

Using JOD Backup Get

December 9, 2019

1 Using JOD Backup Get bget

1.0.1 Introduction

In addition to restoring entire dictionary backups with `restd` JOD also supports fetching individual objects from particular backups with `bget` and `bnl`.

If you screw up part of a larger system restoring *all the code* may create more problems than it solves. Usually you only want *the good bits* of a backup.

`bget` is your good bits **huckleberry**.

```
In [1]: NB. display J version
9!:14''
```

j901/j64avx/windows/beta-s/commercial/www.jsoftware.com/2019-12-02T12:51:33



The following examples assume you have installed the JOD development dictionaries (joddev), (jod), and (utils). Use [JAL](#) to install the [JODSOURCE](#) [addon](#) and follow the instructions to load (joddev), (jod), and (utils).

```
In [2]: NB. load JOD in a clear base locale
        load 'general/jod' [ clear ''

        NB. The distributed JOD profile automatically RESETME's.
        NB. To safely use dictionaries with many J tasks they must
        NB. be READONLY. To prevent opening the same put dictionary
        NB. READWRITE comment out (dpset) and restart this notebook.
        dpset 'RESETME'

        NB. Converting Jupyter notebooks to LaTeX is
        NB. simplified by ASCII box characters.
        portchars ''

        NB. Verb to show large boxed displays in
        NB. the notebook without ugly wrapping.
        sbx=: ' ... ' , "1~ 90&{."1@":

        NB. open some JOD dictionaries to search
        od ;:'joddev jod utils' [ 3 od ''
        did ~ 0
```

```
+--+-----+
|1|+-----+--+-----+--+-----+--+-----+--+-----+--+-----+| | | | | | | | | |
| ||      |--|Words|Tests|Groups*|Suites*|Macros|Path*      ||
| |+-----+--+-----+--+-----+--+-----+--+-----+--+-----+|
| ||joddev|rw|32   |8    |2     |1     |12    |/joddev/jod/utils||
| |+-----+--+-----+--+-----+--+-----+--+-----+--+-----+|
| ||jod   |ro|782  |67   |22    |13    |61    |/jod/utils   ||
| |+-----+--+-----+--+-----+--+-----+--+-----+--+-----+|
| ||utils |ro|392  |7    |21    |0     |17    |/utils      ||
| |+-----+--+-----+--+-----+--+-----+--+-----+--+-----+|
+--+-----+
```

1.0.2 bn1 lists available backups

JOD binary backups are created with packd. When packd is run it copies current dictionary files to the backup folder and renames them with an ever increasing backup number prefix.

```
In [3]: NB. list all available put dictionary backups
        sbx bnl '.'
```

[illegible]

1.0.3 bnl lists objects in backups

bn1 lists objects in backups. See jod.pdf for more details.

```
In [4]: NB. list all words in last backup
smoutout sbx bnl ''
```

```
NB. list all test cases in last backup
smoutput sbx 1 bnl ''
```

```
NB. oldest backup
smoutput OldestBnum=: ; {: bnl '.'
```

```
NB. list all macros in oldest backup
smoutput sbx 4 bnl OldestBnum
```

```
NB. list all macros with names starting with "JOD" in the oldest backup
4 bnl 'JOD',OldestBnum
```

```
+--+-----+--+-----+--+-----+--+-----+-- . . .
```

1 bgetSmoke00 bnlBasic01 bnlSmoke00 bnlSmoke01 getDictextSmoke00 loadtest100dictionary pu	. . .
---	-------

```

+-+-----+-----+-----+-----+-----+-----+-----+ ...
.10
+-+-----+-----+-----+-----+-----+-----+----- ...
|1|JODBUILDHISTORY|JODTOOLSBUILDHISTORY|historyjod|manifestjod|manifestjoddocument|manifes ...
+-+-----+-----+-----+-----+-----+-----+----- ...
+-+-----+
|1|JODBUILDHISTORY|JODTOOLSBUILDHISTORY|
+-+-----+

```

1.0.4 abv a backup name list helper verb

To streamline the search for backup objects the following helper verb uses bn1 to return valid backup name lists for objects.

```

In [5]: NB. define in JOD's interface locale
        abv_iod=:3 : 0

        NB.*abv v-- all backup version names.
        NB.
        NB. Returns all valid backup names matching name prefix (y).
        NB.
        NB. monad: blclBNames =. abv zl/clPfx
        NB.
        NB. abv 'ch' NB. all words in all backups starting with 'ch'
        NB. abv '' NB. all words in all backups
        NB.
        NB. dyad: blclBNames =. il abv zl/clPfx
        NB.
        NB. 2 abv 'jod' NB. all group names in all backups starting with 'jod'
        NB. 4 abv '' NB. all macros in all backups

        O abv y NB. word default
        :
        if. badcl_ajod_ y do. jderr_ajod_ ERR002_ajod_ return. end.
        if. -.isempty_ajod_ y do. if. badrc_ajod_ uv=. checknames_ajod_ y do. uv return. else. y=. rv_ajod_ uv end. end.

```

```
if. badrc_ajod_ uv=. x bnl '.' do. uv return. else. bn=. }.uv end.
```

```
NB. names matching prefix in all backups
```

```
pfx=. (<a:) -.&.>~ }.@(x&bnl)&.> (<y) ,&.> bn
```

```
b=. 0 < #&> pfx
```

```
NB. return backup names from most recent to older backups
```

```
\:~ ;<"1@;"1&.> (b # pfx) ,"0&.> <"0 b # bn
```

```
)
```

abv returns backup names from most recent to oldest. The order derives from backup numbers.

```
In [6]: NB. all words in all backups beginning with 'b'
```

```
sbx abv 'bu'
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|buildjodtoolscompressed.67|buildjodtoolscompressed.66|buildjodtoolscompressed.65|buildjod ...
+-----+-----+-----+-----+-----+-----+-----+-----+-----+ ...
```

```
In [7]: NB. all groups in all backups starting with "build" - note the backup suffix numbers
```

```
80 list }. 2 abv 'build'
```

```
buildjod.66 buildjod.65 buildjod.64 buildjod.63 buildjod.62 buildjod.61
buildjod.60 buildjod.59 buildjod.58 buildjod.57 buildjod.56 buildjod.55
buildjod.54 buildjod.53 buildjod.52 buildjod.51 buildjod.50 buildjod.49
buildjod.48 buildjod.47 buildjod.46 buildjod.45 buildjod.44 buildjod.43
buildjod.42 buildjod.41 buildjod.40 buildjod.39 buildjod.38 buildjod.37
buildjod.36 buildjod.35 buildjod.34
```

1.0.5 bget fetches objects from backups

bget fetches objects from backups. See jod.pdf for more details.

Unlike get the verb bget does not define fetched objects in locales. The reason for this is simple, bget may return many versions of the same object. Which one should you restore? JOD lets the user decide.

```
bgetobjects
+--+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+...
|1|+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+...
| ||bgetobjects_84|3|4 : 0   NB.*bgetobjects v-- get objects from backups. NB. NB. dyad: il ...
| |+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+...
+--+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+...
```

bget can fetch many objects. The objects are returned in boxed name, class and value tables. For words and macros these tables have three columns for other objects there are two columns.

```

+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|releasejod_84|3|4 : 0  NB.*releasejod v-- final JOD release steps. NB. NB. dyad:  blVersi ...
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|releasejod_83|3|4 : 0  NB.*releasejod v-- final JOD release steps. NB. NB. dyad:  blVersi ...
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|releasejod_82|3|4 : 0  NB.*releasejod v-- final JOD release steps. NB. NB. dyad:  blVersi ...
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|releasejod_81|3|4 : 0  NB.*releasejod v-- final JOD release steps. NB. NB. dyad:  blVersi ...
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|releasejod_80|3|4 : 0  NB.*releasejod v-- final JOD release steps. NB. NB. dyad:  blVersi ...

```

```
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ ...
```

```
In [10]: NB. fetch the last ten versions of the short explanations of all words starting with "bc"
         'rc ncv'=: 0 8 bget 10 {. abv 'bc'
         sbx ncv
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ ...
|bchecknames_84|checks backup name patterns| ...
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ ...
|bchecknames_83|checks backup name patterns| ...
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ ...
|bchecknames_82|checks backup name patterns| ...
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ ...
|bchecknames_81|checks backup name patterns| ...
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ ...
|bchecknames_80|checks backup name patterns| ...
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ ...
|bchecknames_79|checks backup name patterns| ...
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ ...
|bchecknames_78|checks backup name patterns| ...
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ ...
|bchecknames_77|checks backup name patterns| ...
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ ...
|bchecknames_76|checks backup name patterns| ...
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ ...
|bchecknames_75|checks backup name patterns| ...
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ ...
```

1.0.7 bget results can be edited with ed

bget name, class and value tables can be edited with the JOD ed verb. JOD ed works differently depending on what J IDE you are using but the basic approach is to generate script text from object data, write the script to a file, and then open a J editor. The following examples illustrate typical uses.

```
In [11]: NB. edit the most recent version of a word
         'rc ncv'=: bget 'bchecknames'
         ed ncv
```

```
$$$edit$$$c:/users/john/j901-user/temp/bchecknames_84.ijs
```

```
In [12]: NB. edit all group header text
         'rc ncv'=: 2 bget }. 2 bnl ''
         smoutput sbx ncv
         ed ncv
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+ ...
|jod_84      |NB. *jod c-- main JOD dictionary class.  NB.  NB. All other dictionary classe ...
+-----+-----+-----+-----+-----+-----+-----+-----+ ...
|jodstore_84|NB.*jodstore c-- storage object class: extension of (jod).  NB.  NB. Hides th ...
+-----+-----+-----+-----+-----+-----+-----+-----+ ...
$$$edit$$$c:/users/john/j901-user/temp/jod_84.ijs
```

```
In [13]: NB. edit all versions of all macros that begin with "manifestjoddoc"
         'rc ncv'=: 4 bget 4 abv 'manifestjoddoc'
         smoutput 80 list 0 {"1 ncv
         ed ncv
```

```
manifestjoddocument_84 manifestjoddocument_83 manifestjoddocument_82
manifestjoddocument_81 manifestjoddocument_80 manifestjoddocument_79
manifestjoddocument_78 manifestjoddocument_77 manifestjoddocument_76
manifestjoddocument_75 manifestjoddocument_74 manifestjoddocument_73
manifestjoddocument_72 manifestjoddocument_71 manifestjoddocument_70
manifestjoddocument_69 manifestjoddocument_68 manifestjoddocument_67
manifestjoddocument_66 manifestjoddocument_65 manifestjoddocument_64
manifestjoddocument_63 manifestjoddocument_62 manifestjoddocument_61
manifestjoddocument_60 manifestjoddocument_59 manifestjoddocument_58
manifestjoddocument_57 manifestjoddocument_56 manifestjoddocument_55
```



```
manifestjodddocument_54 manifestjodddocument_53 manifestjodddocument_52
manifestjodddocument_51 manifestjodddocument_50 manifestjodddocument_49
manifestjodddocument_48 manifestjodddocument_47 manifestjodddocument_46
manifestjodddocument_45 manifestjodddocument_44 manifestjodddocument_43
manifestjodddocument_42 manifestjodddocument_41 manifestjodddocument_40
manifestjodddocument_39 manifestjodddocument_38 manifestjodddocument_37
manifestjodddocument_36 manifestjodddocument_35 manifestjodddocument_34
manifestjodddocument_33 manifestjodddocument_32 manifestjodddocument_31
manifestjodddocument_30 manifestjodddocument_29 manifestjodddocument_28
manifestjodddocument_27 manifestjodddocument_26 manifestjodddocument_25
manifestjodddocument_24 manifestjodddocument_23 manifestjodddocument_22
manifestjodddocument_21 manifestjodddocument_20 manifestjodddocument_19
manifestjodddocument_18 manifestjodddocument_17 manifestjodddocument_16
manifestjodddocument_15 manifestjodddocument_14 manifestjodddocument_13
manifestjodddocument_12 manifestjodddocument_11 manifestjodddocument_10
$$$$edit$$$c:/users/john/j901-user/temp/manifestjodddocument_84.ijs
```

1.0.8 Final remarks

bget and bnl make it easy to recover objects in JOD binary backups. The objects are not defined in locales. You must edit them with ed and select what you need. Object names are suffixed with backup numbers. This is done to distinguish object versions. Typically these backup numbers will be removed when editing recovered objects.

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December 2019
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