

# 4 different solutions used in BI

- Windows Terminal Server (bits03, bits04, bitsdev03, bitsdev04)
  - Xeon CPU E5-2650 @ 2.60Ghz **8Gb**
- Centralized SLC6 machines (bdidev1, bdidev2, bdisrv1)
  - Xeon CPU X5660 @ 2.80GHz 24 threads 24Gb
- *Personal Virtual SLC6 Linux machine*
  - From 64Gb local disk 2-8Gb memory
- *Personal Virtual Windows machine*
  - From 40Gb SSD local disk 8Gb memory
- *Personal Virtual SLC7 CentOS Linux machine*
  - From 40Gb SSD local disk 8Gb memory
- ~50-60 existing VM (15 Windows, 30-40 SLC6 and 5 SLC7)

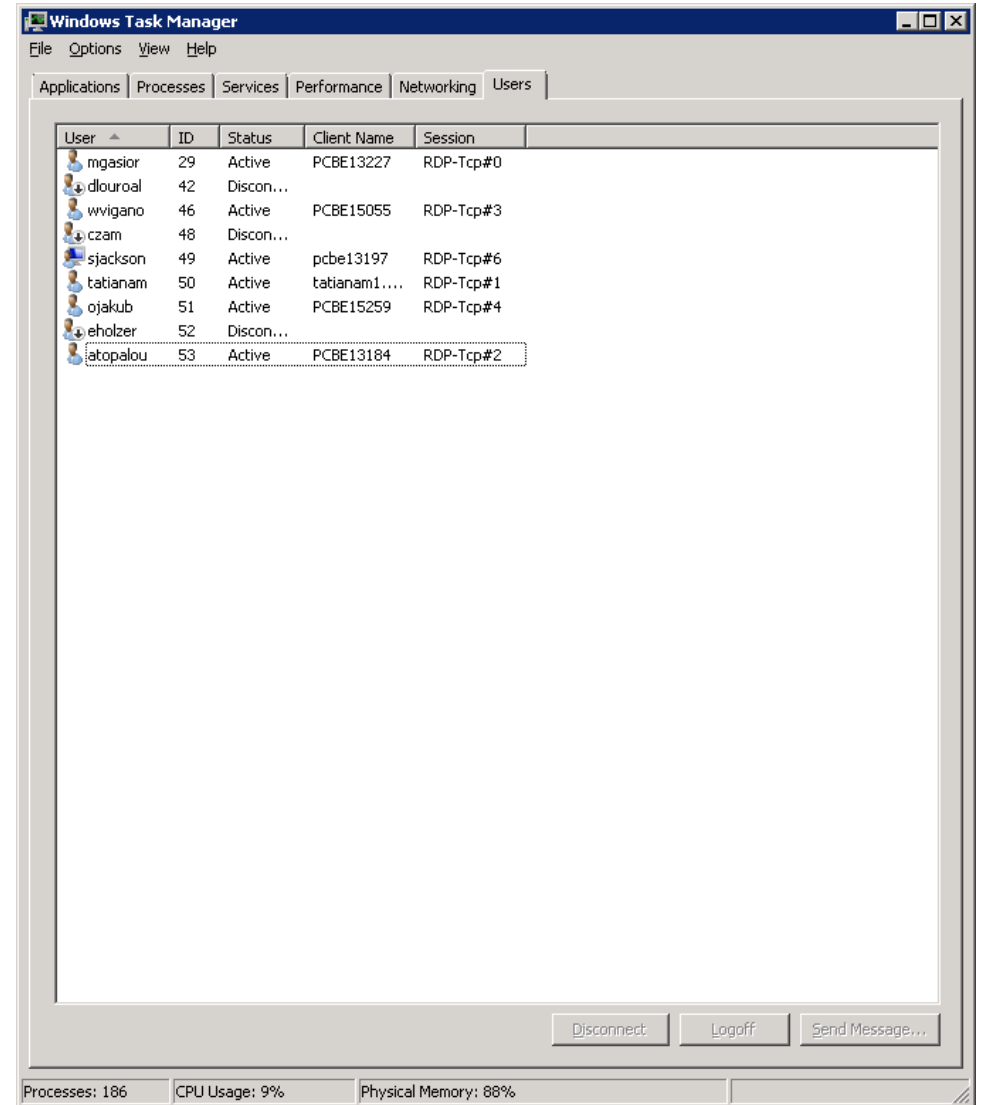
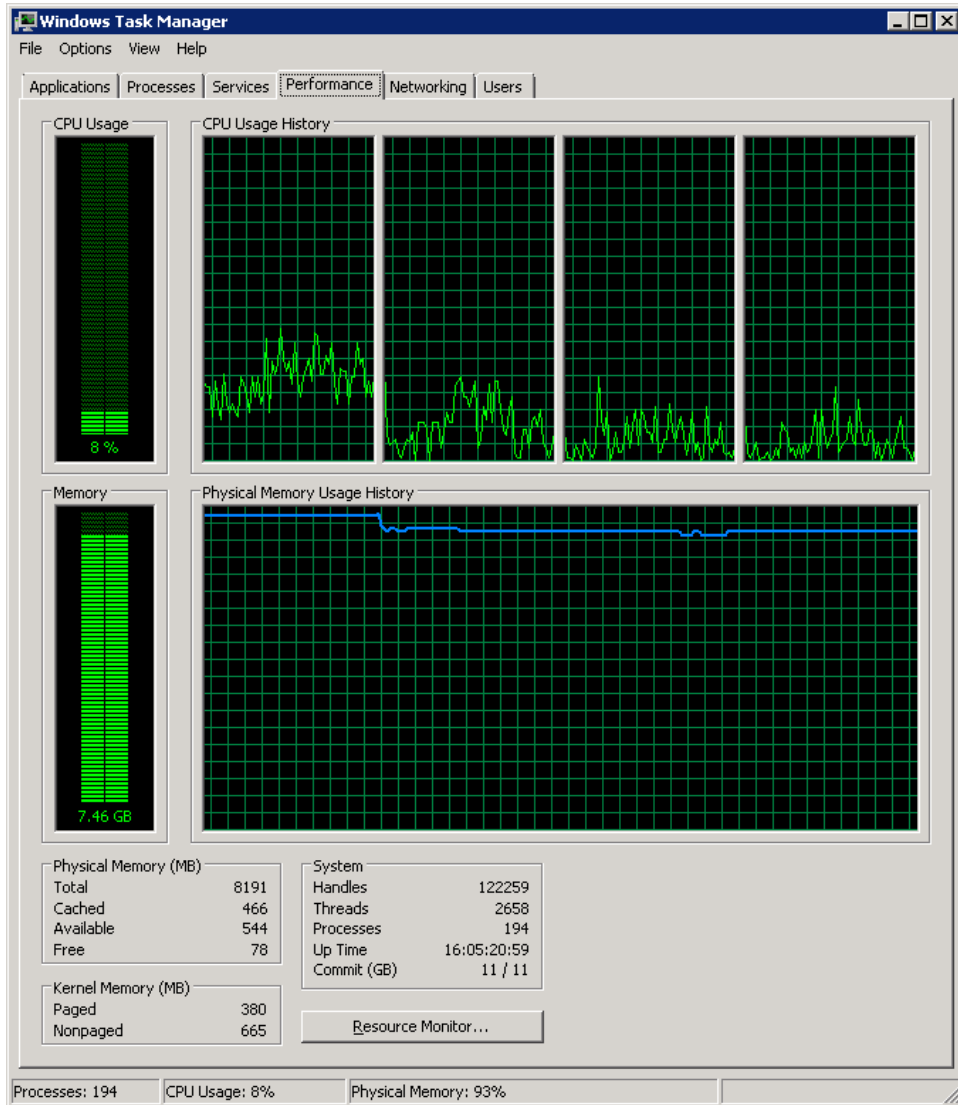
# Why do people need Windows?

- Sometimes people work with other tools, not available on Linux
  - Excel
  - Matlab
  - Mathcad
  - Labview (certain features)
  - Benthic
  - Mathematica
  - WinCC OA
  - ...
- They are more *at-home* on Windows
- Integration (e.g. copy/paste) + Graphics (Java) better

# User experience on Windows terminal server

- Usable during non-busy periods
- During a technical stop, quickly grinds to a halt
- Sometimes hangs and stops people from connecting to a dead session
  - Requires an admin (sjackson) to kill the session
- Can become a critical situation
  - E.g. BLM team updating thresholds on a Friday evening

# Typical usage on Windows terminal server 5/10/2017 (not a busy period...)



# What is special about BITS versus a personal VM Windows machine?

- Logging into a BITS machine, performs several tasks in the *startup*
  - Maps SMB drives to access NFS from Windows
    - L: -> /nfs/bdidev1/local
      - Files created will be owned by bdisoft
    - O: -> /user/slops/data/LHC\_DATA/BI\_DATA
      - Files created will be owned by bdisoft
    - Q: -> /user/bdisoft
      - Files created will be owned by bdisoft
    - U: -> /user/your-login
    - W: -> \\cern.ch\dfs\Departments\AB\Groups\BI\Sections
  - Starts the BI-SW web-page on login
- Several tools are already installed and maintained
  - Matlab, Mathcad, Labview, Benthic, Mathematica, WinCC OA
  - JWS, Firefox, ...
- Pre-configured shortcuts in the start bar (BI-SW Goodies)
  - Links to web-pages
  - Links to common tools (FESA Shell, Navigator)
  - Etc...
  - This is somewhat out of date at the moment!

# Recommendations

- Use CO virtual machines as much as possible (max ~90)
- All should be trusted (access to TN)
- Eradication of the 4 terminal servers April 2018
- Understand that there is a need for Windows
  - So recommend to switch to a VM Windows machine
- We (BI-SW) with the help of BE-CO-IN propose to ease the customization of a standard CO Windows and Linux VM. Default setup to be defined.
  - Access to NFS from Windows through SMB servers
  - Standard tools available : Java (JWS, Applauncher), Python, Eclipse...
  - CCM (BI-EXPERT) toolbar with all main tools (BI & CO)



- CentOS SLC7 machine with FESA plugin available now
  - best candidate !
- bdisrv1 to be used for Python “servers”