Boost.Build

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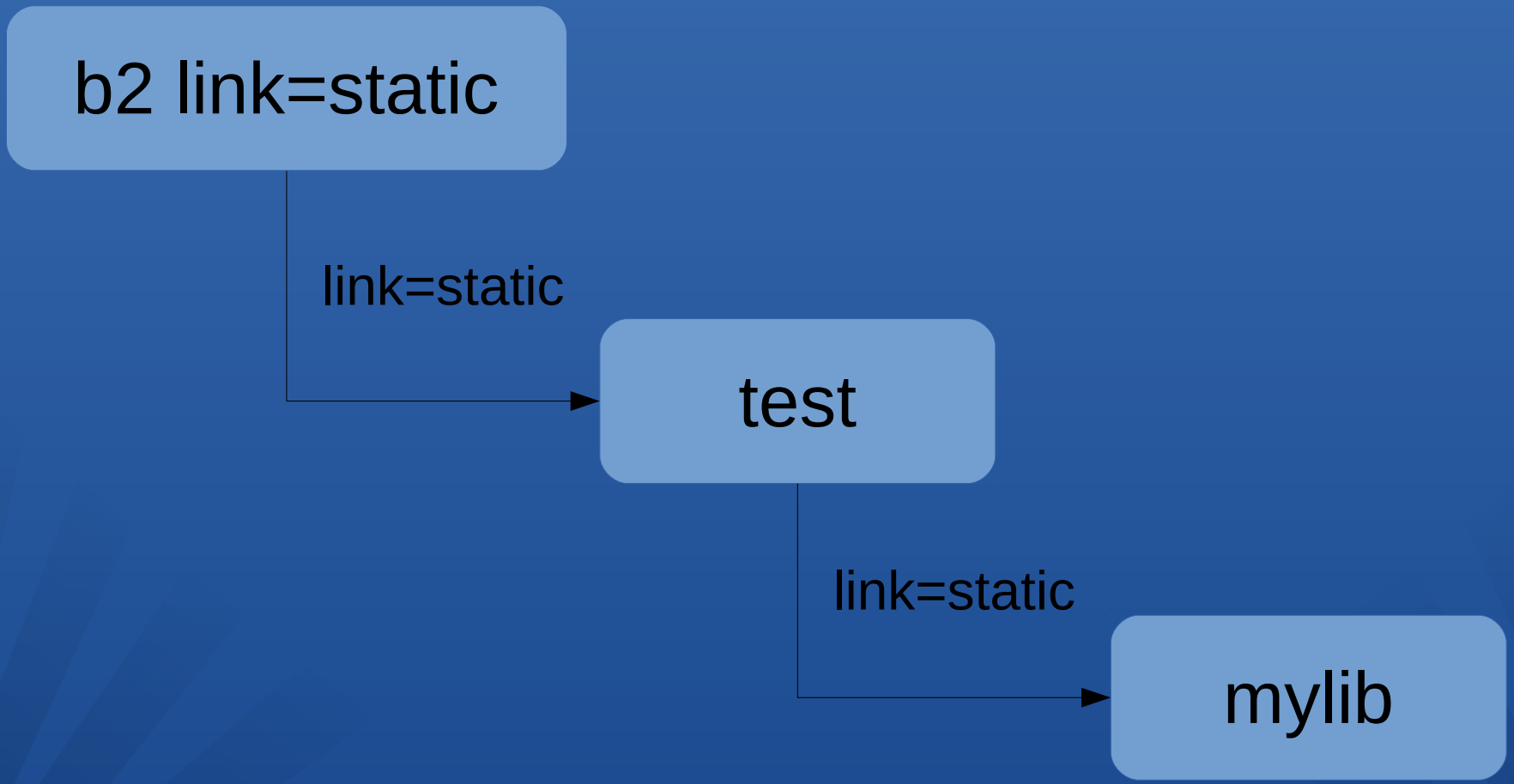
Targets

```
lib mylib : mylib.cpp ;
exe test : main.cpp mylib ;
```

Main Targets



Features in Jamfiles

```
if $(target-os) = windows
{
  sources += windows.cpp ;
}
else
{
  sources += posix.cpp ;
}
```

Target Alternatives

```
alias sources : windows.cpp :
    <target-os>windows ;
alias sources : posix.cpp ;
```

Features

- variant=debug,release
- link=static,shared
- toolset=msvc,gcc
- cxxflags
- include
- define

Kinds of features

- propagated
- free
- path
- dependency
- composite
- incidental

Property sources

- Command line
- Target
  - Requirements
  - Default build
  - Usage requirements
- Project
- toolset.requirements
- Feature default

Project Requirements

```
project mylib
   : requirements
     <link>shared:<define>MYLIB_DLL
   : usage-requirements
     <link>shared:<define>MYLIB_DLL
   : default-build <link>static
   ;
```

Conditional Properties

```
<toolset>msvc:<cxxflags>/Wd4512
<conditional>@extra-props

rule extra-props ( properties * )
{
    return <link>static ;
}
```

Configuration

- configure.check-target-builds
- ac.check-library
- predef.check
- predef.requires
- config.requires

Configuration

```
zlib-requirements =
   [ ac.check-library /zlib//zlib :
     <library>/zlib//zlib
     <source>zlib.cpp
     <source>gzip.cpp ] ;
```

External Libraries

- lib kernel32 ;
- using zlib ;

Directory Structure

- Dir/
  - Jamroot
  - Subdir1/
    - Jamfile
  - Subdir2/
    - Jamfile
    - Subdir3/
      - Jamfile

Testing

```
import testing ;
run test_add.cpp
   /boost//unit_test_framework ;
compile test_is_subconcept.cpp ;
compile-fail fail_ref_assign.cpp ;
```

Other modules

- import regex ;
- using boostbook ;
- use-project /boost : ../boost-git ;
- build-project subdir ;

Jam Language

```
local x = 1 2 3 ;
for local y in $(x)
{
  if $(y) != 2
  {
    ECHO $(y) ;
  }
}
```

Rules

```
rule fun ( x * : y * )
{
  return $(x)-$(y) ;
}

fun a b c : 1 2 3 ;
```

Jam Gotchas

- Dynamic scope
- List of strings
- Lexer
- `[ f x : y : z ]`

Debugging

- --debug-configuration
- --debug-building
- -n, -d2

Debugger

- `b2 -dconsole`