



IBM Software Group – Accelerated Value Program

## ***AVKS – ITCAM for Transactions: Agentless Tracking***

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# Description and Objectives

ITCAM for Transactions 7.3 includes a significant new feature called "Agentless Tracking", which provides a fast and simple way to get an overall picture of your environment's transaction performance.

It captures network traffic and reports the interactions between servers and applications.

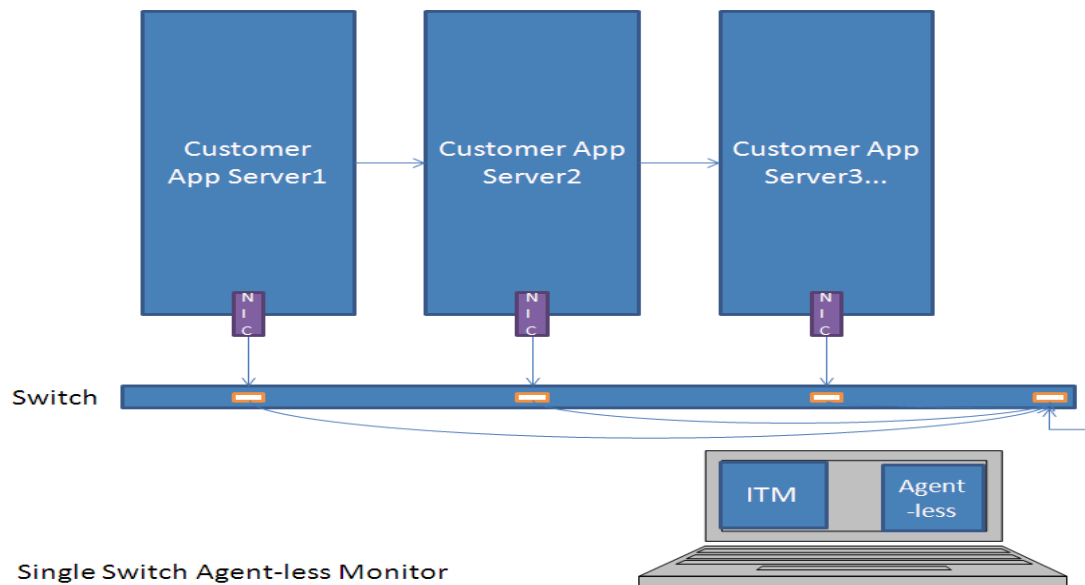
It also integrates into the existing user interface and combines with the agent-based tracking functionality.

Main objectives of this AVP Knowledge Sharing call:

- Provide an overview of Agentless Tracking functionality and architecture
- List Agentless Tracking requirements
- Outline Agentless Tracking components and installation steps involved
- Describe Agentless Tracking configuration process
- Provide a brief analysis of its associated workspaces and situations
- Carry out a brief demo of Agentless Tracking

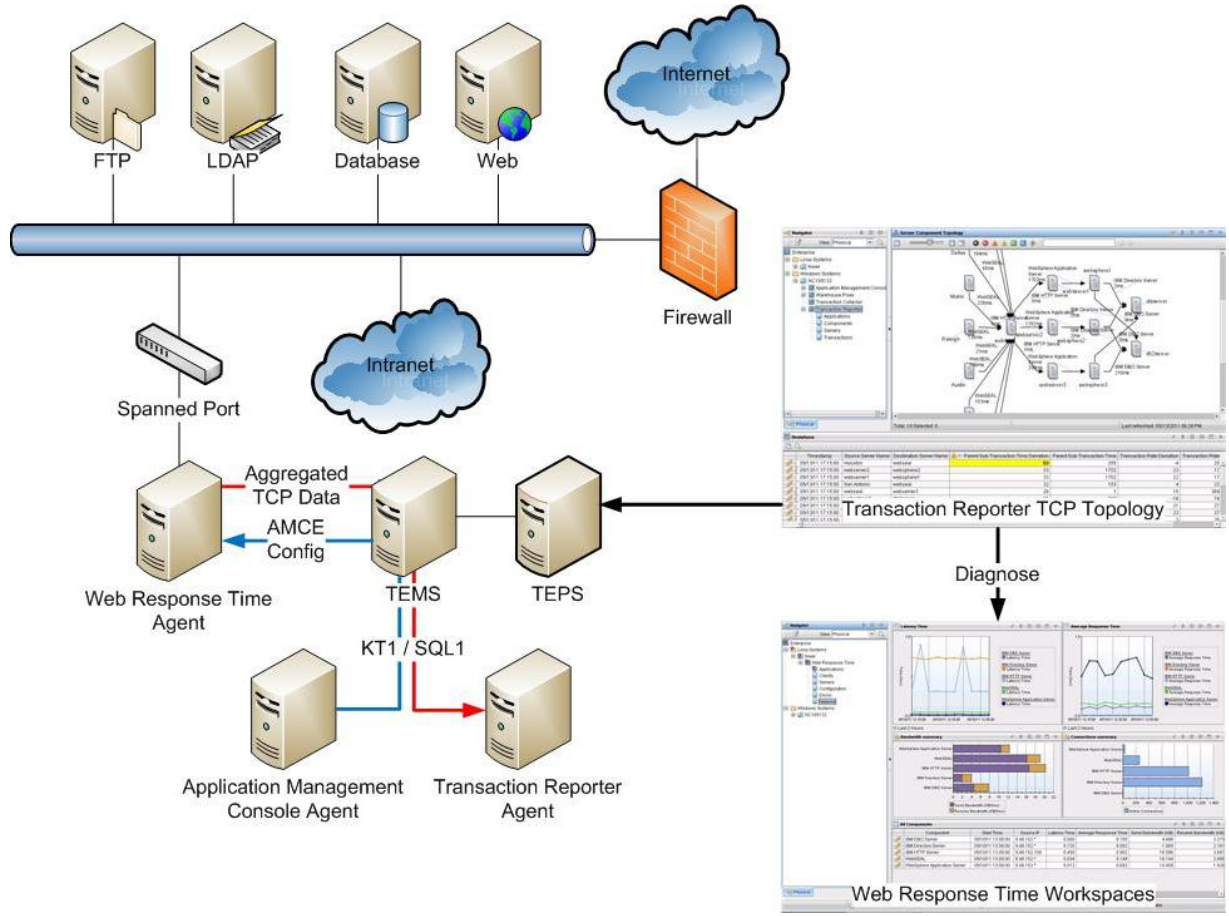
# Agentless Monitoring Overview and Architecture

- ❑ It monitors the TCP interactions in a network environment (via WRT agent)
- ❑ It visualizes the TCP-based application protocols, dependencies and interactions
- ❑ The term “*agentless*” does not mean no agents are involved. It refers to:
  - There is no need to install an agent in all the TCP endpoints in question
  - There is no direct knowledge of the application protocols being used



# Agentless Monitoring Overview and Architecture

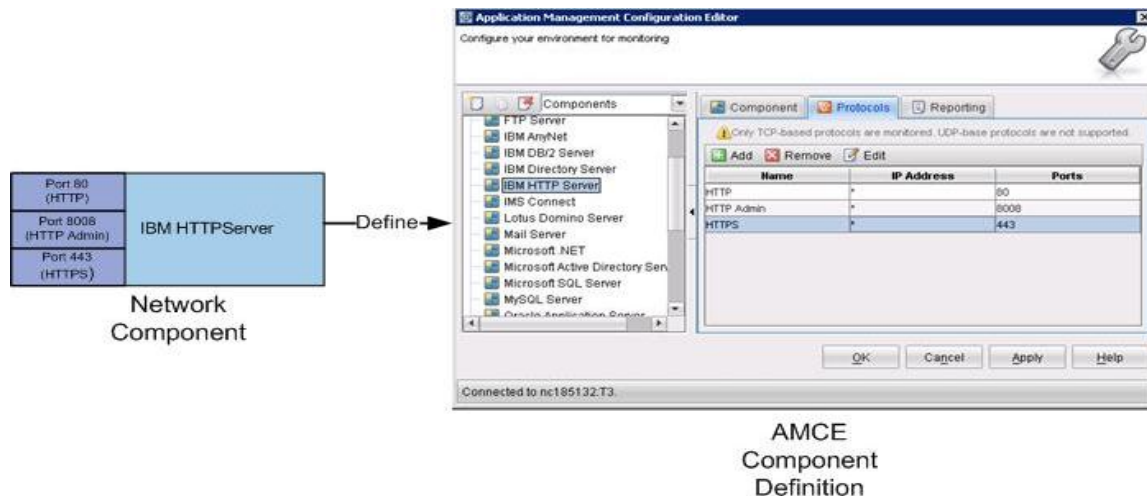
- ❑ The 7.3 Web Response Time agent monitors TCP interactions on a network interface (local or appliance / promiscuous).
- ❑ Aggregated TCP status data from all agentless-enabled Web Response Time agents is rolled up to the Transaction Reporter, where consolidated reporting and visualization workspaces are available.



# Agentless Network Components

The agentless functionality is based on the concept of network “components”. In this case a component refers to a process running on the network that is listening to one or more TCP ports for application requests. This process-based definition is similar to the component concept used in previous versions of the Transaction Tracking product.

In order to allow the monitoring of the TCP activity of these network-based components, the 7.3 version of the Application Management Configuration Editor contains a new component navigation tree that allows the user to create, edit or delete component monitoring definitions. Each component contains one or more protocol definitions, which define which ports on which IP addresses will be monitored for particular protocols used by the component.

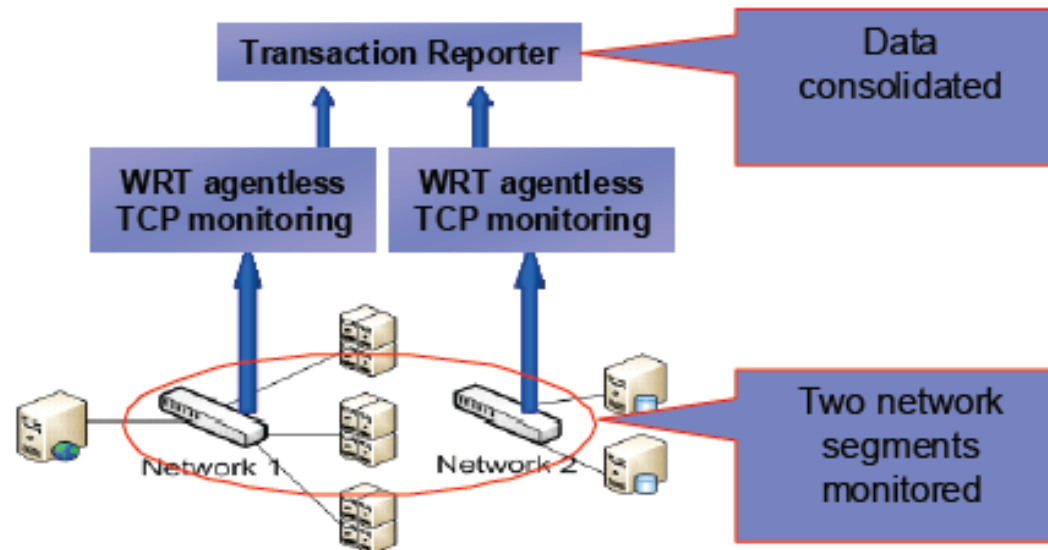


# Agentless Network Components

- ❑ Web Response Time Agent
  - Running in appliance mode it targets (connects to) a mirrored port in a network segment
  - Passively captures TCP/IP traffic in that port
  - Gathers and analyzes source and target ip-address, ports, response time, information, based on configuration
  - Forwards data to the Transaction Reporter
- ❑ Transaction Reporter (Agent)
  - Receives and combines data from all Web Response Time Agents
  - Analyzes the network data and calculates aggregated response time metrics, baselines and topologies
  - Populates appropriate workspaces
  - Monitors and highlights deviations from baselines

# Agentless Network Components

- All other components required:
  - Tivoli Enterprise Monitoring Server (TEMS), Tivoli Enterprise Portal Server (TEPS), Tivoli Data Warehouse (TDW)
  - Transaction Collectors, Application Management Console (AMC)
  - All other ancillary components
    - OS Agents, Tivoli Common Reporting, ITCAM for WAS Agents & Data Collectors, etc.



# Agentless “vs” Agent-Based Transaction Tracking

- ❑ Agentless
  - Simpler to deploy, does not replace agent-based, WRT to Transaction Reporter, one agentless instance per network segment
  - Monitors TCP traffic and collects data on (clients, servers, components, protocols, ports, client/server and server/server relationships)
  - Can cover more domains, produces less data for topologies
- ❑ Agent-Based
  - More complex to deploy, Data Collectors to Transactions Collectors to Transaction Reporter, one or more agents per endpoint
  - Gathers detailed domain, transactions instance, transaction, application, component, server information
  - Includes domain to domain tracking of transactions
- ❑ CAN BE USED COMBINED



# WRT Agentless Configuration

- Configure and start the Web Response Time Agent
  - Make sure you select the “*Monitor all TCP Traffic*” checkbox
  - Configure type of monitoring (TCP, HTTP, HTTPS)
  - Select “*Monitor remote network traffic*” checkbox
  - Configure IP Address to monitor for traffic
  - Connect monitored NIC to a port spanning device
  - Set network masks to exclude
  - Set server masks for TCP data
  - Install all necessary certificates



ITCAM for Web Response Time

Specify basic monitoring configuration.

Monitor All TCP Traffic

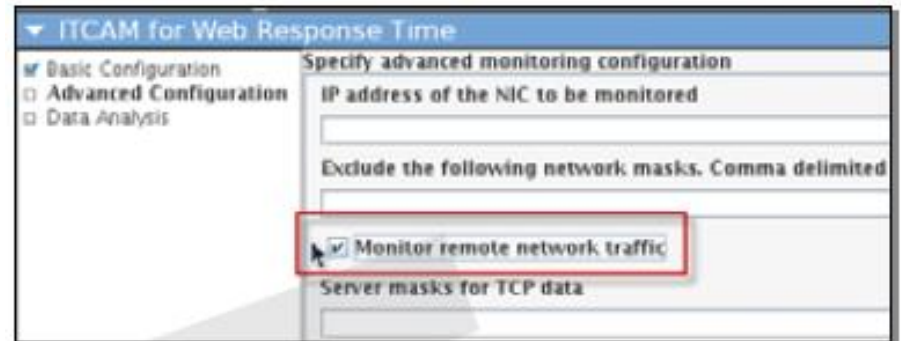
Monitors all TCP Traffic

HTTP ports to monitor (e.g. - e.g. 80,81,82)

80

Monitor HTTPS transactions

Monitor HTTPS transactions using the web server plugin



ITCAM for Web Response Time

Specify advanced monitoring configuration

Basic Configuration

Advanced Configuration

Data Analysis

IP address of the NIC to be monitored

Exclude the following network masks. Comma delimited

Monitor remote network traffic

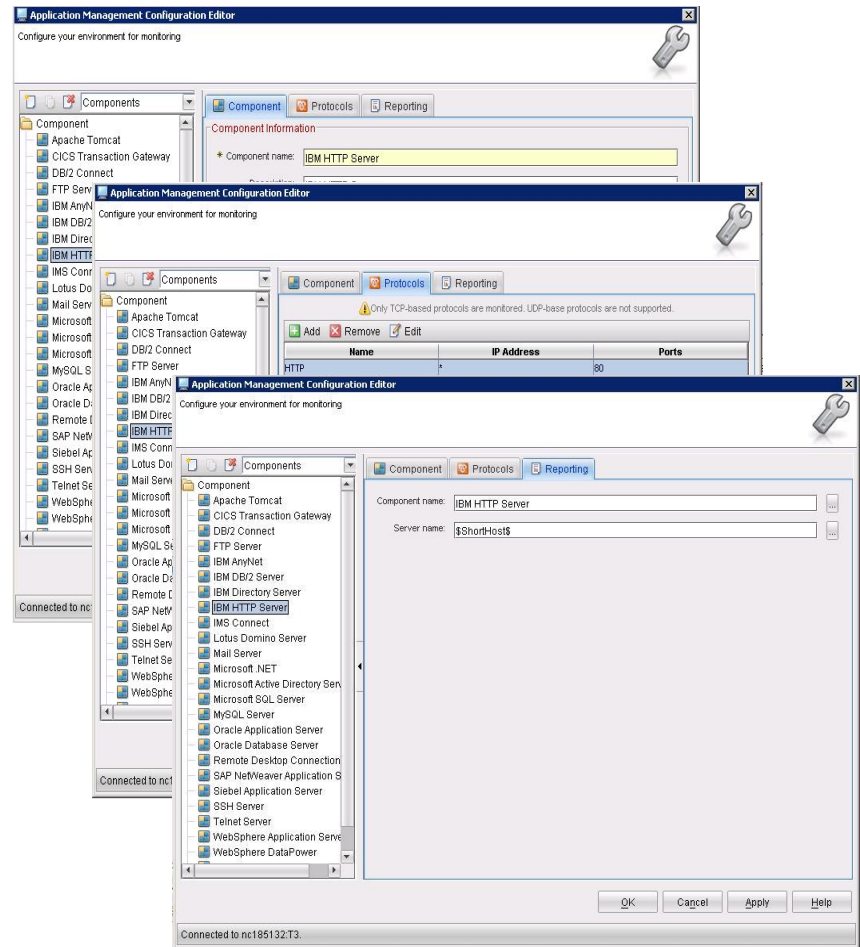
Server masks for TCP data

# App Mgt Config Editor (Components)

In ITCAM for Transactions 7.3, the term “Component” is introduced as a representation of a process within the IT environment that accepts requests on one or more TCP ports on its host machine (protocols).

The AMCE provides a Components view that can be used to define and customize component definitions to specify the way that TCP data is monitored and reported on within ITCAM for Transactions.

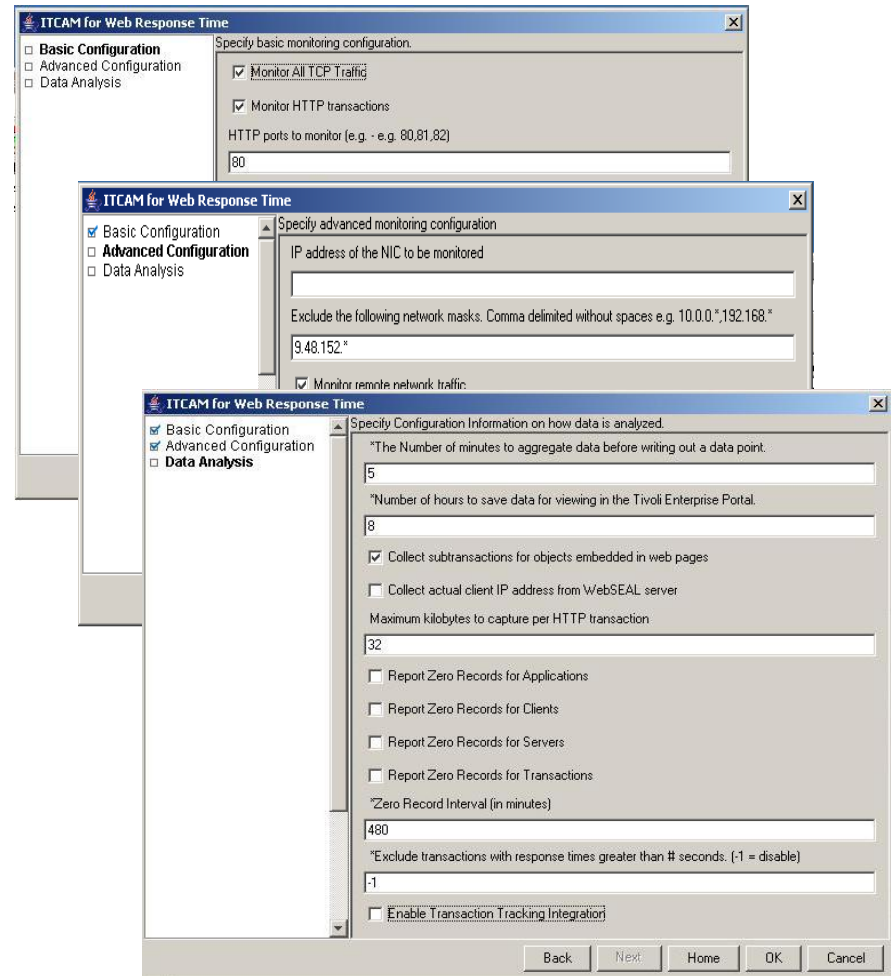
Many default component monitoring configurations are provided by default for common components such as HTTP Servers and LDAP Servers. The user can use these defaults as-is or customize the defaults to reflect the TCP traffic in their environment.



# Web Response Time TEMA Configuration

The Web Response Time TEMA configuration panels were redesigned in version 7.3 to provide better usability in addition to new properties specific to TCP monitoring. These changes include:

1. Consolidation of HTTP and HTTPS Monitoring panels into the new Basic Configuration panel.
2. Renaming the previous Collection panel into the Advanced Configuration panel., with the following new properties:
  - Exclude network masks
  - Monitor remote network traffic
  - Server Masks



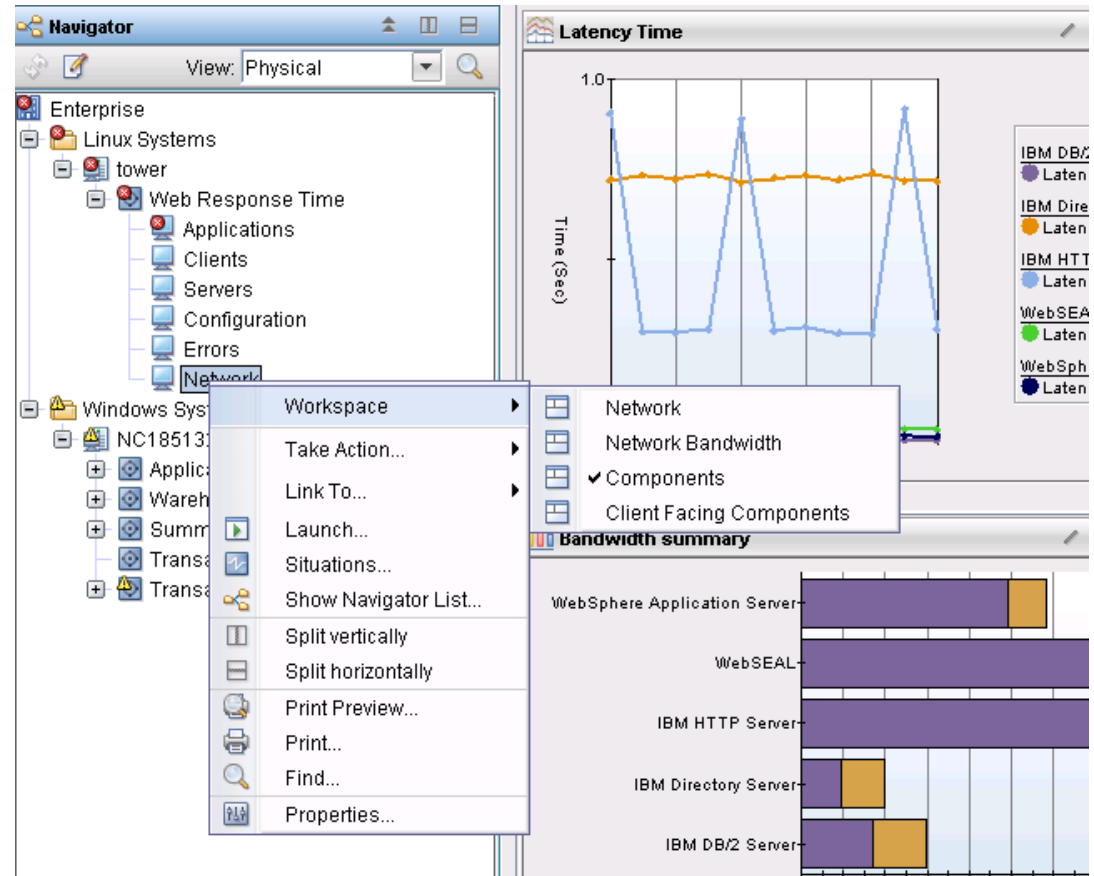
3. HTTP Transaction Tracking options have been moved to the Data Analysis panel

# Web Response Time Workspaces

The following Web Response Time workspaces are available in ITCAM for Transactions version 7.3.0, for viewing monitored TCP data:

- Components
- Component Details
- Component Server Details
- Component History
- Server Dependencies
- Client Dependencies
- Client Facing Components

These workspaces provide many different contexts of monitored TCP data, from client and server level to network component and protocol level. By navigating these multiple levels of TCP traffic in the workspaces, the user can identify TCP performance characteristics and possible bottlenecks in their network environment.

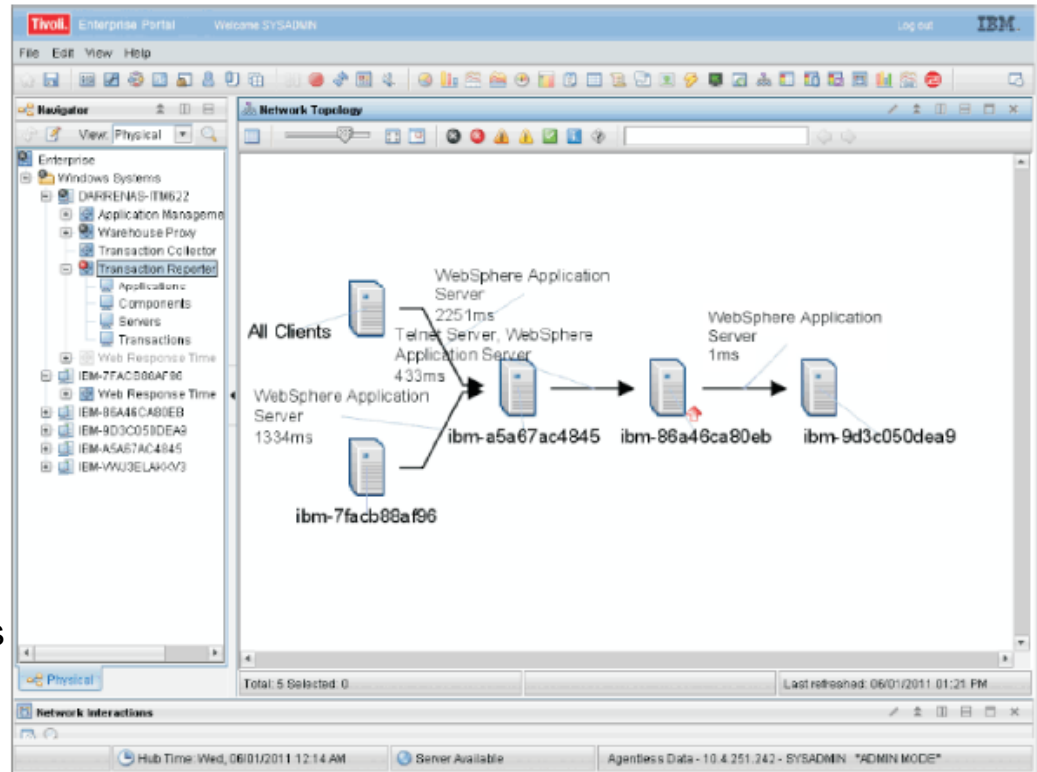


# Transaction Reporter Workspaces

The following Transaction Reporter workspaces are available in ITCAM for Transactions version 7.3.0, for viewing monitored TCP data:

- **Transactions Overview**  
Presents a topology and table of Agent based and Agentless data
- **Agentless Data**  
Presents a topology and table of Agentless data

These workspaces provide consolidated topologies for environment-wide TCP interaction visualization, as well as tables containing TCP timing and deviation metrics for use in network problem isolation.



Upon problem detection, the user may drill down from the topology or table data into the relevant Web Response Time workspaces for further diagnosis.

The Transaction Reporter has enhanced the Topology Adapter and added Table, Bar Chart and Plot Chart Adapters to enable alternate presentation of the data via configuration properties.

# Related links and Resources

- ❑ ITCAM for Transactions: Guide to Agentless Transaction Tracking
  - ❑ [http://publib.boulder.ibm.com/infocenter/tivihelp/v24r1/topic/com.ibm.itcamt.doc\\_7.3.0.1/ic/agtless.html](http://publib.boulder.ibm.com/infocenter/tivihelp/v24r1/topic/com.ibm.itcamt.doc_7.3.0.1/ic/agtless.html)
- ❑ Best Practices for Agentless Tracking
  - ❑ <https://www.ibm.com/developerworks/community/wikis/home?lang=en#!/wiki/Tivoli+Composite+Application+Manager/page/Best+Practices+for+Agentless+Tracking>

# Backup Slide: Demo Environment Layout

