

SOURCE FILE FITZCLIB/QRPGLESRC
MEMBER TESAUTPGM

```

SEQNBR*...+... 1 ...+... 2 ...+... 3 ...+... 4 ...+... 5 ...+... 6 ...+... 7 ...+... 8 ...+... 9 ...+... 0
100  H OPTION(*SRCSTMT : *NOSHOWCPY : *nodebugio)                                03/19/21
200  H bnmdir('HTTPAPI':'YAJL') DECEDIT('0.')                                  10/17/17
300  H debug                                                                    10/23/17
400  *****                                                                    10/10/17
500  *                                                                            *
600  *   Property of PRIME, INC.                                                *
700  *                                                                            *
800  *-----*                                                                    10/10/17
900  *                                                                            *
1000 *   PROGRAM - TESAUTPGM                                                    *
1100 *                                                                            *
1200 *   Authentication processs for eSolutions                                *
1300 *                                                                            *
1400 * To compile:                                                                *
1500 *                                                                            *
1600 *> CRTSQLRPGI OBJ(IL/TESAUTPGM) SRCFILE(PRIMESRC/QRPGLESRC)                03/12/21
1700 *> OBJTYPE(*MODULE) RPGPOPT(*LVL2) DBGVIEW(*SOURCE)                       03/20/20
1800 *                                                                            *
1900 *> CRTPGM PGM(IL/TESAUTPGM) MODULE(TESAUTPGM)                              03/12/21
2000 *> ACTGRP(KLEMENT) BNDSRVPGM(YAJL YAJLR4 QHTTPSVR/QZHBCGI)                 03/20/20
2100 *                                                                            *
2200 *> DLTMOD TESAUTPGM                                                         03/12/21
2300 *                                                                            *
2400 *****                                                                    10/10/17
2500 * Modification Log: (A/### Line Added, D/### Line Deleted,                 10/10/17
2600 *                               C/### Line Changed)                          10/10/17
2700 *                                                                            *
2800 * ###   Date      Programmer   Proj Numb   Comments                          10/10/17
2900 * ---  - - - - -  - - - - -  - - - - -  - - - - -  - - - - -  - - - - -  *
3000 * 000 03/11/21  FITZC          PRJ10151   New Program                          03/11/21
3100 *****                                                                    10/10/17
3200  dcl-f TesAutTok disk usage(*input:*output) keyed;                        03/12/21
3300  dcl-f TesApiAdd disk usage(*input) keyed;                                03/12/21
3302                                                                              03/12/21
3400  /include yajl_h                                                            10/09/17
3500  /include qrpglesrc,HTTPAPI_H                                              10/13/17
3600  /include qrpglesrc,EXPAT_H                                                10/13/17
3700  /include qrpglesrc,ifsio_h                                                10/13/17
3800  /include qrpglesrc,errno_h                                                10/13/17
3900  /define ERRNO_LOAD_PROCEDURE                                              10/13/17
4000                                                                              10/09/17
4100  D @DataDS          ds              qualified                                10/17/17
4200  D @success                ln              10/17/17
4300  D @error                500a            10/24/17
4400                                                                              10/17/17
4500  D @jsonBuf_t          s              2000a  varying                        10/24/17
4600  D                               template                                10/20/17
4700  D @JSON_BUF_SIZE     c              %len(@jsonBuf_t)                    10/17/17
4800                                                                              10/17/17
4900  D @data                ds              likeds(@datads)                  10/17/17
5000                                                                              10/24/17
5100  D @result              ds              qualified                          10/24/17
5200  D @success                ln              10/24/17
5300  D @errmsg                500a            varying                          10/24/17
5400  D @list                  likeds(@list_t) dim(999)                       10/25/17

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5500                                     10/24/17
5600      D @list_t          ds          qualified      10/24/17
5700      D                                     template      10/24/17
5800      D   @code                700a      10/24/17
5900                                     10/24/17
6000                                     10/24/17
6100      D @i                  s           10i 0        10/24/17
6200      D @lastElem           s           10i 0        10/24/17
6300      D @Disp                s          500a        10/19/17
6400      D @OutError           s          500a Varying   10/25/17
6500      D @ErrorYN            s            1          10/25/17
6600      D @rc                  s            3 0        10/10/17
6700      D @len                 s           15 5        10/10/17
6701      D @Length              s           15 5        03/16/21
6800      d @LoadId              s           50a varying  10/16/17
6900      D @jsonBuf             s           like(@jsonBuf_t) 10/17/17
7000      D @jsonSize            s           10u 0        10/11/17
7100      d @Retry                s            1 0 Inz(0)   08/08/18
7200      D @TempFile            s          500a        10/13/17
7300      D @Uri                  s         1500a        03/15/21
7400      /if defined(HTTP_USE_CCSID)
7500      D CCSID_OR_CP          S           10I 0 inz(O_CCSID) 10/17/17
7600      /else
7700      D CCSID_OR_CP          S           10I 0 inz(O_CODEPAGE) 10/17/17
7800      /endif
7900      D @Response             s           like(yajl_val) 10/24/17
8000      D @List                 s           like(yajl_val) 10/24/17
8100      D @Node                 s           like(yajl_val) 10/24/17
8200      D @Val                  s           like(yajl_val) 10/24/17
8300      D @key                   s           50a varying  10/24/17
8400                                     10/18/17
8500      D $createJSON          PR           10i 0        03/18/21
8600      D   @data                likeds(@datads) const 10/17/17
8700      D   @jsonData            like(@jsonBuf_t) 10/17/17
8800      D                                     10/17/17
8900      //-----
9000      // entry list
9100      //-----
9200      C   *ENTRY              PLIST
9300      C   *                   PARM              @ErrorYN 10/25/17
9400      *****
9500      /free
9600                                     10/09/17
9600                                     10/09/17
10400      Chain 'AUTHTOKEN ' TesApiAdd;
10500      If %Found(TesApiAdd);
10600          @Uri = %Trim(TeIpAdd);
10700      EndIf;
10700                                     03/16/21
10700                                     03/15/21
11200                                     10/19/17
11300      @TempFile = '/esolutions/auth/auth.json';
11300                                     03/15/21
11400                                     10/19/17
11500      //This will build the JSON data to send to eSolutions. The data is the login request and if
11600      //success, will return an authorization code.
11600                                     03/15/21
11700      $createJSON(@data: @jsonBuf);
11700                                     03/18/21
11800                                     10/25/17
11900      If %Trim(TeError) = *Blanks;
11900                                     03/16/21

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12000      ExSr $GetAuthCode;                                03/15/21
12100      EndIf;                                           03/15/21
12200                                           10/19/17
12300      *inlr = *on;                                       03/15/21
12400      return;                                           03/15/21
12500      //-----
12600      // Get the authorization code from the JSON data returned from TWEGOS 10/25/17
12700      //-----
12800      BegSr $GetAuthCode;                                10/24/17
12900                                           10/24/17
13000      //Open up the file holding the JSON data           10/25/17
13100      @Response = yajl_stmf_load_tree('/esolutions/auth/auth.json' 03/11/21
13200      : @OutError) ;                                     10/25/17
13300                                           10/25/17
13400      If %Trim(@OutError) <> *Blanks;                    10/25/17
13403      TeToken = 'ERROR';                                  03/15/21
13500      TeError = @OutError;                                03/15/21
13600      TeDate = %Date();                                   03/15/21
13601      TeTime = %Time();                                  03/15/21
14100      Write rTesAutTok;                                   03/15/21
14200      yajl_tree_free(@Response);                          10/25/17
14300      @ErrorYN = 'Y';                                    10/25/17
14400      LeaveSr;                                           10/25/17
14500      ENDIF;                                             10/24/17
14600                                           10/24/17
14700      //Checks to see if there is an object in the JSON data named DATA 10/30/17
14800      @node = YAJL_object_find(@Response: 'data');         10/24/17
14900      @result.@success = YAJL_is_true(@node);             11/01/17
15000                                           10/30/17
15100      @i = 1;                                             03/15/21
15200      //This is the object where the auth code is        03/15/21
15300      @val = YAJL_object_find(@node: 'accessToken');       03/15/21
15400                                           10/30/17
15500      //This adds the auth code to the Data structure named LIST, and places the value 03/15/21
15600      //in the CODE field                                  03/15/21
15700      @result.@list(@I).@code = yajl_get_string(@val);    03/15/21
15800                                           10/24/17
15900      TeToken = @Result.@List(@i).@code;                 03/15/21
15901      TeDate = %Date();                                   03/15/21
15902      TeTime = %Time();                                  03/15/21
16000      Write rTesAutTok;                                   03/15/21
16100                                           10/24/17
16200      yajl_tree_free(@Response);                          03/15/21
16300                                           10/27/17
17000      @ErrorYN = ' ';                                    03/15/21
17100                                           10/27/17
17200      ENDSR;                                              10/24/17
17300      //-----
17400      // Add headers to JSON data                          10/16/17
17500      //-----
17600      P $Add_Headers      B                                03/18/21
17700      D                   PI                              10/16/17
17800      D @Headers          32767a    varying              10/23/17
17900      D @CrLf            c          const(x'0d25')       10/16/17
18000                                           10/16/17

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SEQNBR*...+... 1 ...+... 2 ...+... 3 ...+... 4 ...+... 5 ...+... 6 ...+... 7 ...+... 8 ...+... 9 ...+... 0
18100      /free                                     10/16/17
18200      clear @headers;                          10/23/17
18300      @Headers = //'content-type: application/json' + @CrLf + 03/22/21
18301      'ClientId:' + %trim(TeId) + @CrLf +        03/22/21
18302      'ClientSecret:' + %trim(TeSecret) + @CrLf + 03/22/21
18303      'Cache-Control:' + 'no-cache' + @CrLf +    03/22/21
18304      'Ocp-Apim-Subscription-Key:' + %Trim(TeSubKey); 03/22/21
18305                                             03/16/21
18700      return;                                   10/16/17
18800      /end-free                                  10/16/17
18900      P          E                               10/16/17
19000      *+++++*                                     10/17/17
19100      * createJSON(): Transform the 'data' ds/array into JSON 10/17/17
19200      *                                             10/17/17
19300      *      data = (input) data struct with data to return 10/17/17
19400      * jsonData = (output) the same data in JSON format 10/17/17
19500      *                                             10/17/17
19600      * returns YAJL generator status             10/17/17
19700      *+++++*                                     10/17/17
19800      P $createJSON      B                               03/18/21
19900      D                PI          10i 0            10/17/17
20000      D @data          likeds(@datads) const        10/17/17
20100      D @jsonData      like(@jsonBuf_t)             10/17/17
20200                                             10/17/17
20300      D @rc            s          10i 0            10/17/17
20400      D @len          s          10i 0            10/17/17
20500      D @x            s          10i 0            10/17/17
20600                                             10/18/17
20700      /free                                     10/17/17
20800                                             10/17/17
20900      /**OFF means the data will be in a compact format. *ON would make the data more readable 10/25/17
21000      yajl_genOpen(*on);                          03/22/21
21100                                             10/17/17
21200      //Build the JSON file                       10/25/17
21300      //yajl_beginObj();                           03/16/21
21400      // yajl_addChar('ClientId:': %trim(TeId));   03/16/21
21500      // yajl_addChar('ClientSecret:': %trim(TeSecret)); 03/16/21
21501      // yajl_addChar('Cache-Control:': 'no-cache'); 03/16/21
21502      // yajl_addChar('Ocp-Apim-Subscription-Key:': %Trim(TeSubKey)); 03/16/21
21600      //yajl_endObj();                               03/16/21
21700                                             10/17/17
21800      //%len(@jsonData) = @JSON_BUF_SIZE;          03/22/21
21900      //@rc = yajl_copyBuf(0                         03/22/21
22000      //      : %addr(@jsonData: *data)             03/22/21
22100      //      : @JSON_BUF_SIZE                       03/22/21
22200      //      : @len );                              03/22/21
22300      //%len(@jsonData) = @len;                     03/22/21
22400      //                                             03/22/21
22700      http_debug(*On: '/eSolutions/getdebug.txt'); 03/22/21
22800      http_setccsids(1208:0);                       03/22/21
22900      Http_xproc(HTTP_POINT_ADDDL_HEADER           03/22/21
23000      : %paddr($Add-Headers));                     03/22/21
23100                                             10/17/17
23200      @rc = Http_url_get(%Trim(@Uri)                03/22/21
23300      : %Trim(@TempFile))                           03/22/21

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SEQNBR*...+... 1 ...+... 2 ...+... 3 ...+... 4 ...+... 5 ...+... 6 ...+... 7 ...+... 8 ...+... 9 ...+... 0
23301          : 15                                03/22/21
23302          :*Omit                             03/22/21
23303          :*Omit                             03/22/21
23304          :*Omit);                           03/22/21
23306          //   : 'application/json');         03/22/21
23900                                     10/17/17
23901          //@rc = Http_url_post(%Trim(@Uri)   03/22/21
23902          //   : %Addr(@jsondata) + 2        03/22/21
23903          //   : %Len(%Trim(@jsondata))       03/22/21
23904          //   : @TempFile                    03/22/21
23905          //   : 15                           03/22/21
23906          //   : Http_UserAgent               03/22/21
23907          //   : 'application/json');         03/22/21
23908                                     03/18/21
24000          If @Rc <> 1;                        10/17/17
24100             TeToken = 'ERROR';                03/15/21
24101             TeError = Http_Error;              03/15/21
24102             TeDate = %Date();                  03/15/21
24103             TeTime = %Time();                  03/15/21
24104             Write rTesAutTok;                  03/15/21
24900             @ErrorYN = 'Y';                    10/25/17
24901          Else;                                03/11/21
25700             @ErrorYN = ' ';                    10/27/17
25800          ENDIF;                                10/17/17
25900                                     10/17/17
25901          yajl_genclose();                        03/22/21
25902                                     03/22/21
26100          return @Rc;                             10/24/17
26200                                     10/17/17
26300          /end-free                               10/17/17
26400          P                                     E                               10/17/17
```

* * * * E N D O F S O U R C E * * * *