Similarly, the **RRT Transaction** collection setting (2) points to the **RRT Transaction Status** attribute group (5).

Summarization and pruning intervals have been configured for the **RRT Transaction Instanc**e attribute group (4). If the **RRT Transaction Status** (5) attribute group is running, why isn't the **RRT Transaction Instance** (4) attribute group running?

In this example, the answer is that you have not yet configured a collection setting name to point to the **RRT Transaction Instance** attribute group (4). Since managed systems are distributed through the collection status name, this attribute group has not actually been distributed to managed systems.

Tip: To verify the attribute group name associated with a collection setting name, select the collection setting name (see Figure 11). The attribute group name is shown in the Basic tab.
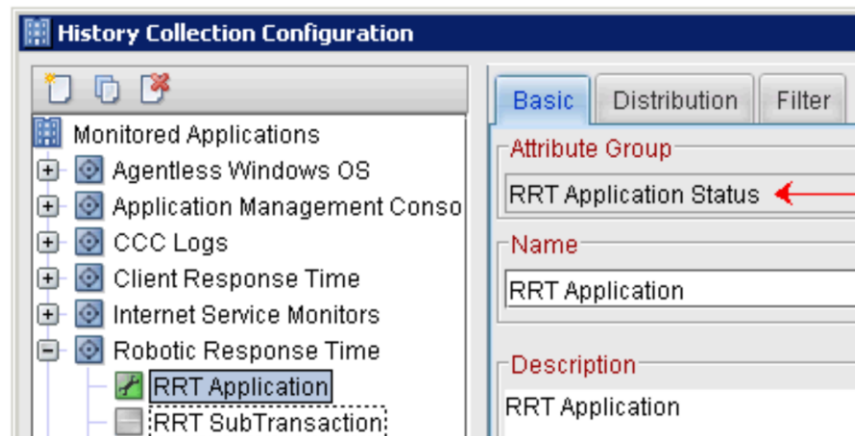
Figure 11 Verify Attribute Group Name

Step 9 -- Add New Attribute Groups

a. Click the **Create new collection setting** icon (see Figure 12).
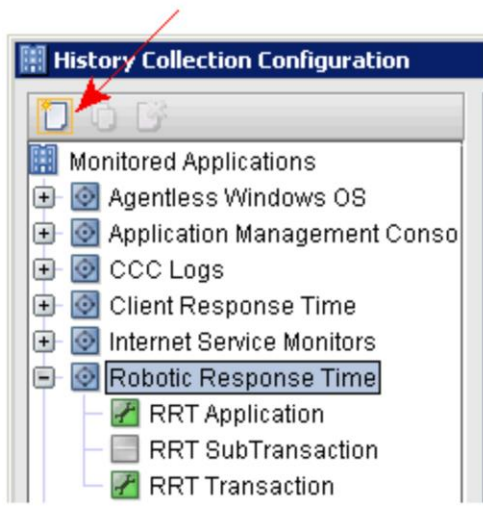
Figure 12 Create new Attribute Group

b. Select an attribute group from the drop-down selection list (1). Type the same attribute group name in the **Name** entry (2). Click **OK**. (See Figure 13.)
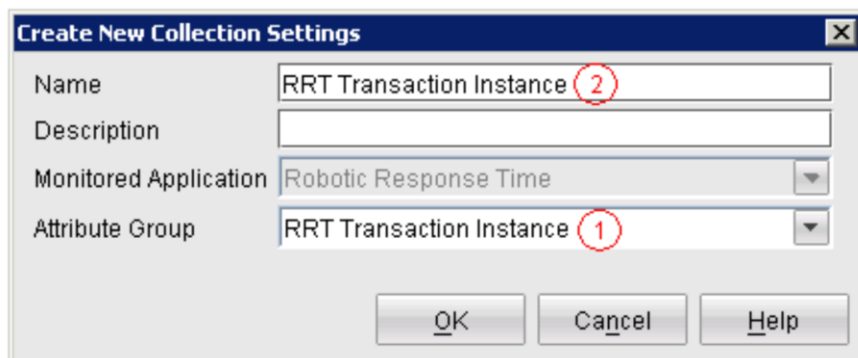
Figure 13 Select Attribute

c. Distribute and configure this attribute group (See Figure 14). Observe that the configured and distributed attribute groups are running.
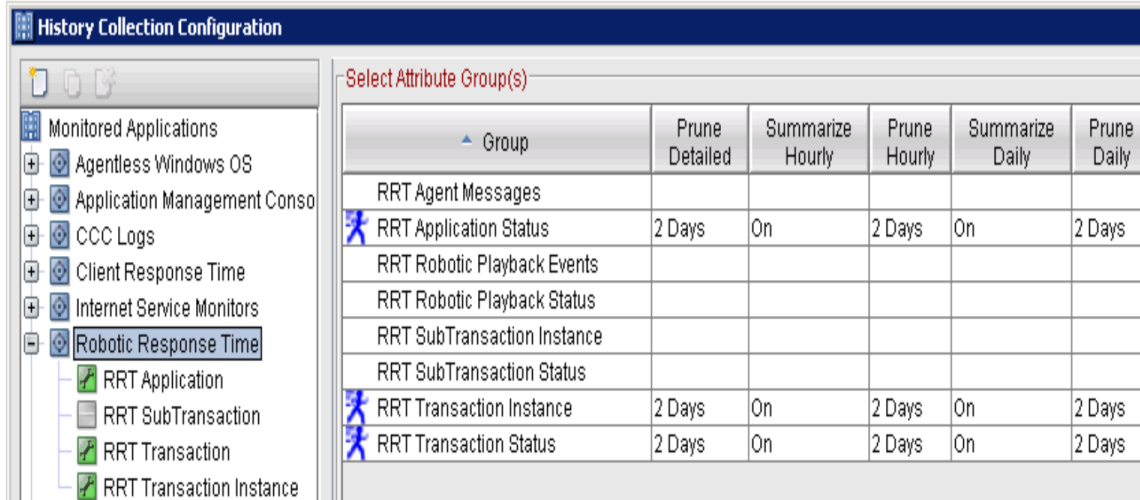
Figure 14 Configure and Distribute Attribute Group

Overview of the Historical Data Collection Process

The Warehouse Proxy Agent and the Summarization and Pruning Agent work together to collect and process historical data.

The Warehouse Proxy Agent reads data from binary history files that are collected at the Tivoli Enterprise Management Server (TEMS) or at the Tivoli Enterprise Management Agent (TEMA). These files are sometimes referred to as Short Term History (STH) files.

The agent attempts to insert this data into TDW tables. If the data is more than 24 hours old and has been successfully inserted into the Data Warehouse, the data is removed from the binary history files after warehousing occurs.

If, for any reason, the insert operation fails, the binary history file continues to grow. Setting the Warehouse Interval to OFF in the History Collection Configuration panel for an attribute group has the same effect (see Figure 15): Data in the binary history file is not added to the TDW, and the size of the binary history file continues to grow. For example, this screenshot shows the Warehouse Interval has been set to OFF.

Implementing Historical Data Collection in ITM 6.3
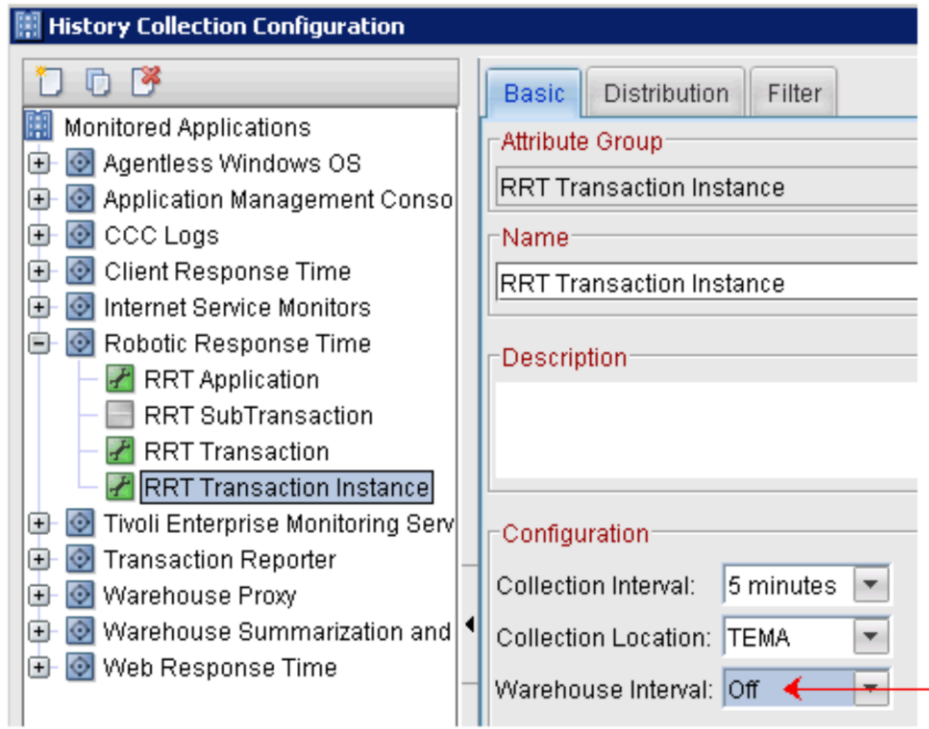
Figure 15 Setting Warehouse Interval Off

The Summarization and Pruning agent creates summarized data from the data available in the TDW. The agent adds this data to tables in the TDW that are named for the active Historical Data Collection (HDC) attribute groups and reflects the summarization period. For example, daily summarized data for RRT Transaction Status metrics is stored in the table RRT_Transaction_Status_D.

The Summarization and Pruning agent deletes records in the TDW tables according to the Pruning interval configured for those attribute groups. Note that the agent does not recover database space. The database administrator needs to run a recovery operation to compact the database.

In the History Collection Configuration window, it is important to understand that the Summarization and Pruning checkbox options must match. For example, if you select Hourly and Daily summarization, you also need to select Hourly and Daily Pruning. The pruning interval for **Detailed data** deletes non-summarized data that is older than the configured interval.

Binary History Files

Binary history files are created in pairs for each historical data collection attribute: a data file and a header file. The data file and the header file share the same basic filename. The header filename includes a .HDR filename extension. The data file does not have a filename extension.

For example, the following pair of files is created for the RRT Transaction Status attribute when historical data collection is enabled for that attribute. These filenames are unique for a specific historical data collection attribute.

T6TXCS
T6TXCS.HDR

The header file resides in the same directory as the data file. Unlike the data files, the header file timestamp is only updated at agent startup. Consequently, the data file and the header file often have different timestamps.

Tip: Select the collection setting group (1) name (see Figure 16). Look for the attribute group name (2) in the bottom right corner of the History Collection Configuration window. The name contains a 3-character agent ID, such as KT6 for the T6 agent, an underscore, and the attribute group name. In this example, T6TXCS is the filename of the historical data collection binary file for RRT Transaction Status data.
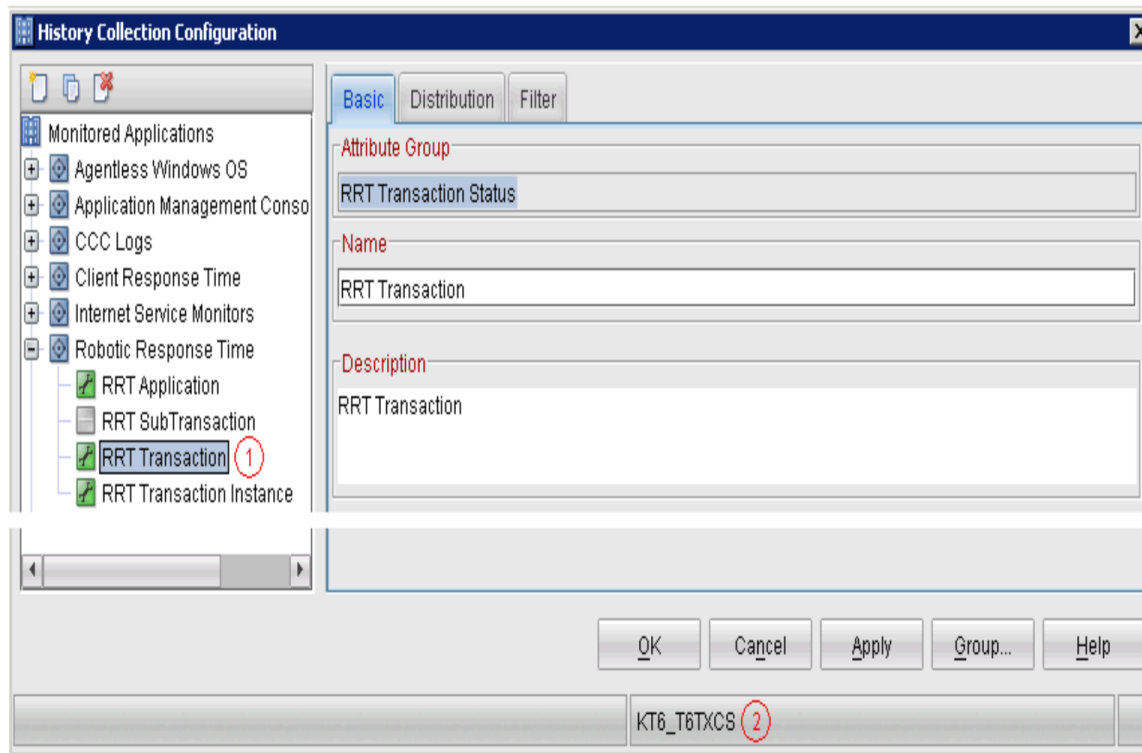

Figure 16 Finding Binary Filename

Binary History Filenames

These unique filenames are assigned to binary history files based on the historical data collection attribute.

Application Management Console			
Attribute Group	**Filename**	**T7.2/T7.3**	**Agentless**
AMC Agent	T3SNAGENT	T7.2/T7.3	
AMC Application	T3SNAPPL	T7.2/T7.3	
AMC Client	T3SNCLIENT	T7.2/T7.3	
AMC Client Agents	T3SNCLTAGT	T7.2/T7.3	
AMC Internet Service	T3ISMPHS	T7.2/T7.3	
AMC Internet Service Agent	T3ISMPHSEA	T7.2/T7.3	
AMC Internet Service Element	T3ISMPHSE	T7.2/T7.3	
AMC Server	T3SNSERVER	T7.2/T7.3	
AMC Server Agents	T3SNSVRAGT	T7.2/T7.3	
AMC Transaction	T3SNTRANS	T7.2/T7.3	
ERT Agent Messages	T3AGNTMSGS	T7.2/T7.3	
Client Response Time			
Attribute Group	**Filename**	**T7.2/T7.3**	**Agentless**
CRT Agent Messages	T4AGNTMSGS	T7.2/T7.3	
CRT Application Status	T4APPCS	T7.2/T7.3	
CRT Server Status	T4SRVCS	T7.2/T7.3	
CRT SubTransaction Instance	T4SUBTXINS	T7.2/T7.3	
CRT SubTransaction Status	T4SUBTXCS	T7.2/T7.3	
CRT Transaction Instance	T4TXINS	T7.2/T7.3	
CRT Transaction Status	T4TXCS	T7.2/T7.3	
Internet Service Monitors			
Attribute Group	**Filename**	**T7.2/T7.3**	**Agentless**
KIS DHCP	KISDHCP	T7.2/T7.3	
KIS DIAL	KISDIAL	T7.2/T7.3	
KIS DNS	KISDNS	T7.2/T7.3	
KIS FTP	KISFTP	T7.2/T7.3	
KIS Host Statistics	KISHSTATS	T7.2/T7.3	
KIS HTTP	KISHTTP	T7.2/T7.3	
KIS ICMP	KISICMP	T7.2/T7.3	
KIS IMAP	KISIMAP	T7.2/T7.3	
KIS LDAP	KISLDAP	T7.2/T7.3	
KIS Monitor Status	KISMSTATS	T7.2/T7.3	
KIS NNTP	KISNNTP	T7.2/T7.3	
KIS NTP	KISNTP	T7.2/T7.3	
KIS POP	KISPOP	T7.2/T7.3	
KIS RADIUS	KISRADIUS	T7.2/T7.3	
KIS RPING	KISRPING	T7.2/T7.3	
KIS RTSP	KISRTSP	T7.2/T7.3	

KIS SAADHCP	KISSAADHCP	T7.2/T7.3	**17**
KIS SAADLSW	KISSAADLSW	T7.2/T7.3	
KIS SAADNS	KISSAADNS	T7.2/T7.3	
KIS SAAFTP	KISSAAFTP	T7.2/T7.3	
KIS SAAHTTP	KISSAAHTTP	T7.2/T7.3	
KIS SAAICMP	KISSAAICMP	T7.2/T7.3	
KIS SAAJITT	KISSAAJITT	T7.2/T7.3	
KIS SAASNA	KISSAASNA	T7.2/T7.3	
Internet Service Monitors			
Attribute Group	**Filename**	**T7.2/T7.3**	**Agentless**
KIS Service Instance Statistics	KISSISTATS	T7.2/T7.3	
KIS Service Statistics	KISSSTATS	T7.2/T7.3	
KIS SIP	KISSIP	T7.2/T7.3	
KIS SMTP	KISSMTP	T7.2/T7.3	
KIS SNMP	KISSNMP	T7.2/T7.3	
KIS SOAP	KISSOAP	T7.2/T7.3	
KIS TCPPORT	KISTCPPORT	T7.2/T7.3	
KIS TFTP	KISTFTP	T7.2/T7.3	
KIS TRANSX	KISTRANSX	T7.2/T7.3	
KIS TRANSXSTEP	KISTRANSX2	T7.2/T7.3	
KIS WMS	KISWMS	T7.2/T7.3	

Robotic Response Time

Attribute Group	Filename	T7.2/T7.3	Agentless
RRT Agent Messages	T6AGNTMSGS	T7.2/T7.3	
RRT Application Status	T6APPCS	T7.2/T7.3	
RRT Robotic Playback Events	T6PBEVENT	T7.2/T7.3	
RRT Robotic Playback Status	T6PBSTAT	T7.2/T7.3	
RRT SubTransaction Instance	T6SUBTXINS	T7.2/T7.3	
RRT SubTransaction Status	T6SUBTXCS	T7.2/T7.3	
RRT Transaction Instance	T6TXINS	T7.2/T7.3	
RRT Transaction Status	T6TXCS	T7.2/T7.3	

Transaction Reporter

Attribute Group	Filename	T7.2/T7.3	Agentless
Aggregate Context	TOAGGCTX	T7.3	agentless
Aggregate Count Metrics	TOAGGCMET	T7.3	agentless
Aggregate Gauge Metrics	TOAGGGMET	T7.3	agentless
Aggregate Interactions	TOINTERTN	T7.3	agentless
Aggregates	AGGREGATS	T7.2/T7.3	
Interaction Count Metrics	TOINTCMET	T7.3	agentless
Interaction Gauge Metrics	TOINTGMET	T7.3	agentless
Interactions	INTERACTN	T7.2/T7.3	
Metric Types	TOMETTYPE	T7.3	agentless
Metric Units	TOUNITTYPE	T7.3	agentless
String Map	TOSTRMAP	T7.3	agentless
Transaction Instance Context	TINSTCXT	T7.2/T7.3	
Transaction Instance Interactions	TINSTINT	T7.2/T7.3	
Transaction Instances	TINST	T7.2/T7.3	

Web Response Time

Attribute Group	Filename	T7.2/T7.3	Agentless
WRT Agent Messages	T5AGNTMSGS	T7.2/T7.3	
WRT Application Status	T5APPCS	T7.2/T7.3	
WRT Client Status	T5CLNTCS	T7.2/T7.3	
WRT Raw Trans Instance	T5TSIT	T7.3	
WRT Server Status	T5SRVCS	T7.2/T7.3	
WRT SSL Alert Current Status	T5SSLALRCS	T7.2/T7.3	
WRT SubTransaction Instance	T5SUBTXINS	T7.2/T7.3	
WRT SubTransaction Status	T5SUBTXCS	T7.2/T7.3	
WRT TCP Status	T5TCPSTAT	T7.3	
WRT Trans Group	T5TGAT	T7.3	
WRT Trans Group Instance	T5TGT	T7.3	

Web Response Time

Attribute Group	Filename	T7.2/T7.3	Agentless
WRT Transaction Instance	T5TXINS	T7.2/T7.3	
WRT Transaction Status	T5TXCS	T7.2/T7.3	
WRT User Sessions	T5USRSS	T7.2/T7.3	

Applicability:

T7.2 -- ITCAM for Transactions 7.2 only
T7.3 -- ITCAM for Transactions 7.3 only
T7.2/T7.3 -- ITCAM for Transactions 7.2 and 7.3
The 'Agentless' column indicates whether the attribute group applies only to the agentless mode.

'Over Time' and Other Metrics Deprecated

Attribute groups containing the term **Over Time** have been deprecated in ITCAM for Transactions 7.2 and 7.3. ITCAM for Transactions does not capture historical data for these metrics.

The following are examples of deprecated historical data collection attributes:

RRT Transaction Over Time
WRT Server Over Time

Binary History File Locations

Binary history files appear in platform-specific directories.

Collect at TEMA

ITM_HOME\TMAITM6\logs (Windows)
ITM_HOME/<architecture>/<product-code>/hist (Unix/Linux)

Example: /opt/IBM/ITM/aix523/t6/hist (Unix/Linux)

Collect at TEMS

ITM_HOME\CMS (Windows)
ITM_HOME/tables/<tems-name> (Unix/Linux)

Example: /opt/IBM/ITM/tables/mytems

Determining When HDC is Active on an Agent

An .LG0 log is created each time an agent starts. This log indicates which situations and historical data collection attributes have started and stopped on the agent. The filename and location are platform-specific.

ITM_HOME\TMAITM6\logs\<hostname>_<product-code>.LG0   (Windows)
ITM_HOME/logs/<hostname>:<product-code>.LG0   (Unix/Linux)

For example, the following is the .LG0 filename for the T6 agent on server MyServer:

MyServer_T6.LG0 (Windows)
MyServer:T6.LG0 (Unix/Linux)

In the .LG0 log, look for the presence of UADVISOR messages. These messages indicate that historical data collection is starting or stopping for a specific attribute. For example, the following UADVISOR message indicates that historical data collection has started for the T6 attribute T6TXCS (RRT Application Over Time).

1110922163005469KRAIRA000 Starting Enterprise situation UADVISOR_KT6_T6TXCS <3624927994,3048212305> for KT6.T6TXCS.

These UADVISOR messages appear in the agent .LG0 file regardless whether the binary history file is written to the TEMS or the agent.