




**HPI** Hasso  
Plattner  
Institut  
IT Systems Engineering | Universität Potsdam

## Exercise 3: z/VM

Server Operating Systems 2011



## Connect to our Mainframe

2

- Start your emulator and connect to 172.16.21.93 at port 23

```
z/VM ONLINE

      /
ZZZZZ /
ZZ    /
ZZ    /
ZZ    /
ZZZZZ /


VV      VVV MM      MM
VV      VVV MMM MMMM
VV      VVV MMMM MMMM
VV      VVV MM MM MM MM
VV      VVV MM MM MM MM
VVVVV   MM  M  MM
VVV     MM  MM  MM
V       MM  MM

built on IBM Virtualization Technology

Fill in your USERID and PASSWORD and press ENTER
(Your password will not appear when you type it)
USERID ==>
PASSWORD ==>
COMMAND ==>

RUNNING ZVM61
```

Server Operating Systems 2011 | Stefan Richter | 11/05/2011



## Task 1: Login and format disk a

3


1. Connect to our mainframe
2. Fill out the form and submit with Ctrl
  - initial password: test
3. Execute **format 191 a** and call it **HOME**
4. Re-Login and look at your minidisks

```

Ready: T=0.01/0.01 07:47:51
LABEL  VDEV  M  STAT  CYL  TYPE  BLK52  FILES  BLKS USED-(%)  BLKS LEFT  BLK TOTAL
HOME   191  a  R/W    20  3390  4096     2      9-01      3591      3600
MINT190 190  S  R/O    100 3390  4096    689    15020-03    2472    10000
MINT19E 19E  Y/S  R/O    250 3390  4096   1052    20501-64   16419   45000
Ready: T=0.01/0.01 07:47:59

```

Server Operating Systems 2011 | Stefan Richter | 11/05/2011




## Task 2: Send us a file

4

1. Create a file with XEDIT
2. Send the user IBMUSER this file into his card reader with  
<http://publib.boulder.ibm.com/infocenter/zvm/v6r1/index.jsp?topic=/com.ibm.zvm.v610.dmsb4/sfl.htm>

Server Operating Systems 2011 | Stefan Richter | 11/05/2011




## Task 3: Explore your VM

5

1. Figure out:
  1. how much storage your VM can use?
  2. how many CPUs it can have?
  3. what other devices it has and which additional ones you can add?
- Command Overview:
  - <http://publib.boulder.ibm.com/infocenter/zvm/v6r1/topic/com.ibm.zvm.v610.hcpb7/chap1.htm#chap1>

Server Operating Systems 2011 | Stefan Richter | 11/05/2011



## Task 4: Trace your VM

6

1. Trace the supervisor call instructions executed when creating a file
2. Based on <http://publib.boulder.ibm.com/infocenter/zvm/v6r1/topic/com.ibm.zvm.v610.hcpb2/tr5a.htm#tr5a> create a trace trap for the SVC instruction
  - <http://publib.boulder.ibm.com/infocenter/zvm/v6r1/topic/com.ibm.zvm.v610.hcpb2/option.htm> explains some general options of the trace command, e.g. whether to stop or where the output should go
3. Create a file like in task 2
4. Stop the tracing and look at the log
5. Why do you need supervisor calls when creating a file?

Server Operating Systems 2011 | Stefan Richter | 11/05/2011