

MULTI_PROCESS DEBUGGING (DSF)

SCOPE: GDB 7.1 now fully supports Multi-exec debugging. For this purpose GDB has many inferiors . This is a new feature and introduced new commands.(Remote debugging considered)

```
(gdb)
```

```
add-inferior
```

```
&"add-inferior\n"
```

```
~"Added inferior 2\n"
```

```
^done
```

```
(gdb)
```

```
-list-thread-groups
```

```
^done,groups=[ {id="0",type="process",pid="0"}, {id="0",type="process",pid="0"} ]
```

```
(gdb)
```

```
info inferiors
```

```
&"info inferiors\n"
```

```
~" Num Description Executable \n"
```

```
~" 2 <null> \n"
```

```
~"* 1 <null> \n"
```

```
^done
```

- “add-inferior” without any argument adds a null-empty inferior waiting to be attached. “list-thread-groups” command does not give any info about which process lives on which inferior. We need inferior numbers because we need to switch between them.(like “info threads”)
- GDBProcesses_7_1.java overrides “**getProcessesBeingDebugged**” functions with “info inferiors” command output.

(gdb)

info inferiors

&"info inferiors\n"

| ~" Num | Description | Executable | \n" |
|--------|-------------|------------|-----|
| ~" 2 | <null> | | \n" |
| ~"* 1 | <null> | | \n" |

^done

(gdb)

inferior 2

&"inferior 2\n"

~"[Switching to inferior 2 [process 0] (<noexec>)]\n"

^done

(gdb)

info inferiors

&"info inferiors\n"

| ~" Num | Description | Executable | \n" |
|--------|-------------|------------|-----|
| ~"* 2 | <null> | | \n" |
| ~" 1 | <null> | | \n" |

^done

(gdb)

*) “inferior inferior_id” command switches between inferiors . We already know inferior number so switching with this info easy. (CLISelectActiveInferior)

These features implemented , but we have problem with inferior identification.

After solving this problem and other implementation problems , we will be able to debug multi process. Other commands must be implemented.

- remove-inferior
 - detach inferior
 - kill inferior
- maint info program-spaces.