Upgrading to 5.1 / Building a Test System

AV TSS-05

Mike Scholman
Mobile App: Please take a moment…

Check into Session by:
- Select Detailed Schedule
- Select the specific session
- Click on “Check in”

Take Session Survey by:
- Select Detailed Schedule
- Select the specific session
- Scroll Down to “Survey” and Provide Feedback
Agenda

• Architecture
• Web Services
• Supported Configurations
• Authentication
• Administration
• Troubleshooting Tips
ARCHITECTURE
Smart Client vs. Classic

The full Avantis Client is comprised of both Classic and Smart Client Applications

- Smart Client and Classic applications are seamlessly integrated – users flow back and forth between applications as needed
- Future releases of Avantis will build upon the number of available Smart Client applications to cover more functional areas and workflows.
WEB SERVICES
Web Services

• Separate the Presentation layer from the Business Logic for the Smart Client Applications

• Used by all Smart Client Applications, Workspace, Integration Toolkit and Maintenance Map

• Older web services still exist to support Condition Manager
# IIS Application Pool Advanced Settings

## Advanced Settings

### (General)
- **Identity**: CORP\supportadmin

### Process Model
- **Idle Time-out (minutes)**: 0
- **Load User Profile**: True
- **Maximum Worker Processes**: 1
- **Ping Enabled**: True
- **Ping Maximum Response Time (seconds)**: 90
- **Ping Period (seconds)**: 30
- **Shutdown Time Limit (seconds)**: 90
- **Startup Time Limit (seconds)**: 90

### Process Orphaning

### Rapid-Fail Protection

### Recycling

- **Disable Overlapped Recycle**: False
- **Disable Recycling for Configuration Changes**: True

### Generate Recycle Event Log Entry
- **Application Pool Configuration Changed**: True
- **Isapi Reported Unhealthy**: True
- **Manual Recycle**: True
- **Private Memory Limit Exceeded**: True
- **Regular Time Interval**: True
- **Request Limit Exceeded**: True
- **Specific Time**: True
- **Virtual Memory Limit Exceeded**: True
- **Private Memory Limit (KB)**: 0
Testing using LoginPlain

- Launch Internet Information Services (IIS) Manager
- Browse to the Avantis Web Site and select Avantis
- Change to the Content View
- Right-click Session.asmx and select Browse
- From the list of operations, select LoginPlain
Testing using LoginPlain

- Enter your login parameters then click Invoke

Example:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>loginName</td>
<td>mcadmin</td>
</tr>
<tr>
<td>password</td>
<td>security</td>
</tr>
<tr>
<td>envName</td>
<td>demo501</td>
</tr>
<tr>
<td>siteName</td>
<td>Burlington</td>
</tr>
<tr>
<td>language</td>
<td>ENG</td>
</tr>
<tr>
<td>licenseName</td>
<td>avWebDesktop</td>
</tr>
</tbody>
</table>
SUPPORTED CONFIGURATIONS
Avantis Supported Configurations

- The 5.1 release introduces support for the latest Microsoft Windows Operating Systems. Differences from prior versions can present challenges when installing and administering Avantis.
Supported Operating Systems

Servers
• Microsoft Windows Server 2008 SP2 or R2, Standard or Enterprise
• Microsoft Windows Server 2012 R2

Clients
• Microsoft Windows 8.1 SP1
• Microsoft Windows 7 Professional or Enterprise
• Microsoft Windows Server 2008 SP2 or R2, Standard or Enterprise
• Microsoft Windows Server 2012 R2
Supported Database Platforms

- SQL Server 2008 SP2
- SQL Server 2008 R2
- SQL Server 2012 SP1
- Oracle Database Server 11g R1
- Oracle Database Server 11g R2 Patch 10
- Oracle Database Server 12c

Please refer to the Supported Configurations guide for specific details
64-bit vs. 32-bit

- On 64-bit operating systems, 32-bit applications install to C:\Program Files (x86)

- Registry settings for 32-bit applications are stored under HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node

- If you use a 64-bit operating system to host your database platform, you must still use the 32-bit driver and client to connect to the 64-bit server.
Looking at ODBC drivers on a 64-bit machine

- In a Windows 2008 (64 bit) box, if you launch ODBC administrator, either from the run/search command or by typing odbcad32 in the run/search command, it doesn't show all the oracle drivers, etc… that are installed on the box.
- To launch the one that you need to see all the drivers you need to go to \Windows\syswow64 and double click on the ODBCAD32.exe located there.
- This then launches an ODBC administrator that does show all the drivers available for DSN's. Just as an FYI, you have to make sure to shut down any other ODBC administrator, because they all use the same name, for whatever reason, Windows just brings the active one in the wow64 directory. Because they all use the same name, for whatever reason, Windows just brings the active one back into focus.
Virtualization

• Avantis.PRO can be deployed in a virtual environment with most popular virtualization tools. Microsoft and VMware are the preferred vendors of the Avantis.PRO Quality Assurance and Support teams. Although Avantis.PRO has not been certified for use on virtualized machines, virtualization may be beneficial as it allows you to quickly deploy, backup and maintain test and production environments.

• If you wish to deploy Avantis.PRO in a virtual environment, ensure you allocate the appropriate level of system resources. Failure to reserve enough RAM or CPU power will result in performance degradation.
Windows UAC

- When performing administrative tasks it is often necessary to right click on the application shortcut and select ‘Run As Administrator’

- Examples:
  - Installing or modifying Server Components
  - iisreset from the ‘Run’ prompt vs. Administrative Command Prompt
Installing Prerequisites

- Pay special attention to prerequisites listed in the Server Components ‘Before you Begin’ section in the Administrators guide (p.53)
Authentication Methods

- **Database**
  - Login dialog appears, user enters username, password, environment, site, and language every time
  - Database server is checked to see if the username and password are allowed access to login to the database
  - If allowed, then the Avantis login name that matches the username given is logged in
Authentication Methods

● LDAP
  ● Login dialog appears, user enters username, password, environment, site, and language
  
  ● LDAP server is checked to see if the username and password are allowed access
  
  ● If found in the LDAP tree, then the login name then the matching Avantis login field is returned and the user is logged in. e.g.
    ● Windows Username = John.Smith, Avantis login = JSMITH
    ● Login to Avantis as John.Smith, the middle tier will know that it is an LDAP environment, locate John.Smith in the LDAP tree under the Base DN, return the Avantis login attribute, then login to Avantis.PRO as the employee with jsmith in the login name of the Employee. When John Smith is no longer authorized in LDAP then they will no longer be authorized in Avantis.PRO
Authentication Methods

- **LDAP**
  - **Implicit**
    - Login appears first time only Once set, then at the next login the user will be logged in automatically, using the windows login name as credentials. The windows login name must match a valid LDAP login name.
  - **Explicit**
    - Login appears each time, user can enter any login and password (useful for shared computers)
## Authentication Methods - Comparison

<table>
<thead>
<tr>
<th></th>
<th>Database</th>
<th>LDAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easiest to configure</td>
<td>Easiest to configure</td>
<td>Leverages existing credentials</td>
</tr>
<tr>
<td>Direct database access</td>
<td>Direct database access available from all</td>
<td>Only super user account has access</td>
</tr>
<tr>
<td></td>
<td>clients</td>
<td></td>
</tr>
<tr>
<td>Users must login to</td>
<td>Users must login to Avantis</td>
<td>Supports single sign on (implicit) or</td>
</tr>
<tr>
<td>Avantis</td>
<td></td>
<td>prompting (explicit)</td>
</tr>
<tr>
<td>Must match Database</td>
<td>Must match Database login</td>
<td>Allows login flexibility (mixed case and</td>
</tr>
<tr>
<td>login</td>
<td></td>
<td>spaces e.g. Jean Valjéan or Scott O'Reilly)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Authentication Methods - Fields

<table>
<thead>
<tr>
<th>Data</th>
<th>Database</th>
<th>LDAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Username</td>
<td>Avantis Login Name</td>
<td>Value in LDAP that matches the LDAP login name attribute</td>
</tr>
<tr>
<td>Password</td>
<td>Password specified at the database</td>
<td>LDAP password</td>
</tr>
<tr>
<td>Service accounts?</td>
<td>Must create database account for</td>
<td>Must create database account and LDAP account for Avantis services</td>
</tr>
<tr>
<td></td>
<td>Avantis services</td>
<td></td>
</tr>
<tr>
<td>Authorization</td>
<td>Done via Avantis Security profiles</td>
<td>Done via Avantis Security profiles</td>
</tr>
</tbody>
</table>
• Configuration / Settings / Administration Tool
• Security Profiles & Desktops
• Logging

ADMINISTRATION
Administration Tool

The primary purpose of the Avantis Administration Tool is to provide you with a visual hierarchy structure of the environments, the various middle tier components and users associated with them and manage a variety of plugins that allow you to configure and deploy global client settings.

With the Administration Tool you can:

- Create, modify, or delete Avantis.PRO environments
- Change the default middle tier components
- Manage which clients connect to which middle tier components
- Maintain notification settings
- Maintain data extraction settings
- Maintain global and smart client settings.
Modify Configuration Files

- The file server stores configuration information in the following files that can be modified using the Administration Tool:
  - **Environ.ini** - Contains a list of environments and non-environment-specific information about the Avantis.PRO installation.
  - **Global.ini** - Contains information specific to each environment, such as the environment name, description editor, connection retry and timeout information, and available reports.
  - **AMMT.dsn** - Contains ODBC driver information for the middle tier database connection.
  - **AMC.dsn** - Contains ODBC driver information required for the client database connection.
  - **MachineInventory.xml** - Stores information on which clients use which middle tier components, and which middle tier components act as the default components.
Configure Client Connections

- **Cabinet** - Manages cabinet queries and data with the client.
- **Cache** - Contains frequently used information.
- **Financial Bridge** - Validates G/L information with Protean. For more information, refer to the Avantis.PRO/Protean Integration Guide.
- **Session Server** - Facilitates connections during an Avantis.PRO session.
Admin Tool Plugins

- **The Administration Tool** allows you to configure other plugins:
  - **EAM Processor Settings** - Retrieves entity hierarchy and open work task information from the Avantis.PRO database, calculates the health index data and pushes the data back into the Avantis.PRO database.
  - **Notification Services** - Notifies users when specified criteria is met; for example, monitor specific values in Avantis.PRO data and trigger a notification based on a state change.
  - **Information Manager Settings** - Synchronizes linked item and parts list descriptions based on the interval specified.
  - **Integration Toolkit** - Handles the extraction of data from Avantis.PRO to third-party systems and the loading of external data to Avantis.PRO.
Security Profiles – Default Form Layout

- Custom View Schemas can be created to change the layout of the Smart Client forms.
- Within the Security Profile, the default form layout can be selected for each Smart Client object.
Desktops – Use Classic or Smart Client

- Within an Avantis Desktop, you can choose how each application will launch – Classic or Smart Client
Desktops – Use Classic or Smart Client

• Classic applications can also be configured as the default user interface for all or selective objects by manipulating the UIOBJECT and DTFELEMENT database tables. Please contact Avantis Support for assistance.

• Note that some applications (ie. Maintenance Map) are only delivered as Smart Clients.
Logging

- The Classic Client still logs messages to both the zederr.log and the Windows Application Event Log
- The Web Services log to WebService.log
- Smart Clients log to SCPRO.exe.log, SCWorkspace.exe.log
- You can set the logging level to use in the SCPRO.exe.config, SCWorkspace.exe.config and web.config files by defining one of the following values for the LoggingLevel parameter:
  - None - do not log
  - Verbose - provide extended logging information.

You cannot change the logging level in the web.config file while users are running the smart client applications. If you do change the logging level, users will lose their connection to Avantis.PRO and will need to restart the application.
# Log File Locations

<table>
<thead>
<tr>
<th>Log File</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>AvInstall.log</td>
<td><code>%ProgramData%\Avantis</code></td>
</tr>
<tr>
<td>zederr.log</td>
<td>C:\Users&lt;User&gt;\AppData\Local\Avantis</td>
</tr>
<tr>
<td>SCPRO.exe.log</td>
<td>C:\Users&lt;User&gt;\AppData\Roaming\Avantis\Avantis.PRO\logs</td>
</tr>
<tr>
<td>SCWorkspace.exe.log</td>
<td>C:\Users&lt;User&gt;\AppData\Roaming\Avantis\Avantis.PRO\logs</td>
</tr>
<tr>
<td>WebService.log*</td>
<td>C:\inetpub\wwwroot\Avantis\PRO\WebService</td>
</tr>
<tr>
<td>CommonService.log</td>
<td>C:\inetpub\wwwroot\Avantis\PRO\WebApps\WebServices\logs</td>
</tr>
</tbody>
</table>

*WebService.log* - Logging level configured in:
C:\inetpub\wwwroot\Avantis\PRO\WebService\Web.config

<add key="LoggingLevel" value="None"/>  (“Verbose” or “None”)
Reports

- 5.1 uses Crystal Reports Designer 2013 SP3
- Existing custom reports will need to be tested for compatibility as part of your upgrade planning process
Printing

● What is required to print from Smart Clients?
  ● A PDF reader is required to print all reports
  ● Reports are compiled as PDF files on the web server in a directory, and then retrieved by the client
  ● The path is: \\
  ● On the Web Services machine, permission must be granted allowing the Application Pool user read/write access to both the GeneratedReportFiles and the Windows TEMP folder
TROUBLESHOOTING TIPS
Troubleshooting Tips

- Web Services
  - [http://localhost/Avantis/Session.asmx?op=LoginPlain](http://localhost/Avantis/Session.asmx?op=LoginPlain)
  - Logging levels for WebServices.log – Verbose or None

- License server issues
  - Ensure you have a valid license file for the new version
  - The Maintenance Map and Contractor Services Management modules are new, and require a separate license suite.
  - iavantis.log – verify license usage
## Related Support, Services, Training & Expo Demos

### Support

Peter Barbier, Director of Avantis Support, Mike Scholman and Cindy Dean, both Senior Technical Support Analysts, are all here at the conference and available to answer any of your questions.

- [peter.barbier@schneider-electric.com](mailto:peter.barbier@schneider-electric.com)
- Support can be reached at 1-888-262-7111
- Or via email at [support.pro@avantis.net](mailto:support.pro@avantis.net)

### Services

Please see Alok Pathak, Manager of Implementation Consulting, for all your service needs and inquiries. Alok is present at the conference and available to answer any of your questions.

- [alok.pathak@schneider-electric.com](mailto:alok.pathak@schneider-electric.com)

### Training

Contact Roger Attwell, our Training Manager, for any questions about training availability.

- [roger.attwell@schneider-electric.com](mailto:roger.attwell@schneider-electric.com)

### Expo Demos

Please come see the Avantis Demos on the Expo floor. We are located at Demo Stations:

- #6 - Remote Electrical Equipment Monitoring
- #9 - Enterprise Asset Management
- #10 - Condition-Based Maintenance