

Update on Windows 7 at CERN & Remote Desktop Gateway

CERN IT-OIS

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- Update on Windows 7 at CERN
 - NICE Windows 7 since April 2010
 - Evolution of install base
 - Roadmap for phase-out of Vista, XP, Office 2003
- Remote Desktop Gateway
 - In use at CERN since 2009





- NICE is the CERN management framework for Windows machines providing software upgrades and inventory.
- Windows 7 pilot project was started at CERN in December 2009
- Official Windows 7 support started on 31st March 2010
 - NICE Windows 7 training tutorials for users in June 2010
- Default OS for new desktop machines:
 - 32-bit version of Windows 7
- NICE Windows 7
 - available on 11 standard laptops and 9 desktops models
 - all HW models for which Vista was previously available (available at CERN from 2006 up to now)
- Windows 7 available for installation on all hardware (which satisfies min HW reqs)
- Also support for 64-bit Windows 7 on suitable hardware

- **For Windows 7 32-bit:**

	Microsoft	CERN Recommendations (*)
Memory	1 GB	2 GB (**)
Disk Size	16 GB	60 GB (***)
CPU	1 GHz	2 GHz

(*) **Equal or less than for Vista**

(**) 1 GB memory is enough if Windows 7 is configured without the AERO user interface

(***) 60 GB disk space for typical set of CERN supported applications

- **For Windows 7 64-bit:**

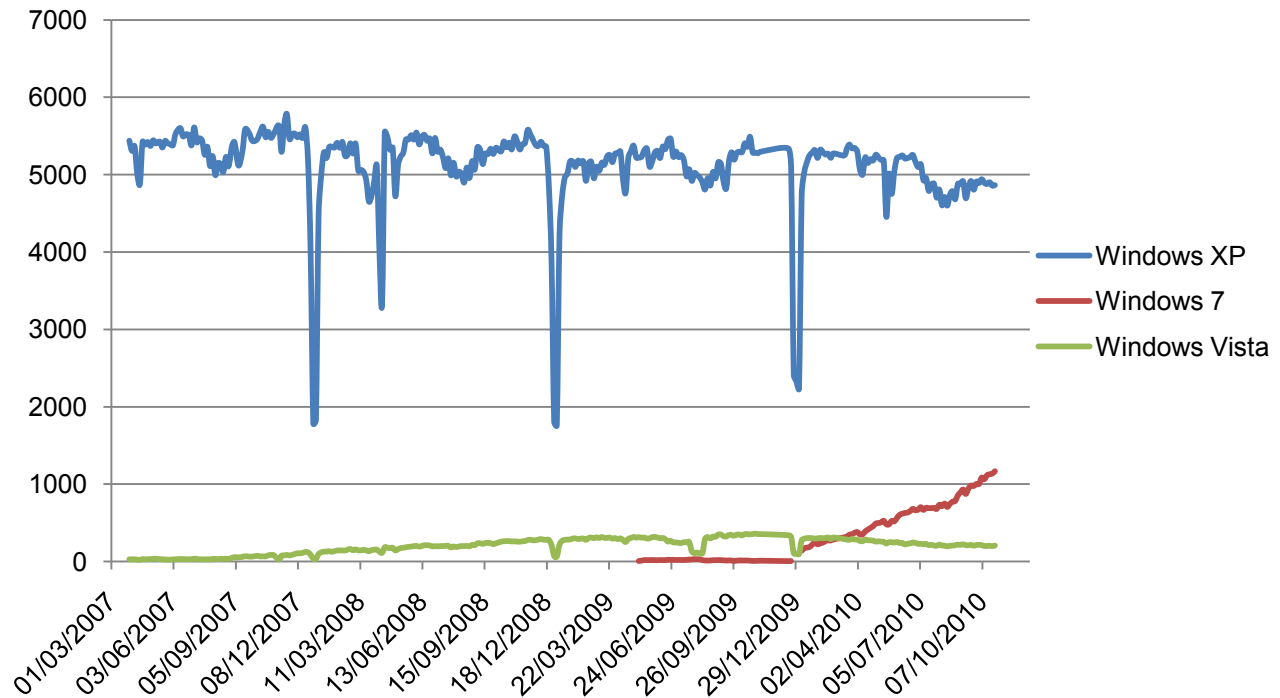
	Microsoft	CERN Recommendations
Memory	2 GB	4 GB (*)
Disk Size	20 GB	60 GB
CPU	1 GHz	2 GHz

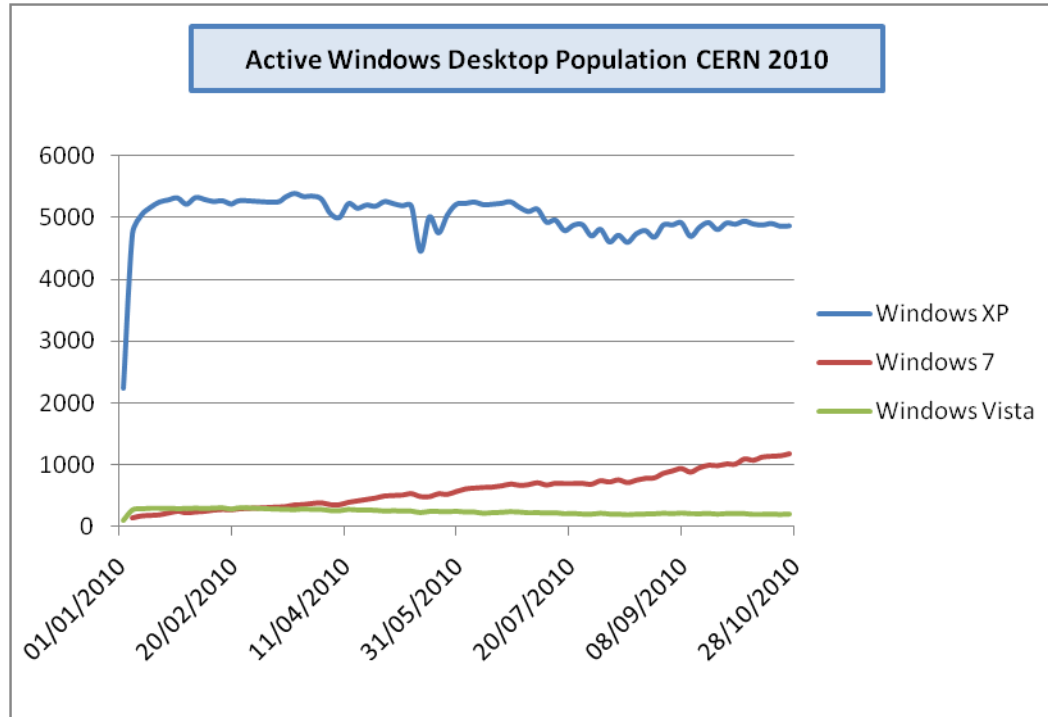
(*) Main motivation of installing a 64-bit OS is to support higher memory configurations

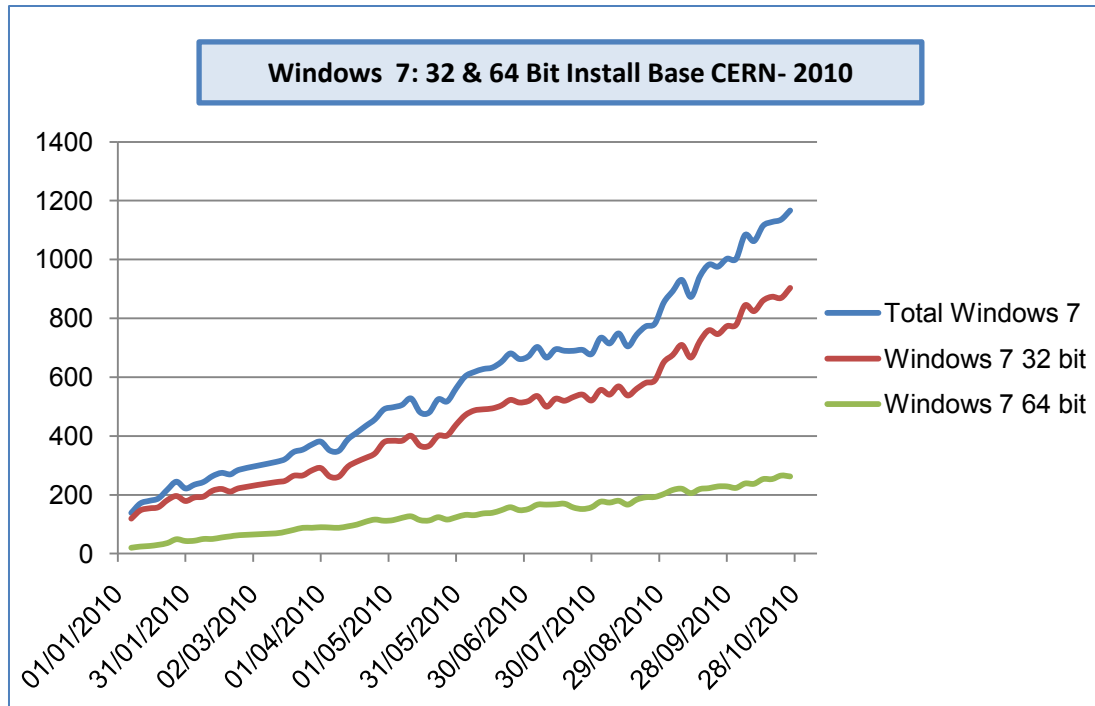




Active Windows Desktop Population at CERN: 2007 - 2010





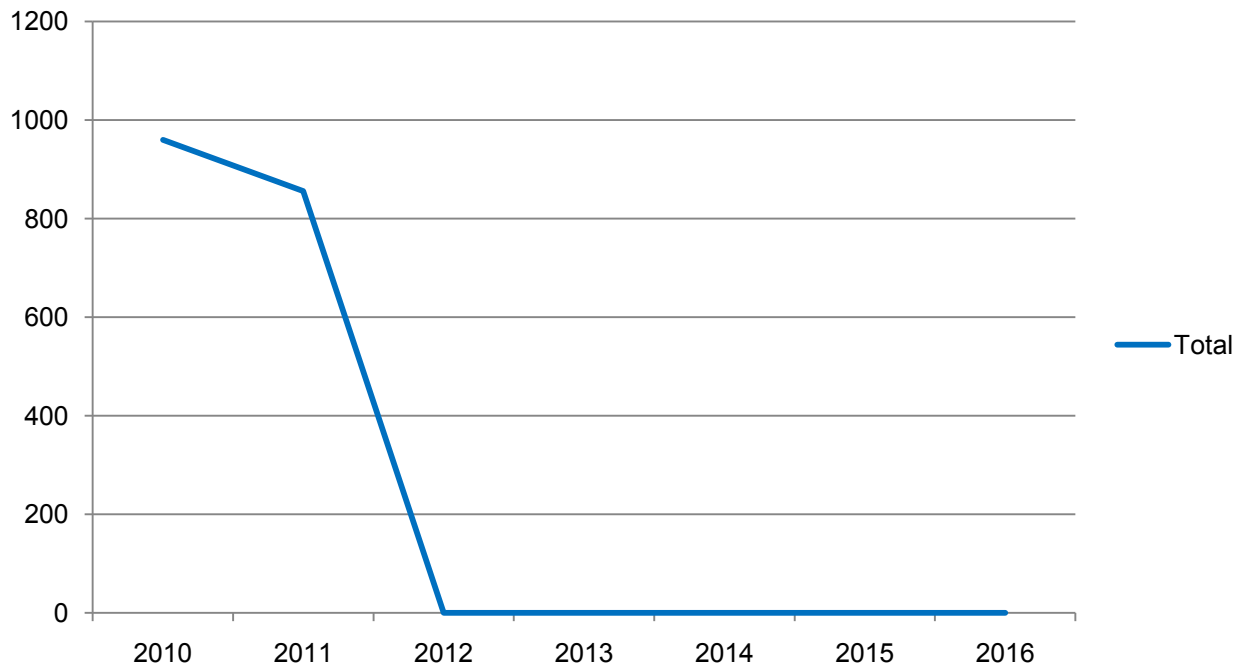


- Phase-out of Windows XP, Windows Vista, Office 2003
 - Target is migration to Windows 7 and Office 2010
- Vendor support
 - Microsoft will stop security updates for Windows XP in April 2014
 - Windows 8 can be expected in 2012
- CERN planning
 - Long term identification of best opportunity for upgrades in coordination with LHC schedule
 - Some investment to replace old PCs may be required

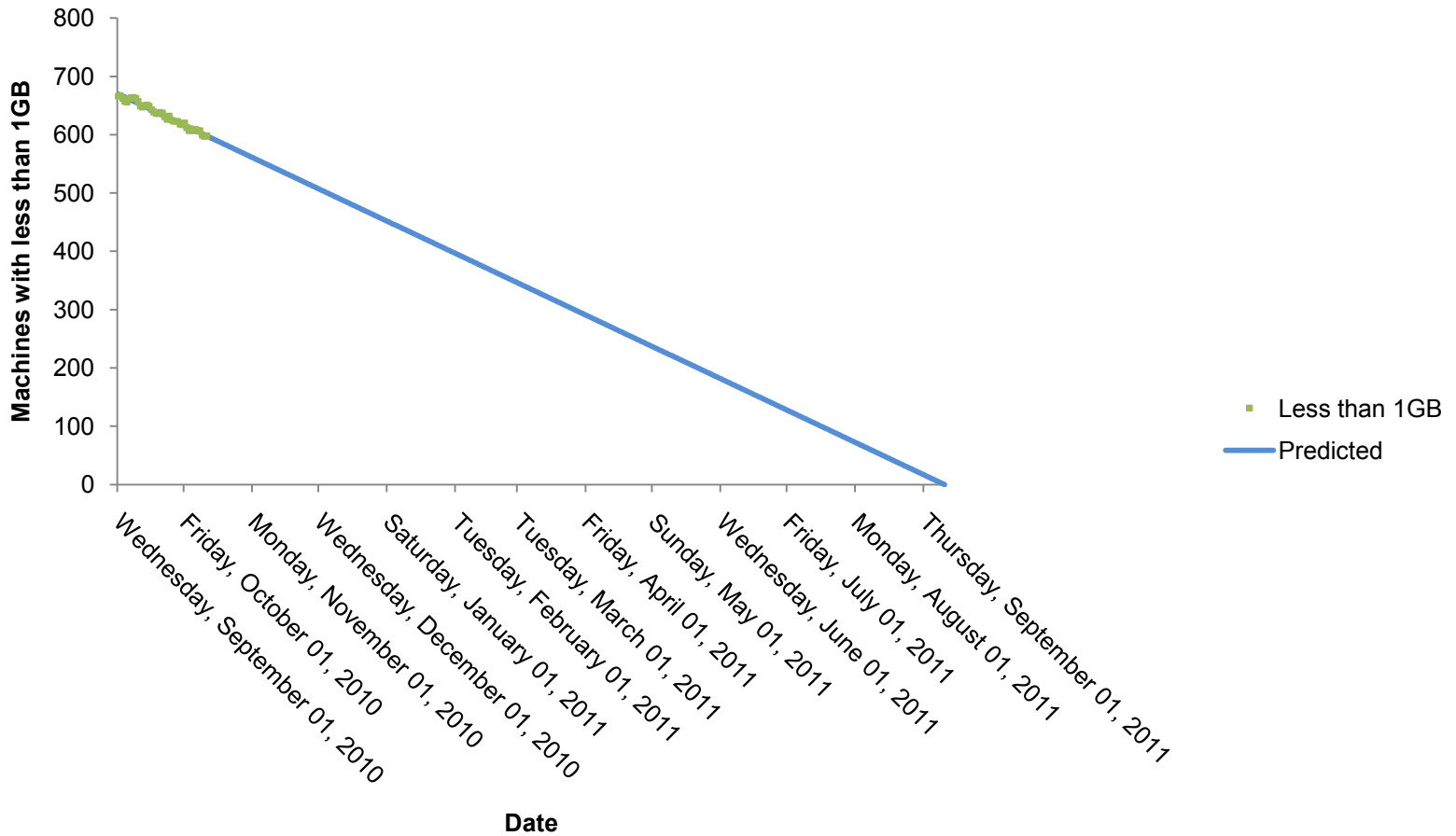


Analysis of the life time of the hardware, where Windows 7 is not supported

Assumption: max 5-year hardware turnover



Hardware boxes having less than 1GB RAM Centrally managed



- 2010 Q4
 - Contact current Vista users to encourage migration to Windows 7
 - Remove installation menu option for Vista
 - Keep it on demand in case it is really needed
- 2011 Q2
 - Stop general support of Windows Vista at CERN:
 - ~20 Catia engineering PCs maintained until Catia on Windows 7
- No hardware upgrades required for Vista to Windows 7 migration



- 2011 Q1
 - Stop installation of XP on new hardware:
 - but keep it available for old hardware
 - IT Training Tutorials for Windows 7 + Office 2010
- 2011 Q3
 - Contact XP users to encourage migration
- 2012 Q4
 - Stop support of Windows XP at CERN
- Today, 950 machines have less than 2GB memory or old motherboards
 - Assuming 5 year lifecycle, all retired by 2012



- 2010 Q4
 - Information campaign to 1000 PCs running Office 2003 to upgrade
- 2011 Q1
 - IT Training Tutorials on Office 2007 and 2010
 - User interface changes
- 2011 Q3
 - Stop support for Office 2003
 - Force upgrade to Office 2007
- >1GB RAM is required
 - 100 PCs which would be also not sufficient for Windows 7



Date	XP	Vista	Office 2003
2010 Q4	Information to users	Information to users Stop new installs	Information to users
2011 Q1	Stop new installs		
2011 Q2		Stop support	Upgrade training
2011 Q3	Mailing to users		Stop support
2011 Q4			
2012 Q1			
2012 Q2			
2012 Q3			
2012 Q4	Stop support		



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- Motivation
 - Windows users need a secure way to access their desktops across firewalls
 - Was in place at CERN to provide secure way to work from home in case it would have been needed in wake of H1N1 pandemic in 2009.
 - Previous options:
 - SSH Tunneling
 - Double-hop via a terminal server



- Remote Desktop Gateway
 - was introduced with Windows Server® 2008 R2
 - enables authorized remote users to connect to resources on an internal corporate or private network
 - Gateway server to route connections
 - Is more secured way to provide connections from Internet.
 - Uses port 443 instead of 3389
 - HTTPS-based protocol
 - NLB Load balanced cluster in use at CERN



- RD Gateway features:
 - Active directory controlled user access
 - Connection Authorization Policies
 - What credentials are authorized to connect TS Gateway
 - Where are connections coming from
 - Resource Authorization Policies
 - Where are you allowed to connect
 - Who is allowed to connect



- Encrypted connection on port 443
- Security in depth
 - AD-based ACLs on the TS Gateway
 - No need to open port 3389 on the firewall

RDC 6.1
(RD) client



RDP over HTTP/S established to TSG



External network

TS Gateway



Internal Network

RDP 3389 to host



Web application that allows to:

- configures RD Gateway permissions to allow connection
- configures the target PC to allow incoming connection for specified users
- prepares RDC connection file

CERN home > IT Department awagner - Andreas.Wagner@cern.ch [Logout] [Details]

NICE Services

Home Help Services Other

Manage the Remote Desktop Connection Access For a Client PC

View or Change Allowed Accounts and Connection Options:

Computer name: pcits09 <- View

Allow Remote Desktop Connection(s) From:

From the CERN Network From the Internet

Save connection settings

Allow User(s) and Group(s) for Remote Connection(s):

CERN\awagner (User) <- Remove selected

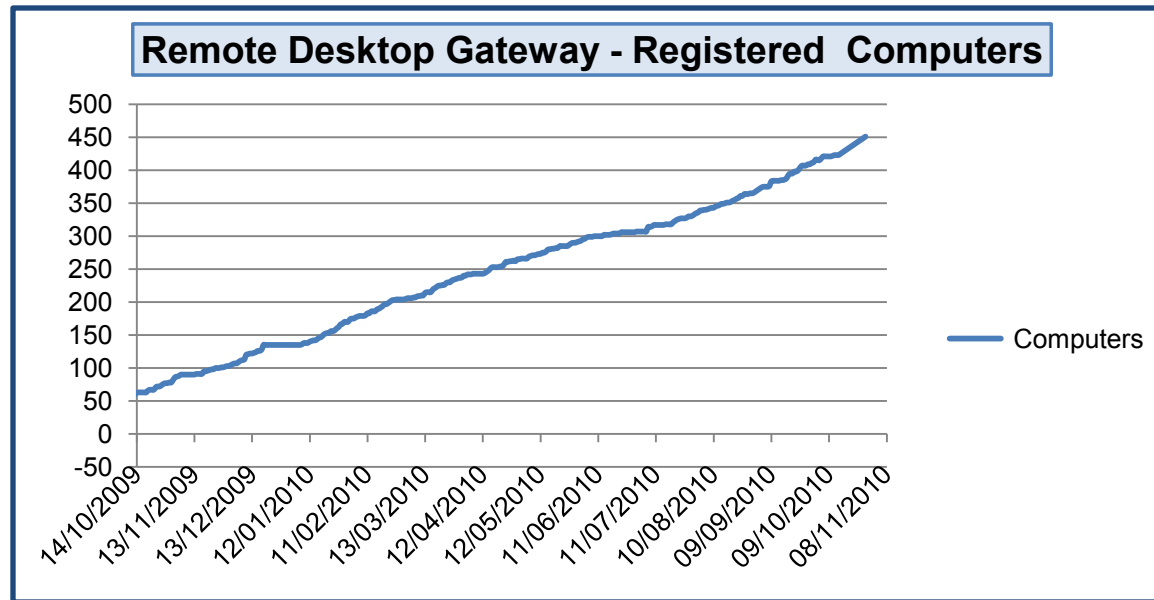
<- Add a member

Download Remote Desktop Connection Shortcuts:

From the CERN Network From the Internet

Last update: October, 2010 - Contact: helpdesk@cern.ch

- Usage & Statistics
 - ~450 registered computers
 - In average about 50 active connections via CERN RD gateway



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Questions?

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Department

