Pacific Application Server for OpenEdge: Getting Started

Progress OpenEdge 11.5 Workshop

2015
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Moving to Pacific Application Server for OpenEdge

- OpenEdge 11.5 is the first release including the Pacific Application Server for OpenEdge, Welcome to the neighborhood!
Series of training sessions

- Roadmap for your training:
  - Getting Started
  - Creating an instance and deploying samples
  - Using Progress Developer Studio
  - Using OpenEdge Management
  - Using the Production Server
Prerequisites

Before you begin this lesson, you should meet the following prerequisites:

- Existing understanding of the OpenEdge AppServer
- Access to a Progress OpenEdge 11.5 installer and control codes

General comment based on the fact that commands can be executed in both Windows and UNIX environments

- Slides and demonstration are all Windows based
  - "\" in this script, please replace with "/" on Unix
  - %DLC% equals $DLC equals on Unix
  - %WRKDIR% equals $WRKDIR on Unix
Agenda: Learning objectives

When you complete this lesson, you should be able to:

- Identify how the Pacific Application Server has been customized for OpenEdge
- Explain the main difference between OpenEdge AppServer and PAS for OpenEdge
- Install the Development version
- Start the default instance
- Verify the instance is running by viewing the default landing page
- Identifying what is running in an instance
- Stop an instance
- Troubleshoot using log files
How the Pacific Application Server has been customized for OpenEdge
What is the **Pacific Application Server (a.k.a. PAS)**?

- A common *Progress Web server platform* that has been *extended* with simpler administration and deployment tools and is *preconfigured* to operate as a *production* ready server.
What is the Pacific Application Server for OpenEdge?

- A Pacific Application Server with
  - An embedded ABL language engine
  - ABL application server for managing ABL Sessions that execute ABL Requests
Two different control codes for PAS for OE are available for installation

**Development**
- Application Server providing APIs to inspect and perform development functions

**Production**
- Secured Application Server locking down APIs and access
Benefits of Pacific Application Server for OpenEdge

Reflecting our core values…

- Reliability
  - Tested by Progress and the Apache community

- Simplicity
  - Leveraging tested architecture
  - Adding OpenEdge functionality to existing architecture

- Integrity
  - Focus on our customer needs not re-inventing the wheel

- Commitment
  - Developing software for today and whatever comes next
What is the main difference between OpenEdge AppServer and the Pacific Application Server for OpenEdge?
Let’s compare OpenEdge AppServer to Pacific Application Server for OpenEdge

**OpenEdge AppServer**

*Works with a Web Server*

**PAS for OpenEdge**

*Is a Web Server*
What's the difference?

- **OpenEdge AppServer** works with a **Web Server**

- **Pacific Application Server for OpenEdge** brings OpenEdge AppServer functionality into the instance

"Fewer hops, to get the job done!"
What are the changes in the Architecture

AppServer Components

Clients

AdminServer

NameServer

AppServer

Agent

1 ABL Sessions

AIA WSA REST/Mobile

Simplified Architecture

Pacific Application Server for OpenEdge

APSV (AIA) SOAP (WSA) REST/Mobile

Session Manager

MSAgent

ABL Session1
What is an OpenEdge Application Server?

OpenEdge Application Server

- OpenEdge AppServer (a.k.a. Classic AppServer)
- PAS for OpenEdge
- WebSpeed OpenEdge application servers
Comparison of Classic Application Instance with Pacific Application Server for OpenEdge
Installing the Pacific Application Server for OpenEdge
Installing PAS for OE: Development is most open to monitoring

- You have the choice of install Pacific Dev AS for OE or Pacific Prod AS for OE
Exercise: Installing OpenEdge 11.5

- This session along with several other sessions will have hands on exercises

  - Complete the exercise for **Installing OpenEdge 11.5**
Starting the default instance
Making it easy to get started – Default instance **oepas1**

- When you completed the install of the Development server you will have a sample instance directory, **oepas1**, and a **bin** directory with scripts to work with the instance.
Pacific Application Server for OpenEdge Instances

- Each instance has a name
  - `oepas1` is the equivalent to AppServer's `asbroker1` default
- Instances have **private** file space **outside** the OpenEdge install
- An instance lives beyond OpenEdge uninstall
- Instances are transferrable between OpenEdge installs
- An instance can be packaged and redeployed
Starting the default instance

1. Select **Start > Progress > OpenEdge 11.5 > proenv**
2. Enter
   \texttt{cd oepas1\bin}
3. Enter
   \texttt{tcman start}

\textbf{Do not close this window!!}
Exercise: Starting the default instance

- Use the Exercises document and complete
  - Starting the default instance
Verifying an Instance in a Browser
Verifying with a browser

- Open a browser and enter **http://localhost:8810** to view the default landing page.
Using Tomcat Web Application Manager

- This landing page is only available in the Development version not available for Production version.

Only available for development version

Production does not include this
Exercise: Verifying the instance is running in a browser

- Use the Exercises document and complete
  - Verifying the instance is running in a browser
What is running in my instance?
Template for creating an instance

- The difference between CATALINA_HOME and CATALINA_BASE
Checking execution environment for CATALINA_HOME vs. CATALINA_BASE

- Getting execution environment details
  - `tcman env`

```
proenv>tcman env
catalina home: C:\Progress\OpenEdge\servers\pasoe
catalina base: C:\OpenEdge\WRK\oepas1
java home: C:\Progress\OpenEdge\jdk
jre home:
manager http port: 8810
manager https port: 8811
manager shut port: 8812
manager URL: http://localhost:8810/manager
config type: instance
config alias: oepas1
config parent: C:/Progress/OpenEdge/servers/pasoe
server running: 0
instance tracking: True
instance file: C:\Progress\OpenEdge\servers\pasoe\conf\instances.windows
server process-id: 0
window title: n/a
security model: dev
service: false
```
Getting more information from `tcman help`

- To view the options for `tcman`, enter
  - `tcman help`
## CATALINA_HOME install directory – DO NOT TOUCH

### Directories of interest

<table>
<thead>
<tr>
<th>Directory</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>%CATALINA_HOME%\common\lib</td>
<td>Contains general 3rd party libraries that are shared by a server, its instances, and its web applications.</td>
</tr>
<tr>
<td>%CATALINA_HOME%\extras\</td>
<td>Contains the WAR files of the default Tomcat web applications and OpenEdge web applications</td>
</tr>
<tr>
<td></td>
<td>• ROOT.war</td>
</tr>
<tr>
<td></td>
<td>• host-manager.war</td>
</tr>
<tr>
<td></td>
<td>• manager.war</td>
</tr>
<tr>
<td></td>
<td>• oemanager.war</td>
</tr>
<tr>
<td></td>
<td>• oeabl.war</td>
</tr>
<tr>
<td>%CATALINA_HOME%\openedge</td>
<td>Contains the typical executables and scripts that you would find in an OpenEdge %DLC% directory (_mproapsv for example)</td>
</tr>
</tbody>
</table>
What’s running in my instance?

- The war files in my webapps are what’s running in my instance.
CATALINA_BASE – Instance for customization

- Customizations are stored in the conf directory
Stopping the default instance
Stopping the default PAS for OE instance

1. Enter

   cd C:\OpenEdge\WRK\oepas1\bin

2. Enter

   tcman stop
Volume in drive C has no label.
Volume Serial Number is 8CD0-4804

Directory of C:\OpenEdge\WRK\oepas1\logs

11/24/2014 02:17 PM <DIR>
11/24/2014 02:17 PM <DIR>
11/24/2014 02:17 PM 23 catalina-oepas1.pid
11/24/2014 02:17 PM 0 host-manager.2014-11-24.log
11/24/2014 02:17 PM 0 localhost.2014-11-24.log
11/24/2014 02:17 PM 0 localhost_access_log.2014-11-24.txt
11/24/2014 02:17 PM 0 manager.2014-11-24.log
11/24/2014 02:17 PM 4,162 oepas1.agent.log

8 File(s) 7,543 bytes
2 Dir(s) 233,778,053,120 bytes free
Exercise: Stopping the default instance

- Use the Exercises document and complete
  - Stopping the default instance
Troubleshooting and Logging
Obvious issue, if you don’t see the oepas1 directory

- This is an obvious problem it means that you have likely installed the Production version instead of the Development license

Use `tcman env` to check the installation security type =dev

Note: If you installed Progress Developer Studio it will install the Development server for the labs we had you explicitly install Development so that you would notice that there are two separate license keys
Three kinds of log files

- Tomcat logs
- PAS for OE Multi-session Agent log
- Web application logs
Troubleshooting

- Where to look
  - **PAS for OE Multi-session Agent log:**
    `<pas>\<instance>\logs\<application>.agent.log`
    is very much like the server log in the classic AppServer
  - **Web application logs:**
    `<pas>\<instance>\logs\<application>\<date>.log`
    is very much like the broker log in the classic AppServer
Tomcat logs

- `catalina.<date>.log` - Tomcat Server activity
- `host-manager.<date>.log` - host-manager.war activity
- `Localhost.<date>.log` - Web application activity
- `localhost_access<date>.log` - Tracking request processed by the server
- `manager.<date>.log` - manager.war Web application
Controlling Tomcat logging

- `%CATALINA_BASE%/conf/logging.properties`
Pacific Application Server for OpenEdge Multi-session Agent log
Controlling Pacific Application Server for OpenEdge Multi-session Agent logs

- `%CATALINA_BASE%\conf\openedge.properties`

```plaintext
# Default properties for Session Manager
#
[AppServer.SessMgr]
agentExecFile=\{psc.as.oe.dlc\}/bin/_mproapsv
agentListenerTimeout=300000
agentLogEntryTypes=
agentLogFile=
agentLoggingLevel=2
agentLogThreshold=0
agentNumLogFile=3
agentStartupParam=-T \{catalina.base\}/temp
```
Web applications – one for each `webapp_name.<date>.log`
Web applications

- `%CATALINA_BASE%/webapps/webapp_name/WEB-INF/logging.xml`
Logging for the session manager can be configured by
\<pas\\instance\\webapps\<application\\WEB-INF\logging.xml. The default level is warn for all appenders, but can be changed to INFO, DEBUG, or TRACE for more information.

\<root level="WARN">\n  \<appender-ref ref="SIFT" />\n\</root>\n
Changing the previous value will increase *all* logging for the Session Manager. If you want to change logging only for one component or area there are configuration values in logging.xml that are commented out. You can uncomment them and set them to the level that you need. For example,

\<logger name="com.progress.appserv.Session" level="INFO"/>
Summary for Controlling logging

- In PAS for OE, you enable logging, set logging levels, and specify the name logging files in the following properties files:
  - %CATALINA_BASE%\conf\logging.properties for Tomcat
  - %CATALINA_BASE%\conf\openedge.properties for the Pacific Application Server for OpenEdge Multi-session Agent
  - %CATALINA_BASE%\webapps\webapp_name\WEB-INF\logging.xml for Web applications
Exercise: Viewing log Files

- Use the Exercises document and complete
  - Viewing log files
Summary

- In this lesson we introduced the Pacific Application Server for OpenEdge and reviewed how to use command line tools to start, stop and clean the logs.