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Kashef Studio User Guide

July 2007

Contents

Terminology

Kashef Studio – This is the primary environment which serves the two main functions. The first is for viewing monitored information (Dashboards) and the second is for the design and configuration of new monitoring modules.

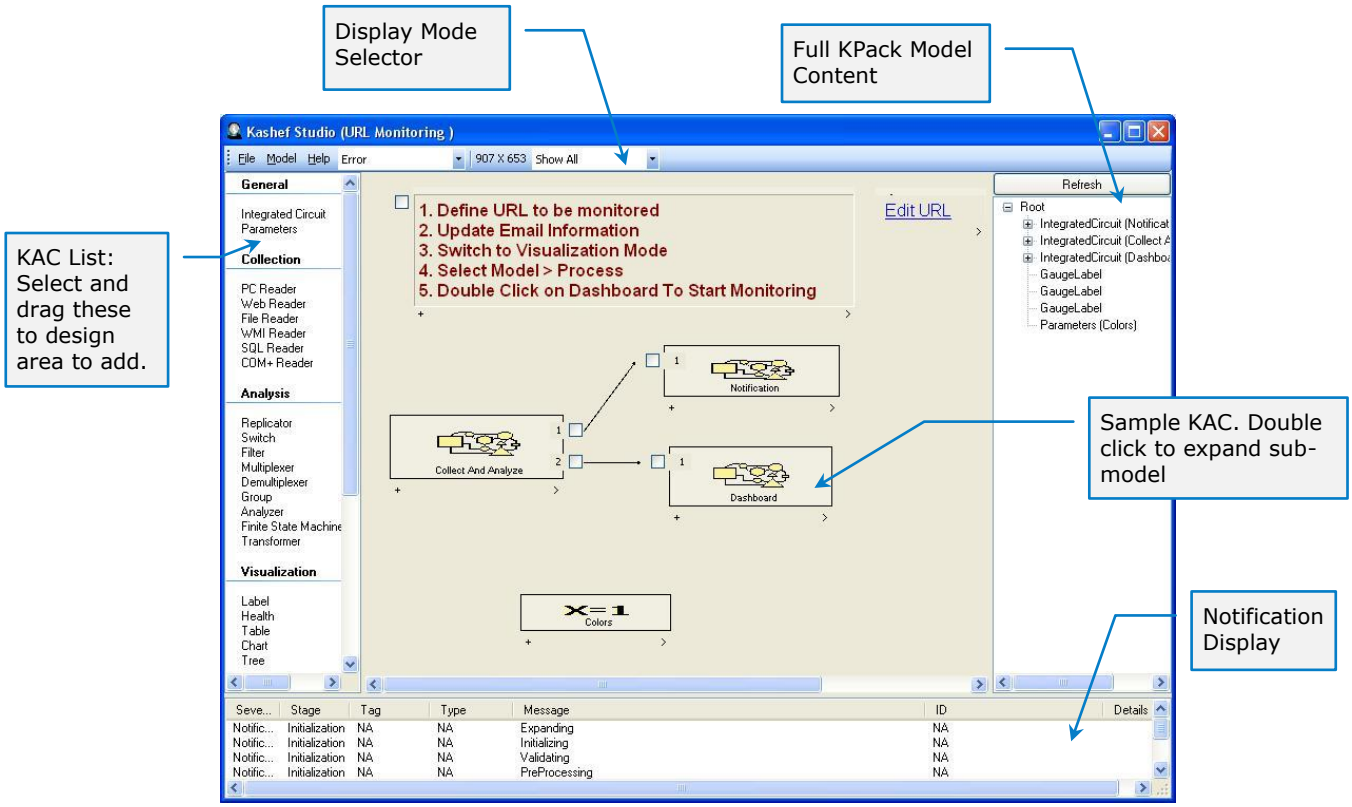
KPack – Also referred to as a module or model. KPacks models are stored in files that end with .kpack extension and can be created, saved, loaded and tested with Kashef Studio. They represent a grouping of Kashef components and deliver a common monitoring function.

KAC – Kashef Components are the individual items that can be created and manipulated inside a KPack. Each KAC has a specific function within a certain monitoring category such as health data capture, analysis, visualization, notification or distribution. KACs can have input and out connectors which can be used to send or receive information from other KACs. Distribution KACs can further exchange information with other KACs running on other machines.

Signal - Signals are the lowest level of information that is managed by Kashef. Signals are created by Collection KACs such as Performance Counter Reader, analyzed, combined and filtered, then displayed in a variety of formats using the Visualization KACs.

- # Quick Start

Main Kashef Studio Screen



.1.1 Selecting a KPack:

Kashef Models (KPacks) are loaded from the file menu.

Use:

- **File** > **Load menu** item to load a KPack and make it the active model. The currently loaded KPack or any changes that have been done will be lost.
- **Save menu** to persist any changes that have been done to the currently loaded KPack.
- **Import menu** to retrieve an existing KPack into the currently active KPack. The imported file will be added as sub-model within a new Integrated Circuit.

.1.2 Initiating Monitoring:

Two display modes are available and can be changed in the topmost toolbar:

1. "**Show All**" displays all KACs and is primarily used during the creation or re-configuration of a KPack.
2. "**Visualization Mode**" changes the display format to eliminate technical KACs and remove any unnecessary windows and drawing elements such as connector arrows.

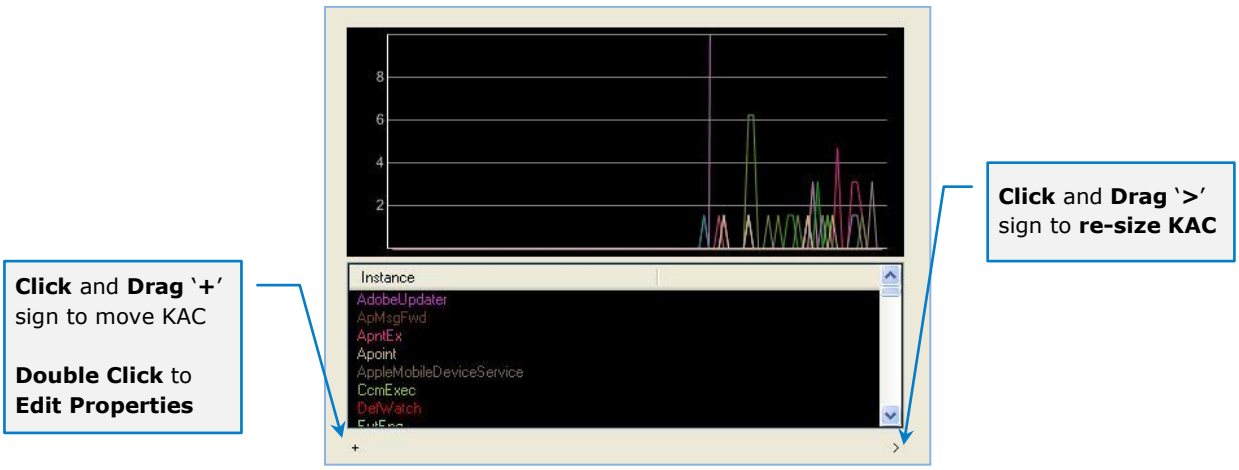
Once a pre-configured model is loaded and ready for execution, switch to Visualization Mode, then start the process by selecting **Model** > **Process** from the menu. This will initiate signal collection, analysis and visualization process. To stop monitoring, select **Model** > **Stop**. Note that any configuration changes done while the KPack is running are eliminated when you stop the processing.

.1.3 Navigating the Dashboard:

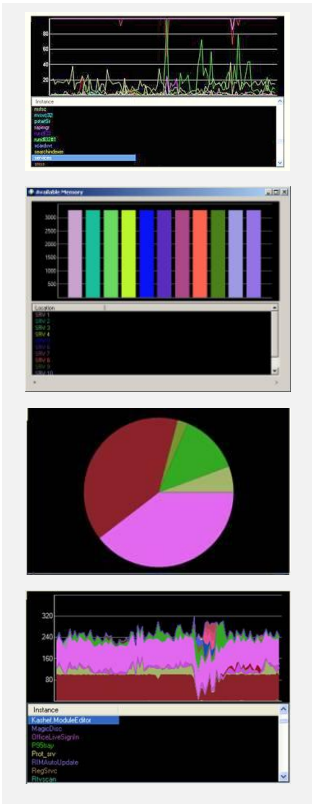
Monitoring dashboards are usually organized hierarchically with ability to drill down to more detailed views from a top level display. Double-clicking usually expands the view to show this extra detail.

Integrated Circuit KACs can be double clicked to expand the content. By convention, these are typically labeled "Dashboard". Other Health gauges usually can also be double-clicked to drill down for further information. The same applies to tables and health gauges.

Display windows can be moved and resized as needed. The individual KACs can also be moved and resized using the special handles (see below)



- ## Charts



A picture is worth a thousand words and as such, the best way to visualize real-time health data is in the form of a chart. The chart KAC in Kashef is very flexible in this regards. It displays data in one of four key formats:

1. **Trend** : Displays a running trend line showing current readings at the right and recent historical readings to the left
2. **Column**: Displays the current reading as columns
3. **Pie**: Displays the a pie chart of the current readings
4. **Stacked**: Similar to trend, but rather than independent lines, displays a running trend stacked area

Chart properties can be changed at design time or at runtime when the model is running. The following table lists the key properties (which can be accessed by double clicking on the '**+**' sign on the bottom left):

Property	Description
Type	Changes the chart type to one of the four available options
HideLegend	Hide the chart legend displayed at the bottom of the chart. The legend area can also be resized by clicking and dragging the splitter available in the middle between the legend and the chart.
IntervalSize	The number of data points to retained for trend or stacked charts. The larger the value, the more history is shown. A default value of 0 indicates automatic interval setting.
AutoScale	When enabled, the chart Y-Axis maximum is automatically adjusted every few seconds to fit the current data maximum value.
YAxisMax, YAxisMin	Determines the minimum and maximum values for the Y-Axis. Note that the YAxisMax is ignored if AutoScale is set to true.

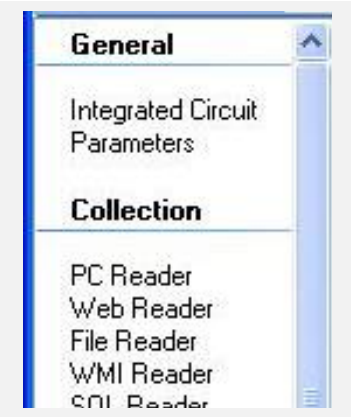
• Tables

Tables present data in a list format. Entries could be color coded to indicate health of the listed items. Double clicking on an entry can lead to opening sub-models if designed as such. Other features include:

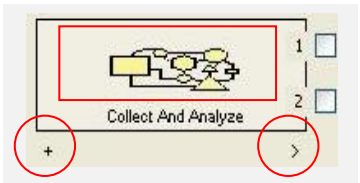
1. Columns can be resized at run-time
2. Clicking the header of the column will sort the column content

• KPack Configuration

Here are some useful notes for those using the Kashef Studio for creating or re-configuring KPacks:

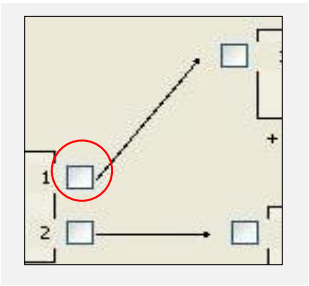


1. New KACs are created by clicking and dragging from the left panel into the main design panel



2. KAC properties are manipulated through the generic editor accessed by **double-clicking** on the '**+**' sign.
3. KACs can be moved by **clicking** and **dragging** the '**+**' sign and resized by **clicking** and **dragging** the '**>**' sign.
4. Integrated Circuit KAC is a special container element. To open the sub-model, **double click** it.
5. To delete a KAC, place the mouse over one and then press **Delete** key
6. To copy a KAC, place the mouse over one then press **Ctrl – C** followed by **Ctrl - V** key combinations. Note that for Integrated Circuits, this will copy the sub-model as well. The new KAC will be created on the top left area of the view. In case other items are already placed in

that position, it may not be visible. You would need to move the other KACs out of the way to locate.



7. To connect two KACs **click** and **drag** the mouse from an output connector to an input connector.
8. To disconnect a given connection, **click once** on the source connector
9. To move all KACs together, press **Ctrl – Up**, **Ctrl – Down**, **Ctrl – Left**, or **Ctrl – Right** arrow key combinations.
10. To bring a given KAC to the **front** (on top of other KACs in the case of overlap), place the mouse on any visible area and press "**F**"
11. A given design area is not limited to the current view size. Move a KPack all the way to the right and continue to expand the size of the design area. A scroll bar will appear automatically which can be then be used to change the current view. This allows for the design of large and complex models.

12. Remember any changes to the model while the process is running will be lost when the model is stopped. As such, any persistent changes required should be done when the process is stopped.

• Command Line Options

Kashef studio can be started with command line options in order to automate tasks as follows:

1. Start Kashef pre-loaded with a given KPack

"Kashef Studio.exe" "Modules\Examples\Windows Services Using WMI.kpack"

2. Start Kashef pre-loaded with a given KPack in Visualization mode and automatically start the processing:

"Kashef Studio.exe" /vis "Modules\Examples\Windows Services Using WMI.kpack"