

Shell access and data transfer

Interactive Login

The Salomon cluster is accessed by SSH protocol via login nodes login1, login2, login3 and login4 at address salomon.it4i.cz. The login nodes may be addressed specifically, by prepending the login node name to the address.

The alias >salomon.it4i.cz is currently not available through VPN connection. Please use loginX.salomon.it4i.cz when connected to VPN.

Login address	Port	Protocol	Login node
10.10.10.10	22	ssh	node1
10.10.10.11	22	ssh	node2
10.10.10.12	22	ssh	node3
10.10.10.13	22	ssh	node4
10.10.10.14	22	ssh	node5
10.10.10.15	22	ssh	node6
10.10.10.16	22	ssh	node7
10.10.10.17	22	ssh	node8
10.10.10.18	22	ssh	node9
10.10.10.19	22	ssh	node10
10.10.10.20	22	ssh	node11
10.10.10.21	22	ssh	node12
10.10.10.22	22	ssh	node13
10.10.10.23	22	ssh	node14
10.10.10.24	22	ssh	node15
10.10.10.25	22	ssh	node16
10.10.10.26	22	ssh	node17
10.10.10.27	22	ssh	node18
10.10.10.28	22	ssh	node19
10.10.10.29	22	ssh	node20
10.10.10.30	22	ssh	node21
10.10.10.31	22	ssh	node22
10.10.10.32	22	ssh	node23
10.10.10.33	22	ssh	node24
10.10.10.34	22	ssh	node25
10.10.10.35	22	ssh	node26
10.10.10.36	22	ssh	node27
10.10.10.37	22	ssh	node28
10.10.10.38	22	ssh	node29
10.10.10.39	22	ssh	node30
10.10.10.40	22	ssh	node31
10.10.10.41	22	ssh	node32
10.10.10.42	22	ssh	node33
10.10.10.43	22	ssh	node34
10.10.10.44	22	ssh	node35
10.10.10.45	22	ssh	node36
10.10.10.46	22	ssh	node37
10.10.10.47	22	ssh	node38
10.10.10.48	22	ssh	node39
10.10.10.49	22	ssh	node40
10.10.10.50	22	ssh	node41
10.10.10.51	22	ssh	node42
10.10.10.52	22	ssh	node43
10.10.10.53	22	ssh	node44
10.10.10.54	22	ssh	node45
10.10.10.55	22	ssh	node46
10.10.10.56	22	ssh	node47
10.10.10.57	22	ssh	node48
10.10.10.58	22	ssh	node49
10.10.10.59	22	ssh	node50
10.10.10.60	22	ssh	node51
10.10.10.61	22	ssh	node52
10.10.10.62	22	ssh	node53
10.10.10.63	22	ssh	node54
10.10.10.64	22	ssh	node55
10.10.10.65	22	ssh	node56
10.10.10.66	22	ssh	node57
10.10.10.67	22	ssh	node58
10.10.10.68	22	ssh	node59
10.10.10.69	22	ssh	node60
10.10.10.70	22	ssh	node61
10.10.10.71	22	ssh	node62
10.10.10.72	22	ssh	node63
10.10.10.73	22	ssh	node64
10.10.10.74	22	ssh	node65
10.10.10.75	22	ssh	node66
10.10.10.76	22	ssh	node67
10.10.10.77	22	ssh	node68
10.10.10.78	22	ssh	node69
10.10.10.79	22	ssh	node70
10.10.10.80	22	ssh	node71
10.10.10.81	22	ssh	node72
10.10.10.82	22	ssh	node73
10.10.10.83	22	ssh	node74
10.10.10.84	22	ssh	node75
10.10.10.85	22	ssh	node76
10.10.10.86	22	ssh	node77
10.10.10.87	22	ssh	node78
10.10.10.88	22	ssh	node79
10.10.10.89	22	ssh	node80
10.10.10.90	22	ssh	node81
10.10.10.91	22	ssh	node82
10.10.10.92	22	ssh	node83
10.10.10.93	22	ssh	node84
10.10.10.94			

```

|_|_|_|_| |salomon.it4i.cz|22|ssh|round-robin DNS record for login[1-4]|
|login1.salomon.it4i.cz|22|ssh|login1| |login1.salomon.it4i.cz|22|ssh|login1|
|login1.salomon.it4i.cz|22|ssh|login1| |login1.salomon.it4i.cz|22|ssh|login1|

```

The authentication is by the private key

Please verify SSH fingerprints during the first logon. They are identical on all login nodes: f6:28:98:e4:f9:b2:a6:8f:f2:f4:2d:0a:09:67:69:80 (DSA)
70:01:c9:9a:5d:88:91:c7:1b:c0:84:d1:fa:4e:83:5c (RSA)

```
Private key (id_rsa/id_rsa.ppk ): 600 (-rw-----)s authentication:
```

On **Linux** or **Mac**, use

```
local $ ssh -i /path/to/id_rsa username@salomon.it4i.cz
```

If you see warning message “UNPROTECTED PRIVATE KEY FILE!”, use this command to set lower permissions to private key file.

```
local $ chmod 600 /path/to/id_rsa
```

On **Windows**, use PuTTY ssh client.

After logging in, you will see the command prompt:

/-----| |
 | (-----| |
 / - - - | / - - - | - - - - -
 -----) | (| | | () | | | | () | | | |
 |-----/ - - - | |----/ | | | |----/ | | | |

<http://www.it4i.cz/?lang=en>

```
Last login: Tue Jul  9 15:57:38 2013 from your-host.example.com
[username@login2.salomon ~]$
```

The environment is **not** shared between login nodes, except for shared filesystems.

Data Transfer

Data in and out of the system may be transferred by the scp and sftp protocols.

In case large volumes of data are transferred, use dedicated data mover nodes cedge[1-3].salomon.it4i.cz for increased performance.

HTML commented section #1 (removed cedge servers from the table)

Address	Port	Protocol	salomon.it4i.cz
scp, sftp login1.salomon.it4i.cz	22	scp, sftp	login2.salomon.it4i.cz
22	scp, sftp	login3.salomon.it4i.cz	22
scp, sftp	login4.salomon.it4i.cz	22	scp, sftp

The authentication is by the private key

HTML commented section #2 (ssh transfer performance data need to be verified)

On linux or Mac, use scp or sftp client to transfer the data to Salomon:

```
local $ scp -i /path/to/id_rsa my-local-file username@salomon.it4i.cz:directory/file
```

```
local $ scp -i /path/to/id_rsa -r my-local-dir username@salomon.it4i.cz:directory
```

or

```
local $ sftp -o IdentityFile=/path/to/id_rsa username@salomon.it4i.cz
```

Very convenient way to transfer files in and out of the Salomon computer is via the fuse filesystem sshfs

```
local $ sshfs -o IdentityFile=/path/to/id_rsa username@salomon.it4i.cz:.  
mountpoint
```

Using sshfs, the users Salomon home directory will be mounted on your local computer, just like an external disk.

Learn more on ssh, scp and sshfs by reading the manpages

```
$ man ssh $ man scp $ man sshfs
```

On Windows, use WinSCP client to transfer the data. The win-sshfs client provides a way to mount the Salomon filesystems directly as an external disc.

More information about the shared file systems is available [here](#).