



00 - OMLEX - Network Backup - Step-by-Step Guide

The guide is describing step by step backup procedure of OMLEX computer backup through Bohemia Market backup server.

Written By: Petr Roupec

Step 1 — Login to OMLEX computer

```
petr — ssh root@192.168.10.30 — 132x36
s03spa SyncState: OK
stlTK OnComp Time StOMK MMi ASR MAC ARC BOM LEA MTB PRT OKU
akt s03ot3 okay fue --- --- --- --- --- ---
akt s03spa okay akt --- akt akt akt akt akt akt ---
akt s03spb okay fue --- fue fue fue fue fue fue ---
akt s03poa okay fue fue fue fue fue --- --- ---
" s03pob okay akt akt akt akt akt --- --- ---
s03apa.txpom :
s03apa.txpom :
s03apa.txpom :
s03apa.txpom : exit
Connection closed by foreign host.
root@C014H030:~# telnet s03poa
telnet: could not resolve s03poa/telnet: Name or service not known
root@C014H030:~#
root@C014H030:~#
root@C014H030:~# telnet 142.124.33.1
Trying 142.124.33.1...
Connected to 142.124.33.1.
Escape character is '^J'.

SCO OpenServer(TM) Release 5 (s03spa.TXP.OM650.scn) (ttypl)

login: █
```

```
petr — ssh root@192.168.10.30 — 132x36
Password:
Last successful login for txpom: Wed Sep 09 11:49:29 2020 on ttypl
Last unsuccessful login for txpom: Sat Dec 16 11:08:54 2017 on ttyp0

SCO OpenServer(TM) Release 5

(C) 1976-2000 The Santa Cruz Operation, Inc.
(C) 1980-1994 Microsoft Corporation
All rights reserved.

For complete copyright credits,
enter "copyrights" at the command prompt.

-----
MIT for Celsius M420 (SCSI)
-----
PG Unix based on: SCO 5.0.6a
PG L62 MIT ( Release V 9.01a )

modified by: "MakeOmMIT_M420.sh V 8.1.1.1" on 15 Mar 2004
             "prototyp_M420.sh V 8.14" on 15 Mar 2004
installed by "postmit.sh V 8.50" on 06 Mar 2006

OM650: PUSU
-----
bf_txp_0074 : Improved /etc/rc2 script for SCO 5.0.6          07.03.06
bf_txp_0076 : Improved bf21_file_watch script for SCO 5.0.6  21.06.06
Environment um OM-spezifisches erweitern
OM: umask 0002
Environment um mac-spezifisches erweitern
Environment um ntb-spezifisches erweitern
Environment um swi-spezifisches erweitern
s03apa.txpom : PL
s03apa.txpom :
s03apa.txpom :
s03apa.txpom : █
```

● Login to the TXP Computer

Step 2 — Evaluate TXP system status

```

petr — ssh root@1
s03spa SyncState: OK
StLTK OmKomp Time StOMK MMI ASR MAC ARC BDM LZA NTB PRT OXU
akt s03ot3 okay fue --- --- --- --- --- --- --- ---
akt s03spa okay akt --- akt akt akt akt akt akt akt ---
" s03spb okay fue --- fue fue fue fue fue fue fue ---
akt s03poa okay fue fue fue fue fue --- --- --- ---
" s03pob okay akt akt akt akt --- --- --- ---

```

- Evaluate status of TXP OM650 status prior shutdown of the computer. In case that power station is in operation make sure redundant computer is available

Step 3 — Stopping OM650

```

petr — ssh root@192
s03spa SyncState: OK
StLTK OmKomp Time StOMK MMI ASR MAC ARC BDM LZA NTB PRT OXU
akt s03ot3 okay fue --- --- --- --- --- --- --- ---
akt s03spa okay akt --- akt akt akt akt akt akt akt ---
" s03spb okay fue --- fue fue fue fue fue fue fue ---
akt s03poa okay fue fue fue fue fue --- --- --- ---
" s03pob okay akt akt akt akt --- --- --- ---
[s03spa.txpom :
[s03spa.txpom :
s03spa.txpom : Om.Sta
[s03spa.txpom : Om.Stop
Om.Stop: OM stopping procedure is activated.
OMstop: Stopping OM processes .....
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: OM processes stopped.
Om.Stop: OM stopping procedure is terminated.

```

```

petr — ssh root@192.168.10.3
s03spa SyncState: OK
StLTK OmKomp Time StOMK MMI ASR MAC ARC BDM LZA NTB PRT OXU
akt s03ot3 okay fue --- --- --- --- --- --- --- ---
akt s03spa okay akt --- akt akt akt akt akt akt akt ---
" s03spb okay fue --- fue fue fue fue fue fue fue ---
akt s03poa okay fue fue fue fue fue --- --- --- ---
" s03pob okay akt akt akt akt --- --- --- ---
[s03spa.txpom :
[s03spa.txpom :
s03spa.txpom : Om.Sta
[s03spa.txpom : Om.Stop
Om.Stop: OM stopping procedure is activated.
OMstop: Stopping OM processes .....
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: OM processes stopped.
Om.Stop: OM stopping procedure is terminated.
s03spa.txpom :

```

- Stop OM650 system by the command
- *Om.Stop*

 Wait until process complete!

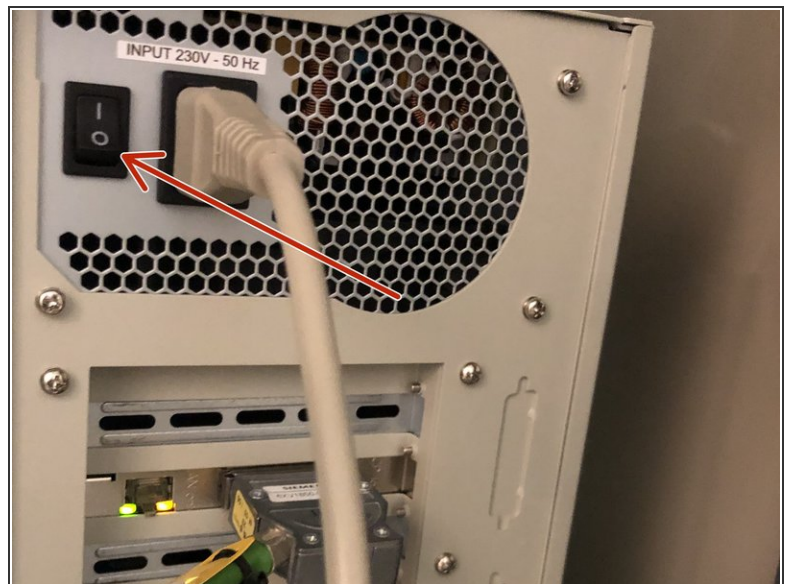
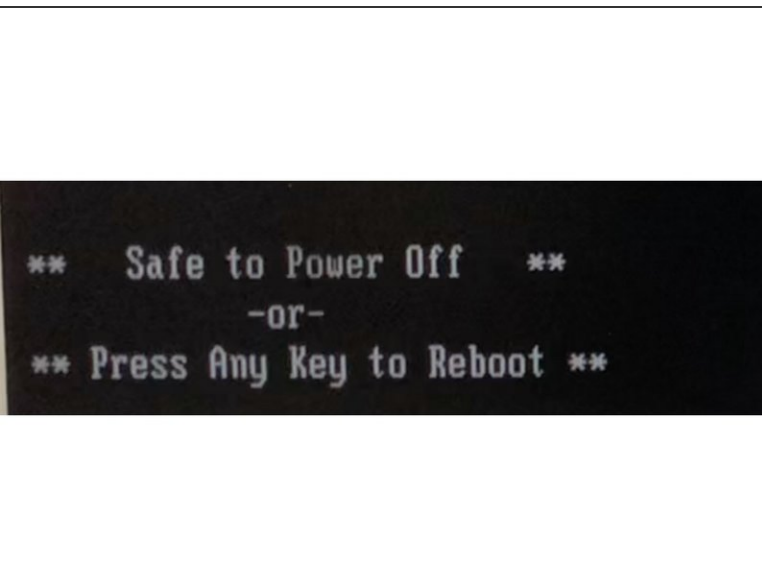
Step 4 — Shutdown computer

```
s03spa SyncState: OK
StLTk OmKomp Time StOMK MMI ASR MAC ARC BDM LZA NTB PRT OXU
akt s03ot3 okay fue --- --- --- --- --- --- --- ---
akt s03spa okay akt --- akt akt akt akt akt akt akt ---
" s03spb okay fue --- fue fue fue fue fue fue fue ---
akt s03poa okay fue fue fue fue fue --- --- --- ---
" s03pob okay akt akt akt akt akt --- --- --- ---

[s03spa.txpom :
[s03spa.txpom :
s03spa.txpom : Om.Sta
[s03spa.txpom : Om.Stop
Om.Stop: OM stopping procedure is activated.
OMstop: Stopping OM processes .....
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: Waiting for end of OM processes ...
OMstop: OM processes stopped.
Om.Stop: OM stopping procedure is terminated.
[s03spa.txpom : su
[Password:
# init 0
```

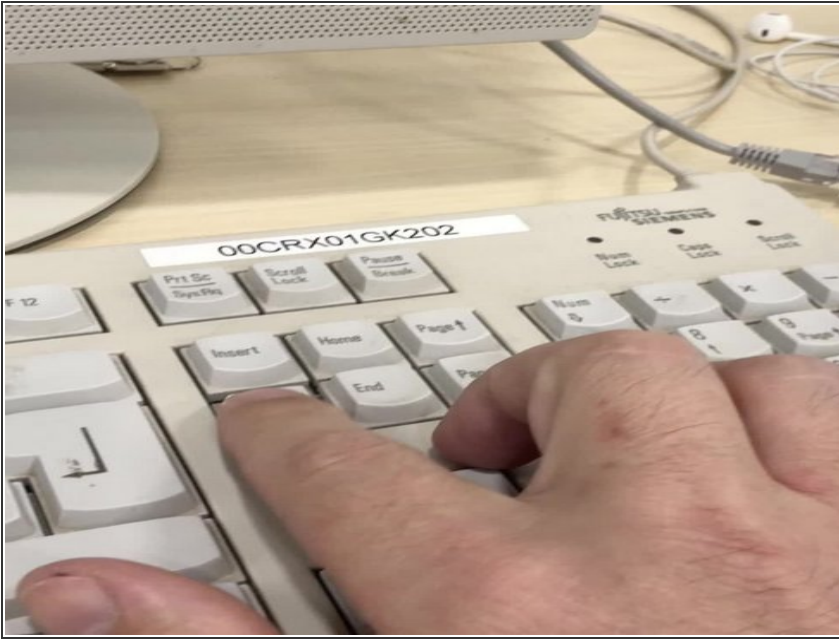
- Login as a super user
 - **su**
- Shutdown computer
 - *init 0*

Step 5 — Switch OFF the computer



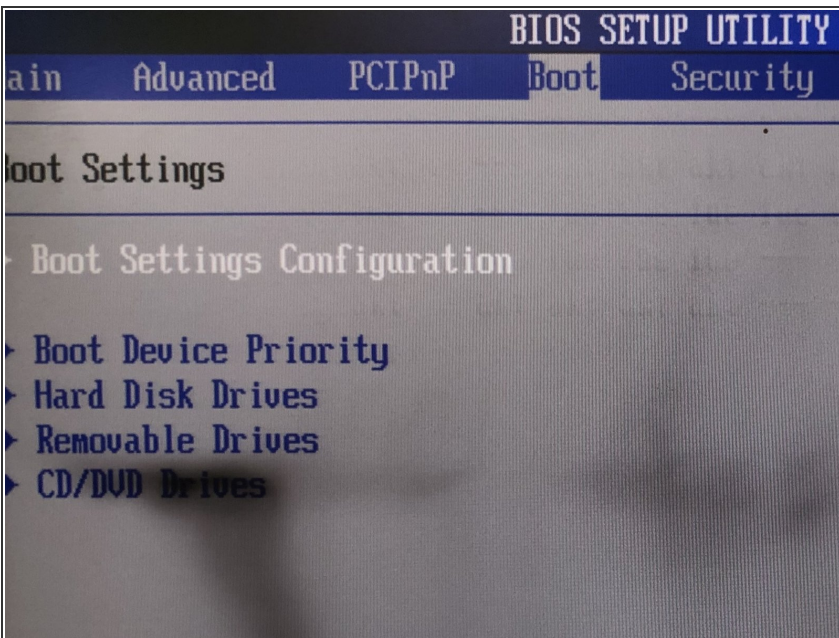
- When shutdown is completed message is shown.
- Switch OFF the computer and follow instructions on hardware connections

Step 6 — Enter OMLEX Computer BIOS



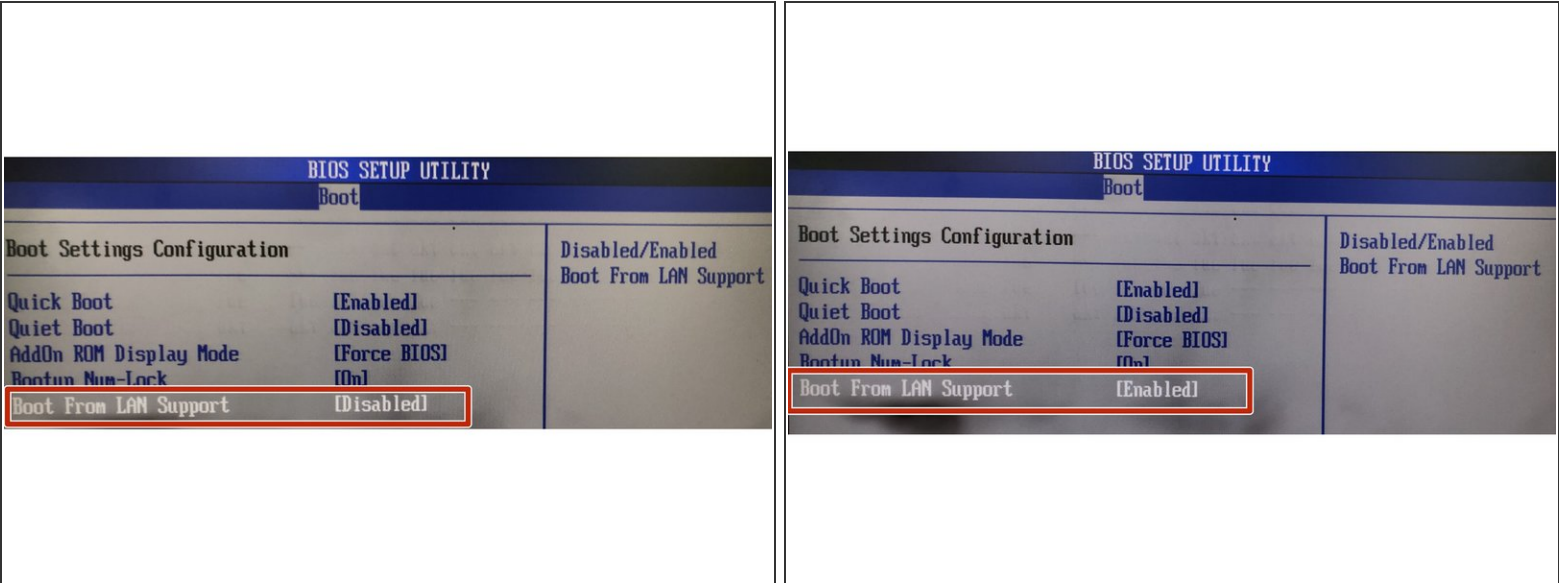
- Enter into BIOS by pressing DEL key right after computer start

Step 7 — Enter OMLEX Computer BIOS



- To enter BIOS pres DEL Key right after computer start
- By pressing left arrow go to the Boot Section
- Enter boot setting configuration

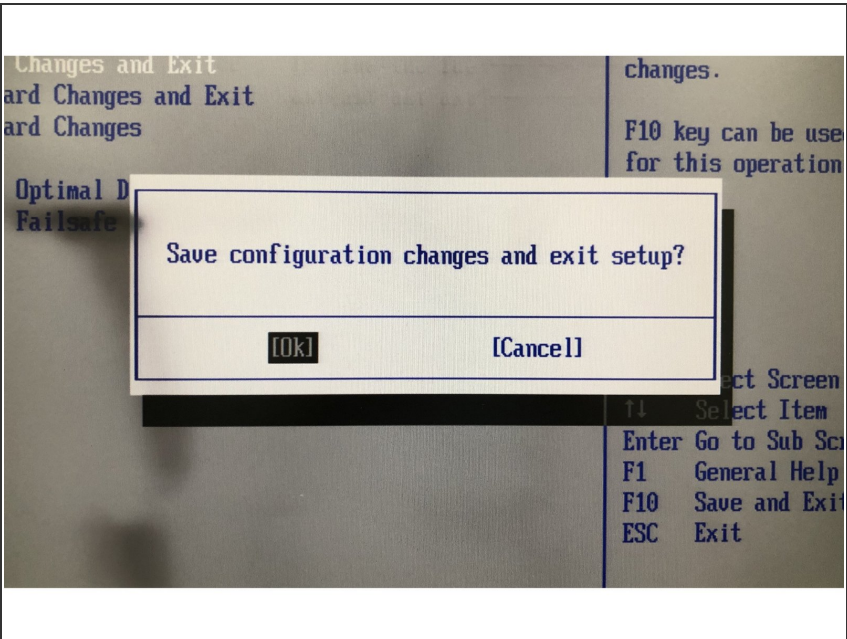
Step 8 — Enable LAN Booting



- Scroll down and enable Boot from LAN

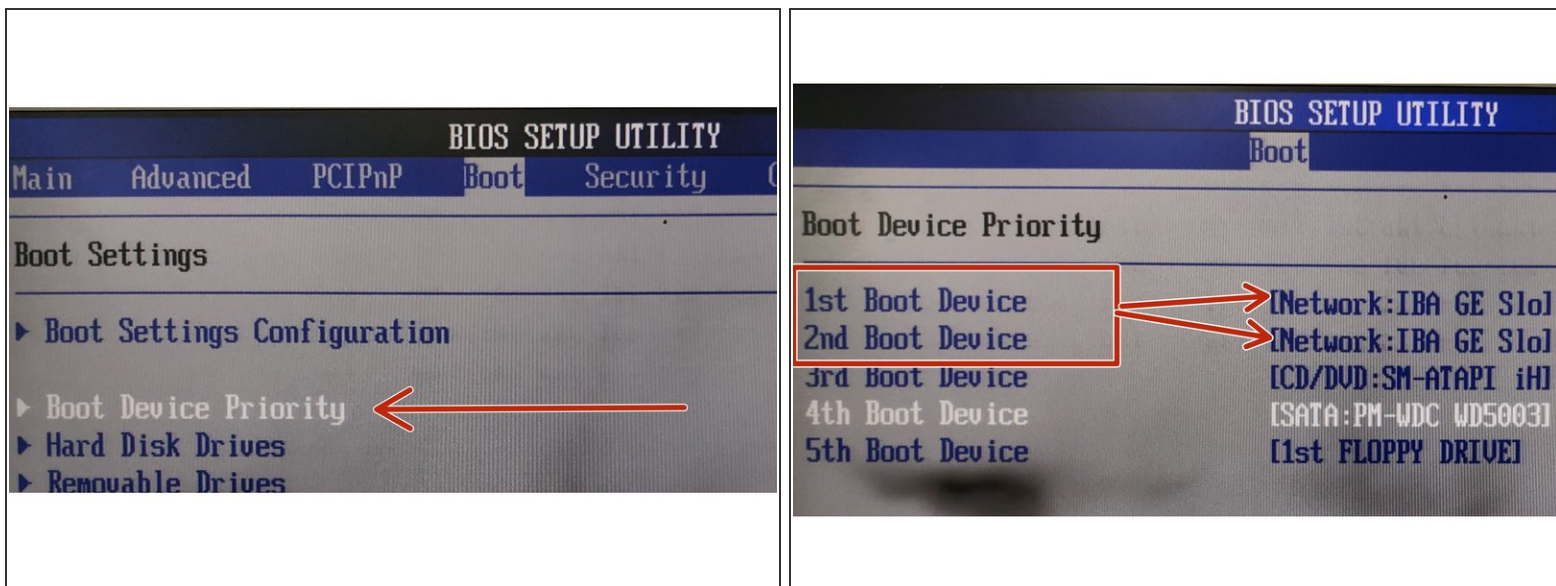
⚠ Save Changes and Reboot computer is required prior changing boot priority devices

Step 9 — Reboot computer



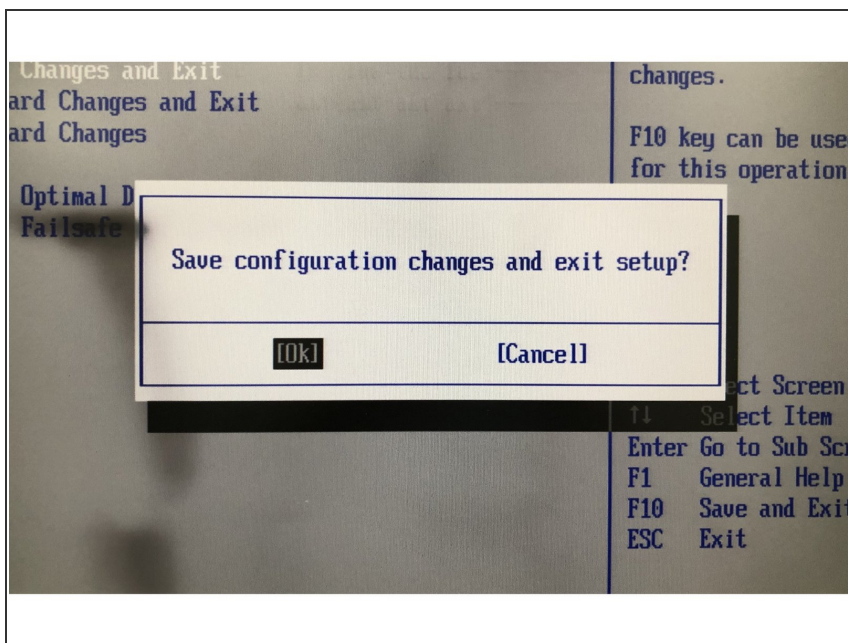
- Save changes and leave BIOS

Step 10 — Enter into BIOS and Change Booting order



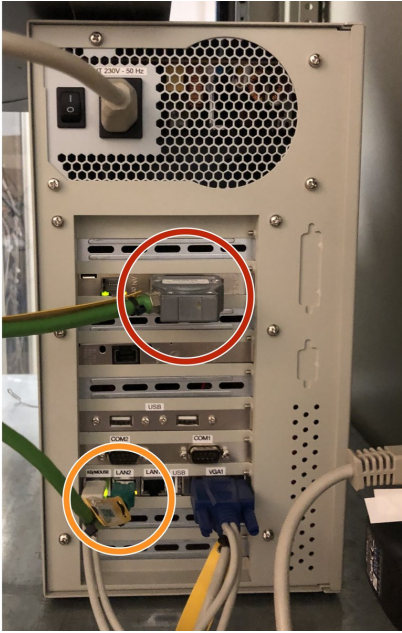
- To enter BIOS pres DEL Key right after computer start
- Change booting priority

Step 11



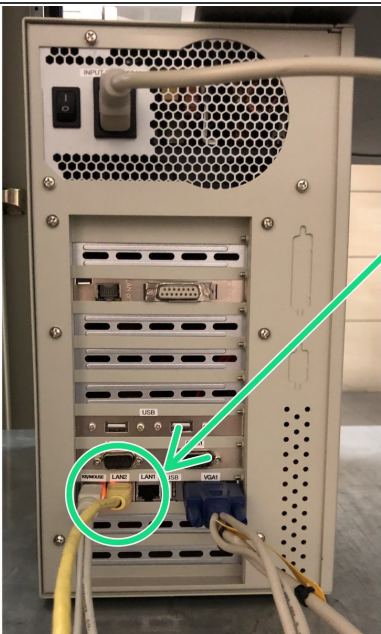
- Save changes and leave BIOS

Step 12 — Disconnect plant bus and terminal bus



- Prior to the backup Terminal Bus to be disconnected from the computer
- Prior to the backup Plant Bus to be disconnected from the computer
- ① Terminal bus is connected to LAN2
- ① Plant Bus is connected to CP1613 card

Step 13 — Connected Bohemia Market Rescue & BBackup Server



- Connect cable going to Bohemia Market Rescue & Backup Server to the LAN 2 port

Step 14 — Boot server request

```
tel(R) Boot Agent GE v1.3.31
pyright (C) 1997-2009, Intel Corporation

itializing and establishing link...
```

```
Intel(R) Boot Agent GE v1.3.31
Copyright (C) 1997-2009, Intel Corporation

CLIENT MAC ADDR: 00 18 7D A1 73 11  GUID: 68AD7D32 F0FE D511 9B4A B98D881C1988
DHCP.\
```

- After switching on OMLEX computer with LAN booting enabled it start every LAN card
- After a while DHCP requests are being sent to the network

Step 15 — DHCP Request received

```
Intel(R) Boot Agent GE v1.3.31
Copyright (C) 1997-2009, Intel Corporation

CLIENT MAC ADDR: 00 18 7D A1 73 11  GUID: 68AD7D32 F0FE D511 9B4A B98D881C1988
CLIENT IP: 10.42.42.167  MASK: 255.255.255.0  DHCP IP: 10.42.42.42
GATEWAY IP: 10.42.42.42

Press F8 for menu. (60)
```

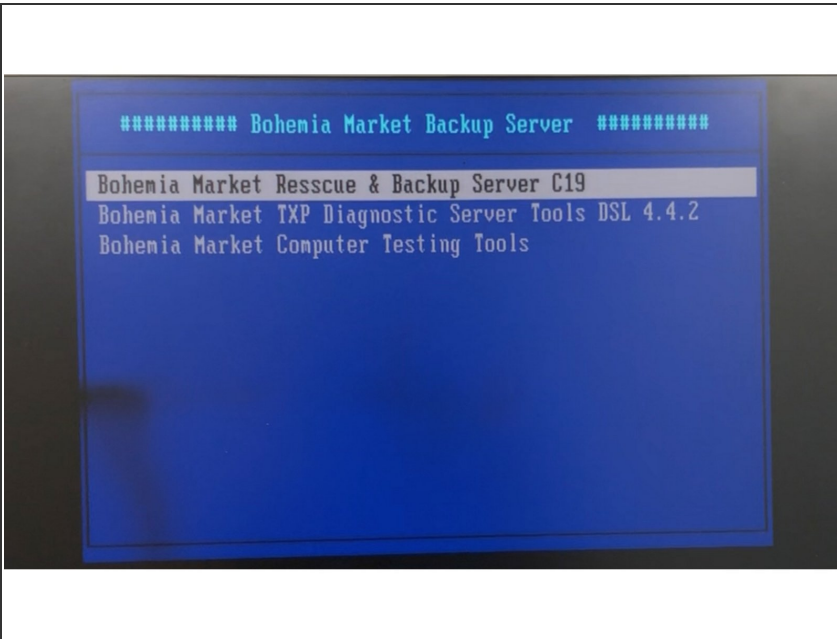
```
Intel(R) Boot Agent GE v1.3.31
Copyright (C) 1997-2009, Intel Corporation

CLIENT MAC ADDR: 00 18 7D A1 73 11  GUID: 68AD7D32 F0FE D511 9B4A B98D881C1988
CLIENT IP: 10.42.42.167  MASK: 255.255.255.0  DHCP IP: 10.42.42.42
GATEWAY IP: 10.42.42.42

--> Bohemia Market Maintenance Servers
```

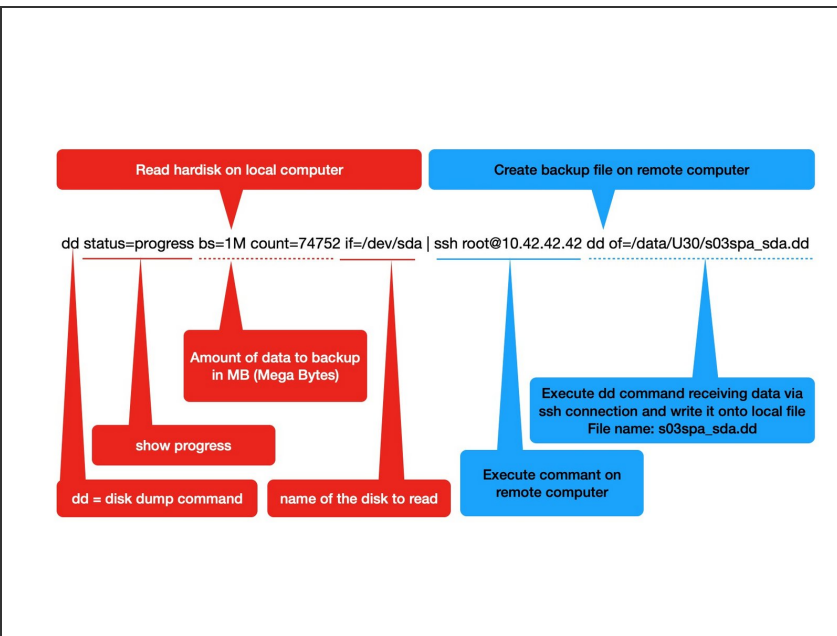
- After a while IP address will be provided by the DHCP server
- Press F8 to connect with Bohemia Market Maintenance Server

Step 16 — Boot the server



- For purposes of OMLEX backup chose the Bohemia Market Rescue and backup server

Step 17 — Perform Backup



- ★ For clarity command is shown on several lines - please type all on one lineBackup is made as set of command on command line
- `dd status=progress if=/dev/sda | root@10.42.42.42 dd of=/data/U30/s03spa_sda.dd`
- i Second disk backup command is; `dd status=progress if=/dev/sdb | root@10.42.42.42 dd of=/data/U30/s03spa_sdb.dd`
- i Server require password - this is site specific and will be provided during commissioning

Step 18 — SSH Connection and password

```

root@sysresccd ~# dmesg | grep sda
[ 6.693298] sd 0:0:0:0: [sdal] 976773168 512-byte logical blocks: (500 GB/466 GiB)
[ 6.693311] sd 0:0:0:0: [sdal] Write Protect is off
[ 6.693312] sd 0:0:0:0: [sdal] Mode Sense: 00 3a 00 00
[ 6.693334] sd 0:0:0:0: [sdal] Write cache: enabled, read cache: enabled, doesn't su
[ 6.755235] sda: sda1 sda2 < sda5 >
[ 6.755681] sd 0:0:0:0: [sdal] Attached SCSI disk
root@sysresccd ~# dd if=/dev/sda | ssh root@10.42.42.42 dd of=/data/U30/s03opc_sda
The authenticity of host '10.42.42.42 (10.42.42.42)' can't be established.
ECDSA key fingerprint is SHA256:NHPIz8No4UCkE3LCJdEdjPlraD2cIKPkIRBFmuSukaAQ
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes_
Warning: Permanently added '10.42.42.42' (ECDSA) to the list of known hosts.
root@10.42.42.42's password:

```

```

root@sysresccd ~# dd if=/dev/sda | ssh root@10.42.42.42 dd of=/data/U30/s03opc_sda
The authenticity of host '10.42.42.42 (10.42.42.42)' can't be established.
ECDSA key fingerprint is SHA256:NHPIz8No4UCkE3LCJdEdjPlraD2cIKPkIRBFmuSukaAQ
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '10.42.42.42' (ECDSA) to the list of known hosts.
root@10.42.42.42's password:

```

- Once connected to BM Backup Server answer the question in regards of the certificates: YES
- After establishing connection you will be asked for Backup Server Password

Step 19 — Backup Completed

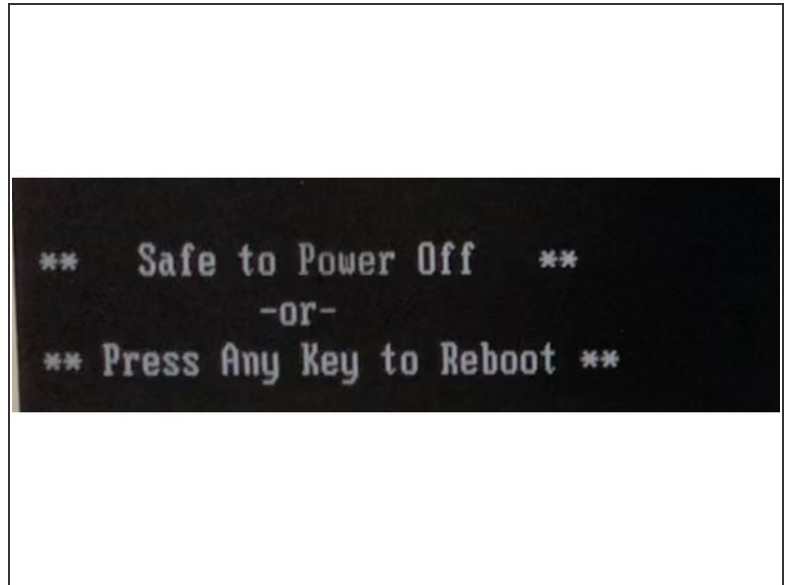
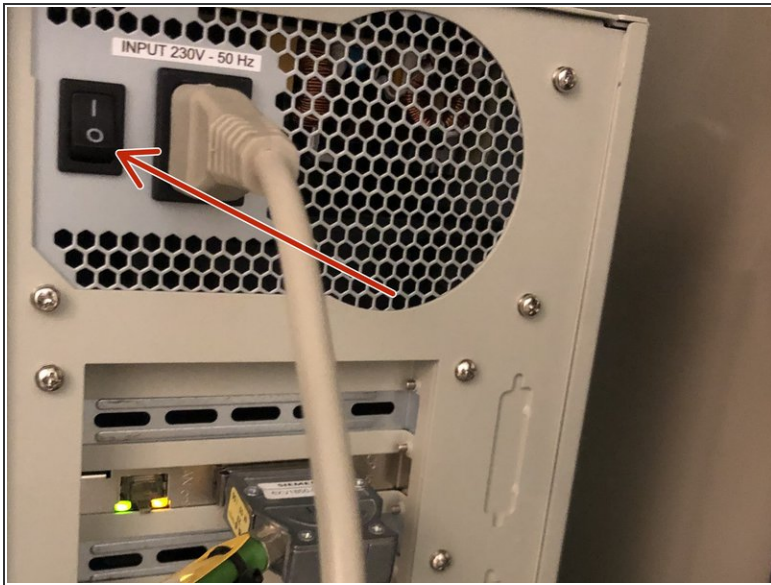
```

root@sysresccd ~# dd status=progress bs=1M count=74752 if=/dev/sda | ssh root@10.42.42.42 dd of=/data/U30/s03spa_sda.dd
root@10.42.42.42's password:
70354841600 bytes (70 GB, 73 GiB) copied, 1626 s, 48.2 MB/s
74752+0 records in
74752+0 records out

```

- After a while backup will complete

Step 20 — Switch off computer



- When shutdown is completed message is shown. Switch off the computer
- Connect cables and start the computer