

Evaluate CIT's Desktop Everywhere on Dell Wyse all-in-one system

Many, many "start up" issues resolved by CIT. Use was from December 2014, through August 2016. Here is a partial record of my issues, along with some remaining ones to work through.

- STATUS: Experiment stopped
- Facts to know
- Working with A&S IT
- Testing ideas
- Issues Oliver had, most of which were addressed
 - Reported issue to CIT, on 4/22/16 (Friday)
 - Not yet reported (3/14/16)
 - Adobe Flash Player plug-in won't load in Chrome
 - Reported issue to CIT, on 3/2/16 (Wed)
 - INC000001622659 - Desktop Everywhere: Because Outlook not caching, no junk e-mail filtering. And no usable search.
 - Reported issue to CIT, on 12/3/15 (Thur)
 - INC000001553418 - Desktop Everywhere: Acrobat not licensed
 - Reported issue to CIT, as of 10/19/15 (Mon)
 - INC000001516309 - Desktop Everywhere: Problems with OneDrive syncing.
 - Reported issue to CIT, as of 5/29/15 (Fri)
 - Box Edit sync client still not working.
 - Reported issue to CIT, as of 5/14/15 (Thur)
 - Cannot reset client to factory settings via base Linux OS. Nor access base Linux OS desktop's "Admin" capabilities.
 - Reported issue to CIT, as of 5/8/15:
 - Box Edit sync client not able to start.
 - Context
 - File share privileges too liberal, but only within Desktop Everywhere
 - Status
 - Original report, 5/3/15
 - CU View blocked (Java plug-in)
 - Status
 - Action step
 - Original report
 - Notes prior to 4/20/15 (as reported to CIT, INC000001364135)
 - FIXED: Quest tool upgrade delayed
 - Take-home, regarding any virtualized application in Desktop Everywhere
 - Original report
 - File share access
 - Status
 - Original report
 - Printing
 - Status
 - Original report
 - 1) Can't install a printer for which the driver is installed. (HP)
 - 2) Losing duplex (double-sided) capability for one printer. (HP)
 - 3) Also, default printer is not retained.
 - USB flash drive
 - Doesn't retain settings, such as "don't ask me again" or "remember this"
 - Status
 - Consider doing
 - Original report
 - Built-in camera
 - Status
 - Original report
- Notes
- Resources and other info

STATUS: Experiment stopped

Tuesday, Sept. 6, 2016: I have brought to a halt my CIT Desktop Everywhere engagement, which I started 12/16/2014. For over 1.5 years, this service was my primary work platform, with no other computer dedicated to me. A partial record of my issues, most of which CIT resolved, is parked below.

Facts to know

- CIT's service page:
 - <http://www.it.cornell.edu/services/desktop-everywhere/>
- Updates to the desktop image are usually only done on Saturdays.
- Video-enhanced service gets you dedicated video, of 256MB video RAM (~24-32 VMs split up across available video RAM). For \$2/mo. more. When of value?
- CIT's service does not support RDP (currently). Only accepts PCoIP.
 - End-point can off-load some of that protocol's processing to hardware if it has a dedicated Teradici-licensed PCoIP hardware card.

- As of 4/28/16: CIT considering having "pools" so images could be tailor for departments and/ or have greater control over maintenance windows (including reverting or patching sooner than all others).

Working with A&S IT

Coordinate with A&S IT to ensure the right people are doing the right work:

- <https://cornellprod.sharepoint.com/sites/AS/AIT/ChemIT/Shared%20Documents/VDI>
 - <https://cornellprod.sharepoint.com/sites/AS/AIT/ChemIT/Shared%20Documents/VDI/ChemIT%20-%20PhysIT's%20VDI-related%20procedures.xlsx?d=w278a6dc9a9bb4c5fbc7bb87d10b95a7f>

Testing ideas

How many simultaneous connections? If I'm logged in at work (Dell Wyse), can I log in from home (browser)?

- Test from a browser of another computer in the office, first.
 - **Result:** Kicks on out of other session, picking up exactly where you are.
 - Within VDI, way to suspend session without logging out? That is, get the same result as the above, but without first logging in elsewhere first?
- Can I log into it from a browser running from within my VDI?!
 - **Result:** No! Kicks you right out. (When log back in, picks up exactly where you were, as if you had tried accessing it elsewhere; see above.)

In MS Outlook, I set that the "Delete" button would show on any message I compose.

- Does it retained over time, through reboots?
 - **Result:** Yes! Many months later, "Delete" button still shows (as of 3/2/16).

NetID credentials retention: Confirm it's happening, by others.

- Firefox retains NetID credentials through the weekend such that logging into Remedy on Monday (after restoring all tabs after re-opening Firefox) did NOT prompt me for a NetID password challenge. It simply allowed me into Remedy.
 - Subsequently going into Confluence did require me to log in using my NetID credentials.

What is the lowest level of processing the thin client needs?

- Try to measure the value of using a client with Teradici-licensed, dedicated hardware card.
 - If performance OK without the card, than can consider using cheaper clients.
- Also, if it performs OK on decent, but non-carded, hardware, then the question is how does it perform on super-low performance (even cheaper!) hardware?
 - Raspberry Pi, anyone?
- See "NoTouch Desktop", elsewhere on this page.

Try out NoTouch Desktop software (Per seat: ~\$32 + \$6-7/yr).

- <http://www.stratodesk.com/products/notouch-desktop>
 - Associated support software (management console, VM tool) available at no extra cost.
- 5/14/15Thur: MH created boot drive and use on one of our old, spare Dells. Worked fine.
- 5/8/15: Requested free trial software and got the links.
 - 697MB
 - Stratodesk-NoTouchReceiver-2.39.323-EEs-k305-150425.zip
 - R:\Users\oh10\VDI related

Try out Creative Cloud software

- 5/11/15Mon: Tested out with Zack and all looked good.
 - Acrobat DC still not loaded up, however.
- Info from Friday morning, 5/8/15, with KeeneS:
 - May switch Acrobat to the Serialized Creative Cloud.
 - Serialized Creative Cloud replacing current virtual application deployment this weekend, for Monday (5/11/15).

Issues Oliver had, most of which were addressed

Reported issue to CIT, on 4/22/16 (Friday)

Per phone conversation with Jeff, 2 people (myself included) reported this problem last week.

-----Original Message-----

From: Cornell Information Technologies (CIT) [itservicedesk]

Sent: Thursday, April 28, 2016 10:16 AM

To: Oliver B. Habicht <oh10>

Subject: INC000001659658 Slowness in VDI: A recent, negative change

We believe this particular issue was due to an issue with a Microsoft patch (Update for Microsoft Outlook 2013 (KB3114941)). While we attempt to secure our VDI environment by installing all relevant software patches, we must rely on Microsoft and other vendors to do aggressive testing prior to releasing software updates.

The weekly VDI recompose process is lengthy and our maintenance timeline is short. We were able to remove this update after we received notification from Microsoft, but it had been deployed in our VDI image. We had to balance interrupting the VDI service for all users vs. inconveniencing a few users.

From: Oliver B. Habicht
Sent: Thursday, April 28, 2016 9:29 AM
To: Cornell IT Service Desk <itservicedesk@cornell.edu>
Subject: RE: INC000001659658 Slowness in VDI: A recent, negative change

Jeff,

Thank you for writing. The rubber-banding of textual inputting and other related slowness was not evident this week (3+ days, now).

Did you determine what it may have been, in order to prevent or address future symptoms like this? Has that scope been determined?

Is there monitoring put into place to detect this kind of problem so end-users are not the first having to report it? (Most won't, based on my experience.) A good way to monitor such a service is for service provider staff members to "live" in the service which can at least confirm that what I experienced may have just been restricted to my virtual instance rather than a system-wide issue (scope of problem)

I am no longer seeing the problem so, from my narrow perspective, as a single end-user, you can close this ticket. But I would appreciate knowing the answers to the above questions, moving forwards. Thank you, -Oliver.

I am reporting periodic, frequent slowness in my VDI. Please restore the performance to what it was!

Some symptoms:

- I type and takes 10 seconds for text to show up. This was happening a lot this week.
- Seconds worth of latency between moving windows and me seeing the change.
- Just once: Print job taking half a minute before it "took". This condition retained the print screen so I could not get back to the application (Outlook, in this case).

This is a significant change in service. I have been "living" in CIT's Desktop Everywhere VDI service (for a year or so now?) and I have not run into these (frustrating!) conditions. What has changed?

I have an "ideal" VDI set-up: Dell Wyse All-In-One on Cat-6 network.

Not yet reported (3/14/16)

Adobe Flash Player plug-in won't load in Chrome

In Chrome, plug-in won't load ("Can't load plugin") so video at BBC site won't work. Ex:

- <http://www.bbc.com/news/business-35381524>
- Can't tell what the plug-in is that won't load, alas.

In Firefox and IE, plug-in is fine. And once loaded, one discovers it is the Adobe Flash plug-in.

Reported issue to CIT, on 3/2/16 (Wed)

INC000001622659 - Desktop Everywhere: Because Outlook not caching, no junk e-mail filtering. And no usable search.

Any considerations on getting the Outlook working in VDI better, and closer to what experiences on a normal desktop?

Examples:

When marking an email message as junk, one gets this dialog box:



Also, because caching is turned off, search within Outlook is useless. I must go to Office 365 (web) to search my email, which then takes me out of my desktop email client and is not as efficient.

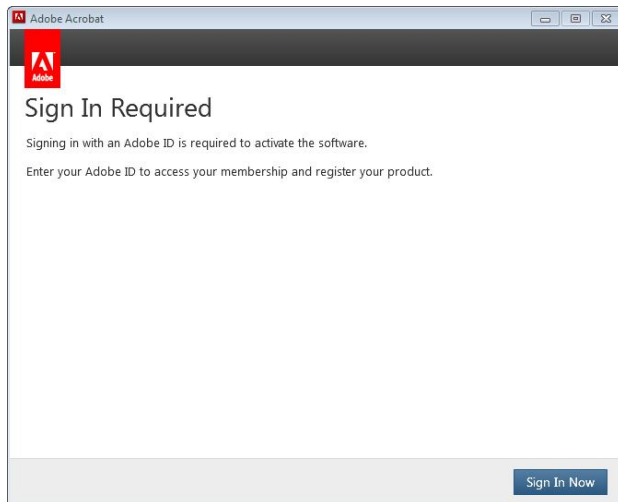
Why these limitations matter, regardless of the technical or storage challenges they present to the VDI service:

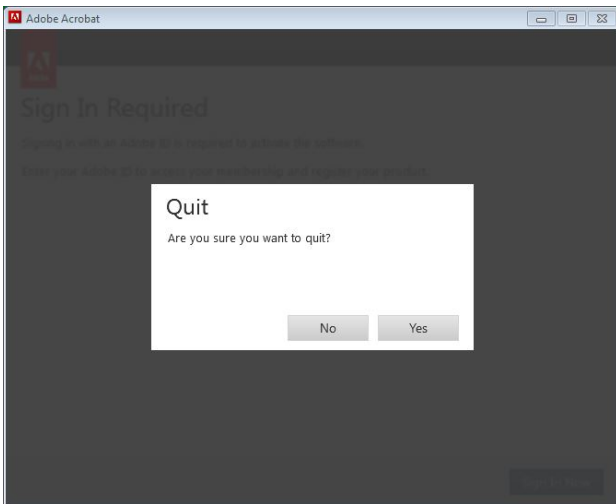
- These issues seem really important to address since email is a large part of what many people at work use a computer for, Any interference with effectively using email makes it really hard to recommend VDI as a production environment for staff or faculty. This is especially true for "core" client capabilities as preventing junk filtering, or preventing searching.

Reported issue to CIT, on 12/3/15 (Thur)

INC000001553418 - Desktop Everywhere: Acrobat not licensed

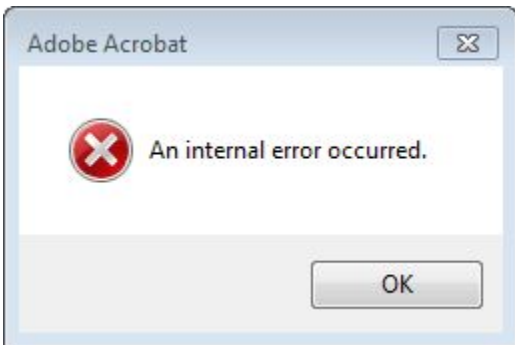
Why is this product not serialized? It had been working just fine, before.





Answer: This sometimes happens. Restarting VDI session only known way to fix the problem.

Also, first time launching Acrobat after a restart produced (always produces?) this error:



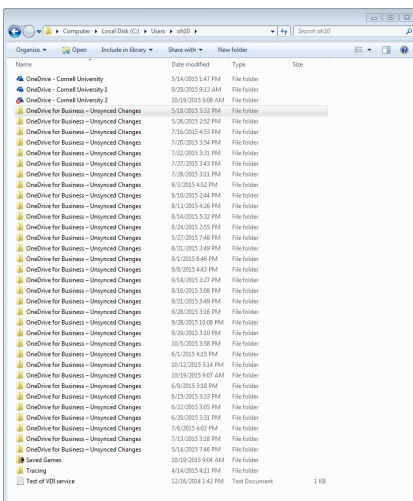
Acrobat doesn't launch after dismissing error. However, trying same thing again launches Acrobat, with no errors.

Reported issue to CIT, as of 10/19/15 (Mon)

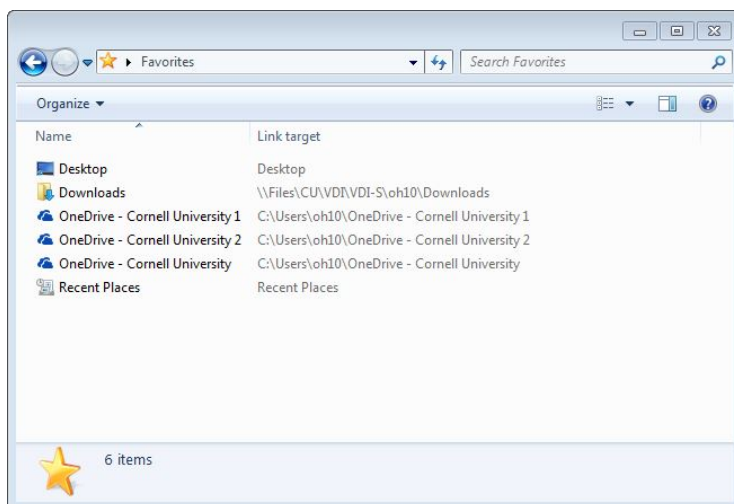
INC000001516309 - Desktop Everywhere: Problems with OneDrive syncing.

- OneDrive not syncing in consistent location after VDI restart. And (related?) errors.

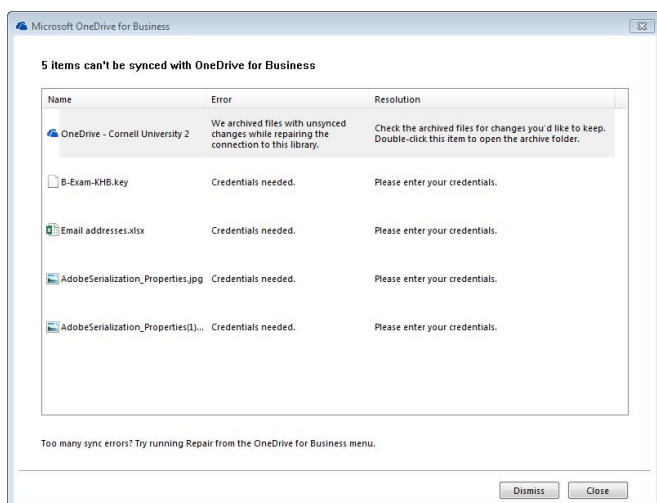
Multiple locations and creation of multiple associated support directories:



What that causes to be seen within "Favorites":



And the reported failures from today's syncing (10/19/15), even after a "Repair" invoked:



Did recommended aggressive "cleaning" (see Remedy ticket for details).

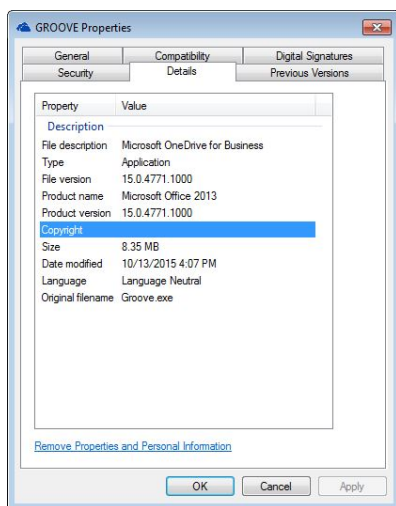
- Others using OneDrive seem not to have this problem. Thus, problem with just my OneDrive, and nothing to do with VDI?

Oliver's situation, and his VDI Office/ Groove (prior tech. name for OneDrive):

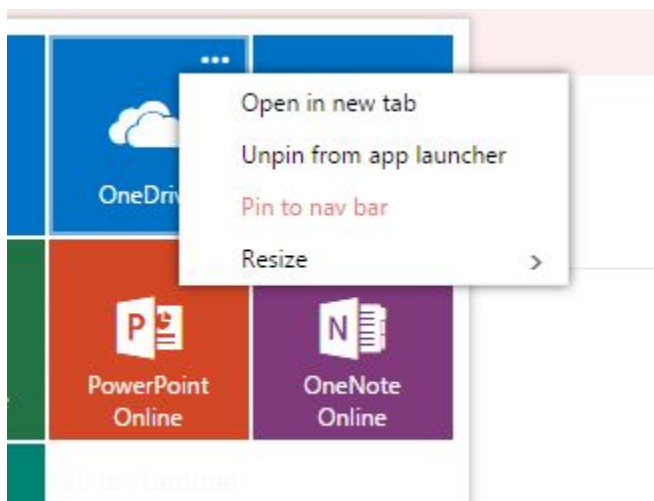
Office version, in VDI:

	Microsoft Application Virtualization Client en-US Lan...	Microsoft Corporation	12/19/2014	786 KB	5.0.3404.0
	Microsoft Office Professional Plus 2013	Microsoft Corporation	12/17/2014		15.0.4569.1506
	Microsoft Project Professional 2013	Microsoft Corporation	12/19/2014		15.0.4569.1506

OneDrive (Groove.exe) version, in VDI:



And a OneDrive anomaly in Oliver's Office365 interface in which OneDrive is not pinable, but otherwise completely usable via the web:



"Pin to nave bar" is red and not selectable. It is selectable, and does pin to the nav bar, for Michael and Roger.

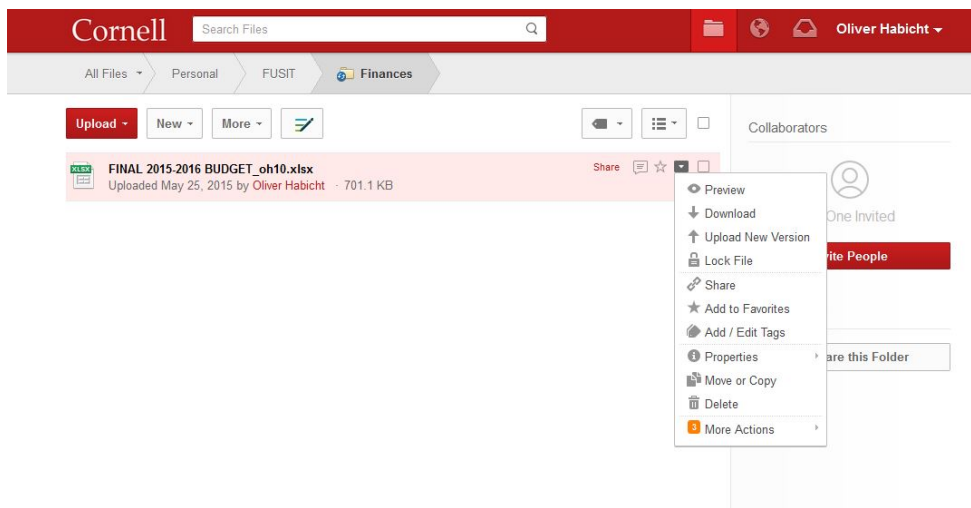
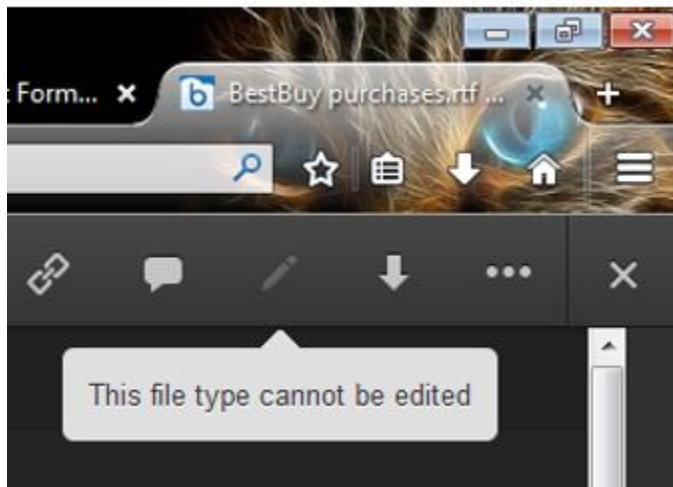
Reported issue to CIT, as of 5/29/15 (Fri)

I reused ticket number INC000001364135, "INC000001364135 -VDI tweaking: Box Edit still not working."

Box Edit sync client still not working.

Although the Box Edit seems to be running ,it doesn't seem to work at all.

That is, within the Box.com site, it's as if Box Edit is not installed. Thus documents can't be edited within the site. Must instead old-school it and downloaded the document, edit it locally, and round-trip it back to the site.



Notes: Box Edit no longer states an error when starting up on Windows log-in as it was doing in the past (below). And the icon shows up in the task bar, bottom right.

- **Update Tues., Sept. 6, 2016:** On my last day of using the service, I was still seeing that Box Edit did not run correctly on boot-up, and had been seeing it. So it must have come back at some point!

When I use Box Edit from a Windows non-VDI system, the tested file edits just fine within MS Word, saving directly to [Box.com](https://www.box.com/) without needing to do the whole round-tripping thing.

Reported issue to CIT, as of 5/14/15 (Thur)

I reused ticket number INC000001364135.

Cannot reset client to factory settings via base Linux OS. Nor access base Linux OS desktop's "Admin" capabilities.

Not fixed, but getting closer. I can now get to the base Linux OS's System Information at the log-in dialog. That contains some helpful info, but provides no controls.

Once a VDI session is connected, one can press a key combination to get to the base Linux OS with more options/ controls:

- CTRL+ALT+DOWN ARROW

I ensured I got the most current config (*.ini) by booting the thin client from a CIT DHCP network.

Oddly, one can't get to those controls from the log-in dialog. (That is, the CTRL+ALT+DOWN ARROW does nothing at the log-in screen,) Not good, since should not have to have a running VDI session to access controls of the base OS, including ones to start a new session!

- This will matter if we have to do thin client support. :-)

Access include System Information (duh!), System Settings, and Home. But other options are grayed out since I'm not Admin.

- Within that access, there is still no option to revert to factory settings using that interface.
- Nor does it provide access to other things, such as some options within Settings, nor Add Connection and Global Connection Settings, FWIW.

What is the Admin name and Password? Or, is that giving me too many keys, if the same across Desktop Everywhere? I don't like being locked out of my own hardware, naturally.

Workaround I found involved pulling the network cable on boot-up. That's not ideal. Instead, want to be able to do within the base Linux OS, as I used to be able to do with this system before getting CIT's *.ini configuration.

Reported issue to CIT, as of 5/8/15:

5/14/15Thur: Update from Oliver's testing, reported to Keene today:

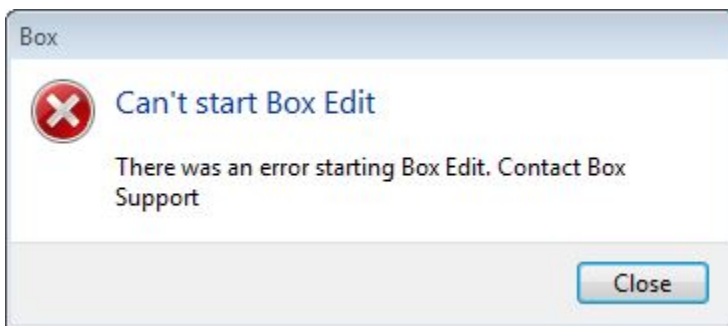
- Still not working. Now not even launching and failing. No indication it's even trying to run.

Update from later that day:

- We recently discovered that Box Edit was not installed in "all users" style on the master. It's been fixed for tomorrow morning's recompose.

Box Edit sync client not able to start.

It is installed and set to auto-start on boot up. Here's the error message:



Context

Since VDI's local file storage is limited, may not be a good idea to have a local [Box.com](#) sync folder.

- Desktop Everywhere does not support this feature, for this reason.

However, Box Edit may be "good enough" to facilitate using files within my CU-based [Box.com](#) account.

- Hence the desire for Box Edit to start and work correctly.

File share privileges too liberal, but only within Desktop Everywhere

Status

Friday morning, 5/8/15, with KeeneS:

- Keene Bomgar'd in to both my VDI and workstation Dell and confirmed report.
- Keene intends to work with Greg to develop theories and let me know if I can do any further tests.
- I suggested he create a Desktop Anywhere instance for himself and have Greg give him file share access to A&S file share analogous to mine and see if the issue can be replicated.

Original report, 5/3/15

I can see anyone's files within our file share, such all directories here:

\\files.cornell.edu\as\chm\Users

I'm using my basic <oh10> account to log in (the only one I'm paying for within CIT's VDI service); nothing special.

We have verified that permissions on the above directories are correct. Indeed, on any other Windows computer, permissions are respected. Thus I suspect the CIT VDI instance is giving me elevated privileges to my account in an unintended way.

More details: I just tested more directories and I can seem to see into any directory below <\as\chm> AND everywhere below <\as\PHY>. However, one level above those <\as>, I was not able to get to other directories I tested at that level, FWIW.

To clarify: My basic <oh10> AD account should not get broad access to either of the Chm or Phy levels, even though my IT group supports both Chemistry and Physics. And I confirmed I cannot get access to them when using my <oh10> account from within other Windows systems, other than CIT's VDI.

In this case, my directories are on a file server provisioned by A&S IT, a service used to support A&S staff and admin-related services.

Why I think this is critical: We need to trust file shares will respect the permissions set on directories and files and thus are capable of holding data which is designated NOT to be shared. When that trust is compromised the value of the file share service is severely compromised. This can lead staff to find alternative locations for data (such as performance reviews and salaries), perhaps using places not very "good" from an institutional perspective, even as they may nominally seem to meet a staff member's own needs.

CU View blocked (Java plug-in)

Status

Friday morning, 5/8/15, with KeeneS:

- Ideally webcams should be using signed Java applications, if they must use Java at all. (Self-signing is not sufficient; must get a certificate!). Especially Cornell-based web cams.
- Asking web visitors to perform a configuration work-around (which doesn't even work in all instances, such as within Desktop Everywhere!), or even worse, ask them to lessen their security, is not a reasonable alternative.

Action step

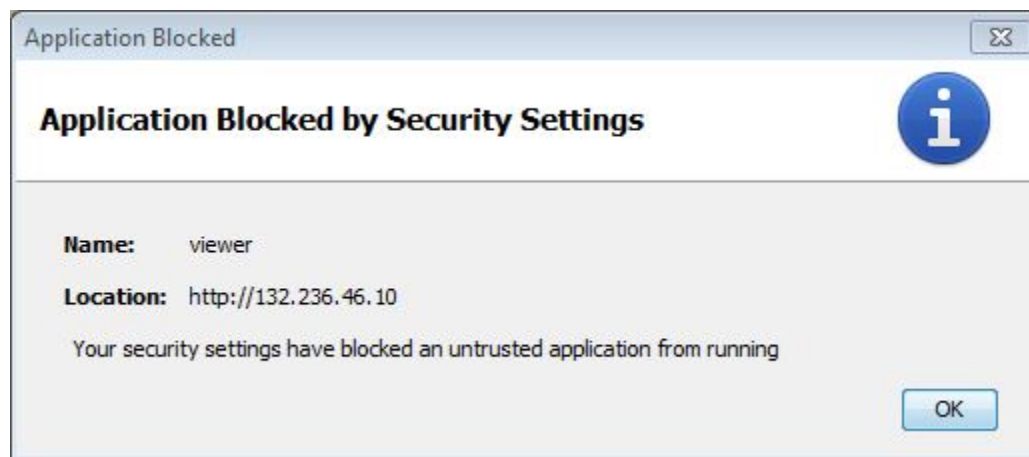
Have someone inform webcam of evolved expectations.

- Should it be the IT Security office, who can confirm this request is valid, and if so, has the credibility?

Original report

Pertains to all of the campus's views:

<https://www.hotelschool.cornell.edu/about/campusview.html>



Details:

Java Plug-in 10.79.2.15

Using JRE version 1.7.0_79-b15 Java HotSpot(TM) Client VM

User home directory = C:\Users\loh10

Notes prior to 4/20/15 (as reported to CIT, INC000001364135)

FIXED: Quest tool upgrade delayed

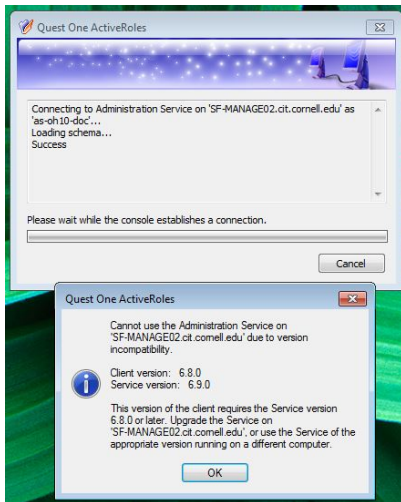
Take-home, regarding any virtualized application in Desktop Everywhere

Any virtual application will require the Desktop Everywhere staff to update it specially.

- It's not part of the image, so updating the image's software leaves the virtual applications untouched (for better or worse!).
- Info per conversation, Friday morning, 5/8/15, with KeeneS.

Original report

Quest server was upgraded over the weekend. By Monday morning (4/20/15), the Quest client was not updated so access to service via fat client not possible:



File share access

Status

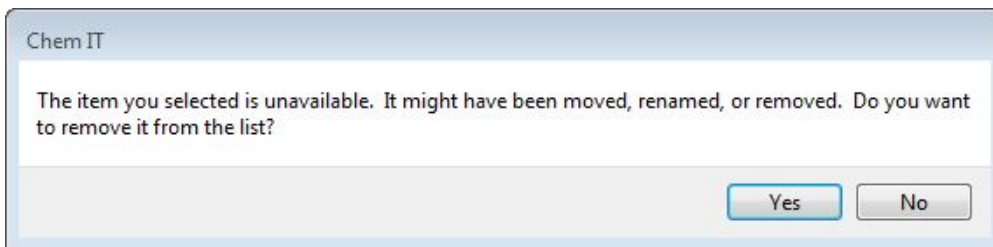
Friday morning, 5/8/15, with KeeneS:

- I reported that this problem has not been seen for weeks. Thus, currently a non-issue.

Original report

A properly configured file share short-cut fails to work, per dialog presented below. And default of the dialog is to remove the short-cut- ouch!

- The short-cut **always** works the second time it's selected.



Printing

Status

Friday morning, 5/8/15, with KeeneS:

- Keene will investigate adding our 2 ChemIT printers to CIT's printer server. And let me know.
 - printserver.cit.cornell.edu
 - CIT uses something like "Microsoft RDP ez-print", or something like that.
- Service is not designed to work with printers directly, only with printer servers (anyone's).

Issue 3, below, can only be solved with boot-up scripts because of where data regarding default printer is stored.

- CIT does not have a stock script, etc. Thus, will just deal with it "as is".

Original report

1) Can't install a printer for which the driver is installed. (HP)

2) Losing duplex (double-sided) capability for one printer. (HP)

- This happens after printer is initially made to see that it is double-sided, and defaulted to using duplex. Or something like that!
 - Is the root problem actually a VDI issue? Or can the problem appear on any Windows system? Perhaps must better characterize problem.
- The Dell printer does not exhibit this problem. It always shows it is duplex capable. And it retains its setting to defaulting to double-sided.

3) Also, default printer is not retained.

Keeps to WebEx Document Loader. See below in the "Doesn't retain settings" section for screenshot.

Data:

Date	Note
7/6/15	Reverted again to WebEx Document Loader. I moved it back to Dell color printer. It's been a while since this has happened, but since it did again happen, starting up this log.

USB flash drive

Can't see USB storage device at all. Simple USB flash, 64MB from Dell.

iPhone plugged in by USB (to charge it) is recognized by the computer.

Doesn't retain settings, such as "don't ask me again" or "remember this"

Status

Friday morning, 5/8/15, with KeeneS:

- For some of these issues, can only be solved with boot-up scripts because of where data regarding stored defaults are stored.
- Service uses Redirected Profile, which includes App data (roaming).
 - It does not include App data (local).
- For Acrobat specifically, service may switch application to the one available in the serialized (licensed) Creative Cloud, which would eliminate the "remember" box.

Consider doing

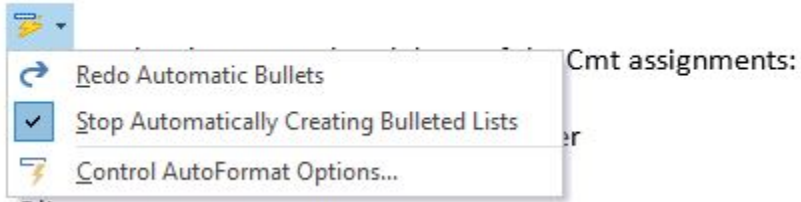
- For Symantec Endpoint Protection (SEP) Manager, the IT Security Office should sign the application they are hosting.
 - They should get a certificate, since self-signing is not sufficient nowadays.
 - The IT Security office should be very well aware of evolved expectations.

Original report

- CIT does not have any stock scripts for this kind of specialized functionality. Thus, will just deal with it "as is".
- iPhone: Trust this computer? I say Yes, and remember that. It won't remember it.

- MS Office: Stop auto-correcting. Such as automatically imposing formatting on bullet lists in Outlook:

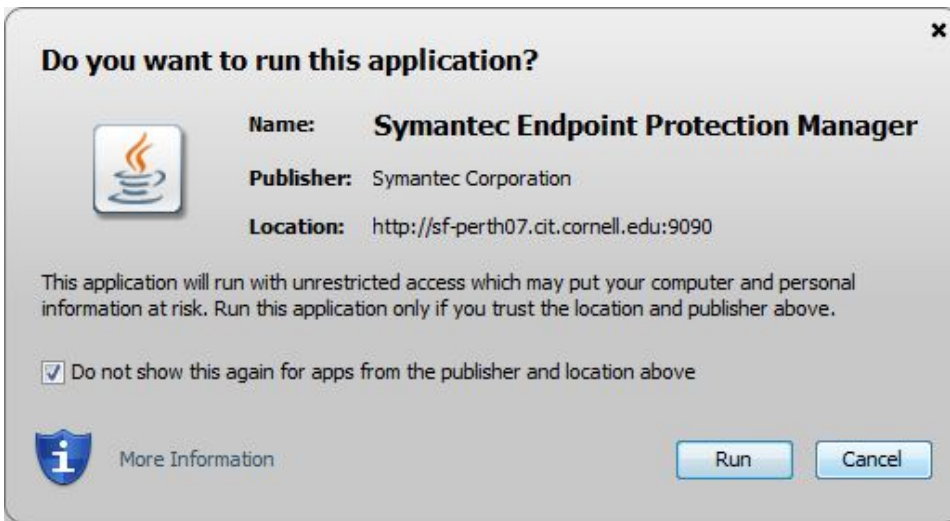
* Committee Assignments by Committee



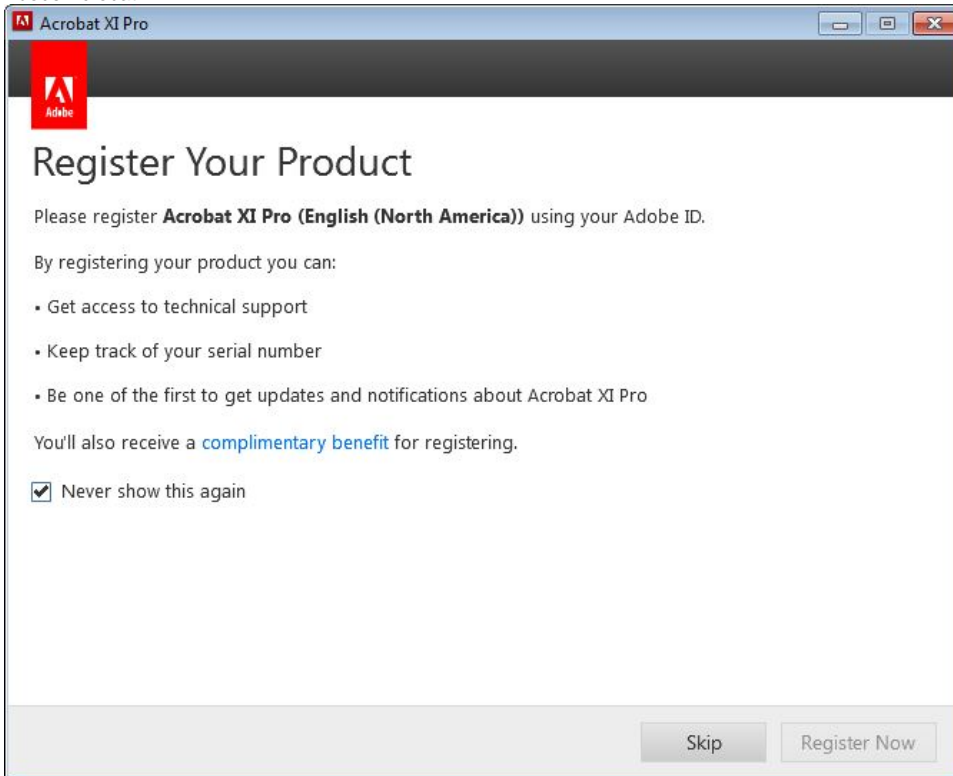
- MS Office: In Outlook, does not remember that I added the delete button in my ribbon bar:



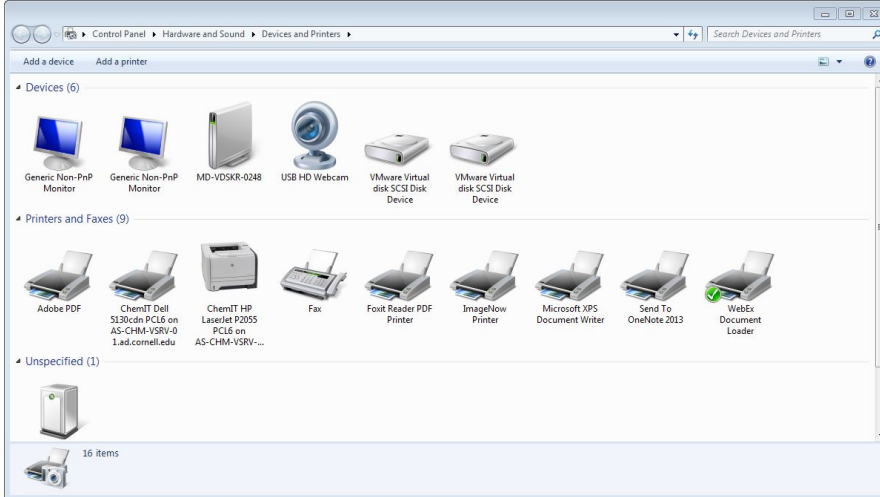
- Java: Symantec Endpoint Protection Manager:



- Adobe Acrobat:



- Default printer reverts off from "mine" to WebEx Document Loader (when does reversion occur? Everytime? Whenever WebEx updated? Other?)



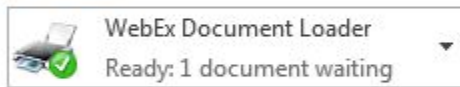
...and..

Print

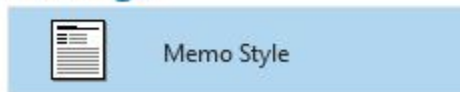


Specify how you want the item to be printed and then click Print.

Printer



Settings



Built-in camera

Status

Friday morning, 5/8/15, with KeeneS:

- CIT fixed one of their two Dell Wyse all-in-ones (AIO). The second one is not fixed.
- KeeneS will keep his ears open to solutions.

Original report

Camera only works when object placed an inch or less from the lens. (Tested with Skype.) Won't detect or refresh otherwise. Odd!

- Dell person told me no camera driver available. ETA?
- An old, external, USB camera, works just fine.

Notes

CIT's VDI service permits user to download MS updates. But naturally if you do, they get wiped out when you next reboot. Why permit? Maybe useful to get updates which don't require a reboot, I suppose.



Resources and other info

CIT's service's pricing:

- <http://www.it.cornell.edu/services/desktop-everywhere/about/fees.cfm>

Amazon Web Service (AWS) offers a similar service (WorkSpaces), for about 5 times the cost (as of 3/2015):

- <http://aws.amazon.com/workspaces/pricing/>

Teradici's PC-over-IP (PCoIP) technology nominally affords the best performance. CIT (and AWS) offers PCoIP on its hosting infrastructure. Clients have to have this licensed technology to use it, and it is not available on Raspberry Pi-type devices.

- <http://www.teradici.com/product-finder/zero-clients/monitors-and-laptops>
- <http://www.teradici.com/pcoip-technology>
- NOTE: One can use a client which doesn't use PCoIP, but performance is less (how much less?).