Una soluzione agent-less per il monitoraggio di transazioni complesse

Paola Soressi
Software Group Tivoli
IBM Italia Spa

Agenda

- Monitoring & Diagnostics JEE Applications Across the Enterprise
- ITCAM for Transactions Overview & Deployment
- WRT HTTP appliance mode
- Integration of WRT data into Transaction Tracking
- Web Response Time Network Flow
- Agentless TCP Monitoring
- Contextual Integration
- ITCAM for Transactions - TBSM Integration

Monitoring & Diagnostics JEE Applications Across the Enterprise

ITCAM for Application Diagnostics

Deep Dive J2EE Diagnostics

ITCAM for Applications

Application Resource Monitoring

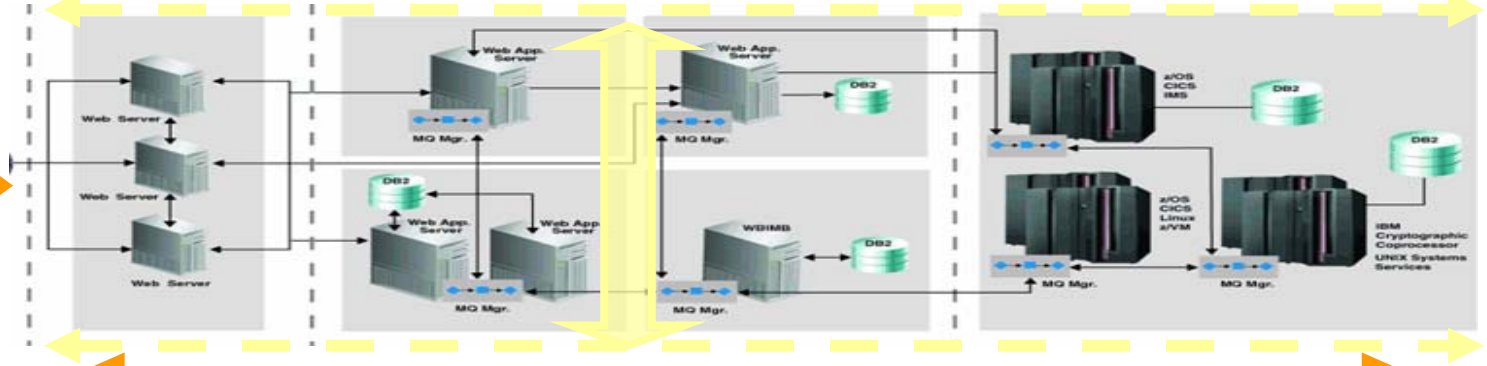
End User Response Time Monitoring

Web servers: Apache/IHS, IIS, Sun

App servers: WebSphere, WebLogic, Netweaver, Jboss, Oracle AS, Tomcat

WebSphere Portal, ESB, Workplace Collaboration, Process Server

Back-end systems: CICS, IMS, DB2



ITCAM for Transactions

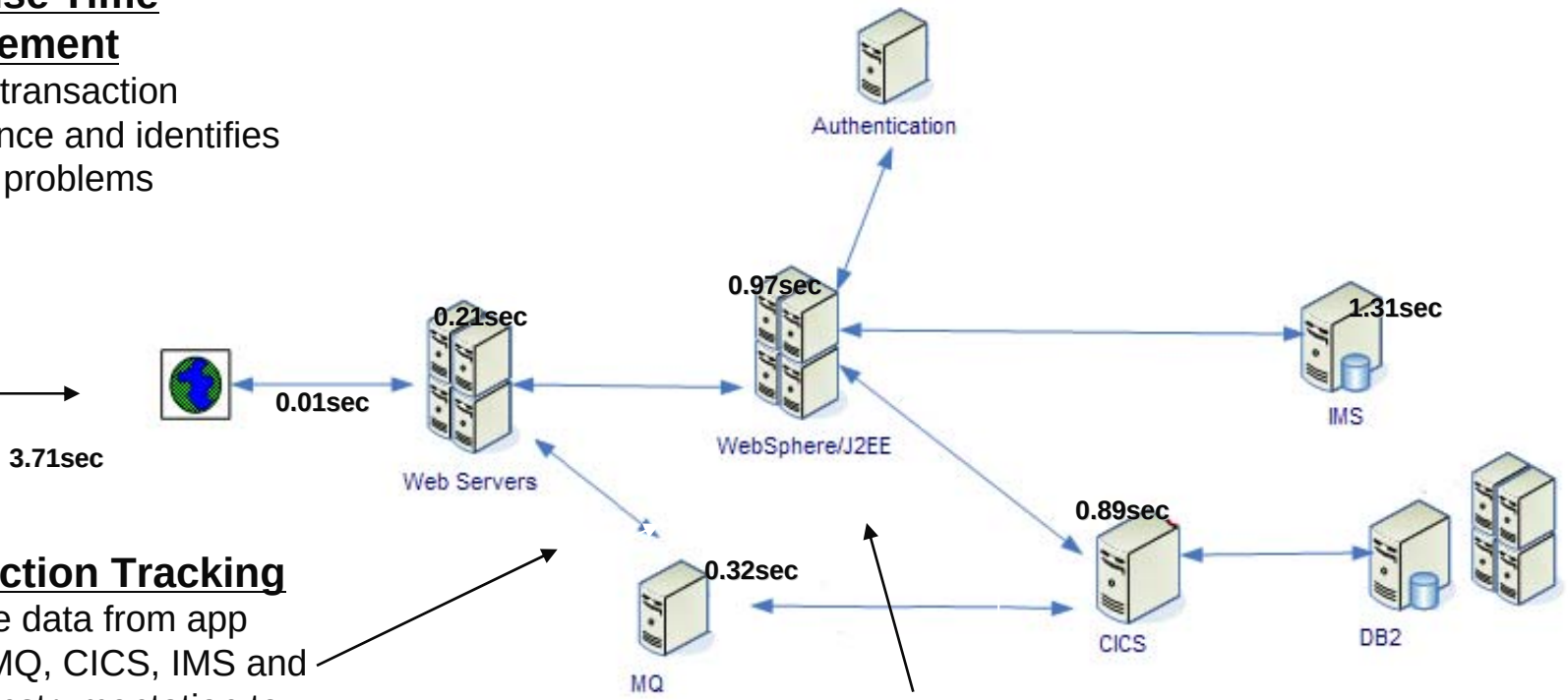
ITCAM for SOA

Service Performance Management

ITCAM for Transactions - End-to-End Monitoring, Tracking and Diagnosis

Response Time Measurement

Monitors transaction performance and identifies end-user problems



Transaction Tracking

Correlate data from app server, MQ, CICS, IMS and custom instrumentation to show topology and isolate problems

Deep Dive diagnostics

Launch in context to SME capabilities including SME level tracking within specific domain

Sense	Isolate	Diagnose	Repair

ITCAM for Transactions - Three key Monitoring capabilities

Focused on simplicity and integration via Application Management Console

Response Time

– **Web response time** - this component delivers agent less real-user monitoring of Web-based transactions through either a Web server plug-in or a standalone appliance.

– **Robotic response time** - this component runs prerecorded robotic scripts on a scheduled basis, leveraging IBM Rational® Performance Tester and IBM Rational Robot technology.

– **Internet service monitors** - these monitors are designed to help monitor the availability, response time, and performance of a wide range of Internet services.

Client Response Time

Client response that delivers real-user response time of Microsoft Windows desktop applications at the client level.

Transaction Tracking

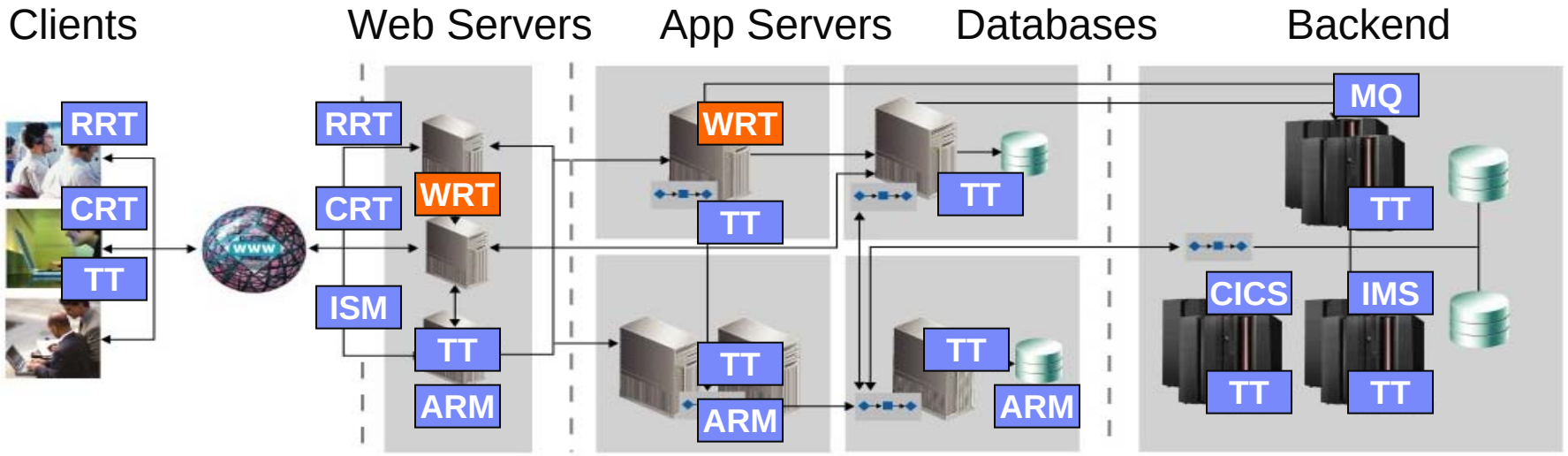
-**Transaction collector** - this agent collects transaction data from the ARM, TTAPI and transaction data collectors.
– **Transaction reporter** - this agent gathers transaction data from the transaction collectors and produces reports that can be viewed in the Tivoli Enterprise Portal (TEP).

– **MQ data collector** - this agent collects MQ tracking data and delivers this data to the transaction collectors.
– **CICS® data collector** - this agent gathers collection data from CICS and delivers this data to the transaction collectors.
– **IMS™ data collector** - this agent gathers collection data from IMS and delivers this data to the transaction collectors.
- **WebSphere Message Broker** data collector
- **CICS Transaction Gateway** data collector

Application Management Console (AMC)

Aggregate data from other IBM Tivoli Composite Application Manager agents and brings the results together in a consolidated view in the TEP. The operator can quickly view monitored transaction status and drill down into problems.

Deployment Best Practices

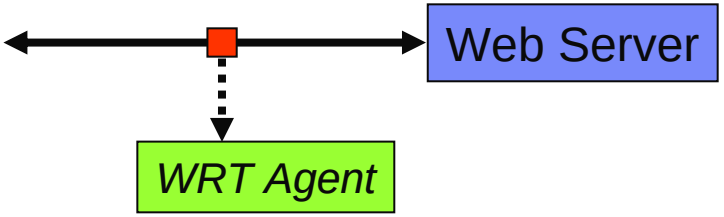


- **Robotic Response Time (RRT) agents in remote locations inside and outside the enterprise (points of presence) to monitor complex business transactions.**
- **Internet Service Monitoring (ISM) agents in various intranet locations to monitor service availability.**
- **Client Response Time (CRT) agents in corporate geographic location (branch office).**
- **Web Response Time (WRT) agent on each web server, or in each subnet as an appliance.**
- **Transactions Collector (TT) on each system to track transactions.**
- **CICS, IMS, MQ data collectors on each mainframe resource.**
- **1 Application Management Console & 1 Transactions Reporter connected to the HUB TEMS**

WRT HTTP appliance mode

- WRT can now monitor HTTP & HTTPS sessions remotely, without installing anything on the web server.

- Network must somehow allow WRT agent to see packets sent to/from web server
  - Network tap
  - Port-mirroring switch
  - Broadcast hub

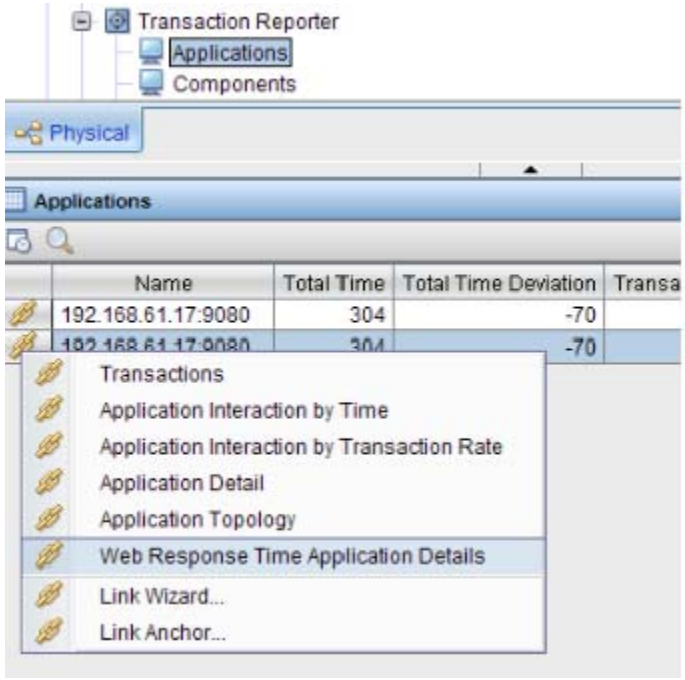


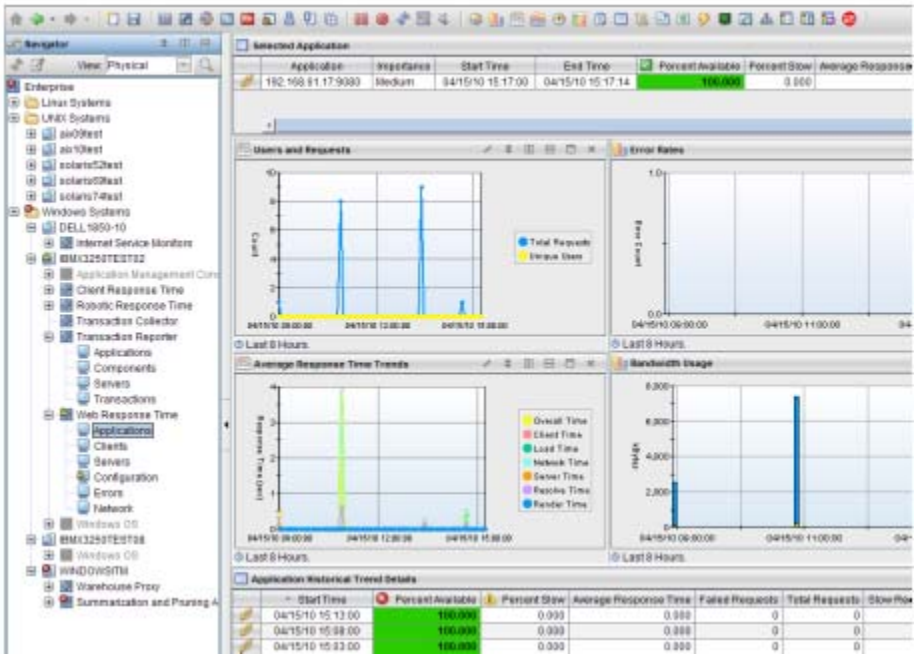
- If network can't do this, WRT agent can also run on the web server ("local appliance")

+ Lets WRT monitor HTTPS without web server plugins.

- Consumes some of web server's CPU and bandwidth, maximum CPU and memory limits can be set if desired.

Dynamic Workspace Links to WRT Application Workspace

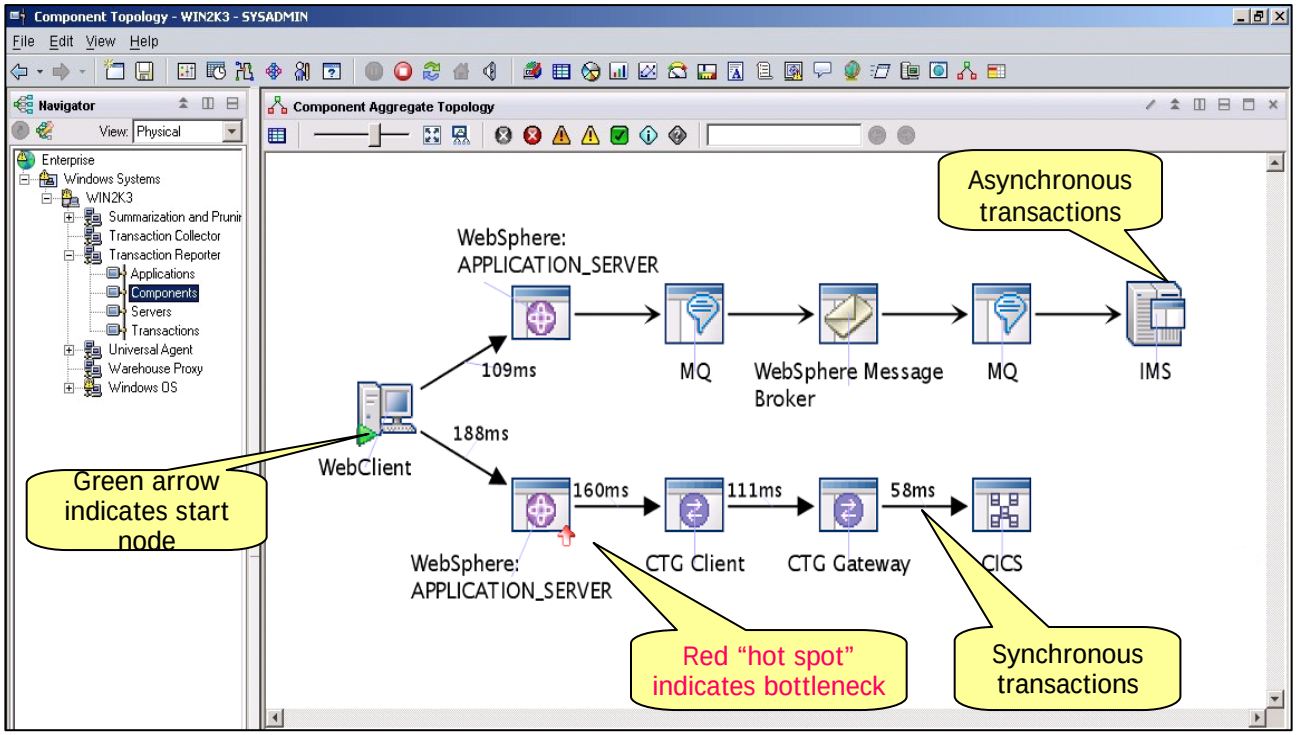




Integrated response time and transaction tracking

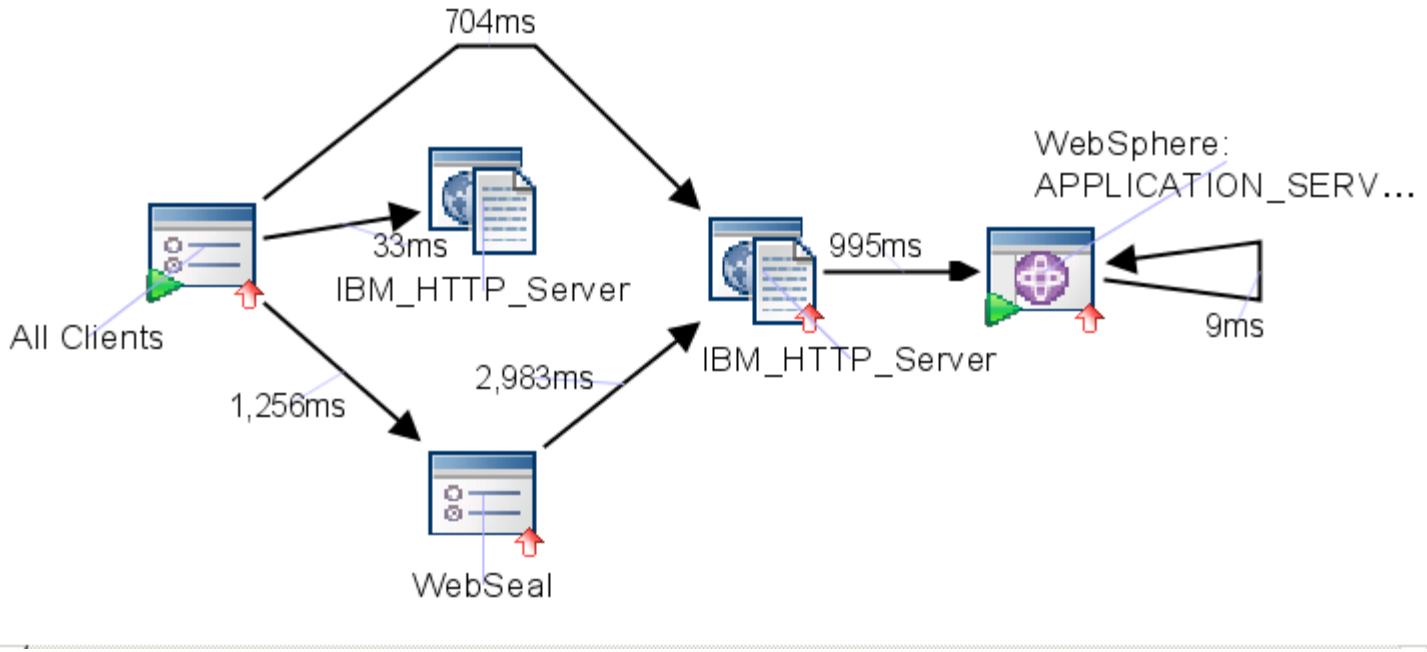
- Unified, end-to-end transaction tracking across distributed and zSeries
- Cross component tracking
- Improved tracking methodology → token-less (domain thru domain dynamic correlation)
- Support for asynchronous and synchronous transactions

- Extensible, modular infrastructure
- Low overhead and scalable
- Integrated response time and transaction tracking



Integration of WRT data into Transaction Tracking

- Integration of WRT data into the Transaction Tracking agents allows tracking of Transactions from the web browser all the way to the backend servers in a unified topology



Agentless TCP Monitoring

ITCAM for Transactions 7.3 introduces the ability to monitor the TCP interactions in a network environment.

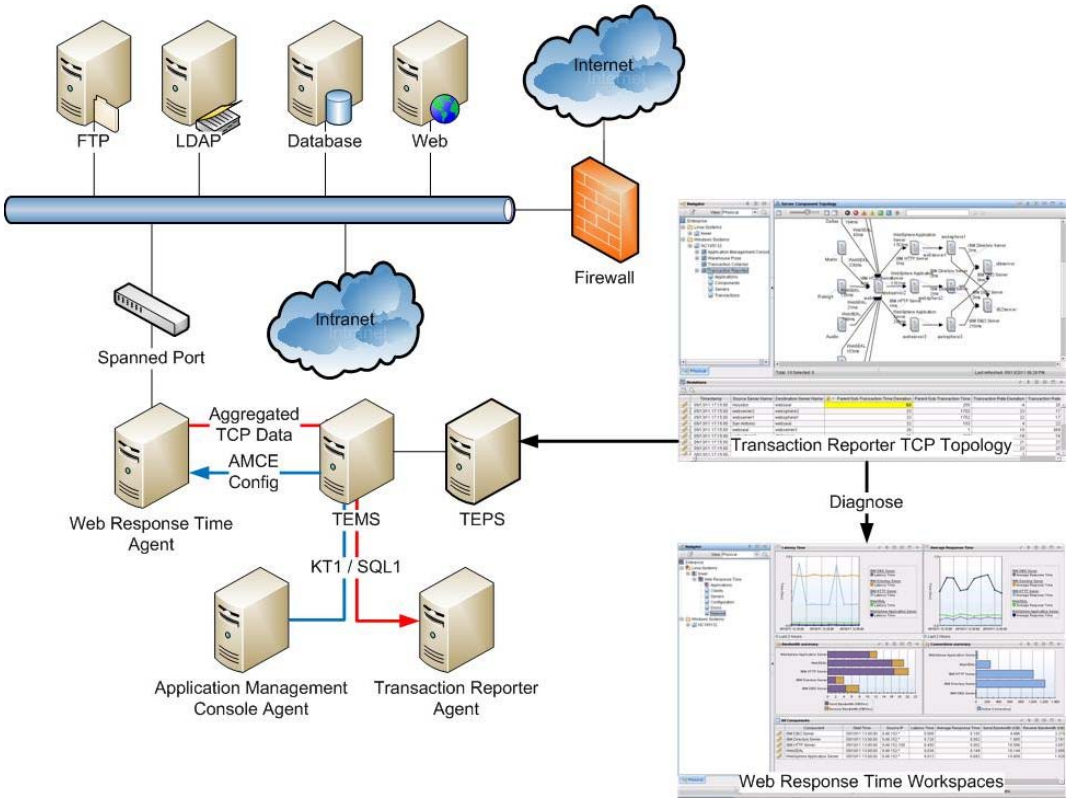
This new functionality allows the user to quickly visualize the TCP based application protocols and dependencies present in their production environment along with performance characteristics of these interactions.

The term “Agentless” in this presentation refers to the ability of this TCP-monitoring to occur:

- Without having ITCAM for Transactions agents installed on the TCP endpoints themselves (through the use of a spanned port).
- Without knowledge of the application protocols being used on top of the TCP transport layer.

Agentless Monitoring 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.



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Web Response Time: Network Flow

Component	Start Time	Source IP	Latency Time	Average Response Time	Send Bandwidth (KB)	Receive Bandwidth (KB)
IBM DB/2 Server	05/10/11 13:00:00	9.48.152.*	0.000	0.155	4.486	3.270
IBM Directory Server	05/10/11 13:00:00	9.48.152.*	0.720	0.002	1.885	2.161
IBM HTTP Server	05/10/11 13:00:00	9.48.152.109	0.450	0.002	16.596	3.697
WebSEAL	05/10/11 13:00:00	9.48.152.*	0.034	0.149	16.144	2.896
WebSphere Application Server	05/10/11 13:00:00	9.48.152.*	0.012	0.692	10.409	1.939

- Default workspace off of the navigator “Network” node
- Provides overall view of the component TCP characteristics across the entire environment
- Shows an aggregated view of many TCP-centric metrics at the component level.

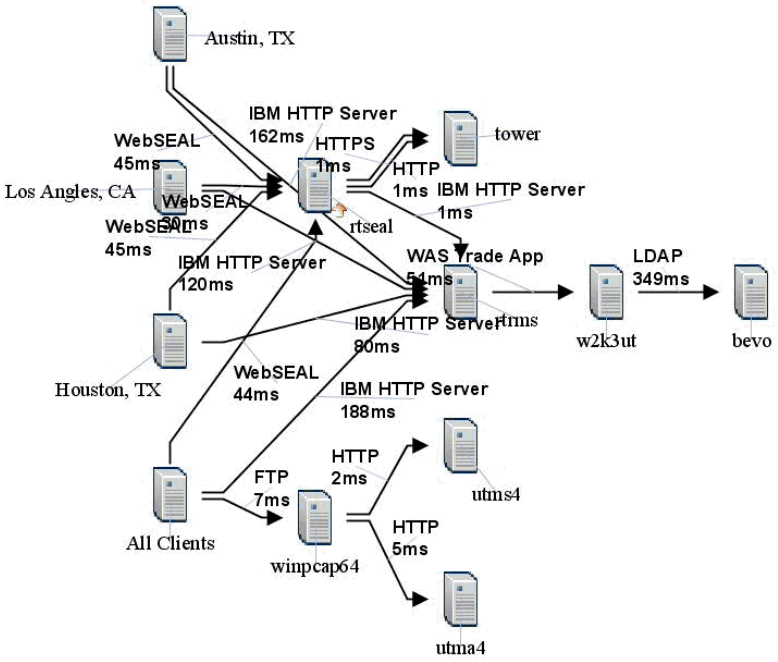
Agentless Tracking

Tracing transaction flows through network traffic analysis

Offers much faster Time-To-Value → platform independent

Low overhead, Zero transaction impact

Although …
Not as detailed or as informative
Does not provide instance data



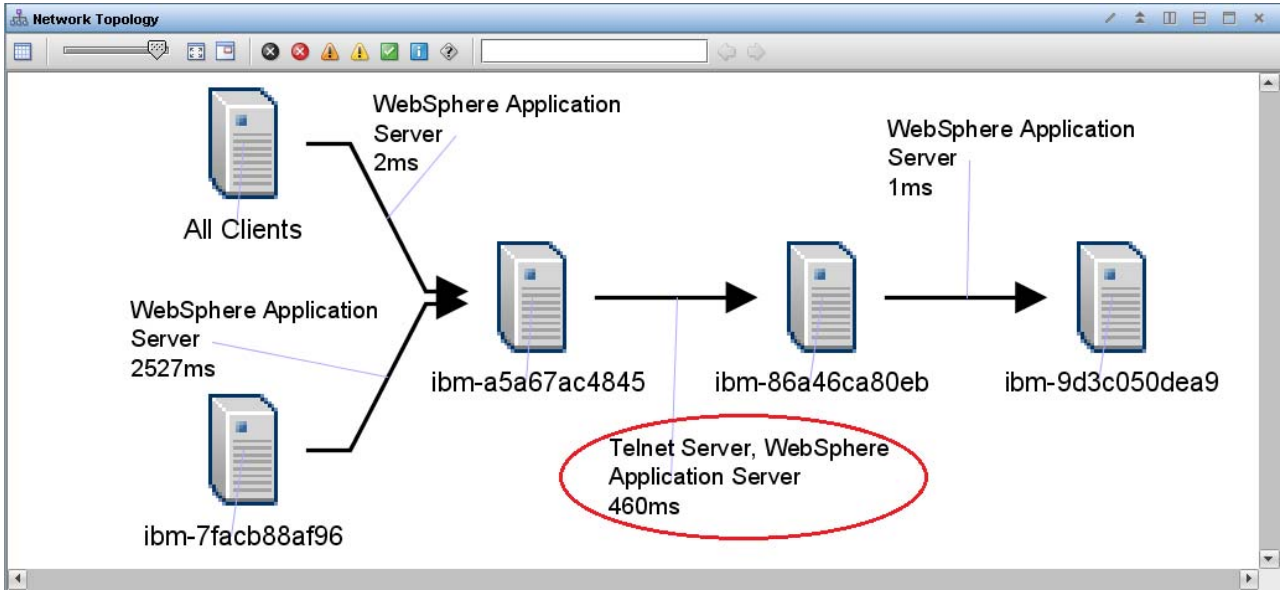
Ability to integrate agentless and agent-based data into a single transaction topology

Flexibility to start with Agentless, and seamlessly transition to agent-based as their needs require

Can also use Agentless for most domains, and Agent-based for problematic or high-risk domains

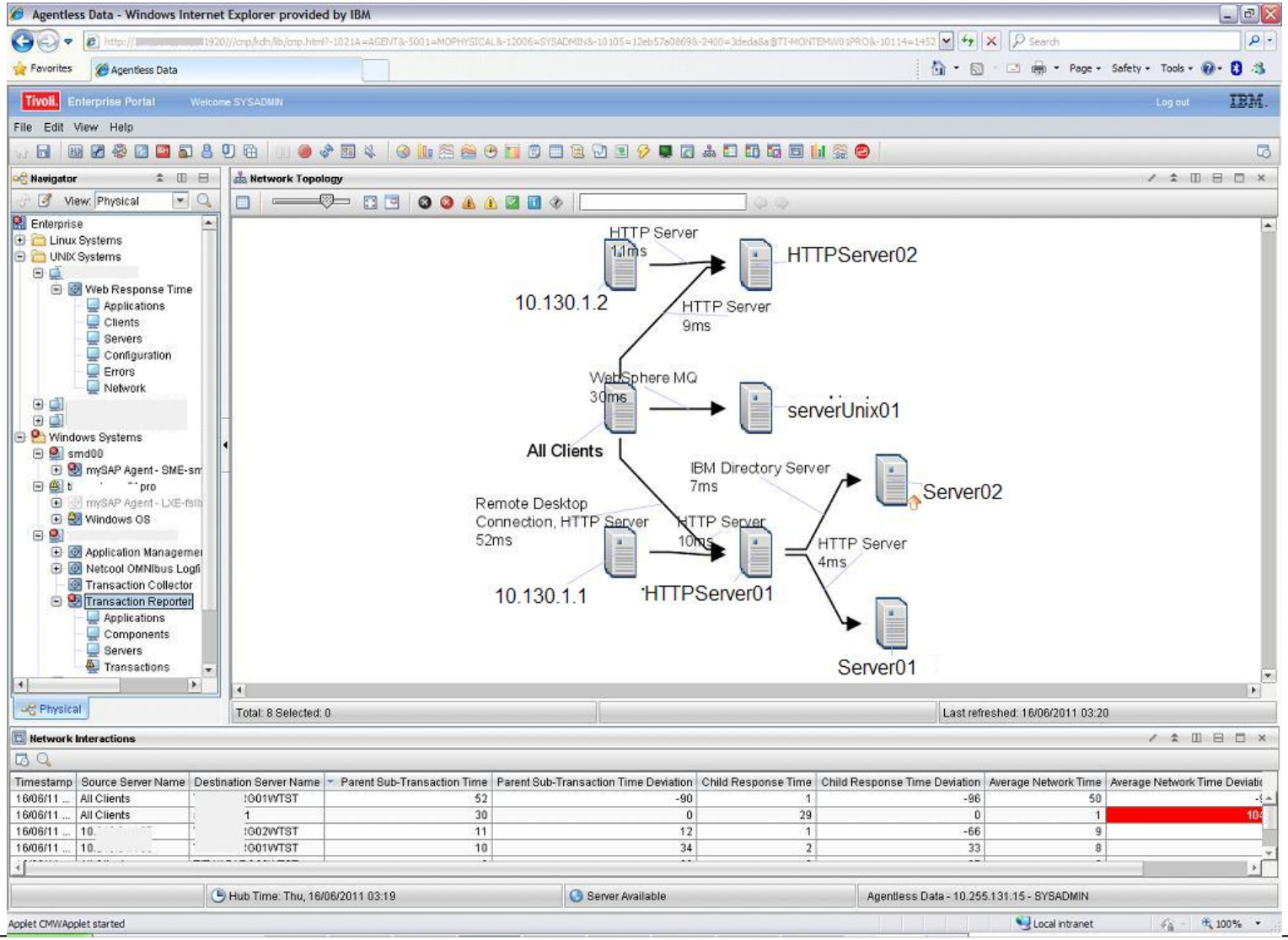
Agentless Topology

- From the aggregate interactions obtained from the Web Response Time Agents the Transaction Reporter workspaces present a topology of interactions between servers.

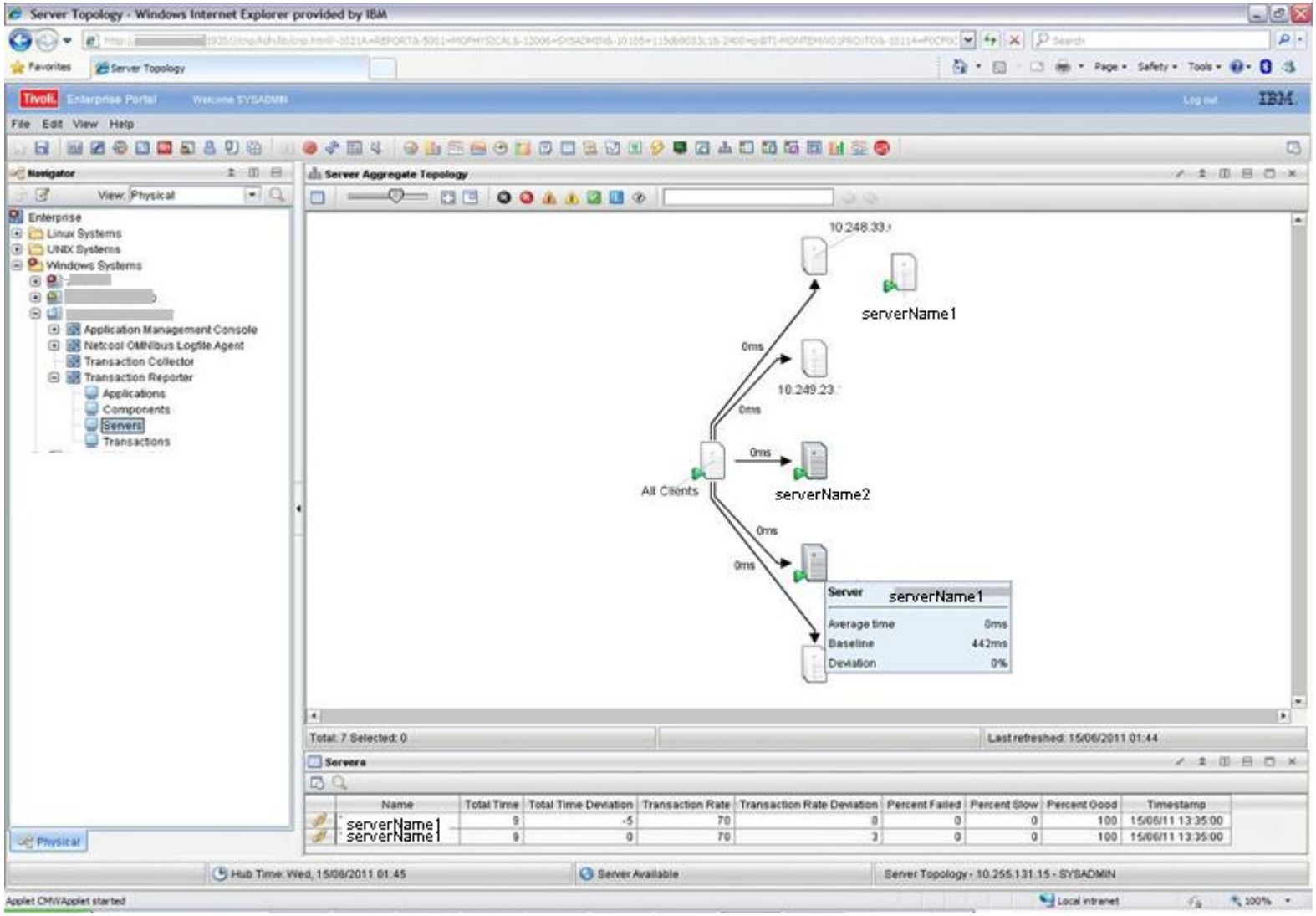


- The labels for each node is determined from the Server Name, which is truncated at the first period to allow merging of Agent based data (see next slide).
- The arrows indicate the protocol(s) used between each pair of servers. The highlighted interaction label indicates that interactions to two components was observed between these two servers. The component names are configured for the WRT agent in the AMCE.

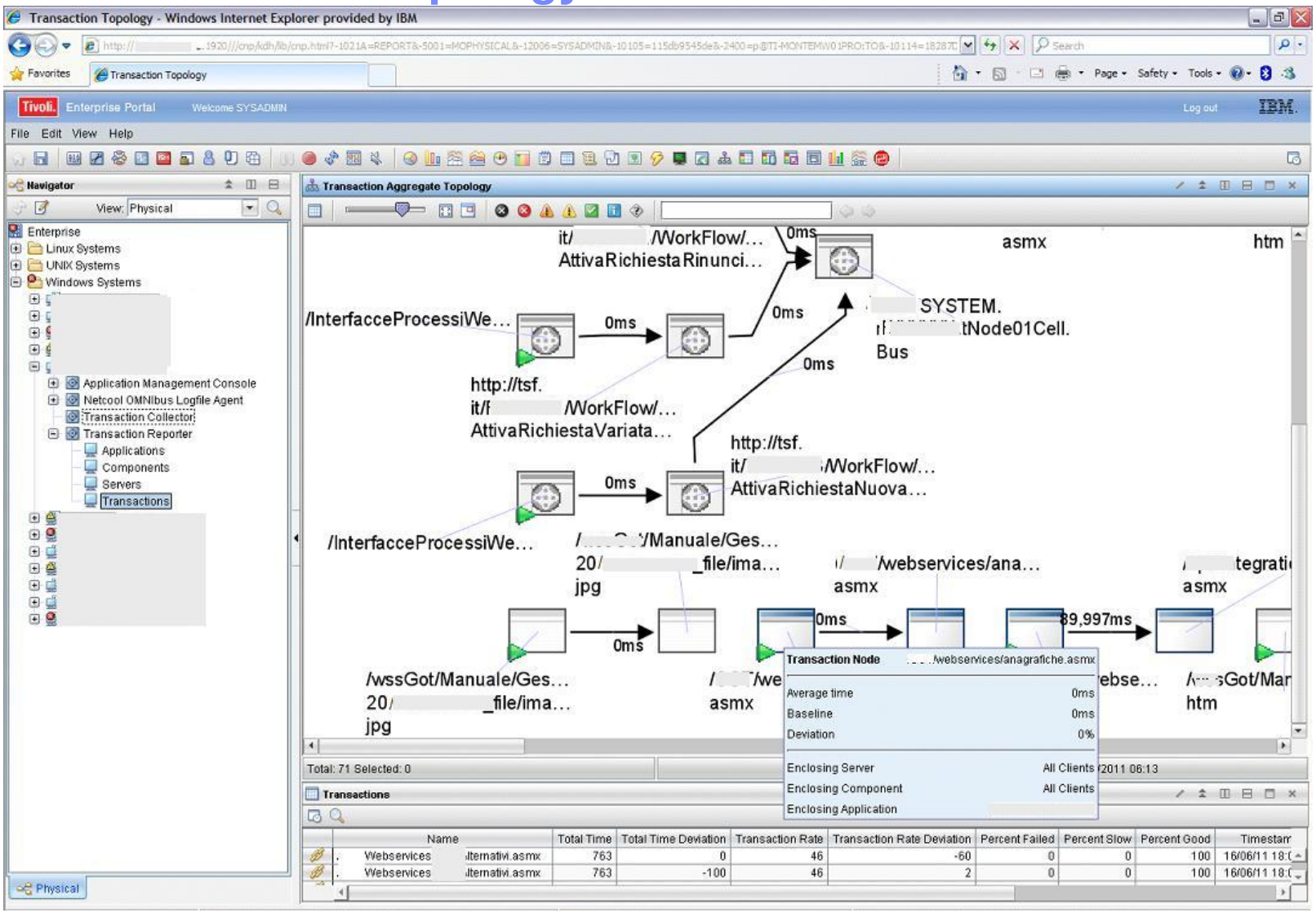
Agentless Topology



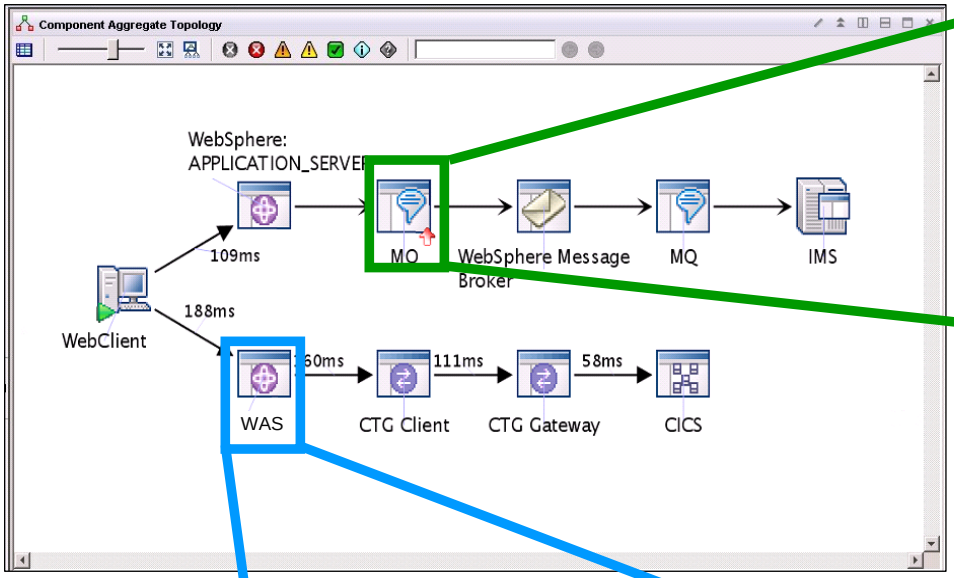
Server Topology



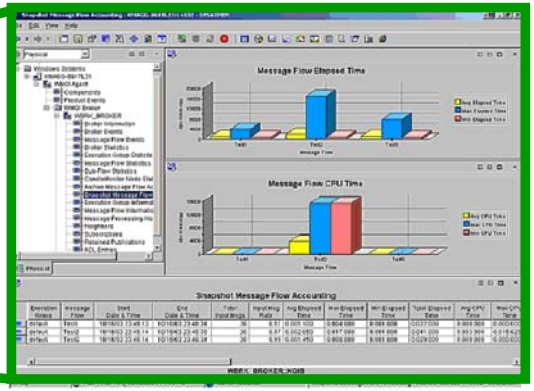
Transactions Topology



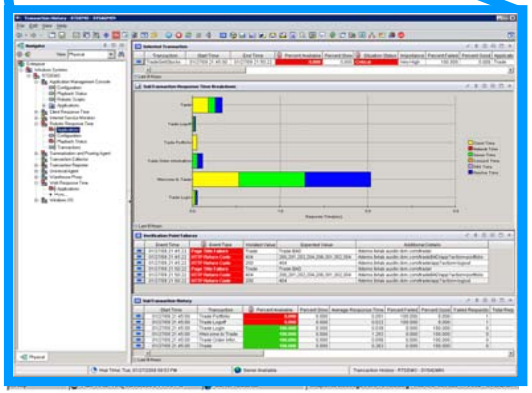
Contextual Integration



ITCAM for Transactions



OMEGAMON XE for Messaging

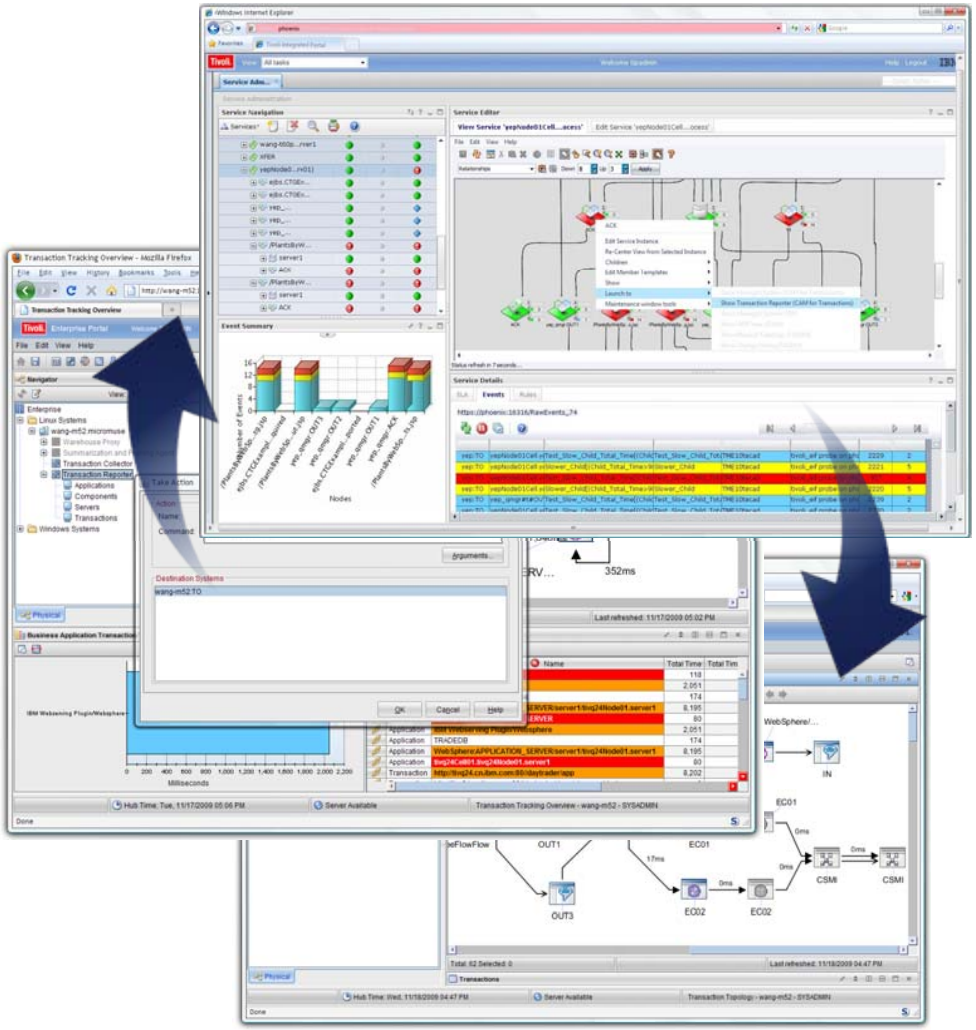


ITCAM for Application Diagnostics

- Launch-In-Context allows SME to quickly and easily drill down to the problem
- Speeds MTTR

ITCAM for Transactions - TBSM Integration

- TBSM delivers real-time information in order to respond to alerts efficiently and in line with business requirements
- Data collected by ITCAM for Transactions will be able to populate TBSM Service Model
  - –logically relate transaction activities and business services
- Situations from ITCAM for Transactions will trigger TBSM service events
  - –TBSM service view will receive alert from any abnormalities detected by CAM for Transactions
  - –Launch to CAM for Transactions workspace for detail analysis from TBSM portlet



Grazie!