

Learning Series - How to record JDBC Transactions of Enterprise Dashboard and Virtualize the same using DevTest Broker ?

DevTest Broker provides an Java Agent using which you record JDBC transactions done from Enterprise Dashboard and convert it into a virtual service.

TESTED WITH: 10.4

Pre-Requisites:

DevTest Broker should be up and running. Check pfbroker.log and make sure there are no problems in starting this service. Refer to this blog if you face any troubles [What to check if Broker Startup Fails with weird error in pfbroker log file](#)

Setting Up Java Instrumentation Agent for ED & IAM

Add the line below to LISA_HOME/bin/EnterpriseDashboard.vmoptions or LISA_HOME\bin\EnterpriseDashboardService.vmoptions

```
-javaagent:C:\Progra~1\CA\DevTest\agent\InsightAgent.jar=url=tcp://localhost:2009,name=DRADIS
```

Here; url refers to the URL of DevTest Broker. Name can be any descriptive identifier. You would find its usage later in the article

It is very important to follow the same syntax as shown above. Using folder names with space or using double quotes may lead to startup failure of ED

Start ED from command prompt from LISA_HOME\bin, run the command **EnterpriseDashboard.exe** or start it from Windows Services

For IAM, add the following entry to file C:\Program Files\CA\DevTest\IdentityAccessManager\bin\standalone.bat

```
set "JAVA_OPTS=-Dprogram.name=%PROGNAME% -javaagent:"C:\Program Files\CA\DevTest\agent\InsightAgent.jar"=url=tcp://localhost:2009,name=IAMCL %JAVA_OPTS%"
```

In case of IAM, you can start IAM from windows services

NOTE: Trying to use javagent with Registry fails to start registry.

Checking If ED is Connected to Broker

As soon as ED starts, it connects to the broker. There are 5 different ways this can be confirmed.

Method 1 - Checking pfbroker log file

```
[DevTest AGENT:BC][INFO][7468][183][ActiveMQ Session Task][Jan 23, 2020 7:56:55 PM] Agent online: [ID: 69429598][NAME: IAMCL][IP: 169.254.92.143][MC: org.jboss.modules.Main][PID: 9132]
[DevTest AGENT:BC][INFO][7468][183][ActiveMQ Session Task][Jan 23, 2020 7:57:24 PM] Agent online: [ID: 2024515099][NAME: DRADIS][IP: 169.254.92.143][MC: com.install4j.runtime.launcher.WinLauncher][PID: 18332]
```

In this case, I have set javaagent property to both ED and IAM.

Whenever the process that was set with javaagent stops, you would see an entry similar to the one shown below in pfbroker.log file

```
Agent offline: [ID: 69429598][NAME: IAMCL][IP: 169.254.92.143][MC: org.jboss.modules.Main][PID: 9132]
```

Method 2 - From ATK (Agent Tool Kit Tool)

This is a simple UI tool to show agents (yes, any process that has the javaagent configured is called as agent)

Launch atk.exe from LISA_HOME\bin folder and you should be able to see the ONLINE agents

CA Application Trace Kit (v.10.4.0.355 - i.5.3.1.2) [Dev:natsa03@NATSA03-7520.ca.com][16319157][Broker: tcp://localhost:2009?daemon=true]

Broker URL:

Overview | Classes | Threads | VS Play | Scripting | Terminal | Explorer | Log | Extensions

Pathfinder

- Live Paths
- Saved Paths
- Database
- Tickets

Manage Agents

- DRADIS
- DRADISSERVICE (12968)
- IAMCL (4340)
- IAMCLASSES
- REGISTRY

Manage Consoles

Overview

General Actions: [Icons]

Agent Name:	DRADIS (ID: 2024515099) (PID: -1)
Agent Version:	10.4.0.355
Agent Directory:	C:\Program Files\CA\DevTest\lib\core
OS:	Windows 10 10.0 (amd64)
Machine:	NATSA03-7520.ca.com (169.254.92.143)
VM Name:	7468@NATSA03-7520 (Java HotSpot(TM) 64-Bit Server VM)
VM Version:	1.8.0_221 (25.221-b11)
Working Directory:	c:\Program Files\CA\DevTest
Cmd Line:	C:\Program Files\CA\DevTest\bin\BrokerService.exe -XX:HeapDumpPath="C:\Progra
Flags:	UNCONFIGURED

CPU Usage | Memory Usage

8:13:30 | 8:14:00 | 8:13:30 | 8:14:00

Details

Settings

Method 3 - From Portal (Yes)

Just login to Portal and go to Settings -> Agents as shown below. It shows active as well as inactive agents.

DevTest Portal

Home

Create

Manage

Monitor

Application Insight

Reporting

Settings

Agents

Access Control

Roles

Resource Groups

Resources

Agents

Broker:NATSA03-7520\$@NATSA03-7520.ca.com

Version: 10.4.0.355

Agents: 5

DRADIS

Version: 10.4.0.355

Settings

DRADISSERVICE

Version: 10.4.0.355

Settings

IAMCL

Version: 10.4.0.355

Settings

IAMCLASSES

Version: 10.4.0.355

Settings

REGISTRY

Version: 10.4.0.355

Settings

JVM Performance

CPU Usage (%)

100%

90%

80%

70%

60%

50%

40%

30%

20%

10%

0%

30

Method 4 - Using PF Invoke API

<http://localhost:1505/lisa-pathfinder-invoke/api/v1/agents>

NOTE: This is what the portal uses internally

Method 5 - Using Workstation

Created a VS by recording. Choose java as protocol.

Virtual Service Image Recorder

Please provide us with some basic information about what is to be recorded and select the appropriate protocol(s) involved. Some transport protocols do not allow for a data protocol.

Basics Notes

Write image to: Files\CA\DevTest\Projects\SE_Issues_Jan_2020\DE439223\3m.vsi Browse...

☒ Create ☐ Merge into

Import traffic: Browse

Transport protocol: Java

☐ De-identify (transport layer)

☐ Treat all transactions as stateless

☐ Allow duplicate specific transactions

Default navigation: WIDE Last: LOOSE

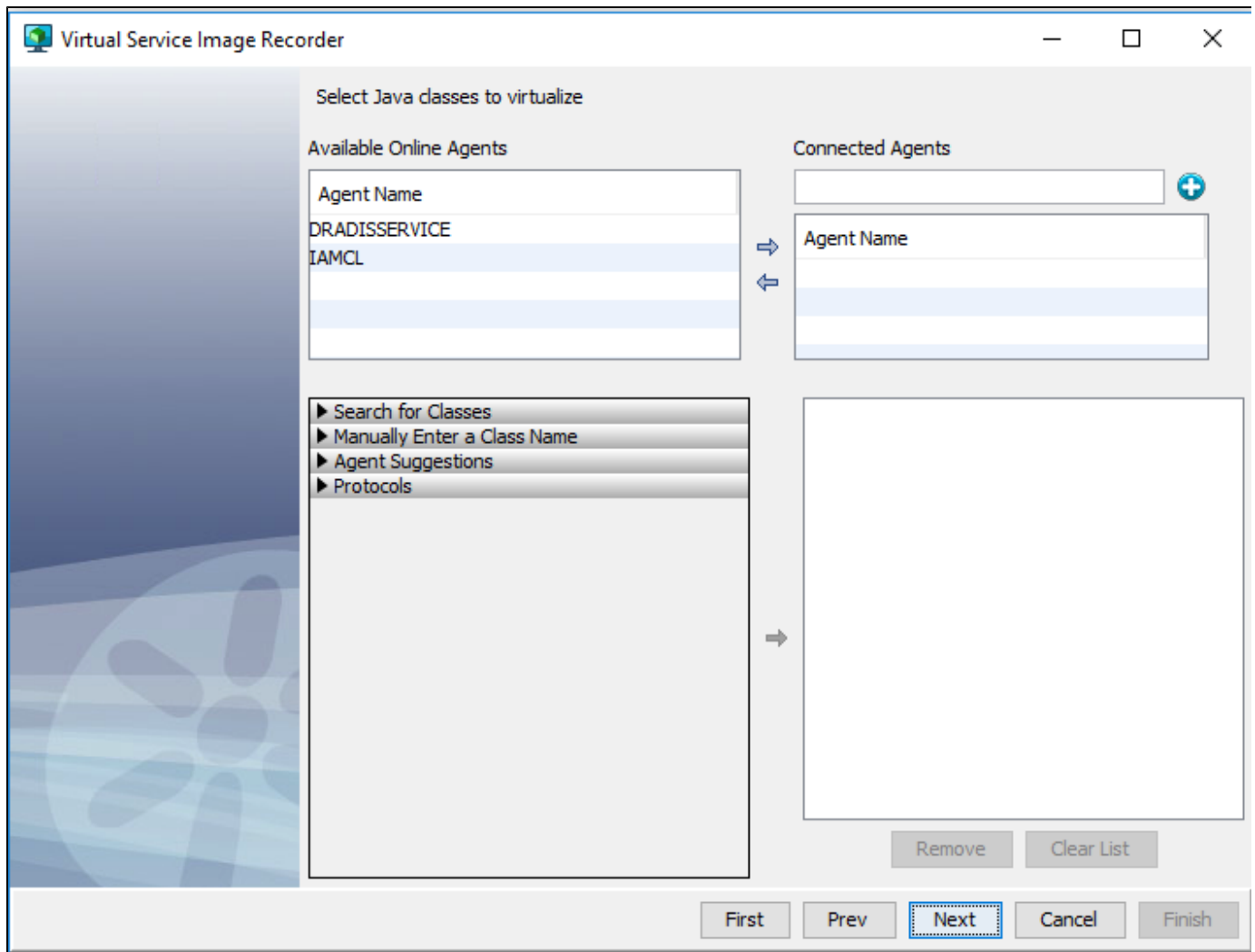
Export to: Browse...

Model file: Files\CA\DevTest\Projects\SE_Issues_Jan_2020\DE439223\3m.vsm Browse...

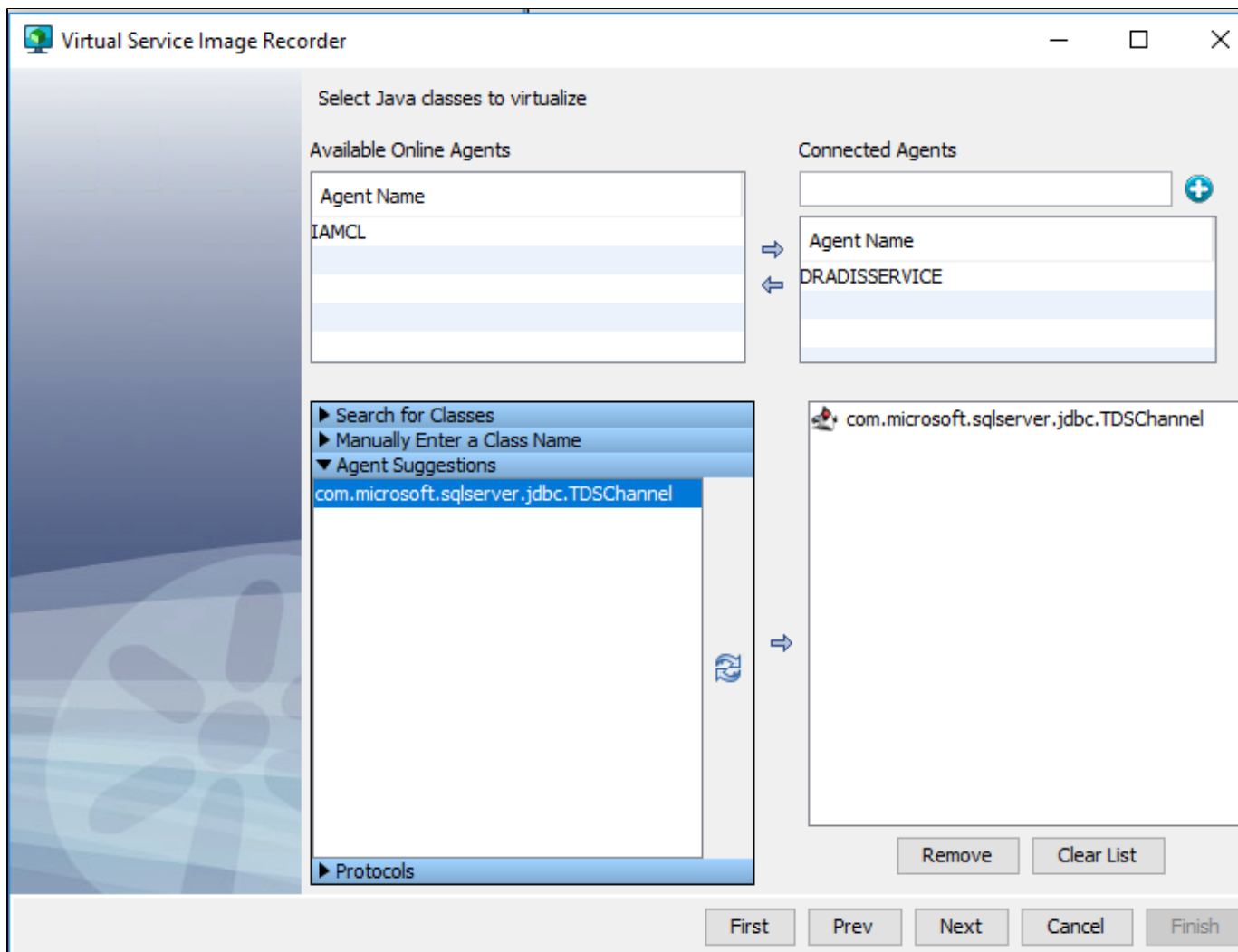
VS Model style: ☐ More flexible ☒ More efficient

First Prev Next Cancel Finish

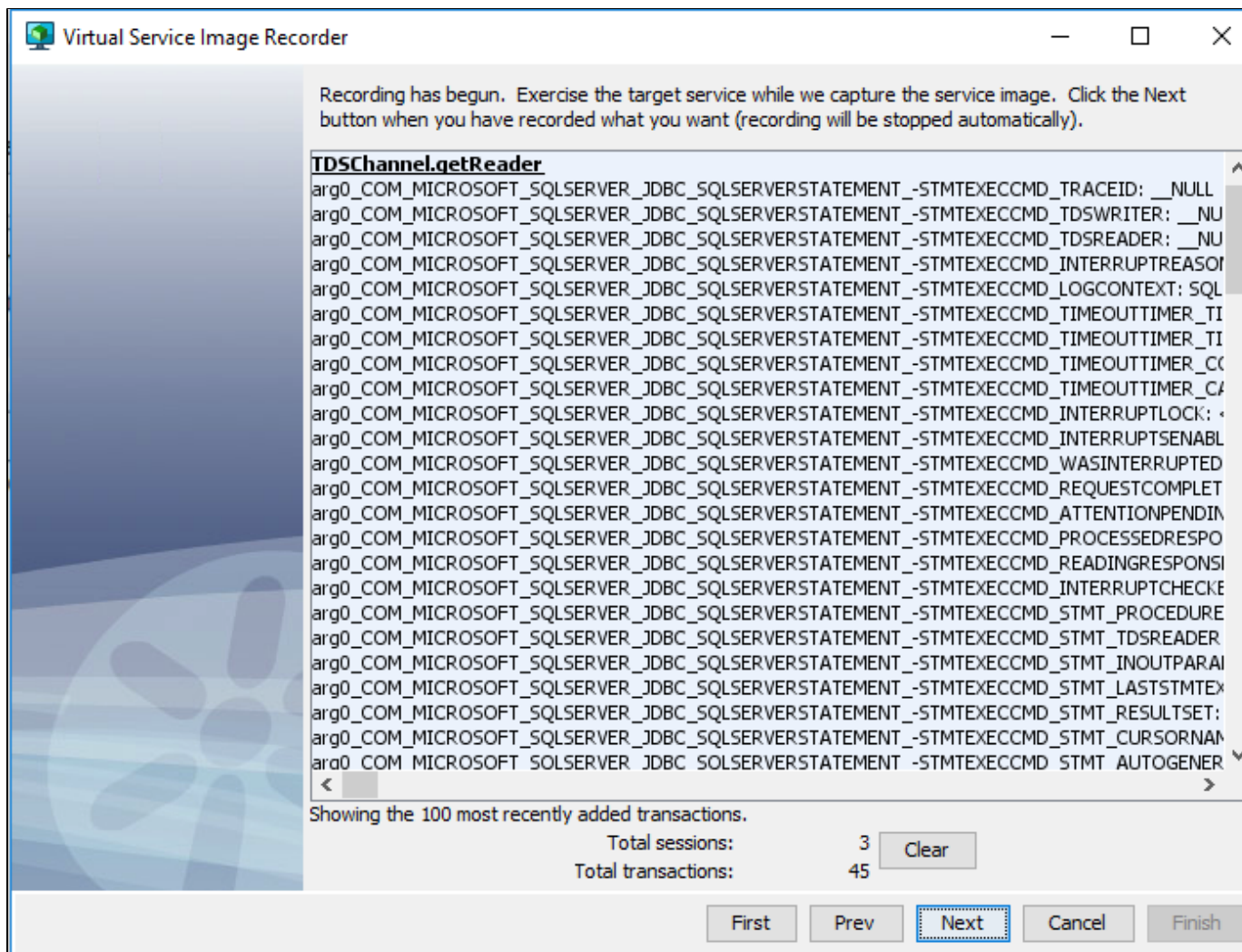
You would see online agents appear in next screen



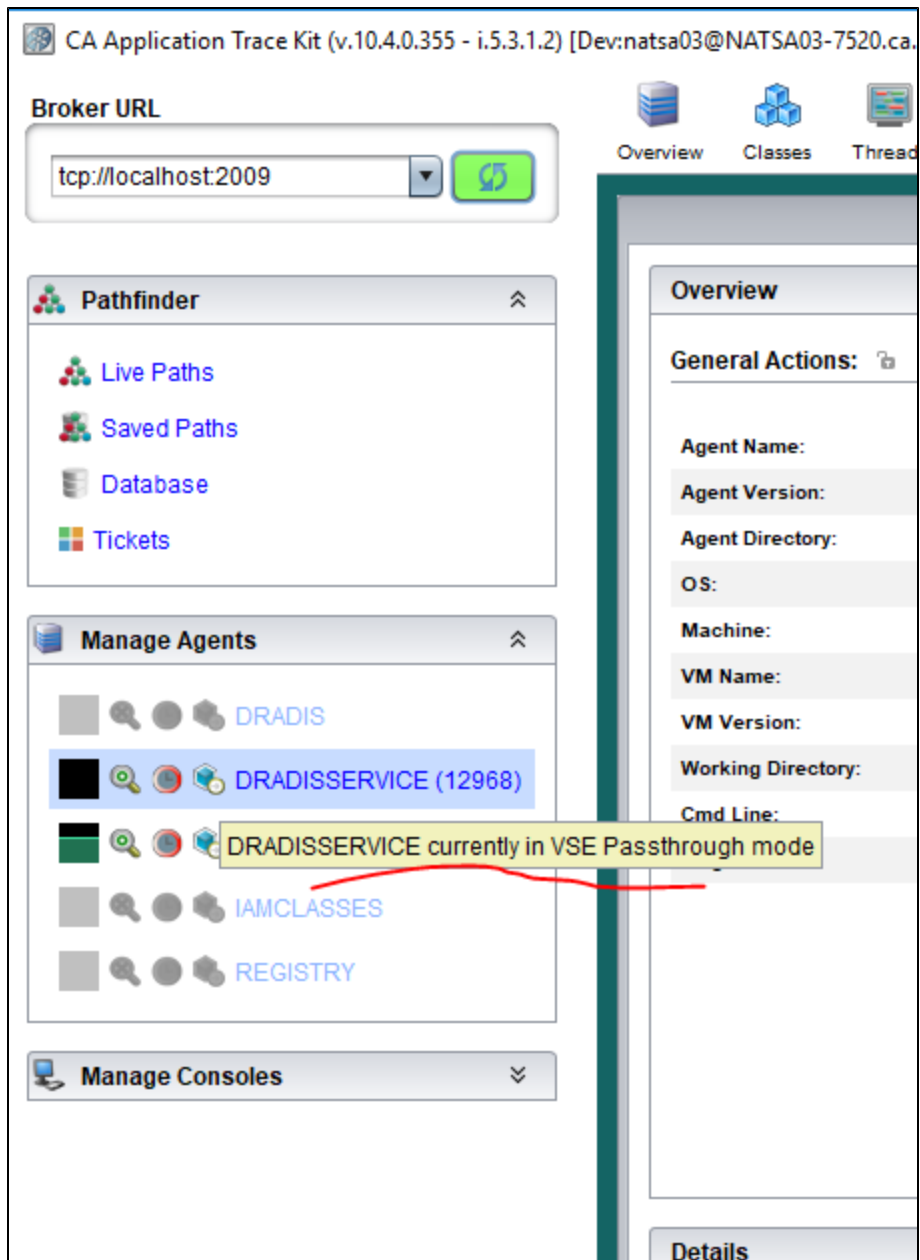
Choose agent, move it to right and choose class from 'Agent Suggestions'



In the next screen you would see JDBC traffic being captured and you can move further and finish the VS



Now that you have just done the recording and the VS not deployed, you would be able to see that the agent is in passthrough mode in ATK



As soon as you deploy the VS that was recorded, you would see that the status of agent changes to PLAYBACK mode

IN case of an active customer defect (DE439223), the status doesnt change to PLAY BACK and remains in PASSTHROUGH mode after deploying the VS

