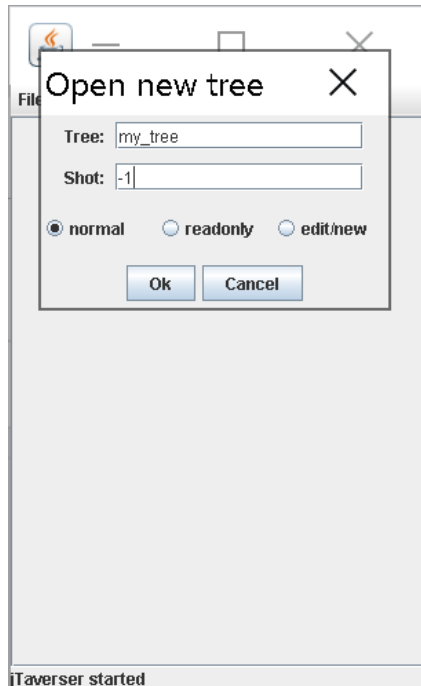


MatlabからMdsplusにアクセスする方法

今回は、Fourierに入っているmy\_tree(my\_tree\_path=/home/fourier/test\_tree)  
というTreeにアクセス。



1. アクセスしたいPCにMDSplusインストール  
(<http://mdsplus.org/index.php/Downloads>)

2. ツリーのdatafileがあるフォルダのパスをtree\_name\_pathという形で環境変数に設定。

linux: export my\_tree\_path=/home/fourier/test\_tree

windows: コントロールパネルから設定

(参照

<http://www.mdsplus.org/index.php?title=Documentation:Tutorial:CreateTrees%20&open=38101832318169843162415089&page=Documentation%2FThe+MDSplus+tutorial%2F+Creating+and+populating+MDSplus+trees>)

Matlabでsetenv('tree\_name\_path', 'パス') とやれば行ける説もある。(6/19追記)

↑ここまではIDLもMatlabも同じ

3. 以下URL参考にMatlab側セットアップ

[http://www.mdsplus.org/index.php/Documentation:Tutorial:MdsObjects#MATLAB\\_Specific\\_Issues](http://www.mdsplus.org/index.php/Documentation:Tutorial:MdsObjects#MATLAB_Specific_Issues)

(1)Matlab開いてset pathで検索パスに以下を追加

- add the MDSplus directory containing the MATLAB '.m' files to the the MATLAB path. This can be done using the menus in the main matlab interface. Older versions use the 'set path' entry in the 'File' menu. Newer versions use the 'path def' button in the toolbar. Set this to:
  - /usr/local/mdsplus/matlab - linux, mac etc...
  - c:\Program Files\MDSplus\Matlab - windows (or equivalent for your system)

(2)librarypath.txt作成

## 参照

[https://jp.mathworks.com/help/matlab/matlab\\_external/locate-native-method-libraries.html](https://jp.mathworks.com/help/matlab/matlab_external/locate-native-method-libraries.html)

```
cd(prefdir)
```

```
edit javalibrarypath.txt
```

- add the location of the mdsplus shared images for your platform to the librarypath.txt file.
  - on linux this is probably /usr/local/mdsplus/lib or /lib32 or /lib64
  - on windows it is C:\Windows\system32 for 64-bit Matlab or C:\Windows\syswow64 for 32-bit MATLAB
  - for newer versions of MATLAB (2012b+)
    - find the preferences directory by invoking a 'prefdir' command
    - edit or create the file javalibrarypath.txt in that directory
    - add the full file specification of the jar file to that file and save.
  - for older versions of MATLAB find the 'local' sub directory of installation's toolbox directory and edit the file librarypath.txt file.
    - on linux it will be something like: /usr/local/matlab/toolbox/local/
    - on windows it will be: C:\Program Files (x86)\MATLAB\R2012a\toolbox\local . The directory "R2012a" depends on license and version. For example, if student edition, it reads "R2012a Student"
      - When adding the path to librarypath.txt , add the directory for bin\_x86, NOT the directory for bin\_x86\_64. On newest versions of MATLAB, the 64 bit directory works.
  - add the platform full file specification of the directory to this file.

## (3)javaclasspath.txt作成

参照 [https://jp.mathworks.com/help/matlab/matlab\\_external/static-path.html](https://jp.mathworks.com/help/matlab/matlab_external/static-path.html)

- add the MDSobjects jar file to the javaclasspath.txt file.
  - on linux this file is probably /usr/local/mdsplus/java/classes/MDSobjects.jar
  - on windows it is probably c:\Program Files\MDSplus\java\classes\MDSobjects.jar
  - for newer versions of MATLAB (2012b+)
    - find the preferences directory by invoking a 'prefdir' command
    - edit or create the file javaclasspath.txt in that directory
    - add the full file specification of the jar file to that file and save.
  - for older version of matlab find the 'local' sub directory of installation's toolbox directory and edit the file classpath.txt file.
    - on linux it will be something like: /usr/local/matlab/toolbox/local/
    - on windows it will be: C:\Program Files (x86)\MATLAB\R2012a\toolbox\local . The directory "R2012a" depends on license and version. For example, if student edition, it reads "R2012a Student"
  - add the platform full file specification of the jar file to this file.

## (4)Matlab再起動

### 4.データアクセス

MDSコマンド参照 <http://www.mdsplus.org/index.php/Documentation:Reference:Matlab>

プラ核誌の辻井先生による特集

[http://www.jspf.or.jp/Journal/PDF\\_JSPF/jspf2019\\_05/jspf2019\\_05-236.pdf](http://www.jspf.or.jp/Journal/PDF_JSPF/jspf2019_05/jspf2019_05-236.pdf)

```
import MDSplus.*
```

```
mdsconnect('192.168.1.140') ←FourierのIP
```

```
mdsconnect('87.224.94.202') ←ST40のIP (tree_nameは'st40')
```

以下mdsconnect('192.168.1.140') のtree

```
mdsopen('my_tree', shotnumber); shotnumber=-1は最新ショット
```

これでツリーが開ける。例えばそこから

mdsvalue('NUM1')とかすると...

(もしアクセスできない場合、先にFourierにsshして  
mdsip -p 8000 -m -h /etc/mdsip.hosts  
のコマンドでポートを開けておいてから)