

SmartNews, Progress Software's Worldwide Technical magazine, is published quarterly as an exclusive resource for technical updates and news of Progress Software.

Table of Contents

Knowledge Center	1
How to monitor WebSpeed and AppServer agents	2
9.1D Schema Mover	3
ESubscribe	5
4GL Tracing	5
Be Part of the SmartNews Team!	6
How to Subscribe for SmartNews?	6
List of Patches	6
Contributing Editors	6
Progress TechSupport/Worldwide	6

The Knowledge Center – now showing at a Support Center near you

by Doris Jurisson, Director, Americas

It was a pleasure to have met many of you at Exchange in June. It is always a great opportunity for us to get insight into your businesses and to better understand your support needs. At Exchange we had the pleasure of debuting the new Knowledge Center, a project that is near and dear to our hearts. We have long recognized the value of our existing Knowledge Base but have felt it could be so much better. What we really wanted was a process that integrated knowledge management into our overall workflow in such a way that the really valuable nuggets of information we glean from every call would become accessible to the greater Progress community in a timely manner. After much introspection about our own processes and procedures and a look at what tools are available in the marketplace, we created a vision of the new Progress Knowledge Center.

Now, almost a year later, after much hard work, we are very excited about what we are seeing. The Knowledge Center has been rolled out to 90% of the Technical Support organization and we are getting some really positive feedback from the Technical Support Engineers. Over the next month we will start a pilot program

providing customers direct access to the search capabilities and are anxious to get your feedback.

You may already be noticing a change in our vocabulary – everybody is talking solutions. Solutions documents are the building blocks of our Knowledge Center. They comprise *problem statements*, *environment details*, *causes* and when complete, the *solution*. Every call into Technical Support will result in either the reuse of an existing solution document or the creation of a new solution document. The solution documents are searchable using a powerful natural language search engine that is not limited to keywords but accepts questions written in simple English. Enough of my chattering, here are a few quotes from the Engineers using the Knowledge Center.

“I started working an issue and the symptoms matched a solution document created by a TSE in EMEA. I was able to see the issue had been fully researched and was identical to what I was facing. I had an idea for an alternative solution to the issue and after speaking with my colleague in EMEA was able to offer the customer 2 different options for moving forward.”

- Haneet Sodhi, Progress Technical Support, US and Canada

“I received a call from a customer who had noticed their clients were hanging when trying to connect to the AppServer. I went to the Knowledge Center and entered the error statement the customer was getting. It returned several solutions. I clicked on the first, not applicable. The second, again, not applicable. The third however, mentioned temp tables and a limit. I checked with the customer and sure enough, they were using temp tables, lots of them. Bingo! I would have never thought about temp tables, I was ready to look at his configuration, kernel settings, files opened, etc... The knowledge Center helped me ask the right questions and lead to a known solution.”

- Sandy Mercado, Progress Technical Support, US and Canada

“The Knowledge Center helped on the investigation process keeping the knowledge inside the database. In the end, when we got a resolution for the call, we also got a solution document ready with no extra steps needed.”

- Marcelo Konatu, Progress Technical Support, Latin America

How to monitor WebSpeed and AppServer agents

By Libor Laubacher, TechSupport, ETSC

Probably everyone who is running WebSpeed and AppServer is asking:

“How can I monitor my agents?”

“How can I prevent situation where agents become busy?”

“How can I be immediately notified when the broker is down?”

The Progress core installation unfortunately does not provide specialized tools to address these issues, as a result this article suggests a solution, based on the cooperation of shell script and 4GL code.

In short:

- The shell script is using wtberman and basic Unix tools to gather information about agents, then outputting this information to an ascii file in an exactly defined format.
- The 4GL code reads data from this ascii file and detects if agent is up / down, how many agents are available, busy, etc.

The method used and coding written is very simple and is by no means a perfect solution. I have been using this for almost two years in production and testing environments with 3.1a/b/c as well as 9.1a/b/c on AIX/Linux covering about twenty brokers in total and the main task – “to be informed when something strange was happening” – is achieved. Sometimes I really hate this small application, especially when my mobile starts beeping at 5am, but it has saved me from questions like: “Why it does not work?” from my manager.

This published example is for WebSpeed agents, a similar method can be used for the AppServer, with “grepping” for AppServer agents status (CONNECTED, LOCKED, SENDING, ENDING_RQ)

```
/* watcher.sh */
#!/bin/ksh

rm /watcher/watcher.log 2>&1 >/dev/null
for jj in broker1 broker2 ...
do
    $DLC/bin/wtberman -i ${jj} -q >
    /watcher/${jj}_stat.log
    MYFILE=/watcher/${jj}_stat.log
    echo ${MYFILE} >>
    /watcher/watcher.log
```

```
more ${MYFILE} | grep ACTIVE | wc
-1 >> /watcher/watcher.log
more ${MYFILE} | grep AVAILABLE |
wc -1 >> /watcher/watcher.log
more ${MYFILE} | grep BUSY | wc -
1 >> /watcher/watcher.log
more ${MYFILE} | grep LOCKED | wc
-1 >> /watcher/watcher.log
more ${MYFILE} | grep STARTING |
wc -1 >> /watcher/watcher.log
done
```

The shell script simply executes wtberman with redirected output to a text file, which is processed by more, grep, wc commands taking care about the rest, all information gathered is placed into one file with predefined format.

Following 4GL code is processing this file.

```
/* watcher.p */
DEF VAR w_veta AS INT NO-UNDO.
DEF VAR w_file AS CHAR NO-UNDO.
DEF VAR w_stat AS INT NO-UNDO.
DEF VAR w_avail AS INT NO-UNDO.
DEF VAR w_busy AS INT NO-UNDO.
DEF VAR w_lock AS INT NO-UNDO.
DEF VAR w_msg AS CHAR NO-UNDO.
DEF VAR w_cmd AS CHAR NO-UNDO.
DEF VAR w_down AS LOG NO-UNDO INIT
false.
DEF STREAM _out.

DEFINE TEMP-TABLE xx FIELD test AS
CHAR.

/* cleanup maintenance table in a db */
FOR EACH servis: DELETE servis. END.

w_veta = 0.
/* transfer text file to a temp-table
*/
INPUT FROM /watcher/watcher.log.
REPEAT:
    w_veta = w_veta + 1.
    CREATE xx.
    IMPORT xx.
    CREATE servis.
    ASSIGN servis.tk = w_veta.
           servis.veta = xx.test.
    DELETE xx.
END.
INPUT CLOSE.

w_veta = 0.
/* exactly defined format of text file
will allow me this FOR EACH */
FOR EACH servis NO-LOCK:
    w_veta = w_veta + 1.
    IF w_veta MOD 6 = 1 THEN w_file =
servis.veta. /* id */
    IF w_veta MOD 6 = 2 THEN w_stat =
INTEGER(SUBSTRING(servis.veta,1,2)). /*
up / down */
```

```

        IF w_veta MOD 6 = 3 THEN w_avail =
INTEGER(SUBSTRING(servis.veta,1,2)). /*
# available */
        IF w_veta MOD 6 = 4 THEN w_busy =
INTEGER(SUBSTRING(servis.veta,1,2)). /*
# busy */
        IF w_veta MOD 6 = 5 THEN w_lock =
INTEGER(SUBSTRING(servis.veta,1,2)). /*
# locked */
        IF w_veta MOD 6 = 0 THEN DO:
                                FIND
webspeed WHERE webspeed.logfile BEGINS
w_file NO-ERROR.
                                ASSIGN
webspeed.brokerstatus = IF w_stat = 1
THEN "ACT" ELSE "DOWN"

webspeed.avail_ag      = w_avail
webspeed.busy_ag       = w_busy
webspeed.locked_ag     = w_lock

webspeed.starting_ag =
INTEGER(SUBSTRING(servis.veta,1,2)). /*
# starting */
                                END.
END.

w_msg = "".
/* this loops will gather (short) names
for all brokers from a database,
including their status */
FOR EACH webspeed NO-LOCK BY
brokerstatus DESCENDING:
    w_msg = w_msg +
webspeed.brokershort + ": " +
webspeed.brokerstatus + "; ".
    IF NOT w_down AND
webspeed.brokerstatus = "DOWN" THEN
ASSIGN w_down = TRUE.
END.
w_msg = w_msg + "eof.". /* to avoid
lost incomplete SMS messages */

/* this, the first line blank is only
workaround for sendmail */
OUTPUT STREAM _out TO
/watcher/watcher.sms.
PUT STREAM _out "" SKIP.
PUT STREAM _out UNFORMATTED w_msg.
OUTPUT STREAM _out CLOSE.
/* send email to mobile like SMS */
w_cmd = "sendmail -
fllaubach@progress.com -
Fllaubach@progress.com
mysmsaddress@phone.beep <
/watcher/watcher.sms".
/* send sms only when at least one
broker is DOWN */
IF w_down THEN UNIX SILENT
VALUE(w_cmd).

```

This 4GL code uses a Progress database for storing information. This is indeed not necessary for only

letting the administrator know that broker is down, it was designed to trend historical data, to see how is my broker busy depending on time period – but as you probably recognized, it has never been implemented.

4GL code does not care where the broker resides (Unix, NT ...) – it's processing data gathered by shell script, containing wtberman. Using –host –password I can grab data remotely from any host on a network running WebSpeed.

There are many ways to improve this code, since it's only sending an email when at least one broker is down. For example, if BUSY agents are on 80%, SMS also should be sent, etc. To not have this article too long, I am not including the .df file. If you are interesting in using of this code, drop me an email, and I will send you .df file back directly – llaubach@progress.com.

9.1D Schema Mover

By Carol Osborne, TechSupport, America

There are two methods for converting a database from version 8 to version 9 of Progress. These methods are dumping and loading or using the conv89 option to the proutil command. Databases can be dumped and loaded using the Progress Data Administration tool, as well as via a bulkload or binary dump and load via the proutil command. An alternative to dumping and loading is the conv89 option to proutil.

Command syntax: proutil dbname –C conv89

Then using the conv89 method, the conversion process is quick. Completion of this command results in a version 9 database with schema and data coexisting in the Schema Area - 6 of the database. This data configuration is really not recommended. The conversion of schema and data into one area “Schema Area” is done in this manner for ease of conversion from an earlier Progress release where storage areas were foreign to the architectural design of a database. A database configured in this manner will not prohibit you from starting, stopping or administrating your database.

Prior to version 9.1D however, it would prevent you from regaining space within the “Schema Area” when choosing to take advantage of storage areas by moving data and indexes out of this area. Why? Well, because of the high water mark associated with the “Schema Area”. Architecturally, it was impossible to truncate the “Schema Area” because a space allocation mechanism did not

enforce data packing. Therefore schema records could exist anywhere in the "Schema Area".

Example: If you converted a version 8 database which was 2 gig in size you would have a version 9 database with a "Schema Area" approximately 2 gig in size. If you moved your tables and indexes out of this area into newly defined/created areas, your database would be about 4 gig in size. This is because you could not truncate the space in the "Schema Area".

There is a truncate area option you can supply to proutil which will truncate a data application area.

Command syntax: proutil dbname -C truncate area <area name>

This feature is not applicable to the "Schema Area". The reason it is not applicable to the "Schema Area" is again, a space allocation mechanism does not exist which would enforce data packing. Therefore, schema and user data coexist in this "Schema Area". In order to truncate an area, all items in that area must be removed prior to the truncate command or the truncate command will delete them. This is not something you want when dealing with schema information.

This limitation prompted the creation of the feature called Schema Mover (mvsch) in Progress Version 9.1D. Schema Mover (mvsch) is an option you supply to the proutil command.

Command Syntax: proutil dbname -C mvsch

This option, when passed to proutil, will separate schema and data from the "Schema Area". A new area will be created which is called: "Old Default Area". This new area will contain all data (excluding schema) which previously resided in the original "Schema Area". The "Schema Area" will now only contain schema information.

Data now occupying the "Old Default Area" can be moved, dumped or loaded etc. The "Old Default Area" can be truncated or removed without original limitations due to coexisting with the schema data.

The Schema Mover accomplishes this task by performing the following migration steps:

1. Once the command is issued, we open the database to check to see if the Before Image file has been truncated. If it hasn't, we issue the following error and terminate.

Use proutil to truncate bi file before conversion. (1286)

2. We then issue a statement that the database must be backed up prior to running the conversion.

You must have your database backed up before running the conversion. (1024)

We ask if you have done this and depending upon your answer we will either proceed (y) or terminate (n).

3. PROUTIL then finds the next unused data area (starting at Area 7). Then creates the new area called "Old Default Area" and the associated data extent for this newly created area in the same directory as the original "Schema Area".
4. PROUTIL then moves the schema from the "Schema Area" to the "Old Default Area". All the schema records and indexes are then deleted from the original "Schema Area".
5. PROUTIL then opens the "Schema Area" and the new area "Old Default Area" and updates and switches the master, sequence, and area blocks between the two areas.
6. After the switch is completed the areas and their extents are renamed. The end result is: "Schema Area" now contains only schema data and "Old Default Area" contains data only.

Note: If for any reason the conversion fails, then the database will need to be restored from backup.

ESubscribe

Do you currently receive Tech Support Alerts, SmartNews, Knowledge Base or Patch information? Progress Software is changing systems to communicate more effectively with you!

Announcing a new way to get only the information you Need. Manage the e-communications you receive from Progress by creating a subscription account at:

<http://www.progress.com/subscribe>

Subscription offerings include business and technical publications, such as Profiles Magazine and various newsletters such as SmartNews. We have recently expanded the selections in the new system to include Service Pack Notifications and Tech Support Alerts. Once you have created an account you can update it at any time. It's easy and takes just a few moments!

If you would like to continue to receive this important information, you will be required to reregister. If you do not register in the new system, your name will be automatically dropped from our lists. Register now!

<http://ecommm.progress.com/cgi-bin/ecommm.cgi/system/session/dispatch.w?to=vregistersc&from=in dexsc&sessionLanguage=1>

4GL Tracing

By Fernando Santos de Souza, Solution Engineering

Starting in 9.1D01 (and later Service Packs) and 9.1E there is a new diagnostic feature that will record the execution of the following 4GL statements in a log file:

- RUN
- User-defined FUNCTIONS
- PUBLISH
- SUBSCRIBE

The destination of the messages depends on what the client type is.

For the GUI / TTY client, the log file is the file name specified by the `-clientlog` startup parameter.

For AppServer and WebSpeed, the messages go to the existing server log file.

How to enable

The 4GL Tracing is enabled when the `logginglevel` parameter is set to 4, and the `logentrytypes` parameter is set to 2. To set these parameters:

- Specify the startup parameters `-logginglevel 4 -logentrytypes 2`, for GUI / TTY clients. For example:

```
prowin32.exe -clientlog mylog.lg -logginglevel 4
```

```
-logentrytypes 2
```

- or set `svrLoggingLevel` to 4 and `svrLogEntries` to 2 in the `ubroker.properties` file, for AppServer and / or WebSpeed instances. For example:

```
svrLoggingLevel=4
svrLogEntries=2
```

Information logged

The general format for the message is:

```
<type> <procedure-name> [in <procedure-name>]
[PERSIST] "<input-param>" [<caller> - <source>]
```

where:

`<type>` is RUN / FUNC / PUBLISH or SUBSCRIBE
`<procedure-name>` is the procedure name being executed.
`<in <procedure-name>>` is for a "RUN xx in yy" statement, where yy is the `<procedure-name>`
PERSIST indicates that the run statement has the PERSISTENT clause
`<input-param>` is the list of input parameters, each separated by a single space.
`<caller>` indicates where the statement / function is being called from: "Main block", "SYSTEM-TRIGGER", or the name for an internal procedure
`<source>` is the source file name where `<caller>` is located.

For example:

```
RUN myproc in myproc2.p "my parameters" [init - foo.p]
```

This indicates that the internal procedure `myproc` within `myproc2.p` is being run. There is one input string parameter. The RUN Statement is being executed from an internal procedure named `init` inside `foo.p`.

By default, ADE procedures will not be traced to the log file. This includes the ADE code (or any program whose name starts with `'_'`), and WebSpeed internal procedures, found under `web/objects`, `webutil`, `webedit` and `webtools`. To enable the tracing for these procedures, you must specify the parameter `-zn` at startup. In 9.1D02 (and 9.1E), the exact startup parameter values to turn on this tracing feature may change slightly, due to enhancements in Progress' client logging infrastructure.

Be part of the SmartNews team!

Are you a Progress fan? One of those people who knows the ins and outs of our products, the tips and tricks of the development world or best techniques of database administration? Then join us!

We are looking for enthusiastic Progress users who can tell us what kind of information you need!

Is there an issue you would like to see discussed in the upcoming SmartNews? All ideas are very welcome. If your idea can be developed to a SmartNews article for the next edition, **an exclusive SmartNews shirt** will be sent to you! All ideas and articles need to be sent before April 1st to smartnews@progress.com

How to subscribe for SmartNews?

Subscribe on-line

It's easy and takes just a few moments to receive notification about SmartNews electronically. Manage the e-communications you receive from Progress by creating a subscription account at:

<http://www.progress.com/subscribe>

List of Service Packs and Patches:

To find the **latest** available Progress Service Pack releases, please refer to our web site:

<http://www.progress.com/patches/index.htm>

For detailed information of what has been fixed in a Service Pack, select the supported platform and latest Progress version. The Service Packs will be installed using an Installation Utility similar to the commercial product Installation Utility. Please follow the Download/Install Instructions at the bottom of the Issues page to extract the 'READMESP' or 'READMESP.txt' file. This file will instruct you how to use the Installation Utility.

Click on "**Download This Product Update!**" to download the latest Service Pack after selecting the platform and Progress version.

SmartNews

SmartNews is a quarterly newsletter publication distributed by Progress Software.

Contributing editors

Merrick Whyte, TechSupport ETSC
Christine Laska, TechSupport US
Humphrey Koraag, TechSupport AsiaPac
Perla Lopez, TechSupport Latin America
Marcelo Konatu, TechSupport Latin America

Progress TechSupport/Worldwide

North and Latin America:
Progress Software Corporation
14 Oak Park
Bedford, MA 01730
Phone: + 1 781 280 4999
Fax: + 1 781 275 4543
E-mail: support@progress.com

Europe, Middle East & Africa:
Progress Software
Schorpioenstraat 67
3067 GG Rotterdam
The Netherlands
Phone: + 31 10 286 5700
Fax: + 31 10 286 5225
E-mail: emeasupport@progress.com

Asia Pacific:
Progress Software
1911 Malvern Road
Malvern East, VIC 3145
Phone: + 61 3 9805 8530
Fax: + 61 3 9805 8531
E-Mail: asiapac-support@progress.com