

# WinReg Virtual Machine Setup

This chapter covers how to set up the virtual machines for Halcyon simulator operation.

The region host simulators are set up in nearly the same way as the WinRegTM was in "Creating Virtual Machines", where the name must match the folder its drive file is in. Like this one:

The screenshot shows the VMware ESXi interface with a wizard for creating a new virtual machine. The wizard is titled "New virtual machine - WinReg24 (ESXi 6.7 virtual machine)". It is currently on step 2, "Select a name and guest OS". The "Name" field is filled with "WinReg24". The "Compatibility" dropdown is set to "ESXi 6.7 virtual machine", "Guest OS family" is "Windows", and "Guest OS version" is "Microsoft Windows Server 2008 R2 (64-bit)". Below the wizard, a task list shows several operations completed successfully.

Task Name	Priority	User	Start Time	End Time	Status	Progress
Copy Datastore File	None	rwcurtice	05/03/2021 19:13...	05/03/2021 19:13...	Running...	7 %
Find By Inventory Path	None	rwcurtice	05/03/2021 19:14...	05/03/2021 19:14...	Completed successfully	
Copy Datastore File	None	rwcurtice	05/03/2021 18:54...	05/03/2021 18:54...	Completed successfully	
Find By Inventory Path	None	rwcurtice	05/03/2021 18:59...	05/03/2021 18:59...	Completed successfully	
Delete Datastore File	None	rwcurtice	05/03/2021 18:51...	05/03/2021 18:51...	Completed successfully	
Move Datastore File	None	rwcurtice	05/03/2021 18:51...	05/03/2021 18:51...	Completed successfully	

Once the VMs in the server have been created, right click on the VM name, hover over Power, then click on Power on.

The screenshot shows the VMware ESXi web interface. At the top, a notification states: "Virtual machine WinReg24 was successfully reconfigured - dismiss". Below this is a toolbar with actions: "Create / Register VM", "Console", "Power on", "Power off", "Suspend", "Refresh", and "Actions". A table lists two virtual machines:

Virtual machine	Status	Used space	Guest OS	Host name	Host CPU	Host me...
WinRegTM	✓ N...	60 GB	Microsoft Window...	Unknown	0 MHz	0 MB
WinReg24	✓ N...	60 GB	Microsoft Window...	Unknown	0 MHz	0 MB

The "WinReg24" row is selected, and a context menu is open. The "Power" option is highlighted, and a sub-menu is displayed with the following options: "Power on", "Power off", "Suspend", and "Reset".

Below the VM list is a "Recent tasks" section with the following table:

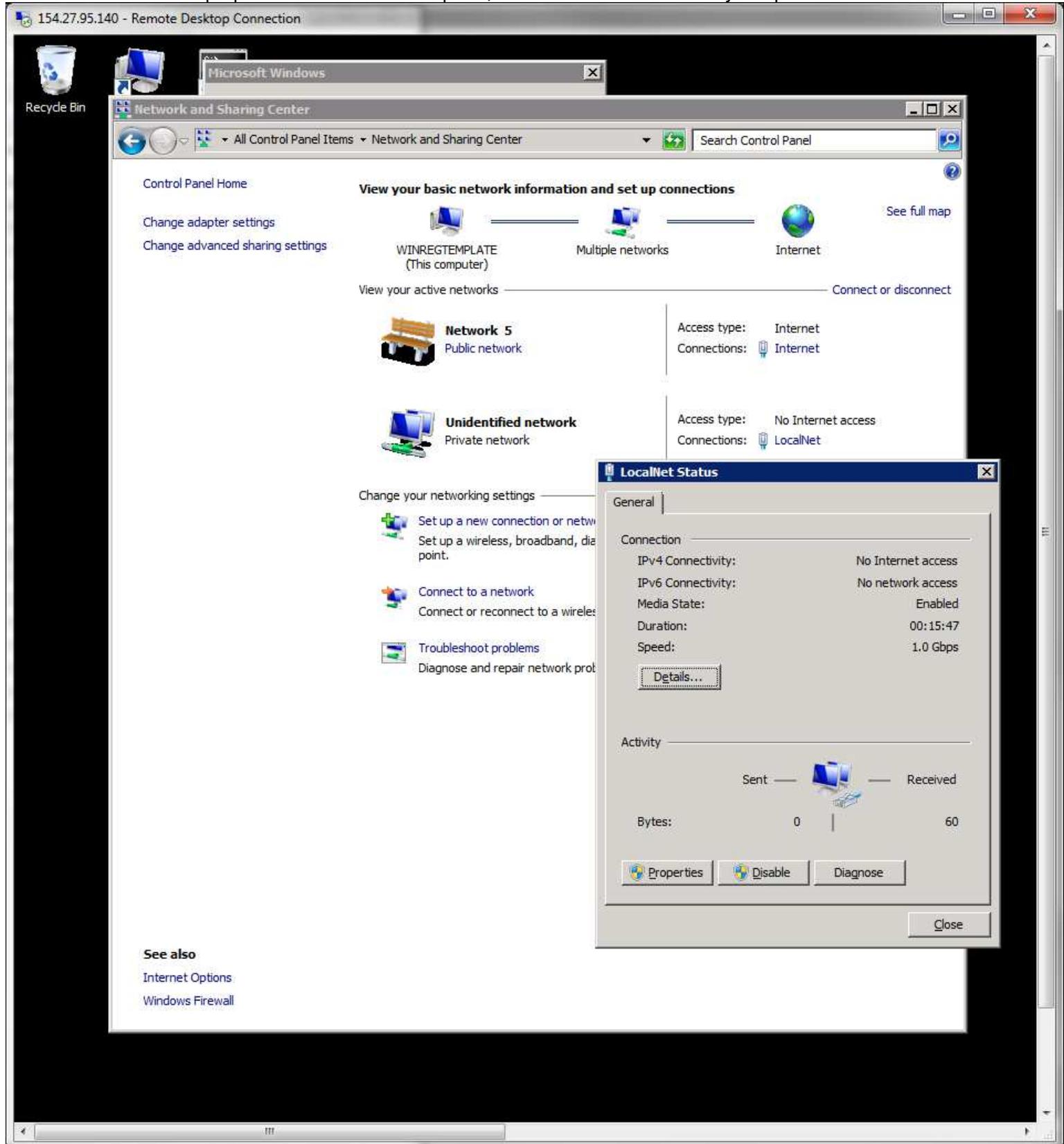
Task	Target	Initiator	Queued	Started	Result	Completed
Copy Datastore File	None	rwcurtice	05/03/2021 19:13...	05/03/2021 19:13...	Running... 44 %	
Create VM	WinReg24	rwcurtice	05/03/2021 19:20...	05/03/2021 19:20...	✓ Completed successfully	05/03/2021 19:20...
Find By Inventory Path	None	rwcurtice	05/03/2021 19:14...	05/03/2021 19:14...	✓ Completed successfully	05/03/2021 19:14...
Copy Datastore File	None	rwcurtice	05/03/2021 18:54...	05/03/2021 18:54...	✓ Completed successfully	05/03/2021 19:13...
Find By Inventory Path	None	rwcurtice	05/03/2021 18:59...	05/03/2021 18:59...	✓ Completed successfully	05/03/2021 18:59...
Delete Datastore File	None	rwcurtice	05/03/2021 18:51...	05/03/2021 18:51...	✓ Completed successfully	05/03/2021 18:51...

Use the VMWare Console window to set up the server for operation.

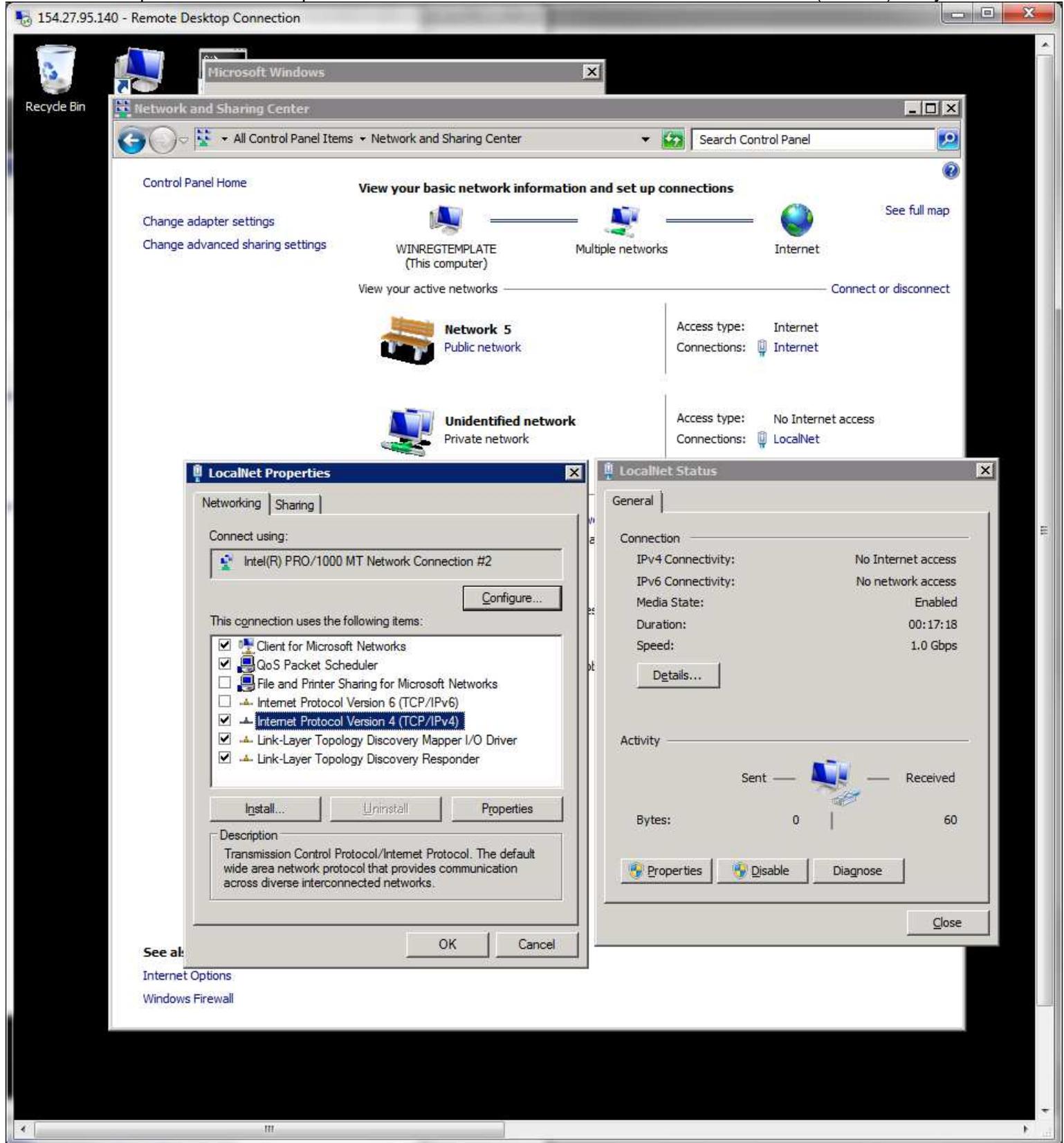
The screenshot shows the VMware ESXi web interface. The browser address bar displays 'localhost.localdomain - VMware' and 'server04.enchantedgrid.com/ui/#/host/vms'. The page title is 'localhost.localdomain - Virtual Machines'. The interface includes a navigation sidebar on the left and a main content area with a table of virtual machines. A context menu is open over the 'WinReg24' VM, showing options like 'Power', 'Guest OS', 'Snapshots', 'Console', 'Autostart', 'Upgrade VM Compatibility', 'Export', 'Edit settings', 'Permissions', 'Edit notes', 'Rename', 'Answer question', 'Unregister', 'Delete', 'Help', and 'Open in a new window'. A sub-menu for 'Console' is also visible, containing 'Open browser console', 'Open console in new window', 'Open console in new tab', 'Launch remote console', and 'Download VMRC'. The 'Recent tasks' section at the bottom is empty.

Virtual machine	Status	Used space	Guest OS	Host name	Host CPU	Host me...
WinRegTM	✓ N...	60 GB	Microsoft Window...	Unknown	0 MHz	0 MB
WinReq24	✓ N...	64.11 GB	Microsoft Window...	WinReg24	510 MHz	4.05 GB
WinReq24	N...	64.11 GB	Microsoft Window...	WinRegTemplate	5.4 GHz	4.05 GB
WinReq26	N...	64.11 GB	Microsoft Window...	WinReg26	472 MHz	4.06 GB
WinReq27	N...	64.11 GB	Microsoft Window...	WinReg27	672 MHz	4.05 GB
WinReq28	N...	64.11 GB	Microsoft Window...	WinReg28	550 MHz	4.06 GB
WinReq29	N...	64.11 GB	Microsoft Window...	WinReg29	642 MHz	4.06 GB
WinReq30	N...	64.11 GB	Microsoft Window...	WinReg30	1.2 GHz	4.06 GB
WinReq31	N...	64.11 GB	Microsoft Window...	WinReg31	1.2 GHz	4.06 GB

After logon, open the My Computer icon, select Network in the left side options. Then select the Network and Sharing Center button in the top options bar. When that opens, click on the LocalNet entry to open its window:



Click on its Properties button to open that window. Click on the Internet Protocol Version 4 (TCP/IP) entry.



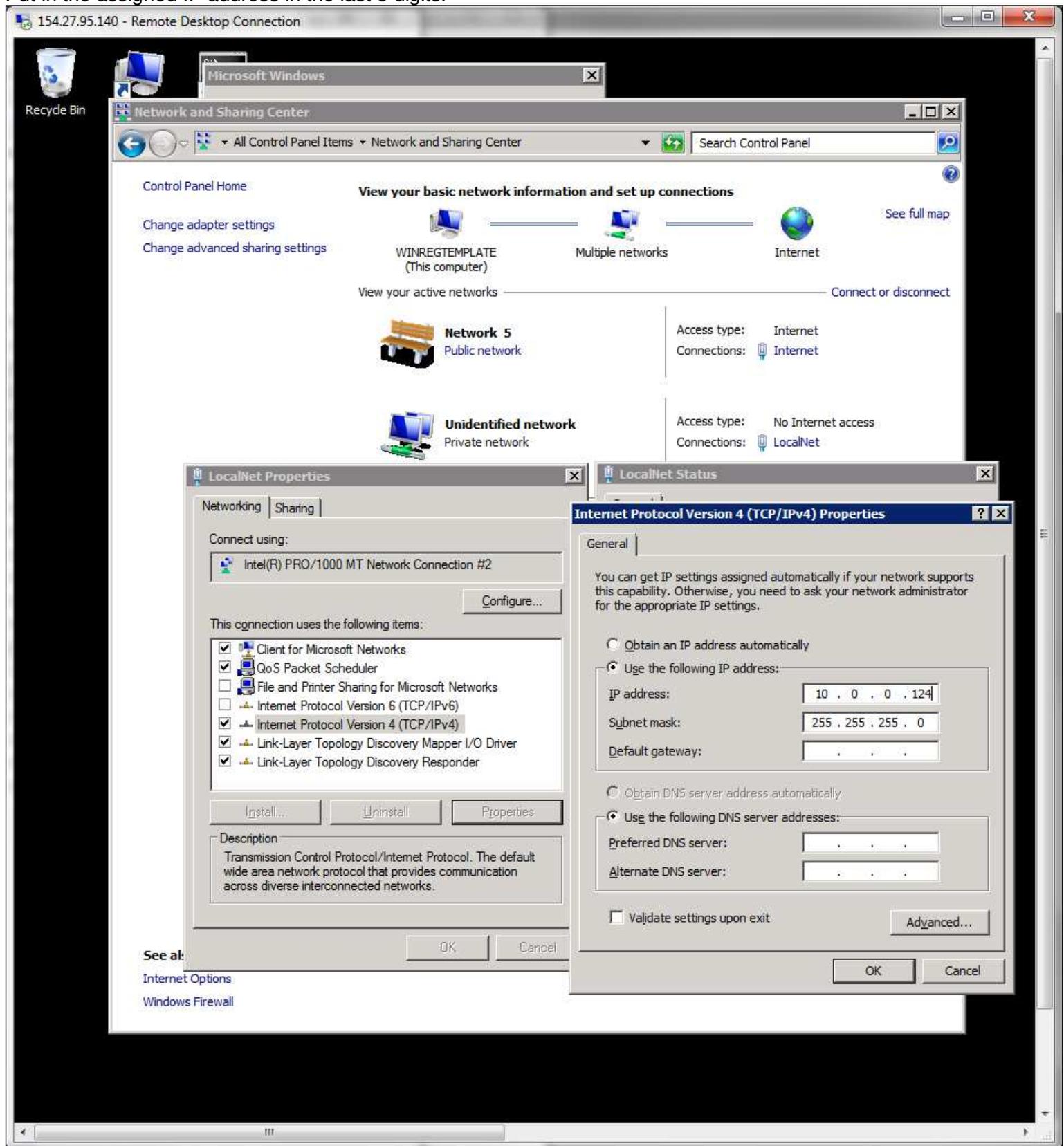
Click on the Properties button to open it.

In the server doc spreadsheet look at the Internal IP address assignment. Remember it as it wont copy / paste.

The screenshot shows a Google Docs spreadsheet titled "enchanted grid" with the following data:

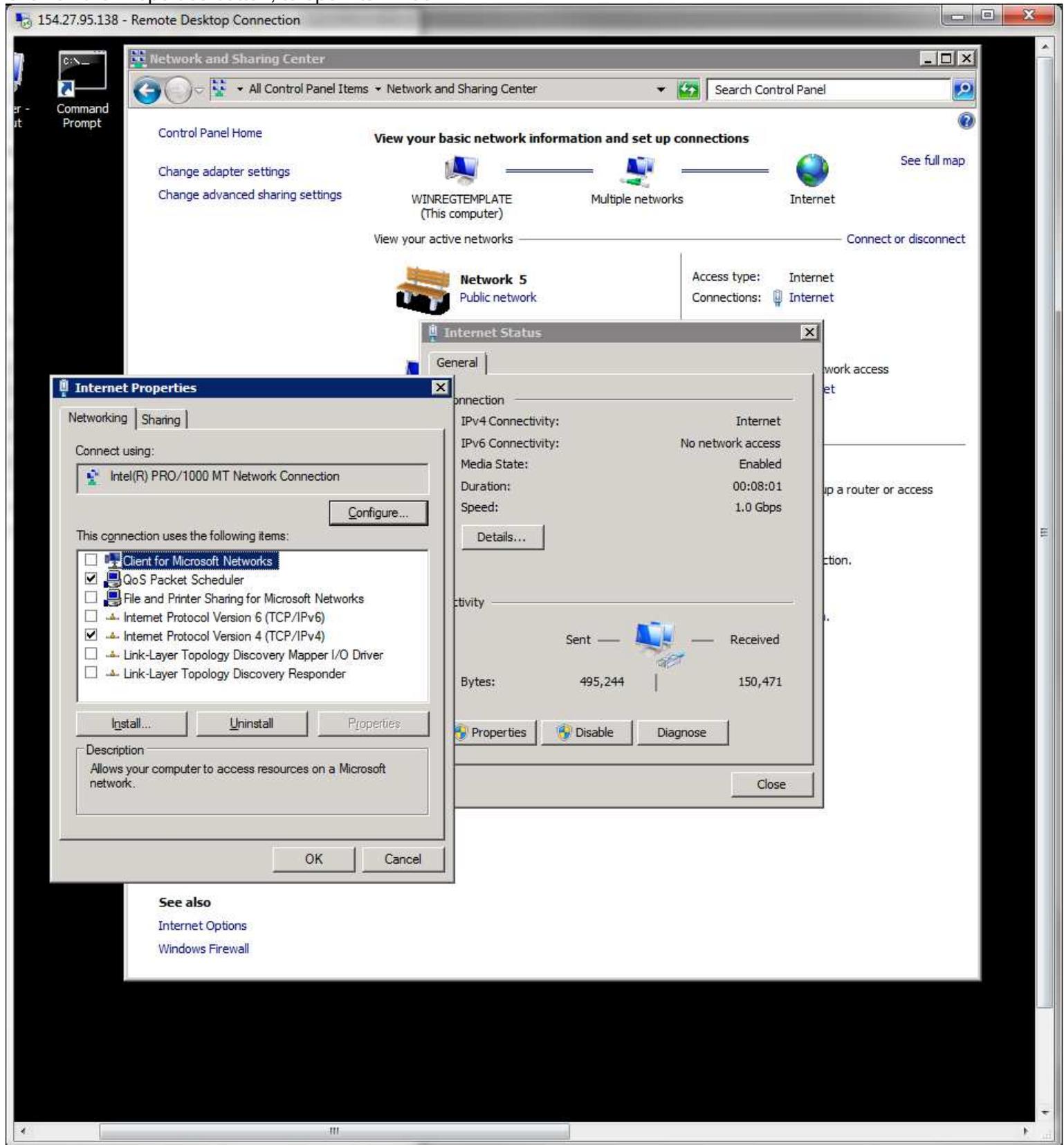
Server Option:	External IP	Internal IP	vCPUs	Memory GB	System & SSD ds1 G
<b>E Sever 16 CPU Host #4</b>					
WhipS03	<NO-IP>	10.0.0.8	2	4	
MySQLRDB03	<NO-IP>	10.0.0.13	2	4	
WinReg24	154.27.95.140	10.0.0.124	3	4	
WinReg25	154.27.95.141	10.0.0.125	3	4	
WinReg26	154.27.95.142	10.0.0.126	3	4	
WinReg27	154.27.95.143	10.0.0.127	3	4	
WinReg28	154.27.95.144	10.0.0.128	3	4	
WinReg29	154.27.95.145	10.0.0.129	3	4	
WinReg30	154.27.95.146	10.0.0.130	3	4	
WinReg31	154.27.95.147	10.0.0.131	3	4	
Ubuntu VM Template			Allowed 2	Allowed 3	
WinReg VM Template	154.27.95.138		Allowed 3	Allowed 4	
			=====	=====	=====
		<b>Used Totals</b>	28	40	
<b>RESERVE SPACE FOR ADDED SERVERS</b>					
<b>VMWare ESXi Accounts</b>	<b>Password</b>	<b>Status</b>	<b>Note</b>		
<a href="https://154.27.74.84/ui/#/host/vms">https://154.27.74.84/ui/#/host/vms</a>	root	3F2%1Zo6#fyQ	Disabled		
<a href="https://154.27.74.101/ui/#/host/vms">https://154.27.74.101/ui/#/host/vms</a>	root	jd!%kMs!hd%4	Disabled		
<a href="https://154.27.74.129/ui/#/host/vms">https://154.27.74.129/ui/#/host/vms</a>	root	BUh1LzflEAJ#	Disabled		

Put in the assigned IP address in the last 3 digits.

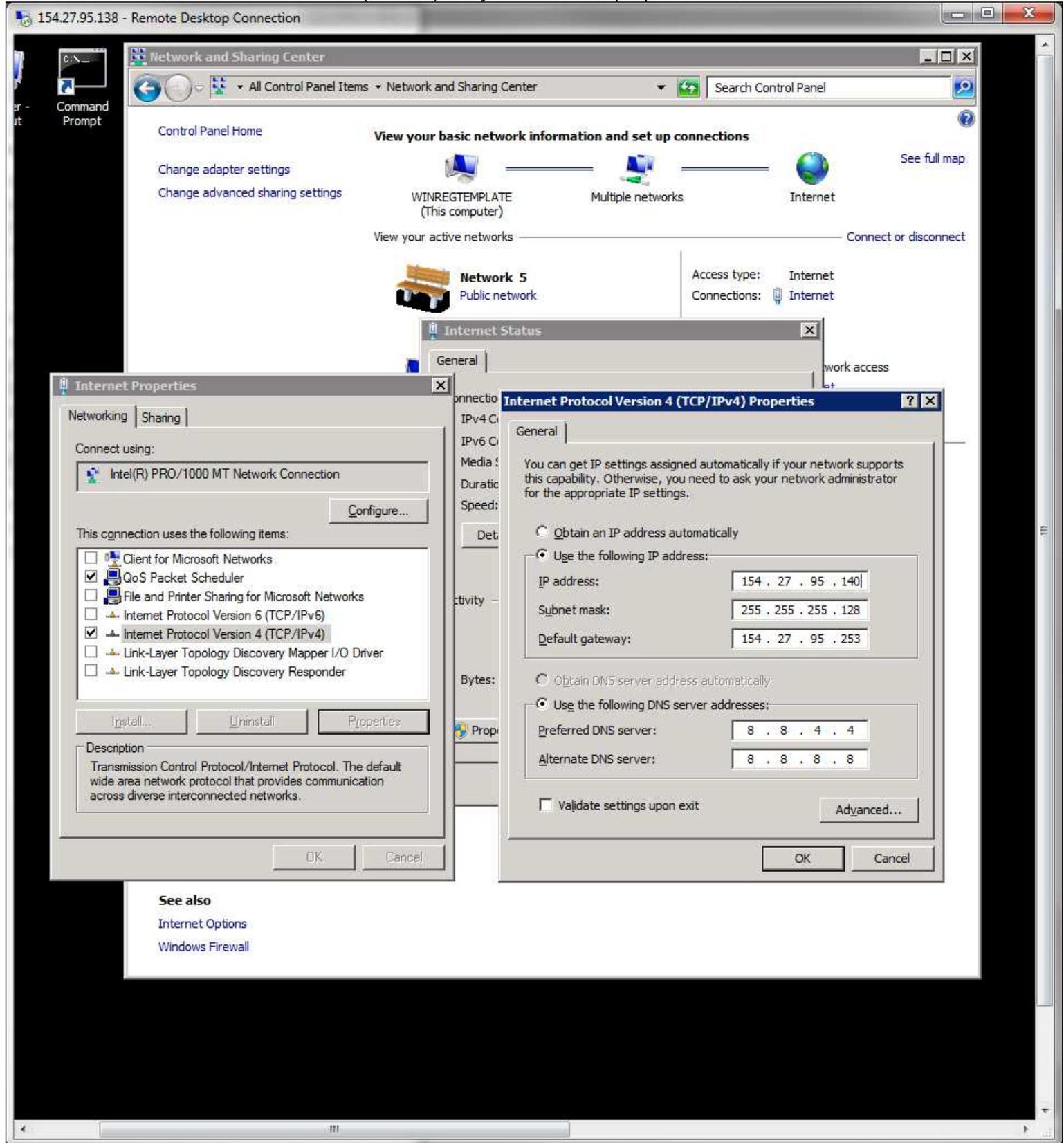


Click on OK for each of the three opened windows. Then click on the Internet entry.

Click on the Properties button, to open its window.

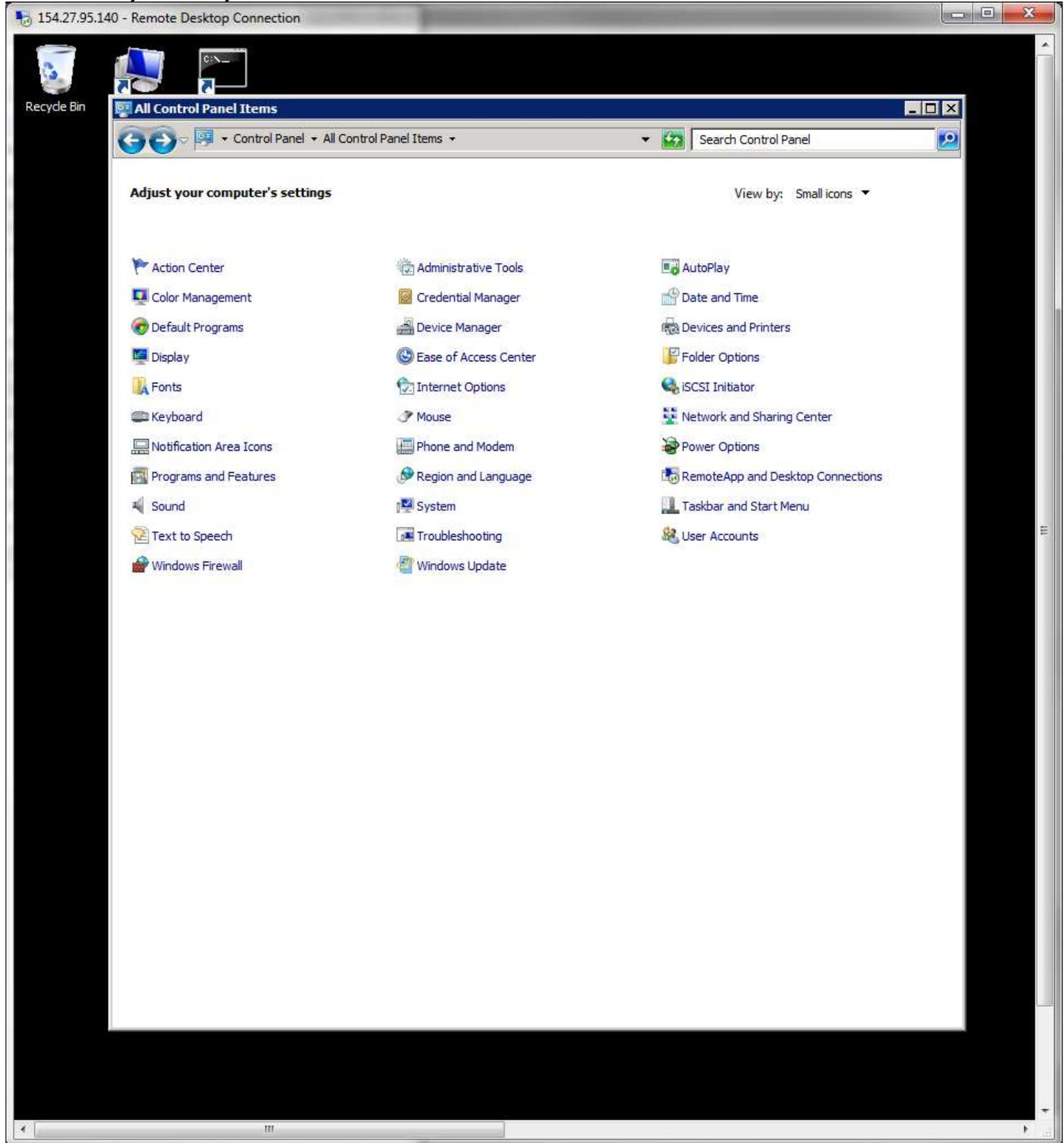


Click on the Internet Protocol Version 4 (TCP/IP) entry. Then on the properties button.



Put in the assigned internet IP address for this VM server. Click the OK on each of the three windows to close them. In the Network and Sharing window address bar click on the "All Control Panel Items" to access its display.

Click on the System entry.



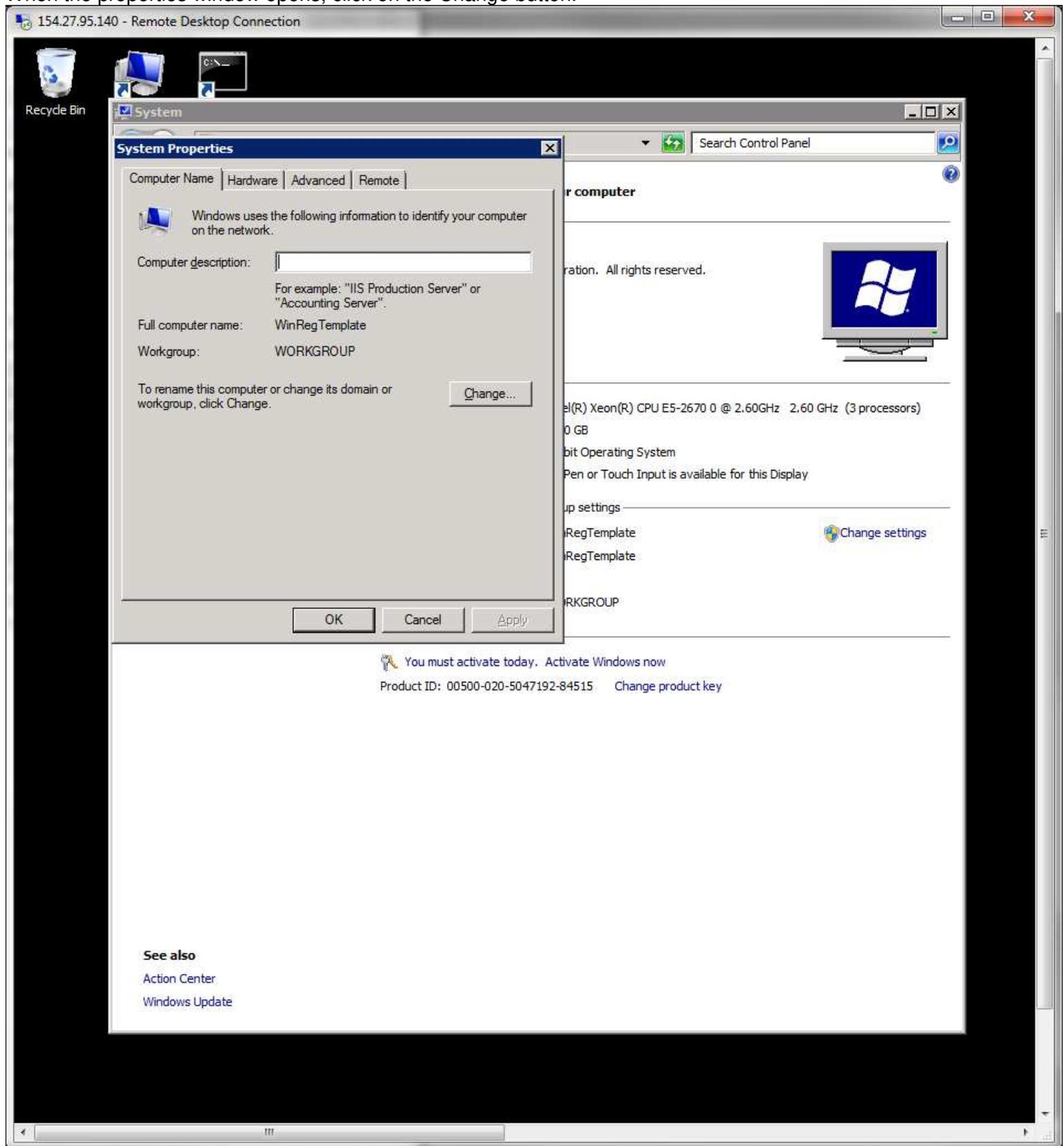
Click on the Change settings link next to the computer name.

The screenshot shows a Remote Desktop Connection window titled "154.27.95.140 - Remote Desktop Connection". The desktop background is black with a Recycle Bin icon. A "System" window is open, displaying the Windows Control Panel for System. The window title bar reads "System" and the address bar shows "Control Panel > All Control Panel Items > System". A search box for the Control Panel is visible. The main content area is titled "View basic information about your computer" and is divided into several sections:

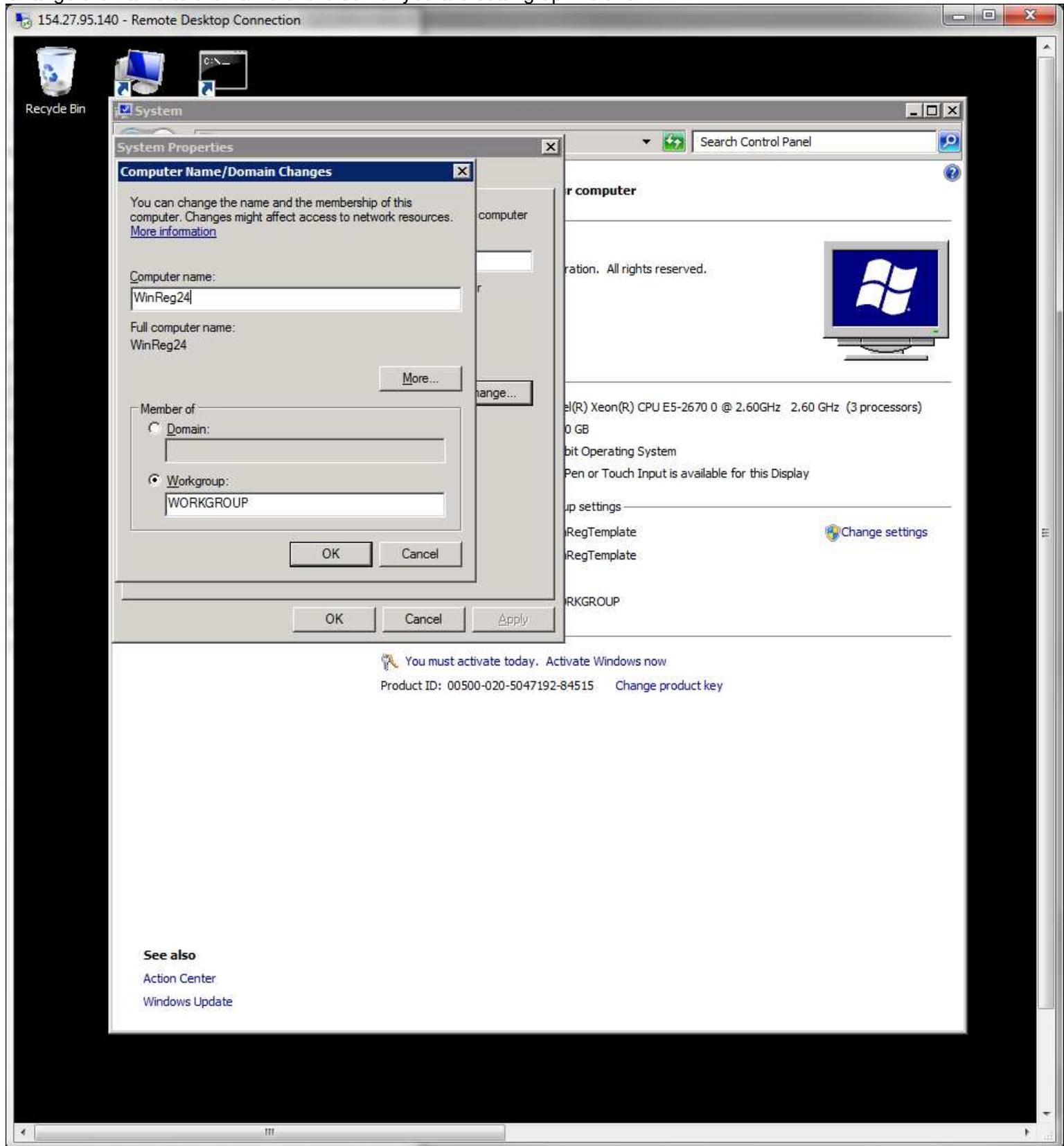
- Windows edition:** Windows Web Server 2008 R2, Copyright © 2009 Microsoft Corporation. All rights reserved., Service Pack 1. An image of a Windows logo on a monitor is shown to the right.
- System:**
  - Processor: Intel(R) Xeon(R) CPU E5-2670 0 @ 2.60GHz 2.60 GHz (3 processors)
  - Installed memory (RAM): 4.00 GB
  - System type: 64-bit Operating System
  - Pen and Touch: No Pen or Touch Input is available for this Display
- Computer name, domain, and workgroup settings:**
  - Computer name: WinRegTemplate [Change settings](#)
  - Full computer name: WinRegTemplate
  - Computer description:
  - Workgroup: WORKGROUP
- Windows activation:**
  - You must activate today. [Activate Windows now](#)
  - Product ID: 00500-020-5047192-84515 [Change product key](#)

On the left side of the System window, there are links for "Control Panel Home", "Device Manager", "Remote settings", and "Advanced system settings". At the bottom left, there is a "See also" section with links for "Action Center" and "Windows Update".

When the properties window opens, click on the Change button.

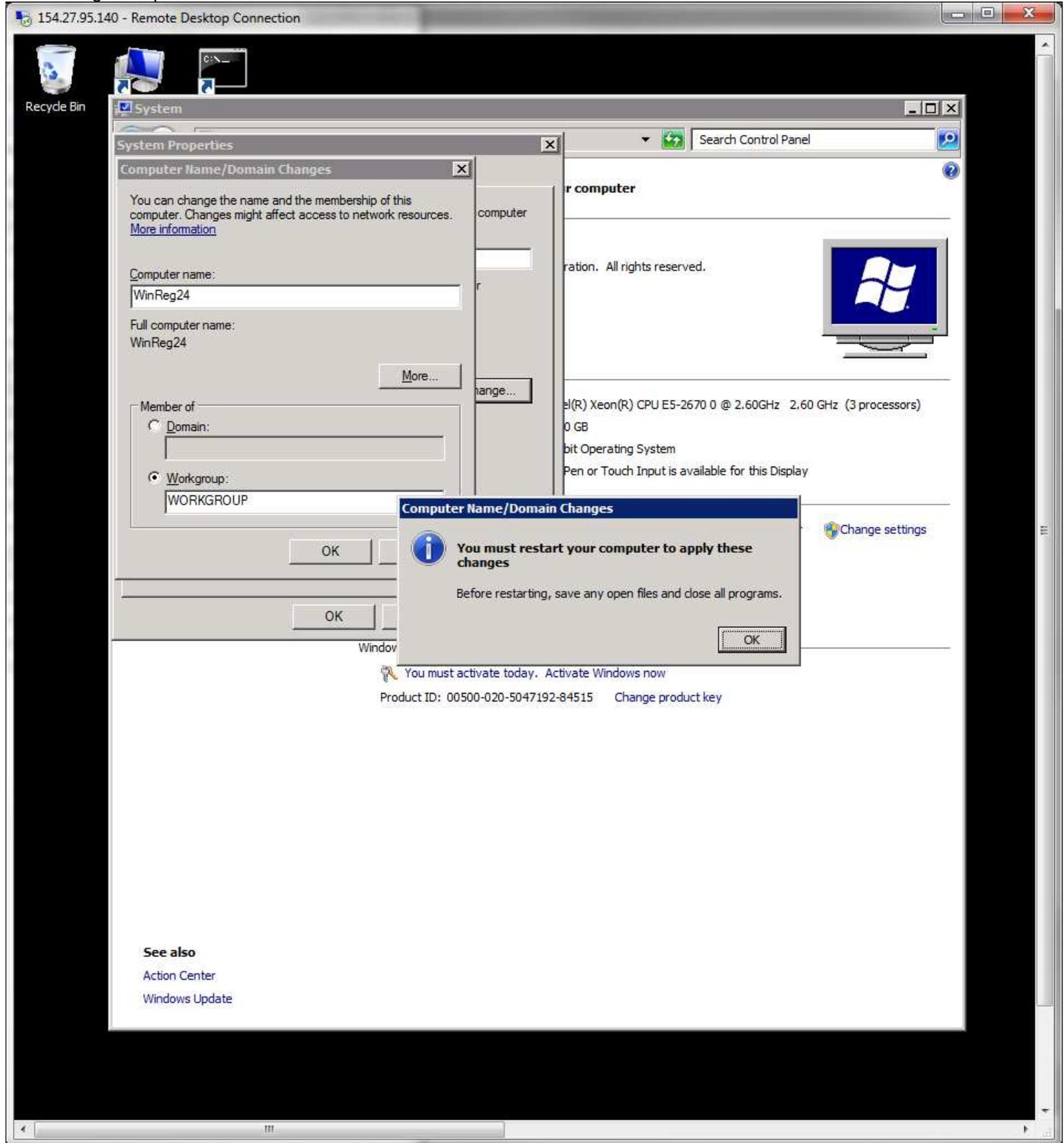


Change the name to the name of the server you are setting up like this:



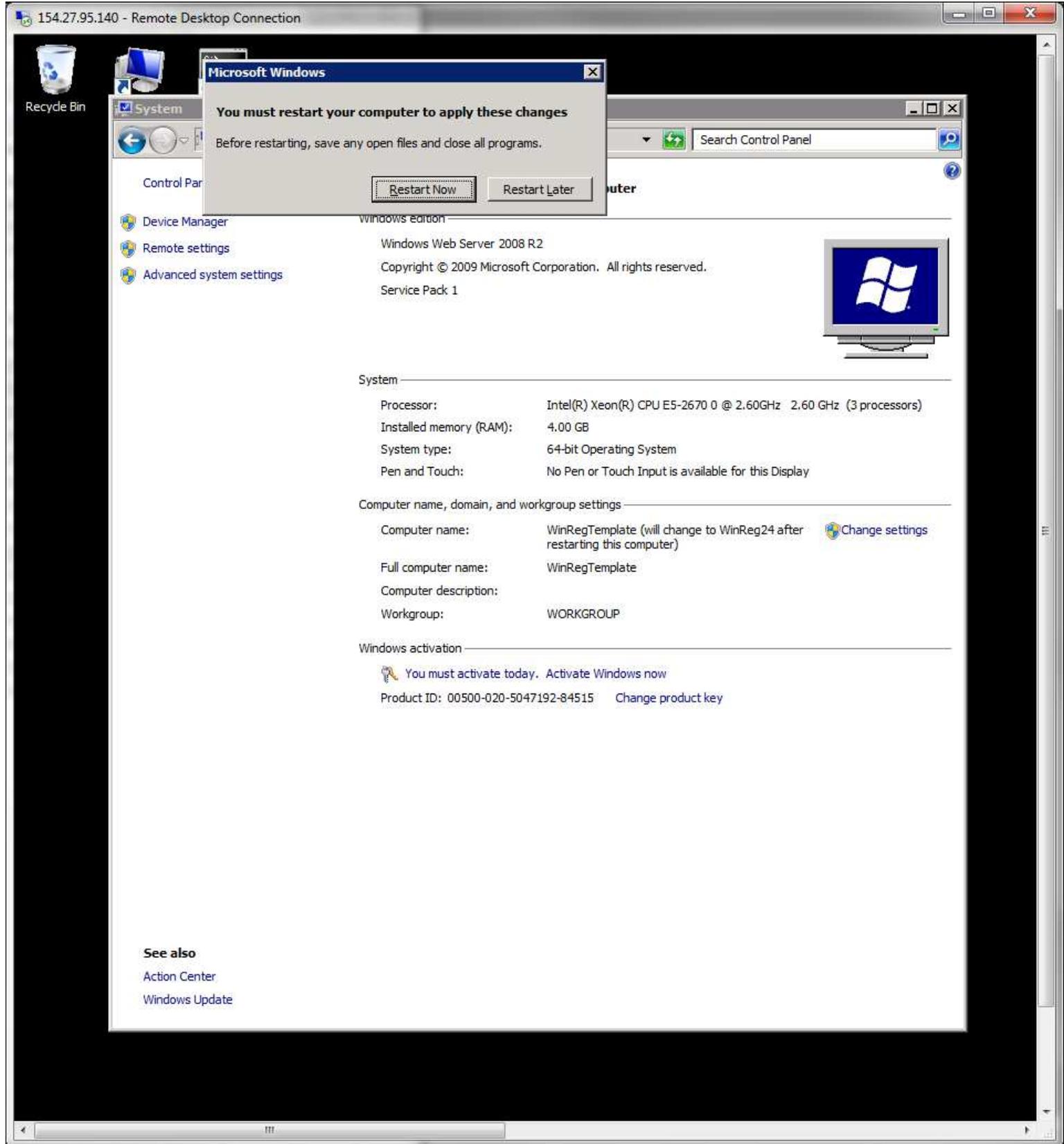
Click the OK button.

This dialog will open. Click OK.



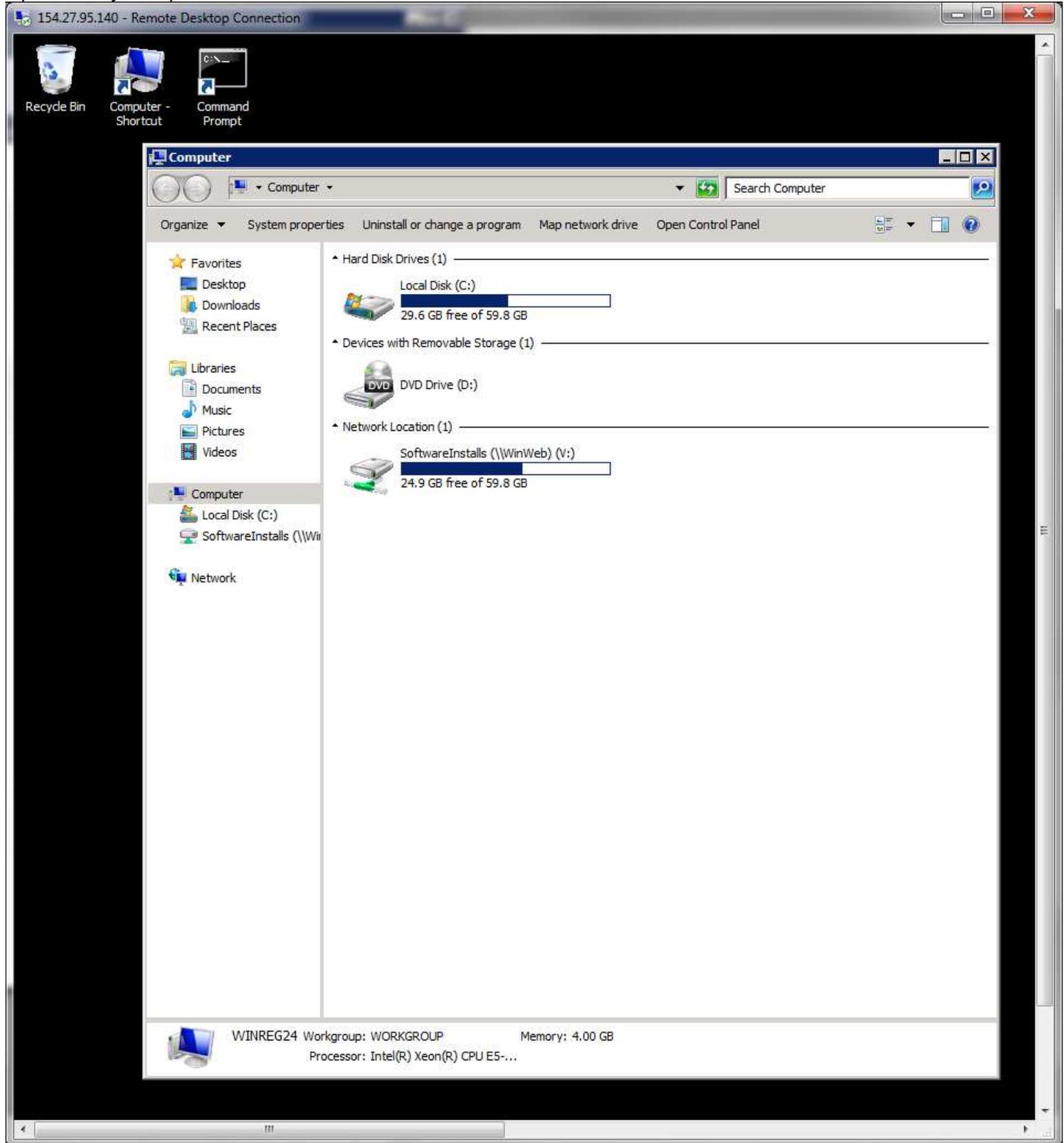
Click OK to close the two open windows.

Then click the "Restart Now" button.

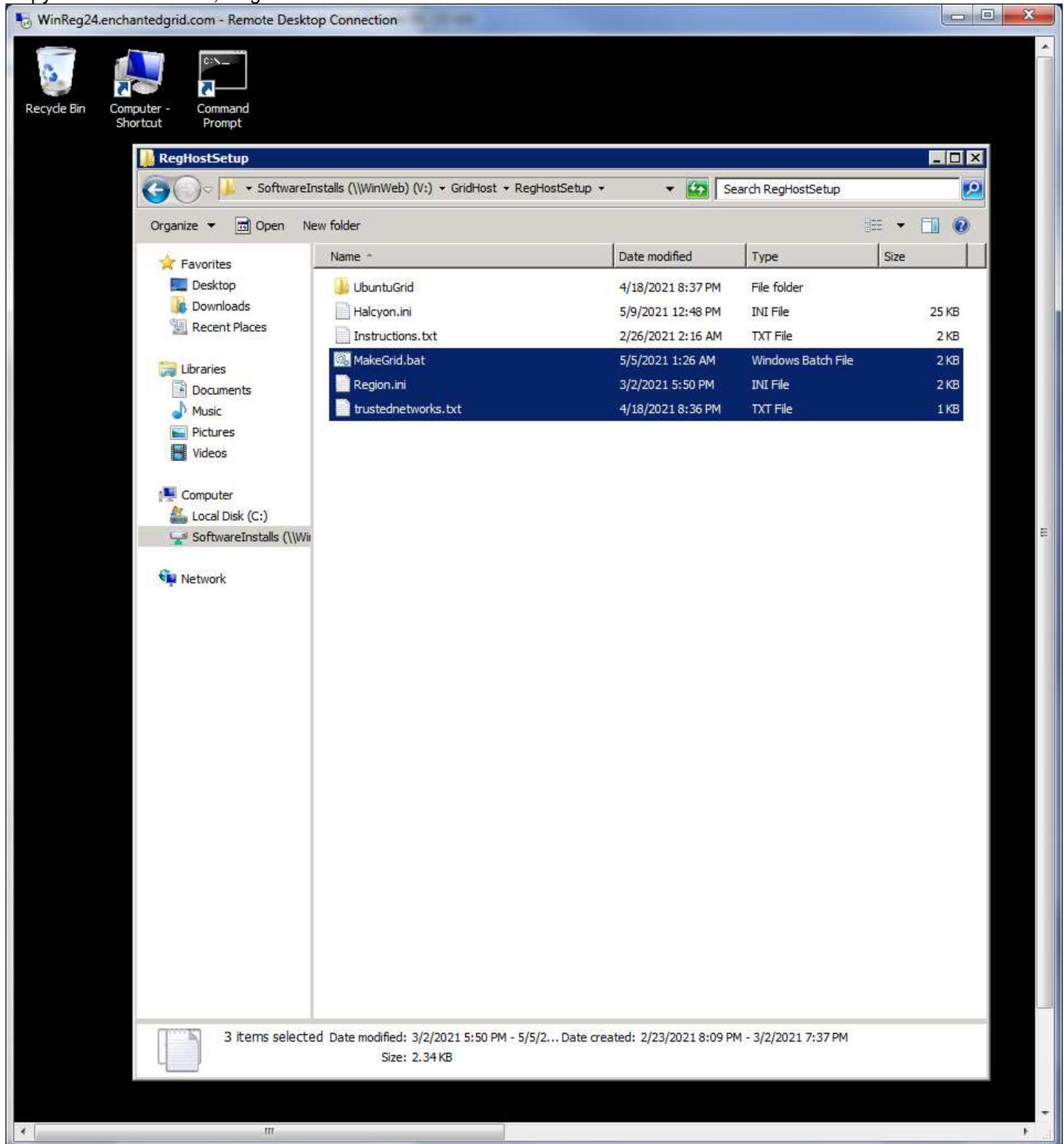


At this point you can watch the console window as the server reboots and again asks for your logon. You may now use Remote Desktop to logon to the server with Administrator account. Close the Console window.

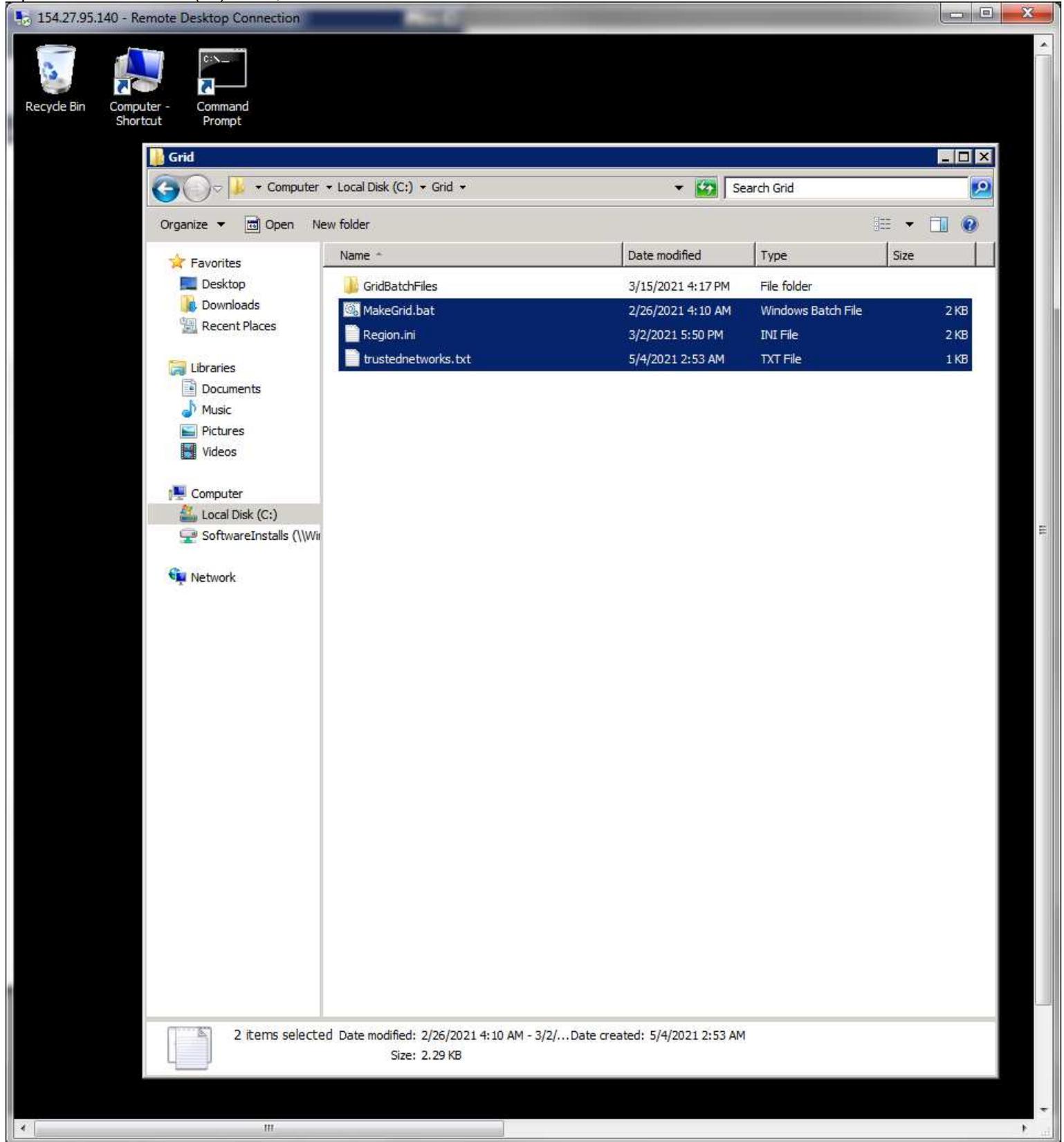
Open the My Computer icon:



Click on the SoftwareInstalls drive, Then open the GridHost, then RegHostSetup folders.  
Copy the MakeGrid.bat, Region.ini and trustednetworks.ini files.



Open the Local Disk (C:) drive, and its Grid folder. Paste the files there.

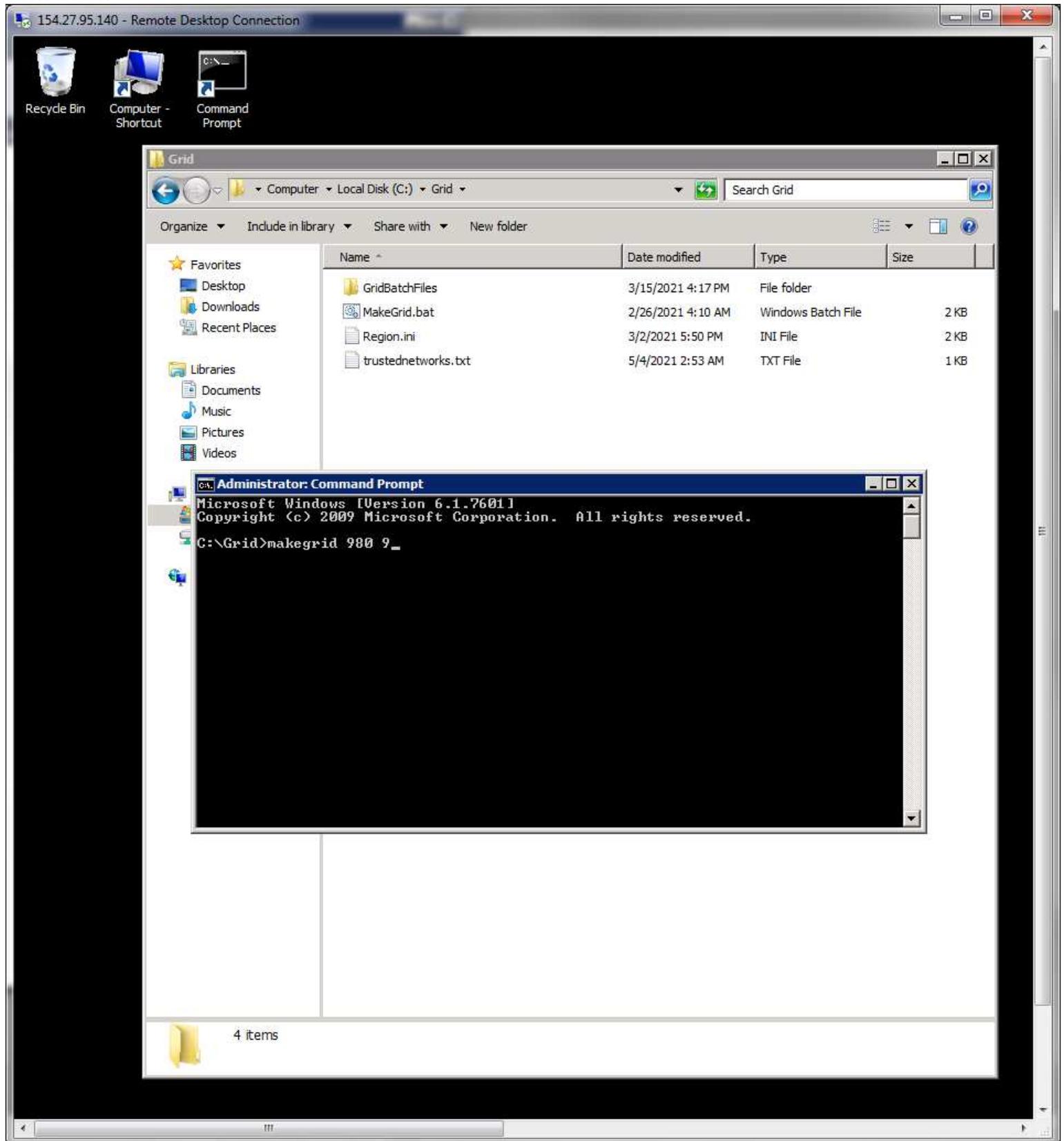


Check the server setup spreadsheet for the port range assignment on the server.

The screenshot shows a Google Docs spreadsheet titled "enchanted grid" with the following data:

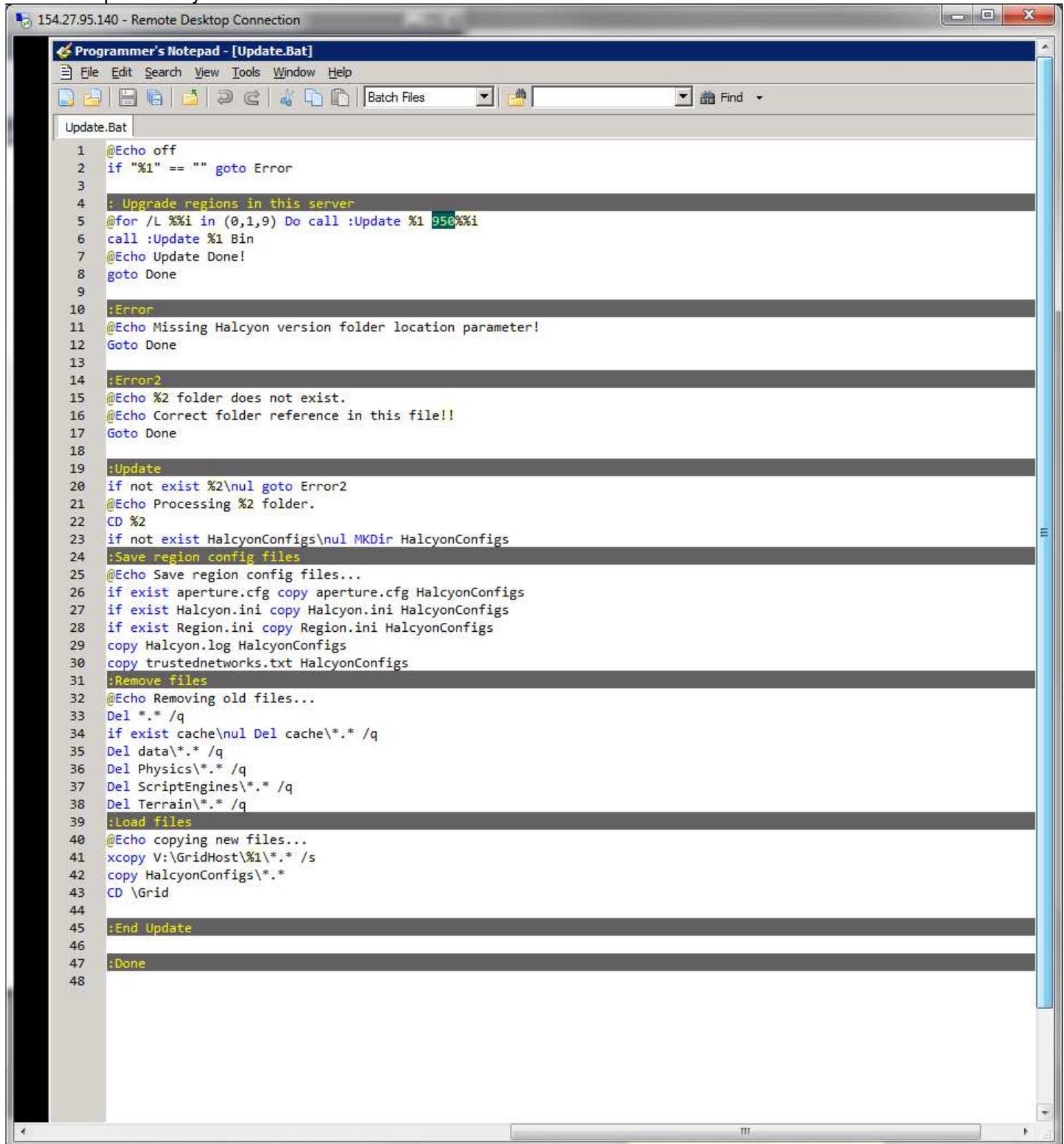
Server Option:	HD4 (spare slot	HD5 (spare slot	Regions	Region Port Assignment
WinReg17				9710-9719
WinReg18				9720-9729
WinReg19				9730-9739
WinReg20				9740-9749
WinReg21				9750-9759
WinReg22 ( water )				10200-10229
WinReg23 ( water )				10230-10259
Ubuntu VM Template				
WinReg VM Template				
=====				
			0	
E Sever 16 CPU Host #4				
WhipS03				
MySQLRDB03				
WinReg24			10	9800-9809
WinReg25			10	9810-9819
WinReg26			10	9820-9829
WinReg27			10	9830-9839
WinReg28			10	9840-9849
WinReg29			10	9850-9859
WinReg30			30	10300-10329
WinReg31			30	10330-10359
Ubuntu VM Template				
WinReg VM Template				
=====				
			120	

Open the Command Prompt icon. Put in the makegrid command with the port range prefix numbers. This case - that is 980 and 9. This means the ports will be in the 9800 - 9809 range. Type the enter key. the batch file will start creating the folders by their port number names. It also creates each ones Region.ini file and needed configuration data in each folder.





Change the port number prefix in line 5 as shown to be the same as the Port number assignment. The last digit is the 0-9 values process by the for command.



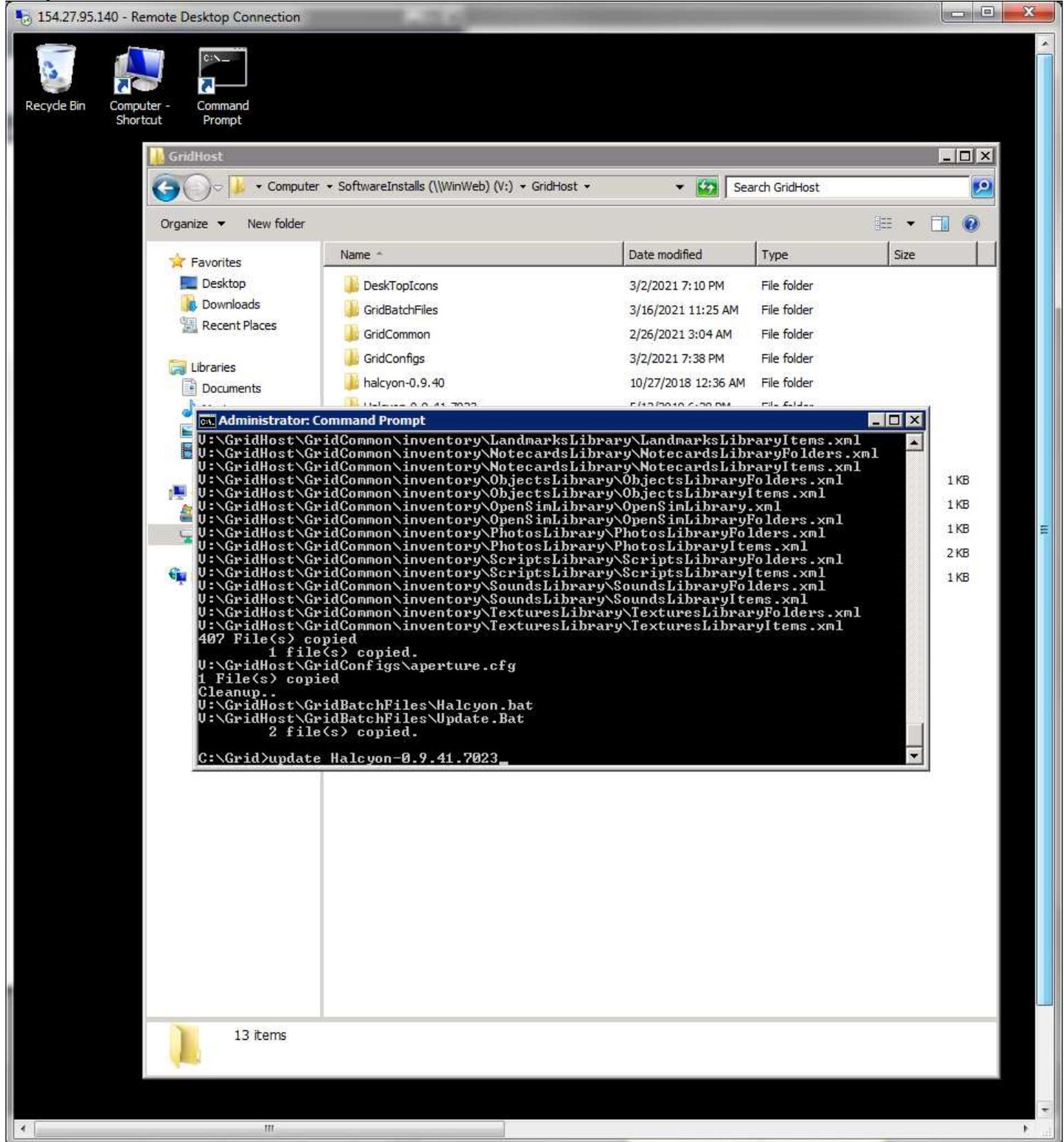
The screenshot shows a Remote Desktop Connection window titled '154.27.95.140 - Remote Desktop Connection'. Inside the window, a Notepad++ editor titled 'Programmer's Notepad - [Update.Bat]' is open. The editor contains a batch file named 'Update.Bat' with the following code:

```
1 @Echo off
2 if "%1" == "" goto Error
3
4 : Upgrade regions in this server
5 @for /L %i in (0,1,9) Do call :Update %1 950%i
6 call :Update %1 Bin
7 @Echo Update Done!
8 goto Done
9
10 :Error
11 @Echo Missing Halcyon version folder location parameter!
12 Goto Done
13
14 :Error2
15 @Echo %2 folder does not exist.
16 @Echo Correct folder reference in this file!!
17 Goto Done
18
19 :Update
20 if not exist %2\nul goto Error2
21 @Echo Processing %2 folder.
22 CD %2
23 if not exist HalcyonConfigs\nul MKDir HalcyonConfigs
24 :Save region config files
25 @Echo Save region config files...
26 if exist aperture.cfg copy aperture.cfg HalcyonConfigs
27 if exist Halcyon.ini copy Halcyon.ini HalcyonConfigs
28 if exist Region.ini copy Region.ini HalcyonConfigs
29 copy Halcyon.log HalcyonConfigs
30 copy trustednetworks.txt HalcyonConfigs
31 :Remove files
32 @Echo Removing old files...
33 Del *.* /q
34 if exist cache\nul Del cache\*.*/q
35 Del data\*.*/q
36 Del Physics\*.*/q
37 Del ScriptEngines\*.*/q
38 Del Terrain\*.*/q
39 :Load files
40 @Echo copying new files...
41 xcopy V:\GridHost\%1\*.*/s
42 copy HalcyonConfigs\*.*/s
43 CD \Grid
44
45 :End Update
46
47 :Done
48
```

Save (ctrl S) and close the batch file. (ctrl w). Leave Programmer's Notepad open as it will be used to edit several more files later.



Open the Command Prompt window and type in the Update with a space and paste (right click menu option) the Halcyon folder name:







Open it by dragging Halcyon.ini into the Programmer's Notepad program. Type (ctrl f) to open the Find window for %.

The image shows a remote desktop connection window titled "154.27.95.140 - Remote Desktop Connection". Inside, a "Programmer's Notepad" window is open, displaying the configuration file "Halcyon.ini". The file content is as follows:

```
[Inventory]
; Inventory process detects whip or cassandra installations.
inventory_plugin = "Halcyon.Data.Inventory.MySQL.dll"
inventory_cluster = "local"
legacy_inventory_source = "Data Source=10.0.0.10;Database=mydata;User ID=DBUser; password=EWorldDB1;"
migration_active = true

[SimulatorFeatures]
; Per-simulator external services and features. They don't have to be enabled on all simulators, but they can be.
; If you are looking for the web-based profile server URI
; profile_server_uri, please edit the UserServer_Config.

; Server that hosts the map tiles.
; Grid-wide setting held in the UserServer_Config.xml file
MapImageServerURI = "https://world.enchantedgrid.com/map."
; Server that hosts the pages used for the search server.
SearchServerURI = "" ;"http://255.255.255.255:9000/"
; Are mesh-based objects allowed on this region?
MeshEnabled = true
PhysicsMaterialsEnabled = true

[Mesh]
AllowMeshUpload = true

[VivoxVoice]
; NOTE: This requires contacting Vivox and putting in an application with them.
; ## Apply for Vivox at https://developer.vivox.com/ for your free account. See listed terms there.
enabled = true
; vivox voice server
vivox_server = www.osp.vivox.com
; vivox SIP URI
vivox_sip_uri = osp.vivox.com
; vivox admin user name
vivox_admin_user = dawnwain4416-admin
; vivox admin password
vivox_admin_password = RnX5PpBA

[Startup]
; Set this to true if you want to log crashes to disk
; this can be useful when submitting bug reports.
save_crashes = true

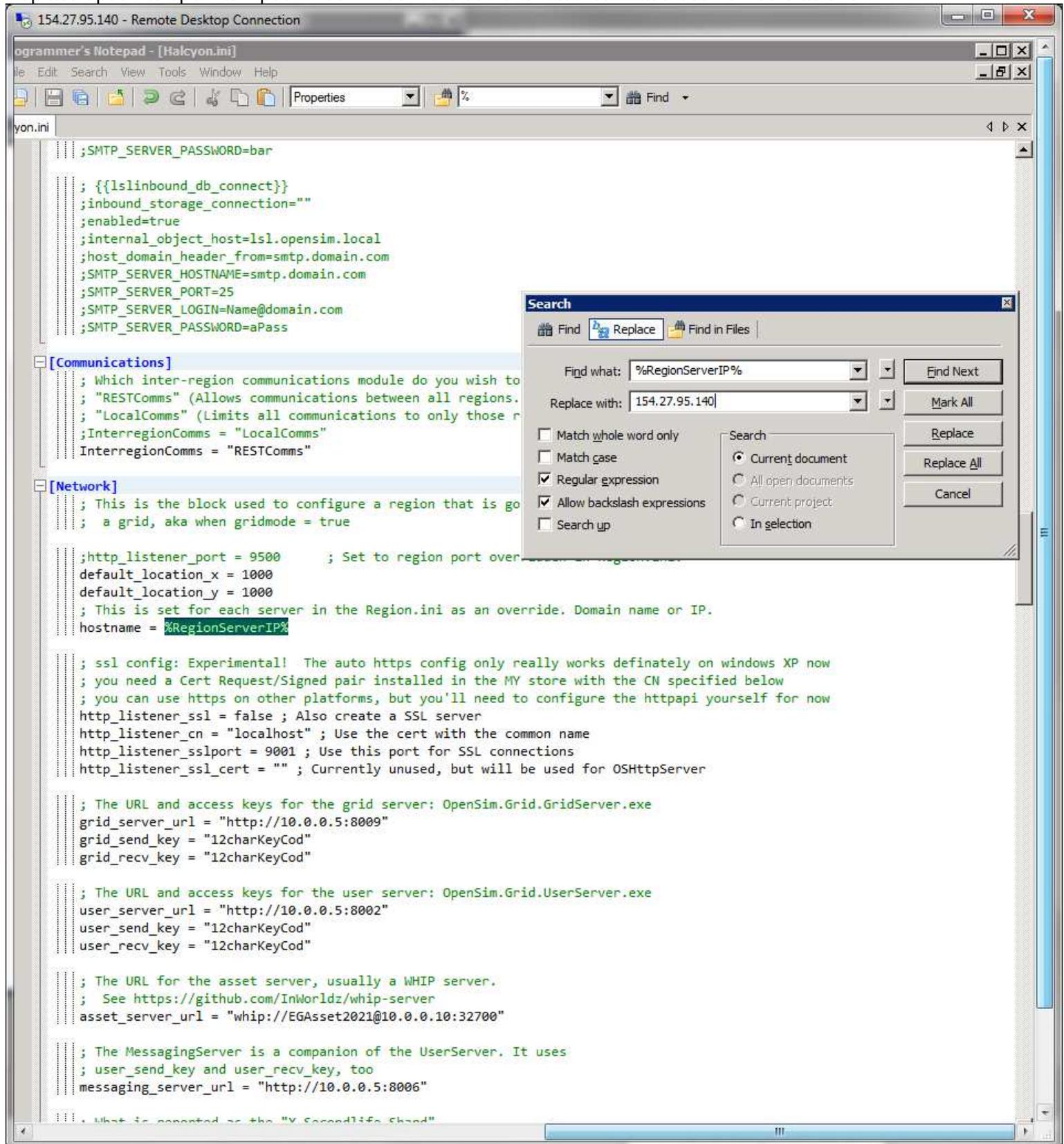
; Directory to save crashes to if above is enabled
; (eg default is /opensimdir/crashes/*.txt or C:\opensim\crashes\*.txt)
crash_dir = "crashes"

; Path for where to create a PID file. Default is to not create one.
; PIDfile = "/tmp/my.pid"

; Http proxy support for llHTTPRequest and dynamic texture loading
; Set HttpProxy to the URL for your proxy server if you would like
; to proxy llHTTPRequests through a firewall
; HttpProxy = "http://proxy.com"
; Set HttpProxyExceptions to a list of regular expressions for
; URLs that you don't want going through the proxy such as servers
; inside your firewall. Separate patterns with a '|'
```

A "Search" dialog box is overlaid on the right side of the Notepad window. The "Find what:" field contains "%". The "Search" section has "Current document" selected. The "Find Next" button is highlighted.

Click the Find Next button. It will locate the hostname entry tag. Highlight it and ctrl f to load it into the search. Click the Replace option to open its input window. Put in the server's Internet IP address numbers as shown.



The image shows a remote desktop connection to a computer named '154.27.95.140'. The main window is 'ogrammer's Notepad - [Halcyon.ini]'. The file contains configuration text for a region, including sections for Communications, Network, and various server URLs. A search and replace dialog box is open over the text. The 'Find what' field contains '%RegionServerIP%' and the 'Replace with' field contains '154.27.95.140'. The 'Find Next' button is highlighted. The 'Search' section of the dialog has 'Current document' selected. The 'Match whole word only' checkbox is checked, and the 'Regular expression' checkbox is also checked. The 'Search up' checkbox is unchecked.

```
Halcyon.ini
;SMTP_SERVER_PASSWORD=bar

; {{!slinbound_db_connect}}
;inbound_storage_connection=""
;enabled=true
;internal_object_host=isl.opensim.local
;host_domain_header_from=smtp.domain.com
;SMTP_SERVER_HOSTNAME=smtp.domain.com
;SMTP_SERVER_PORT=25
;SMTP_SERVER_LOGIN=Name@domain.com
;SMTP_SERVER_PASSWORD=aPass

[Communications]
; Which inter-region communications module do you wish to
; "RESTComms" (Allows communications between all regions.
; "LocalComms" (Limits all communications to only those r
;InterregionComms = "LocalComms"
InterregionComms = "RESTComms"

[Network]
; This is the block used to configure a region that is go
; a grid, aka when gridmode = true

;http_listener_port = 9500 ; Set to region port over
default_location_x = 1000
default_location_y = 1000
; This is set for each server in the Region.ini as an override. Domain name or IP.
hostname = %RegionServerIP%

; ssl config: Experimental! The auto https config only really works defintely on windows XP now
; you need a Cert Request/Signed pair installed in the MY store with the CN specified below
; you can use https on other platforms, but you'll need to configure the httpapi yourself for now
http_listener_ssl = false ; Also create a SSL server
http_listener_cn = "localhost" ; Use the cert with the common name
http_listener_sslport = 9001 ; Use this port for SSL connections
http_listener_ssl_cert = "" ; Currently unused, but will be used for OSHttpServer

; The URL and access keys for the grid server: OpenSim.Grid.GridServer.exe
grid_server_url = "http://10.0.0.5:8009"
grid_send_key = "12charKeyCod"
grid_rcv_key = "12charKeyCod"

; The URL and access keys for the user server: OpenSim.Grid.UserServer.exe
user_server_url = "http://10.0.0.5:8002"
user_send_key = "12charKeyCod"
user_rcv_key = "12charKeyCod"

; The URL for the asset server, usually a WHIP server.
; See https://github.com/InWorldz/whip-server
asset_server_url = "whip://EGAsset2021@10.0.0.10:32700"

; The MessagingServer is a companion of the UserServer. It uses
; user_send_key and user_rcv_key, too
messaging_server_url = "http://10.0.0.5:8006"

; What is reported as the "X SecondLife shard"
```

Click the Replace All Button.

The screenshot shows a remote desktop connection to a machine with IP 154.27.95.140. A Notepad window titled "Programmer's Notepad - [Halcyon.ini \*]" is open, displaying a configuration file named "Halcyon.ini". The file contains various settings for a server, including default locations, SSL configuration, grid and user server URLs, and a list of host blacklists. A search and replace dialog box is overlaid on the Notepad window. The dialog box has "Find what:" set to "%RegionServerIP%" and "Replace with:" set to "154.27.95.140". The "Regular expression" checkbox is checked. The "Replace All" button is highlighted. A small notification window titled "Programmer's Notepad" is also visible, displaying an information icon and the text "2 occurrence(s) replaced." with an "OK" button.

```
Halcyon.ini *
default_location_x = 1000
default_location_y = 1000
; This is set for each server in the Region.ini as an override. Domain name or IP.
hostname = 154.27.95.140

; ssl config: Experimental! The auto https config only really works definetely on windows XP now
; you need a Cert Request/Signed pair installed in the MY store with the CN specified below
; you can use https on other platforms, but you'll need to configure the httpapi yourself for now
http_listener_ssl = false ; Also create a SSL server
http_listener_cn = "localhost" ; Use the cert with the common name
http_listener_sslport = 9001 ; Use this port for SSL connections
http_listener_ssl_cert = "" ; Currently unused, but will be used for OSHttpServer

; The URL and access keys for the grid server: OpenSim.Grid.GridServer.exe
grid_server_url = "http://10.0.0.5:8009"
grid_send_key = "12charKeyCod"
grid_rcv_key = "12charKeyCod"

; The URL and access keys for the user server: OpenSim.Grid.GridServer.exe
user_server_url = "http://10.0.0.5:8002"
user_send_key = "12charKeyCod"
user_rcv_key = "12charKeyCod"

; The URL and access keys for the WHIP server.
; Set the URL and keys for the WHIP server
asset_server_url = "http://10.0.0.10:32700"

; The URL and access keys for the UserServer. It uses
; use the URL and keys for the UserServer
message_server_url = "http://10.0.0.5:8006"

; What is reported as the "User-Agent" when using llHTTPRequest
; Defaults to the user server url if not set
; The old default is "OpenSim", set here for compatibility
shard = "HalcyonHome"

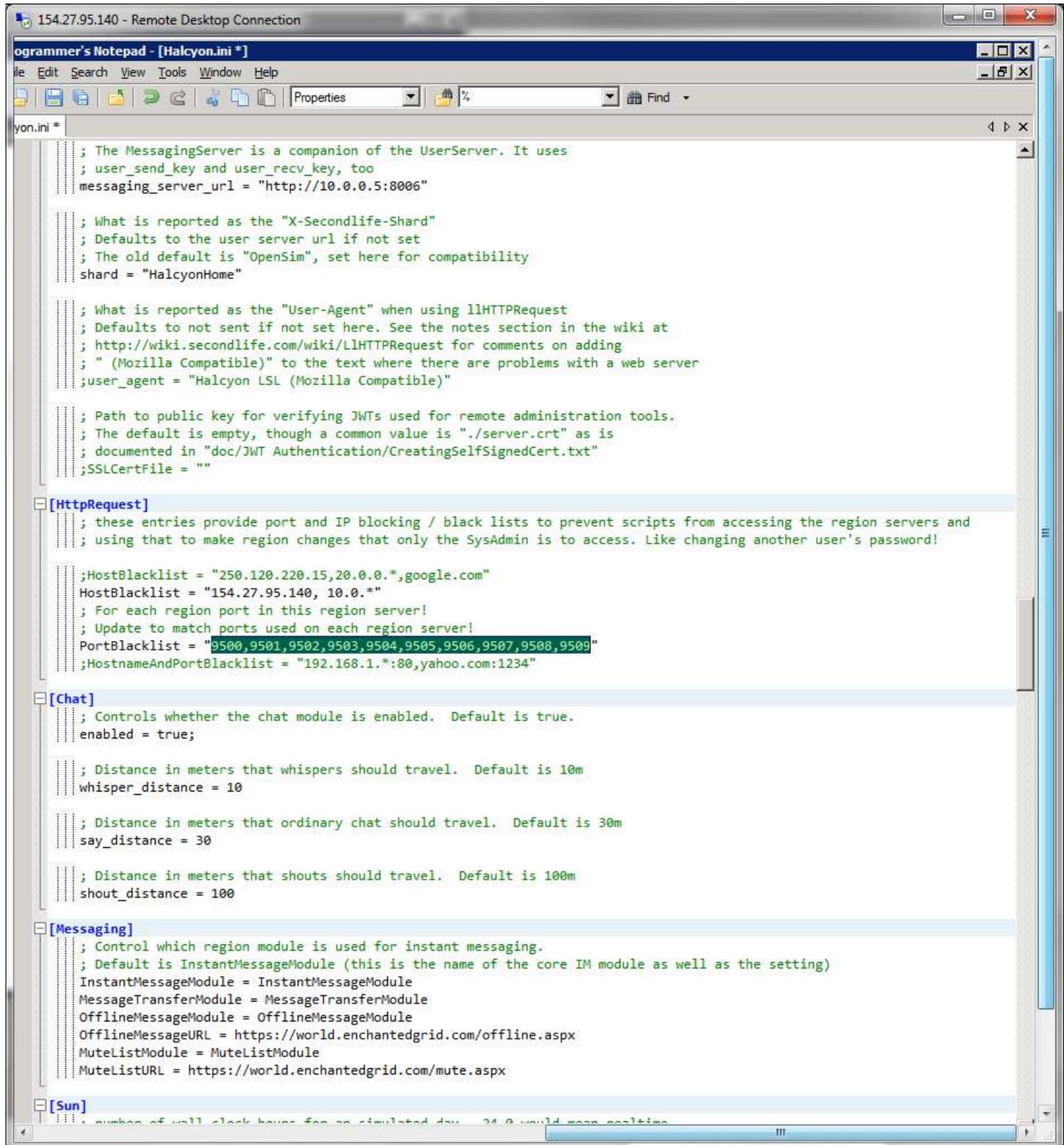
; What is reported as the "User-Agent" when using llHTTPRequest
; Defaults to not sent if not set here. See the notes section in the wiki at
; http://wiki.secondlife.com/wiki/llHTTPRequest for comments on adding
; " (Mozilla Compatible)" to the text where there are problems with a web server
user_agent = "Halcyon LSL (Mozilla Compatible)"

; Path to public key for verifying JWTs used for remote administration tools.
; The default is empty, though a common value is "./server.crt" as is
; documented in "doc/JWT Authentication/CreatingSelfSignedCert.txt"
;SSLCertFile = ""

[HttpRequest]
; these entries provide port and IP blocking / black lists to prevent scripts from accessing the region servers and
; using that to make region changes that only the SysAdmin is to access. Like changing another user's password!

;HostBlacklist = "250.120.220.15,20.0.0.*,google.com"
HostBlacklist = "154.27.95.140, 10.0.*"
; For each region port in this region server!
; Update to match ports used on each region server!
PortBlacklist = "0500 0501 0502 0503 0504 0505 0506 0507 0508 0509"
```

Scroll down a few lines to show the port list. Change them to match the list of folders you have in the Grid folder. Save and close the file.



```
154.27.95.140 - Remote Desktop Connection
ogrammer's Notepad - [Halcyon.ini *]
File Edit Search View Tools Window Help
Properties % Find
Halcyon.ini *
; The MessagingServer is a companion of the UserServer. It uses
; user_send_key and user_rcv_key, too
messaging_server_url = "http://10.0.0.5:8006"

; What is reported as the "X-Secondlife-Shard"
; Defaults to the user server url if not set
; The old default is "OpenSim", set here for compatibility
shard = "HalcyonHome"

; What is reported as the "User-Agent" when using llHTTPRequest
; Defaults to not sent if not set here. See the notes section in the wiki at
; http://wiki.secondlife.com/wiki/llHTTPRequest for comments on adding
; " (Mozilla Compatible)" to the text where there are problems with a web server
;user_agent = "Halcyon LSL (Mozilla Compatible)"

; Path to public key for verifying JWTs used for remote administration tools.
; The default is empty, though a common value is "./server.crt" as is
; documented in "doc/JWT Authentication/CreatingSelfSignedCert.txt"
;SSLCertFile = ""

[HttpRequest]
; these entries provide port and IP blocking / black lists to prevent scripts from accessing the region servers and
; using that to make region changes that only the SysAdmin is to access. Like changing another user's password!

;HostBlacklist = "250.120.220.15,20.0.0.*,google.com"
HostBlacklist = "154.27.95.140, 10.0.*"
; For each region port in this region server!
; Update to match ports used on each region server!
PortBlacklist = "9500,9501,9502,9503,9504,9505,9506,9507,9508,9509"
;HostnameAndPortBlacklist = "192.168.1.*:80,yahoo.com:1234"

[Chat]
; Controls whether the chat module is enabled. Default is true.
enabled = true;

; Distance in meters that whispers should travel. Default is 10m
whisper_distance = 10

; Distance in meters that ordinary chat should travel. Default is 30m
say_distance = 30

; Distance in meters that shouts should travel. Default is 100m
shout_distance = 100

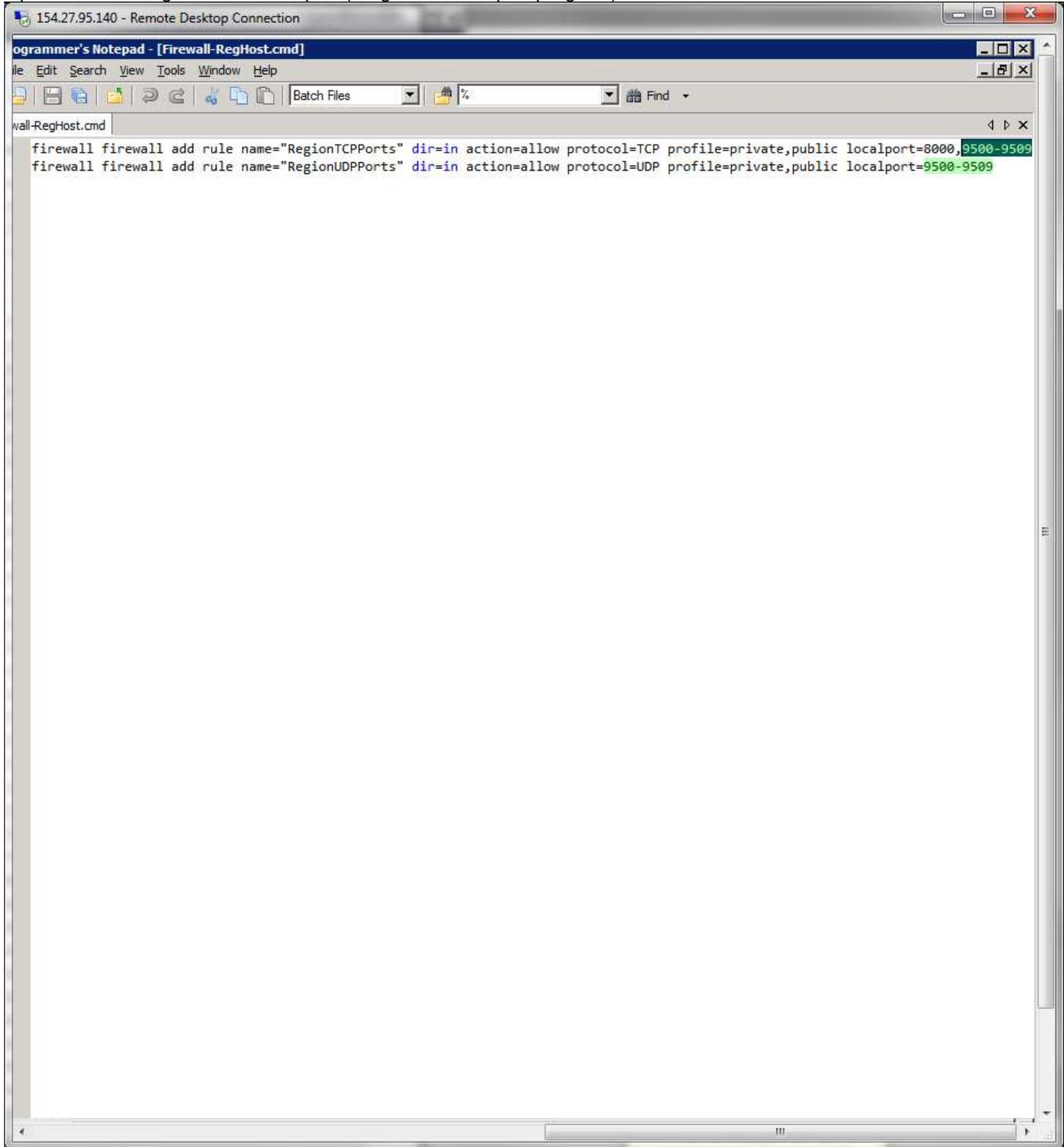
[Messaging]
; Control which region module is used for instant messaging.
; Default is InstantMessageModule (this is the name of the core IM module as well as the setting)
InstantMessageModule = InstantMessageModule
MessageTransferModule = MessageTransferModule
OfflineMessageModule = OfflineMessageModule
OfflineMessageURL = https://world.enchantedgrid.com/offline.aspx
MuteListModule = MuteListModule
MuteListURL = https://world.enchantedgrid.com/mute.aspx

[Sun]
; number of wall clock hours for an simulated day. 24.0 would mean real time
```





Open it in the Programmer's Notepad (drag it into the open program).



The screenshot shows a remote desktop connection window titled "154.27.95.140 - Remote Desktop Connection". Inside the window, a Notepad application is open with the title "Programmer's Notepad - [Firewall-RegHost.cmd]". The Notepad window has a menu bar with "File", "Edit", "Search", "View", "Tools", "Window", and "Help". Below the menu bar is a toolbar with icons for file operations and a search box. The main text area of the Notepad contains two lines of command text:

```
firewall firewall add rule name="RegionTCPPorts" dir=in action=allow protocol=TCP profile=private,public localport=8000,9500-9509  
firewall firewall add rule name="RegionUDPPorts" dir=in action=allow protocol=UDP profile=private,public localport=9500-9509
```

Edit the port numbers to match the ones for this server in both lines. Save and close the file.

Right click on the Firewall Reghost.cmd file select Run as Administrator. It will flash open a console window while it runs. Do the same for the SetPorts4User.cmd. Then select each of the files as shown and delete them.

The screenshot shows a Remote Desktop Connection window titled "154.27.95.140 - Remote Desktop Connection". The desktop background is black with icons for "File Bin", "Computer - Shortcut", and "Command Prompt". A Windows Explorer window titled "Grid" is open, displaying the contents of the "C:\Grid" directory. The file list is as follows:

Name	Date modified	Type	Size
9800	5/4/2021 3:04 AM	File folder	
9801	5/4/2021 3:04 AM	File folder	
9802	5/4/2021 3:04 AM	File folder	
9803	5/4/2021 3:04 AM	File folder	
9804	5/4/2021 3:04 AM	File folder	
9805	5/4/2021 3:04 AM	File folder	
9806	5/4/2021 3:04 AM	File folder	
9807	5/4/2021 3:04 AM	File folder	
9808	5/4/2021 3:04 AM	File folder	
9809	5/4/2021 3:04 AM	File folder	
Bin	5/4/2021 3:04 AM	File folder	
GridBatchFiles	3/15/2021 4:17 PM	File folder	
Firewall-RegHost.cmd	5/4/2021 3:13 AM	Windows Command ...	1 KB
Halcyon.bat	3/16/2021 11:25 AM	Windows Batch File	1 KB
Halcyon.ini	5/4/2021 3:09 AM	INI File	25 KB
MakeGrid.bat	2/26/2021 4:10 AM	Windows Batch File	2 KB
Region.ini	3/2/2021 5:50 PM	INI File	2 KB
SetPorts4User.cmd	5/4/2021 2:59 AM	Windows Command ...	1 KB
trustednetworks.txt	5/4/2021 2:53 AM	TXT File	1 KB
Update.Bat	5/4/2021 3:02 AM	Windows Batch File	2 KB

At the bottom of the Explorer window, a status bar indicates "3 items selected Date modified: 2/26/2021 4:10 AM - 5/4/... Date created: 5/4/2021 3:11 AM Size: 2.20 KB". On the left side of the screen, a Command Prompt window is partially visible, showing a series of "idHost\Ha" commands and a "Done!" message.

Select all the remaining files and copy them.

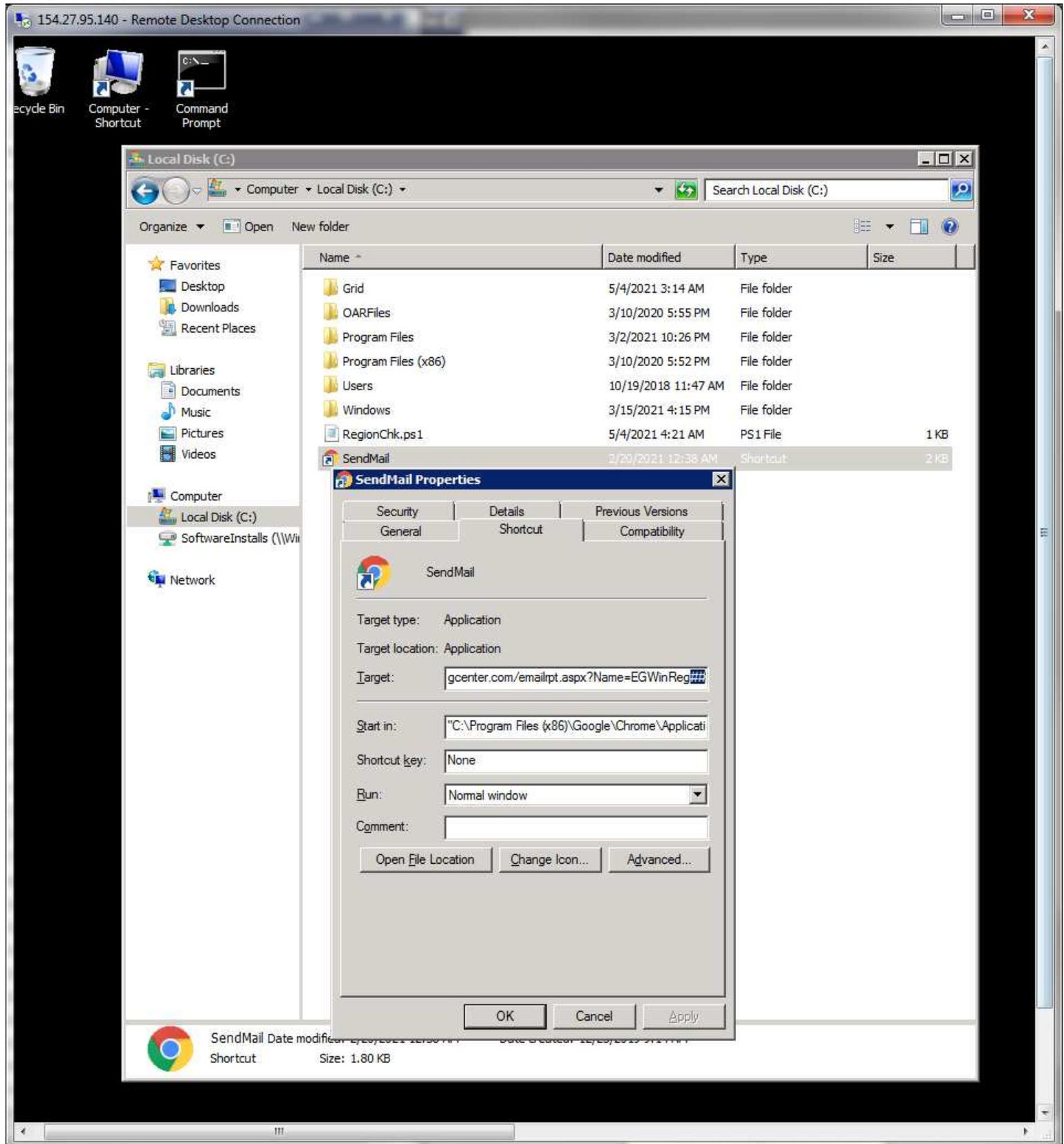
The screenshot shows a Remote Desktop Connection window titled "154.27.95.140 - Remote Desktop Connection". The desktop background is black with icons for "File Bin", "Computer - Shortcut", and "Command Prompt". A Windows Explorer window titled "Grid" is open, showing the path "Computer > Local Disk (C:) > Grid". The Explorer window displays a list of files and folders with columns for Name, Date modified, Type, and Size. Five files are selected, highlighted in blue.

Name	Date modified	Type	Size
9800	5/4/2021 3:04 AM	File folder	
9801	5/4/2021 3:04 AM	File folder	
9802	5/4/2021 3:04 AM	File folder	
9803	5/4/2021 3:04 AM	File folder	
9804	5/4/2021 3:04 AM	File folder	
9805	5/4/2021 3:04 AM	File folder	
9806	5/4/2021 3:04 AM	File folder	
9807	5/4/2021 3:04 AM	File folder	
9808	5/4/2021 3:04 AM	File folder	
9809	5/4/2021 3:04 AM	File folder	
Bin	5/4/2021 3:04 AM	File folder	
GridBatchFiles	3/15/2021 4:17 PM	File folder	
Halcyon.bat	3/16/2021 11:25 AM	Windows Batch File	1 KB
Halcyon.ini	5/4/2021 3:09 AM	INI File	25 KB
Region.ini	3/2/2021 5:50 PM	INI File	2 KB
trustednetworks.txt	5/4/2021 2:53 AM	TXT File	1 KB
Update.Bat	5/4/2021 3:02 AM	Windows Batch File	2 KB

At the bottom of the Explorer window, a status bar indicates: "5 items selected Date modified: 3/2/2021 5:50 PM - 5/4/2... Date created: 3/2/2021 10:25 PM - 5/4/2021 2:59 AM Size: 26.5 KB".



Open C:\ folder. Right click on the SendMail entry and select properties. Locate the ## shown and replace with the server number.

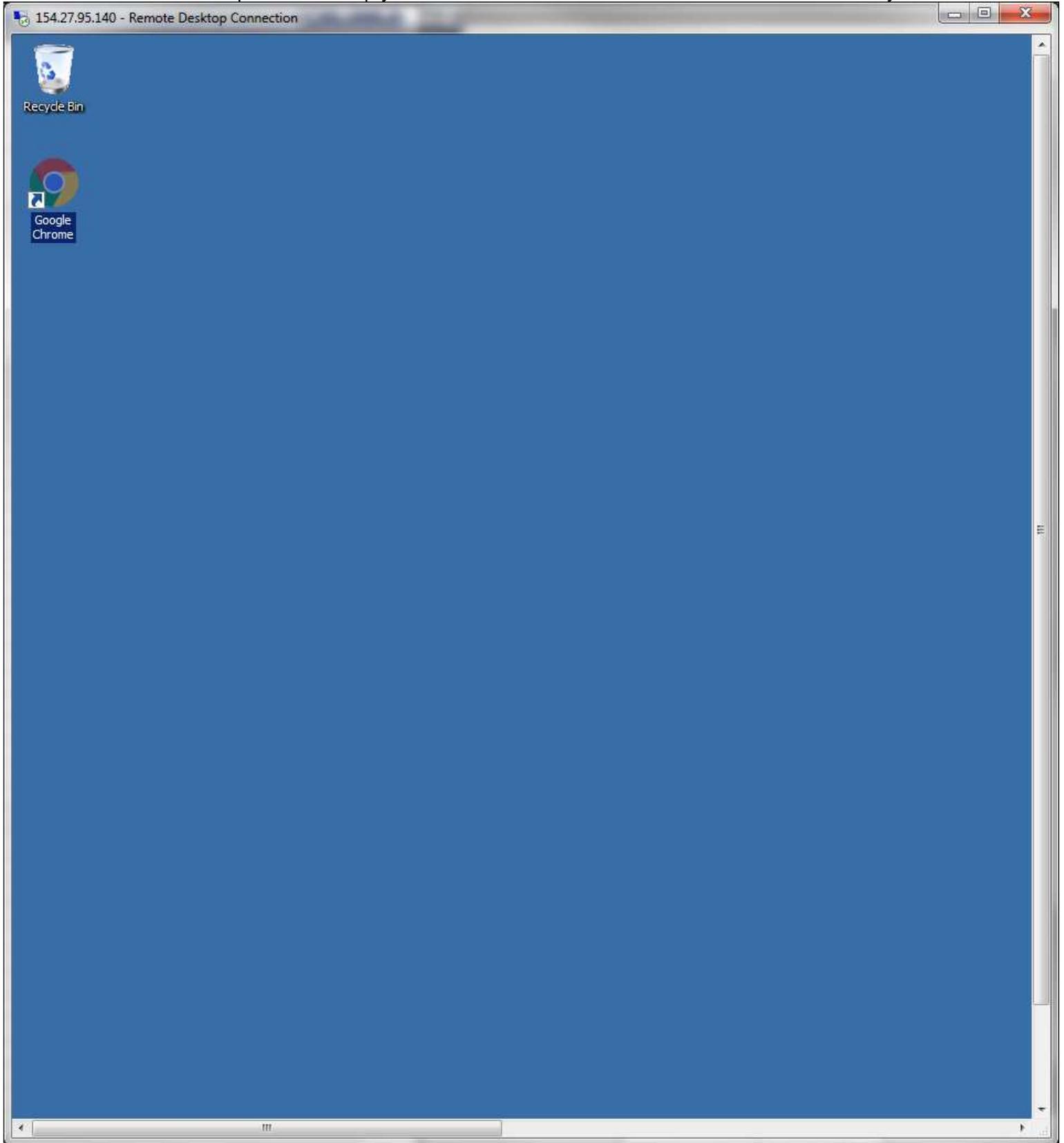


Click OK to save it.

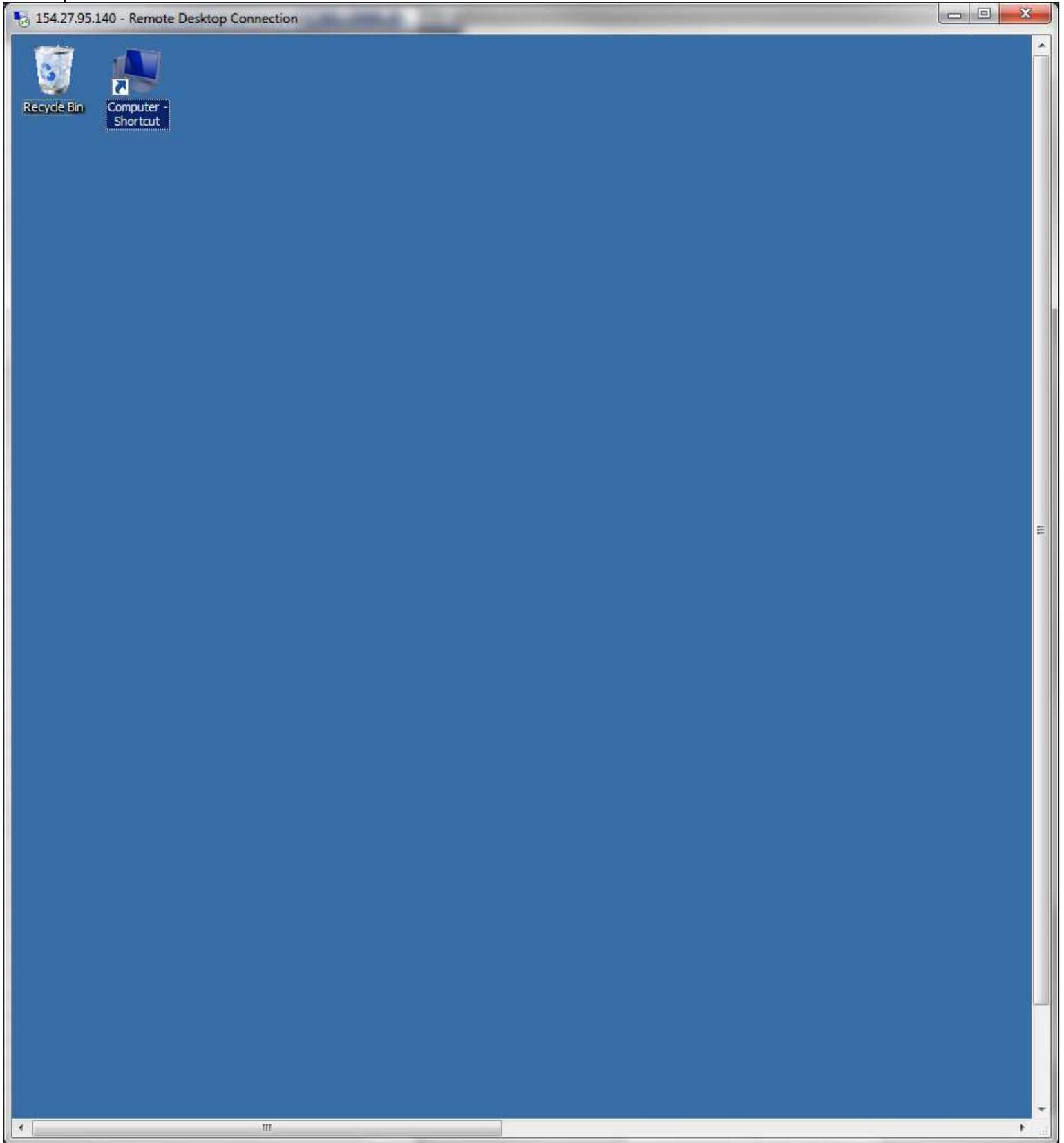
Time now to logon to the server as Grid Manager using Remote Desktop. It will have Administrator as the logon, use the Another Account option to change the logon and put in the password.



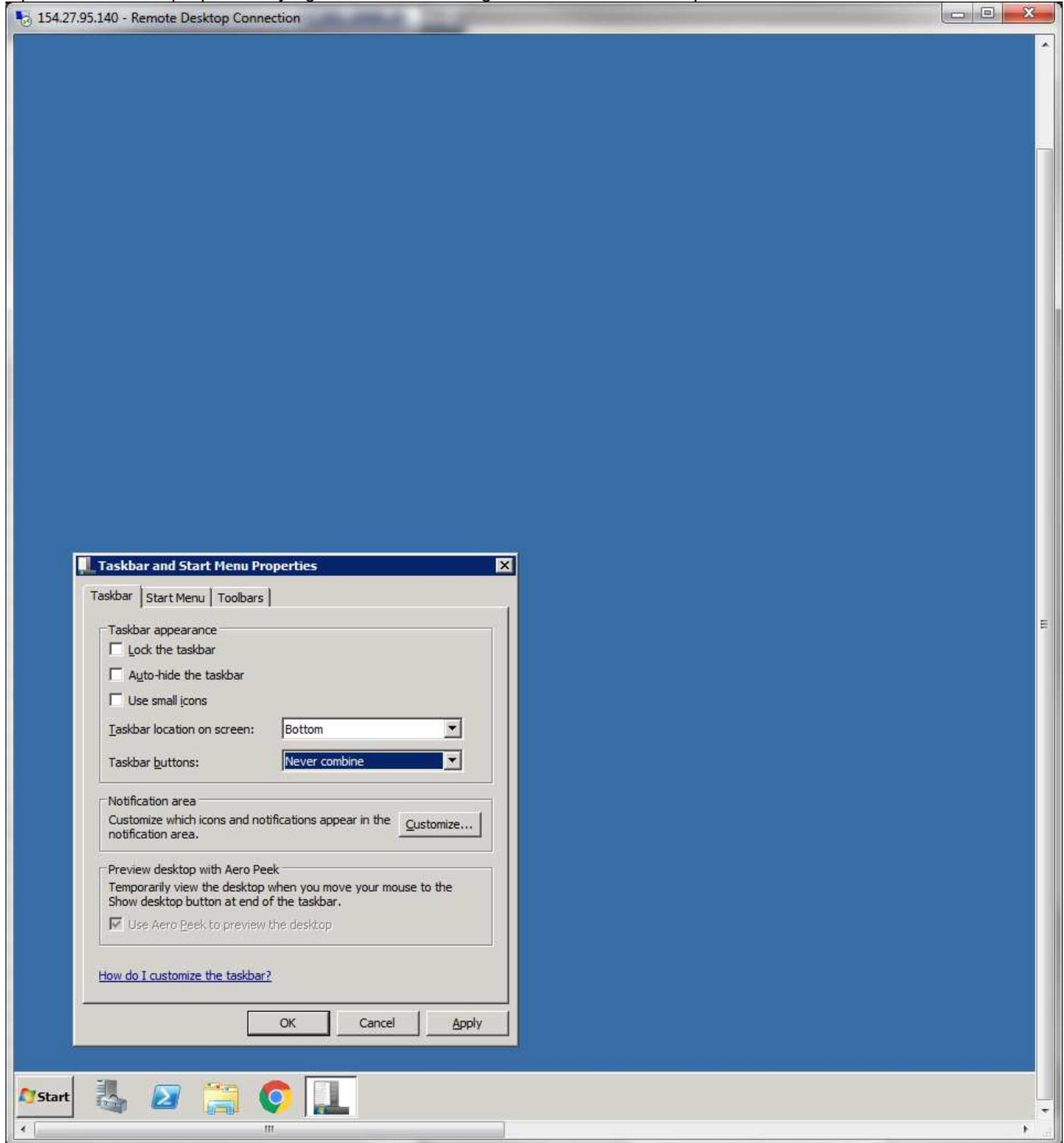
Delete the Chrome desktop icon and empty the trash. Its not needed here. Its in the task bar already.



Open the Windows Start button in the lower left of the screen. Right click on the Computer entry and pin to the desktop. Position the icons as shown.



Open the task bar properties by right click on it. Change the task bar button options to Never combine and click OK.



Leave this Remote Desktop window open, and return to the open Administrator Window to continue setup for the Grid Manager there.

Open the SoftwareInstalls drive and the GridHost, DesktopIcons folder. Select all but the two files as indicated.

The screenshot shows a Windows File Explorer window titled "DeskTopIcons" with the address bar showing the path: SoftwareInstalls (\\WinWeb) (V:) > GridHost > DeskTopIcons. The window displays a list of 13 items, all of which are selected. The items are:

Name	Date modified	Type	Size
0	3/2/2021 7:10 PM	Shortcut	2 KB
1	3/2/2021 7:11 PM	Shortcut	2 KB
2	3/2/2021 7:11 PM	Shortcut	2 KB
3	3/2/2021 7:11 PM	Shortcut	2 KB
4	3/2/2021 7:11 PM	Shortcut	2 KB
5	3/2/2021 7:11 PM	Shortcut	2 KB
6	3/2/2021 7:11 PM	Shortcut	2 KB
7	3/2/2021 7:11 PM	Shortcut	2 KB
8	3/2/2021 7:11 PM	Shortcut	2 KB
9	3/2/2021 7:12 PM	Shortcut	2 KB
AnaxiTimerInstall.txt	3/10/2020 3:25 PM	TXT File	1 KB
Autostart.bat	3/16/2021 11:58 AM	Windows Batch File	1 KB
Grid Aperture #1	2/7/2019 7:06 PM	Shortcut	1 KB
GridOperationManual.txt	11/11/2019 1:26 PM	TXT File	5 KB
StartRegions.bat	3/16/2021 11:58 AM	Windows Batch File	1 KB

The status bar at the bottom of the window indicates: 13 items selected Date modified: 2/7/2019 7:06 PM - 3/16/... Date created: 2/19/2021 8:51 PM - 2/26/2021 4:39 AM Size: 13.3 KB.

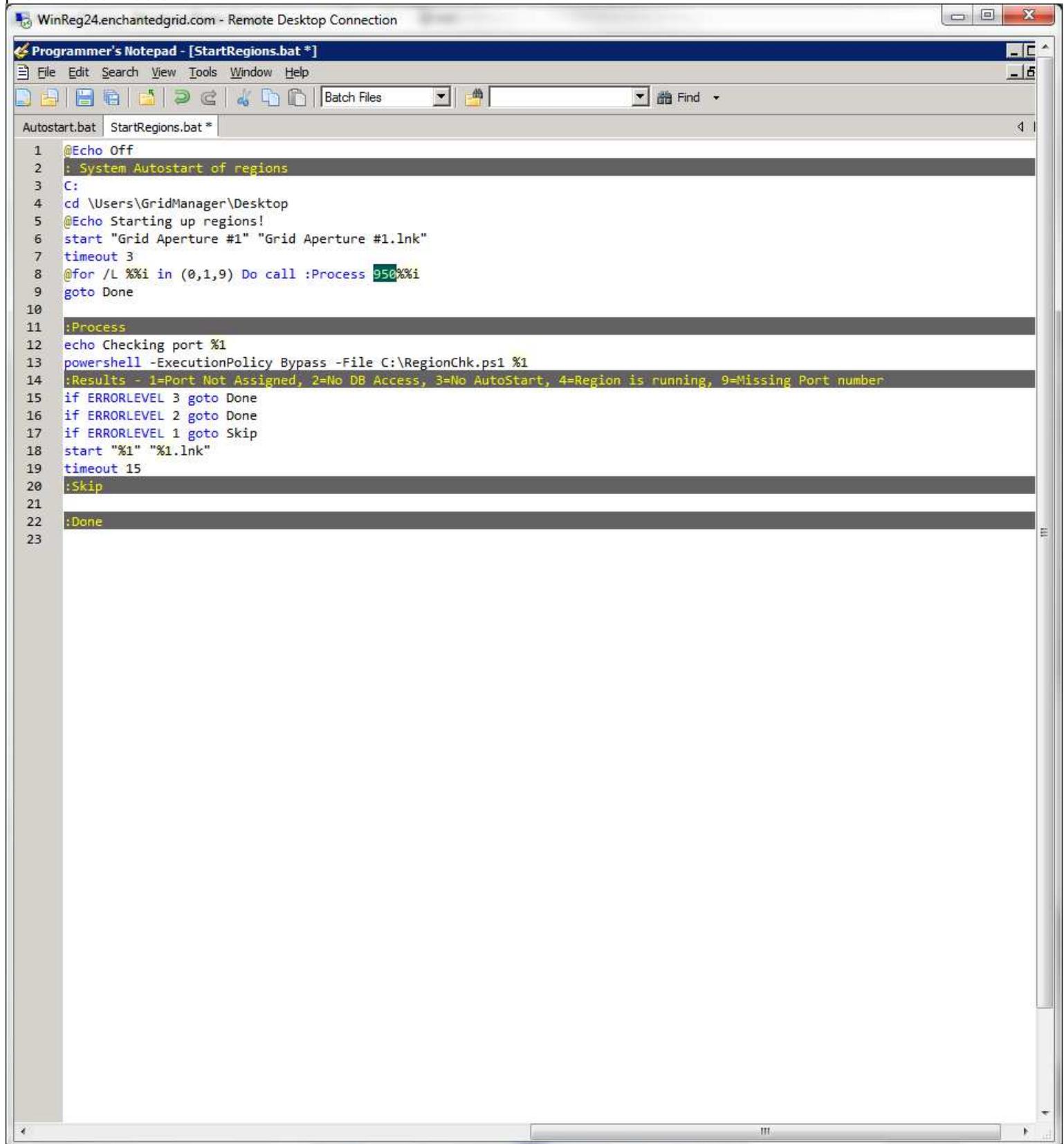
Copy the files. Navigate to C:\Users\GridManger\Desktop and paste the files there.

The screenshot shows a Remote Desktop Connection window titled "154.27.95.140 - Remote Desktop Connection". The desktop background is black. On the desktop, there are three icons: "Recycle Bin", "Computer - Shortcut", and "Command Prompt". A File Explorer window is open, displaying the "Desktop" folder. The address bar shows the path: "Computer > Local Disk (C:) > Users > GridManger > Desktop". The left sidebar shows the navigation pane with "Local Disk (C:)" selected. The main pane shows a list of 14 items:

Name	Date modified	Type	Size
0	3/2/2021 7:10 PM	Shortcut	2 KB
1	3/2/2021 7:11 PM	Shortcut	2 KB
2	3/2/2021 7:11 PM	Shortcut	2 KB
3	3/2/2021 7:11 PM	Shortcut	2 KB
4	3/2/2021 7:11 PM	Shortcut	2 KB
5	3/2/2021 7:11 PM	Shortcut	2 KB
6	3/2/2021 7:11 PM	Shortcut	2 KB
7	3/2/2021 7:11 PM	Shortcut	2 KB
8	3/2/2021 7:11 PM	Shortcut	2 KB
9	3/2/2021 7:12 PM	Shortcut	2 KB
Autostart.bat	3/16/2021 11:58 AM	Windows Batch File	1 KB
Computer - Shortcut	5/4/2021 4:24 AM	Shortcut	1 KB
Grid Aperture #1	2/7/2019 7:06 PM	Shortcut	1 KB
StartRegions.bat	3/16/2021 11:58 AM	Windows Batch File	1 KB

The status bar at the bottom of the File Explorer window shows "14 items".

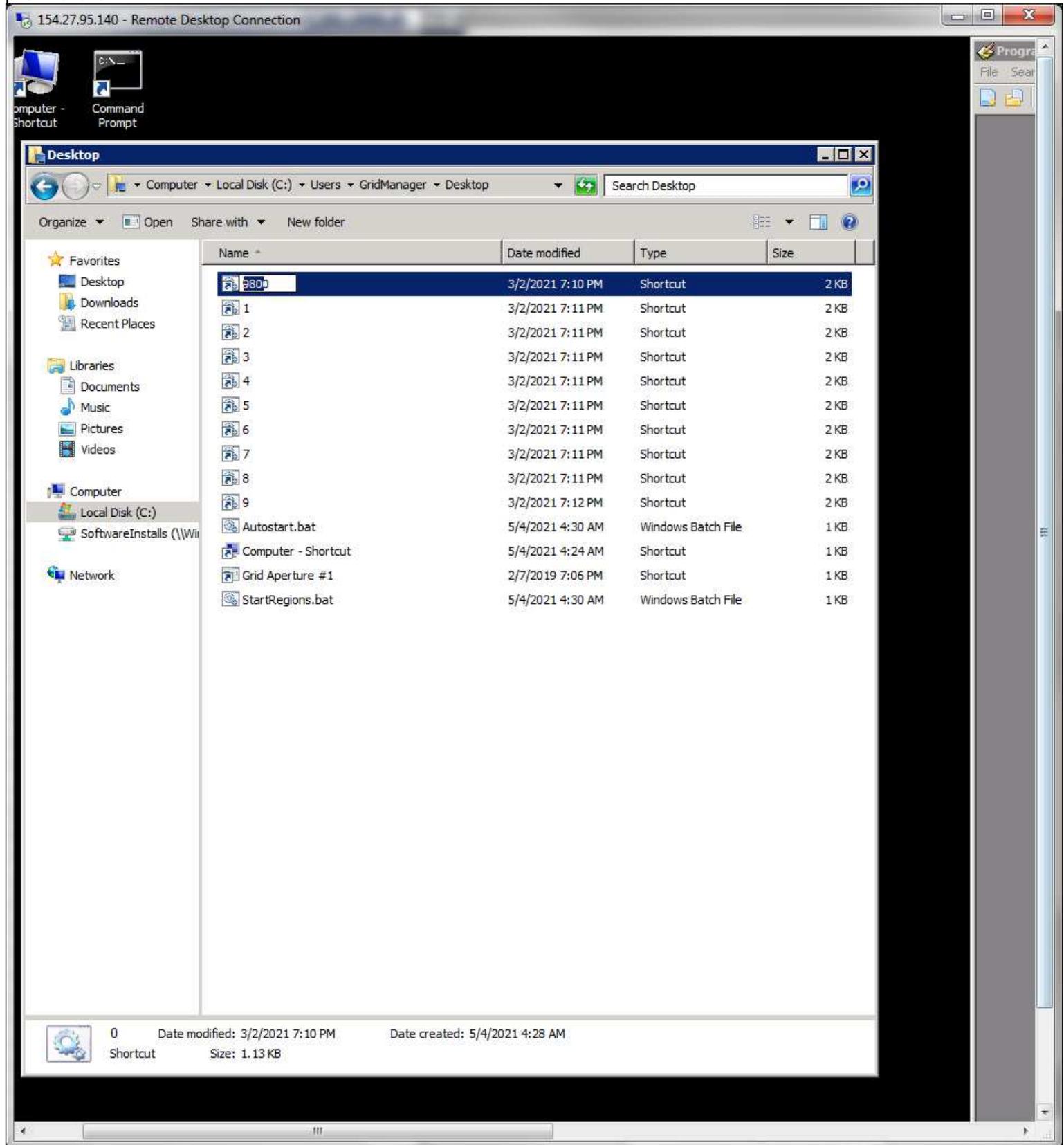
Drag the Autostart.bat and StartRegions.bat files into Programmer's Notepad to edit them. Change the port number prefix in them as shown.



```
1 @Echo Off
2 : System Autostart of regions
3 C:
4 cd \Users\GridManager\Desktop
5 @Echo Starting up regions!
6 start "Grid Aperture #1" "Grid Aperture #1.lnk"
7 timeout 3
8 @for /L %%i in (0,1,9) Do call :Process 950%%i
9 goto Done
10
11 :Process
12 echo Checking port %1
13 powershell -ExecutionPolicy Bypass -File C:\RegionChk.ps1 %1
14 :Results - 1=Port Not Assigned, 2=No DB Access, 3=No AutoStart, 4=Region is running, 9=Missing Port number
15 if ERRORLEVEL 3 goto Done
16 if ERRORLEVEL 2 goto Done
17 if ERRORLEVEL 1 goto Skip
18 start "%1" "%1.lnk"
19 timeout 15
20 :Skip
21
22 :Done
23
```

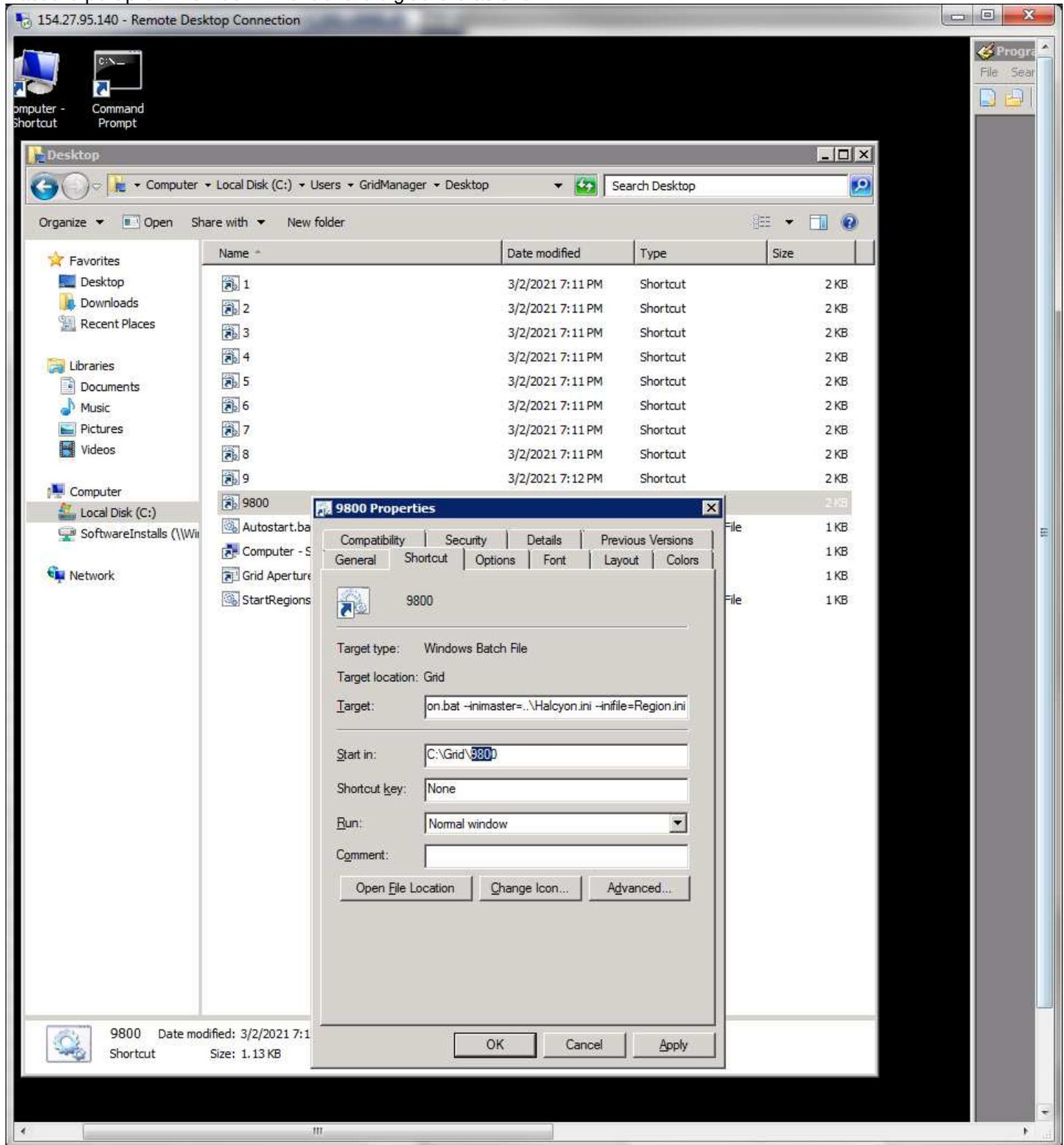
Copy that port prefix number. Save and close each file after editing them.

In the first folder entry, click twice to edit the folder name. Arrow to the front of the number and paste the saved port prefix there.



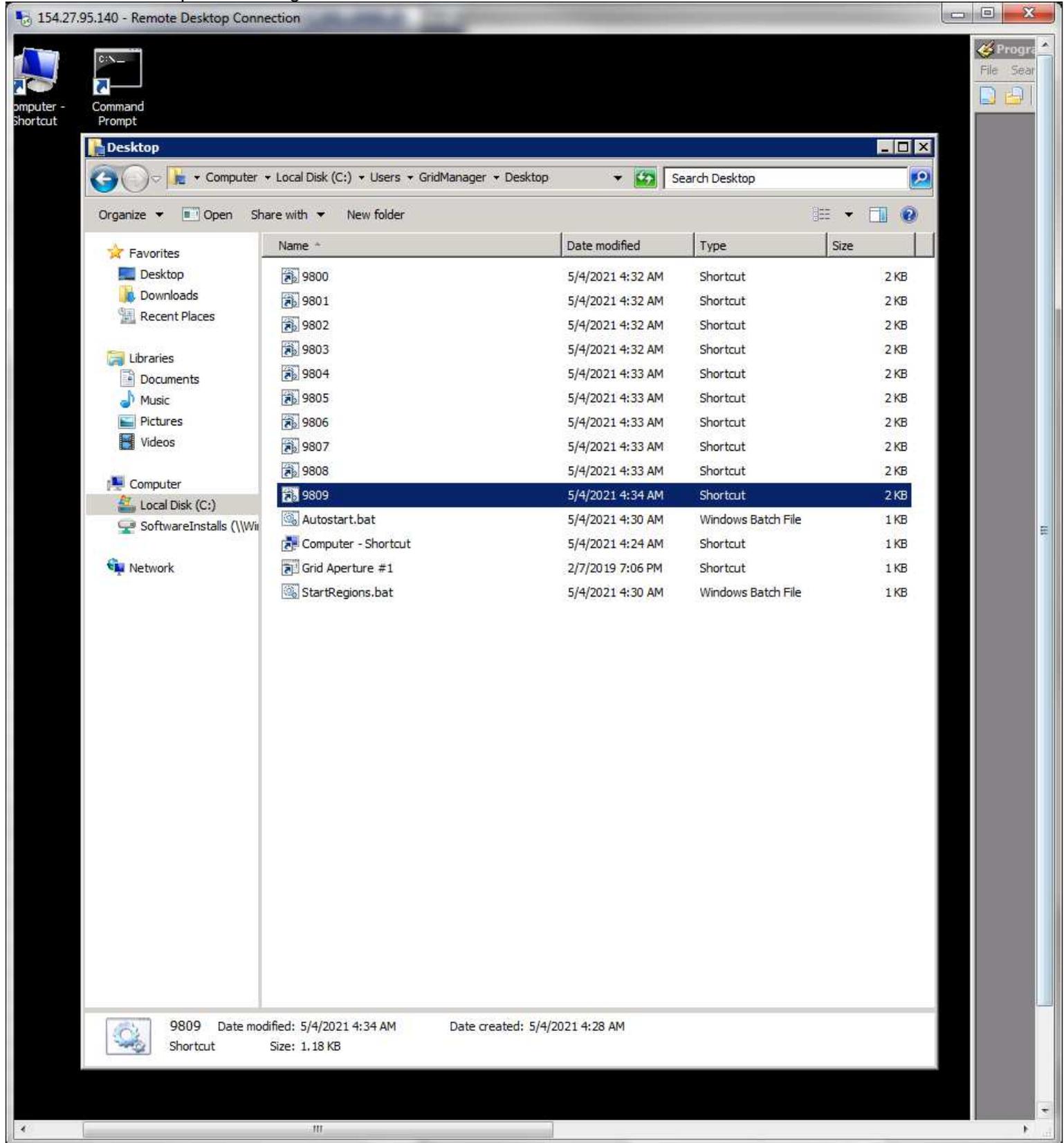
Enter to save it. It will relocate the bottom of the list. Right click on it and select Properties.

Past the port prefix number in front of the digit there as shown.



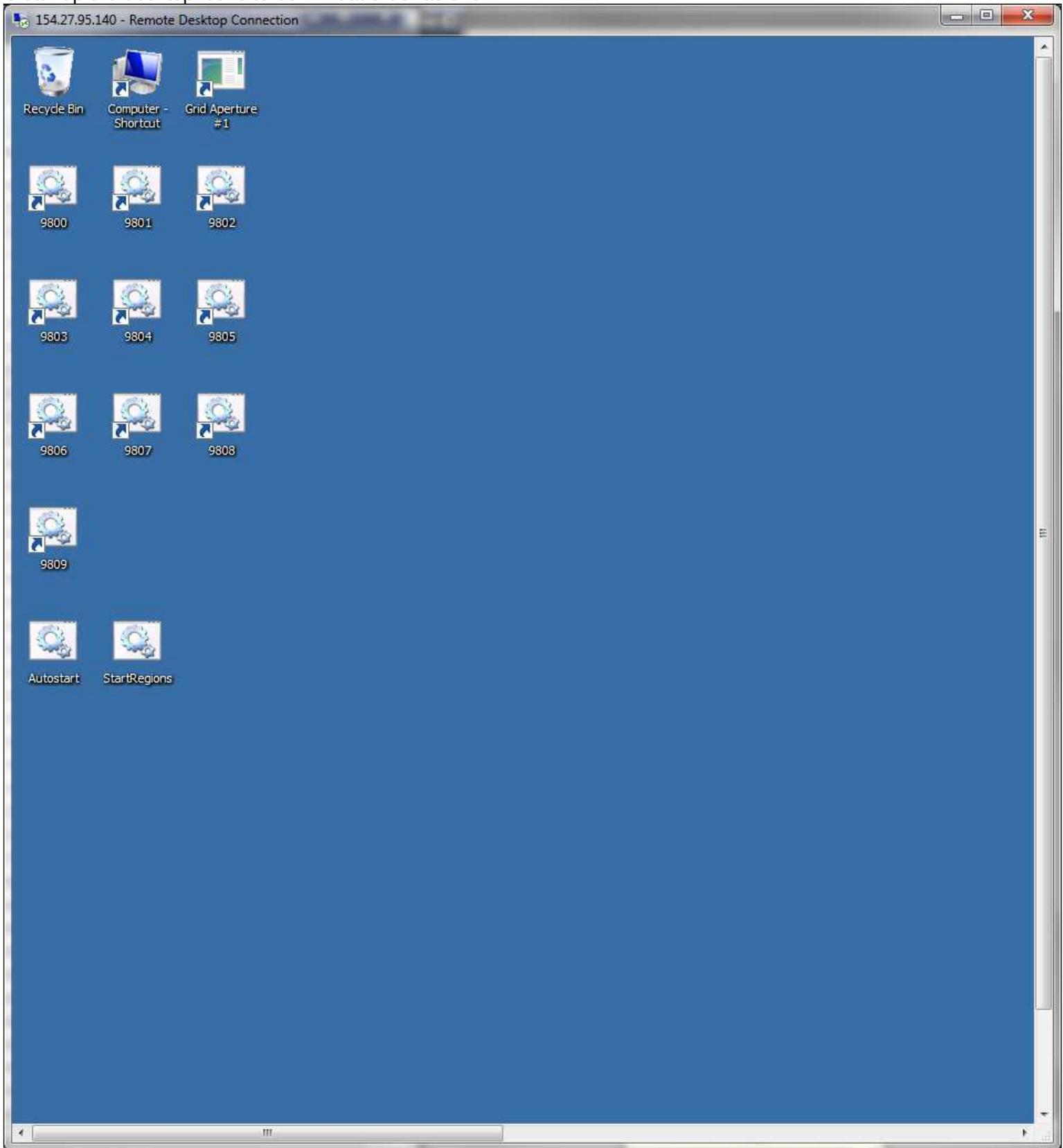
Click Enter to save and close the window. Repeat for each of the folders in the list.

All folders now completed editing.



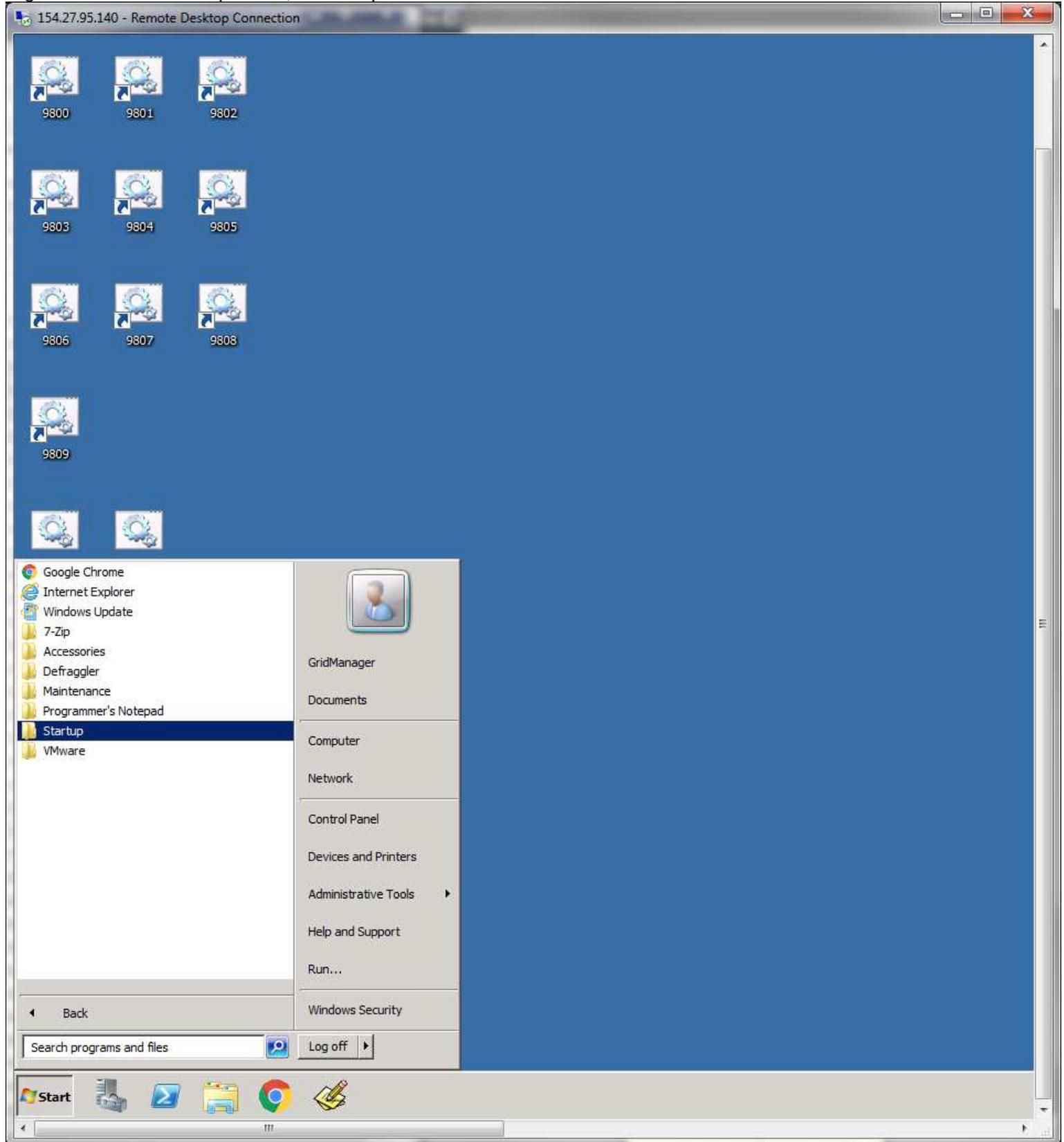
At this point you can empty the Administrator trash can and close all open windows and log out of it. Return to the Grid Manager window.

Clean up the desktop icons to be in neat order as shown:

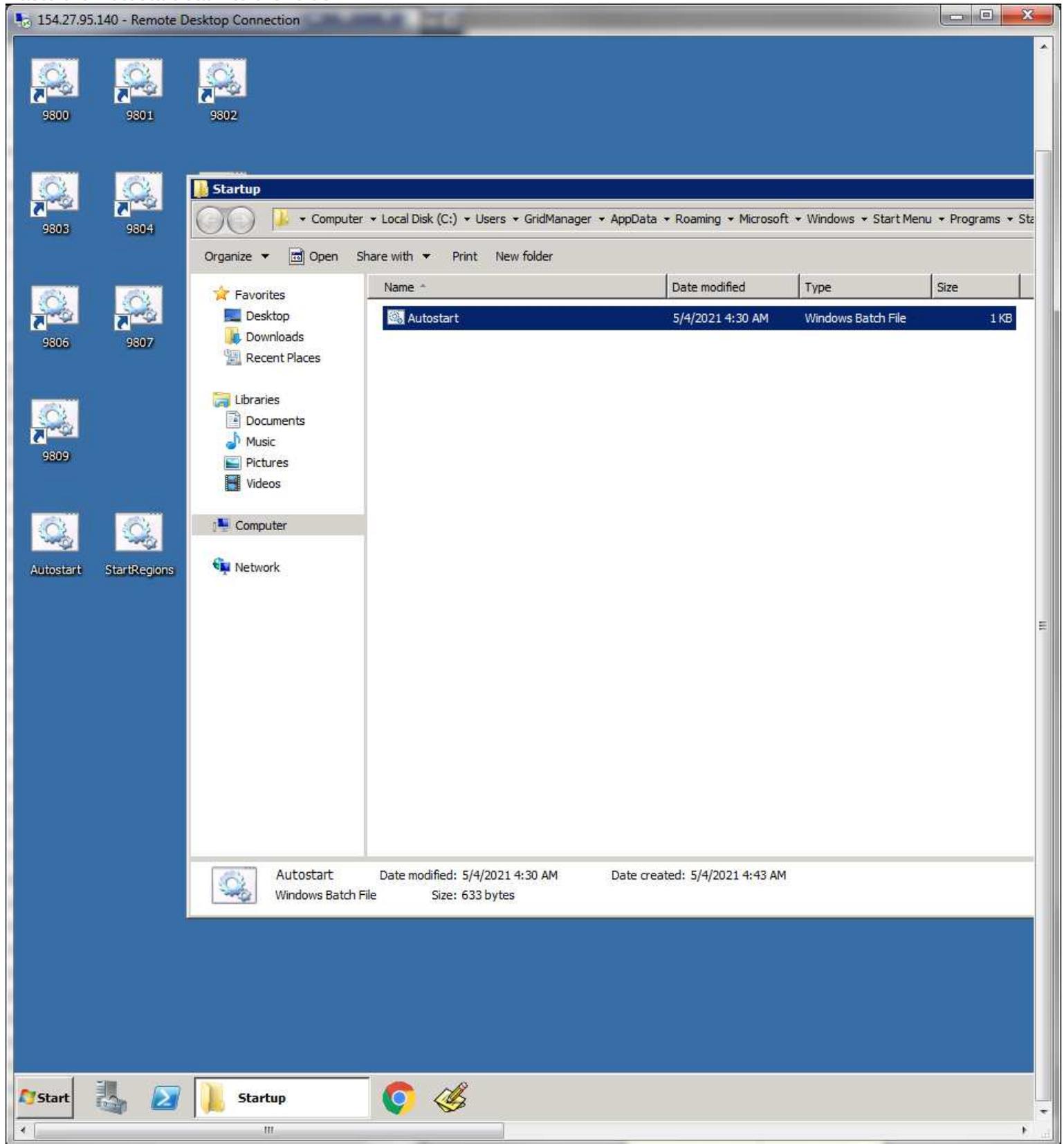


Copy the Autostart batch file icon. Open the Start Menu, then the Programmers Notepad folder and right click on its program entry to select to pin to task bar.

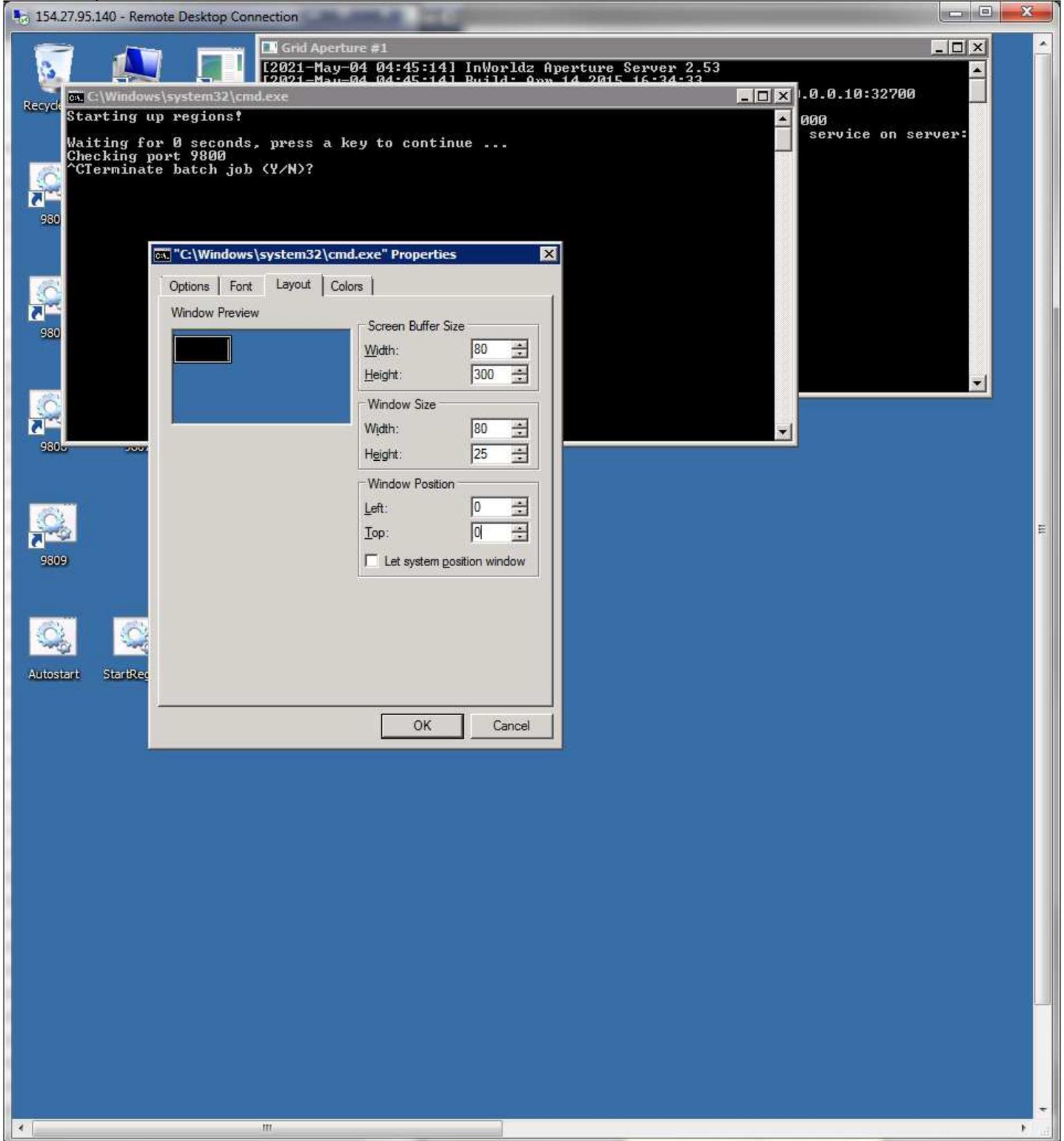
Right click on the Startup folder, select Open.



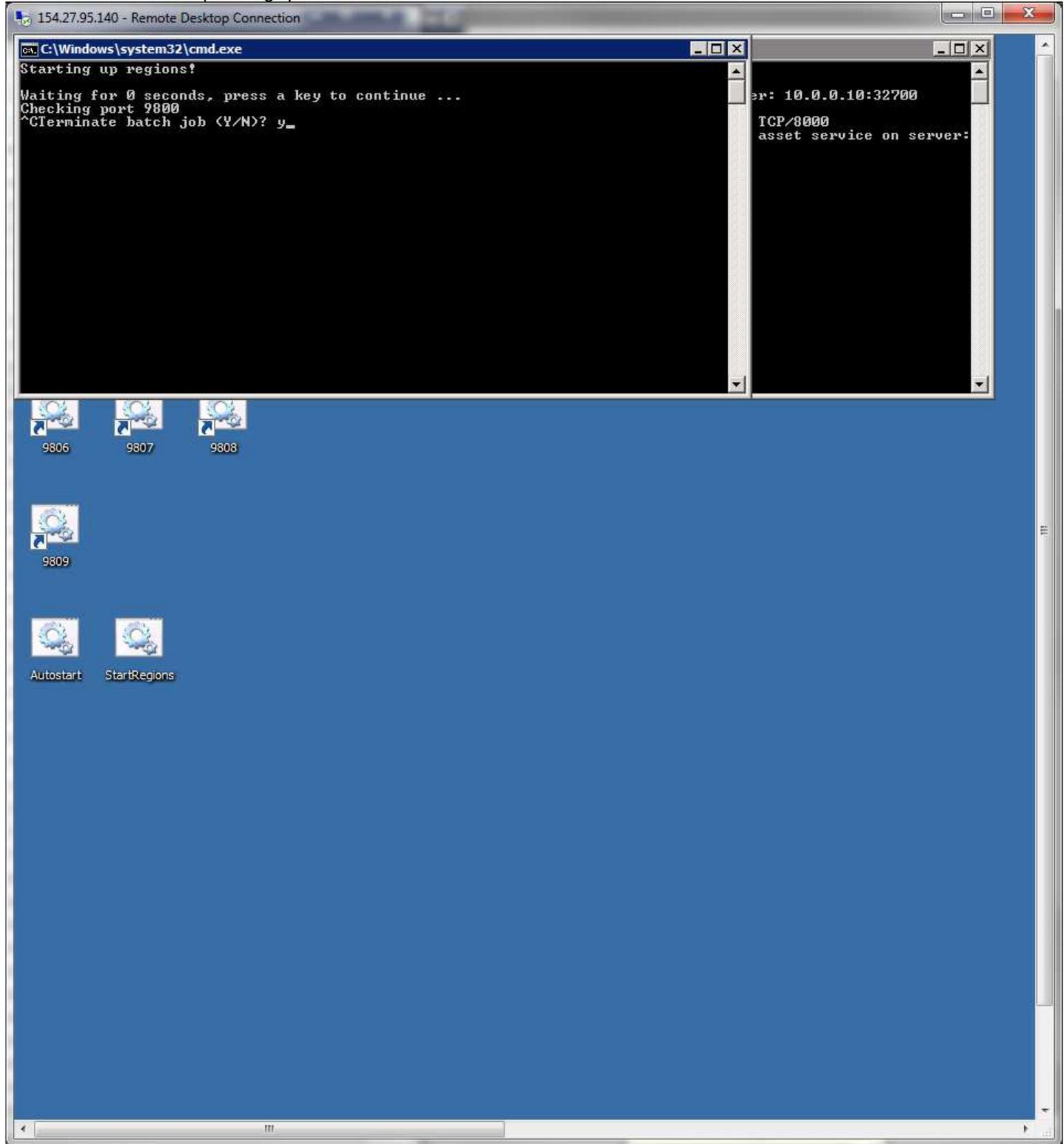
Paste the Autostart.bat into the folder.



This next task is a bit more tricky to accomplish. This is to set the startup console window to the correct position settings. Double click on StartRegions. When its window opens type ctrl C. You may need to do it twice if the Aperture window opens first. While its on the question to Terminate the batch job, right click on the window's top bar and select Properties. Change the Layout Window Position options to be: uncheck the let system position window checkbox, set Left=0, Top=0. click OK to save.



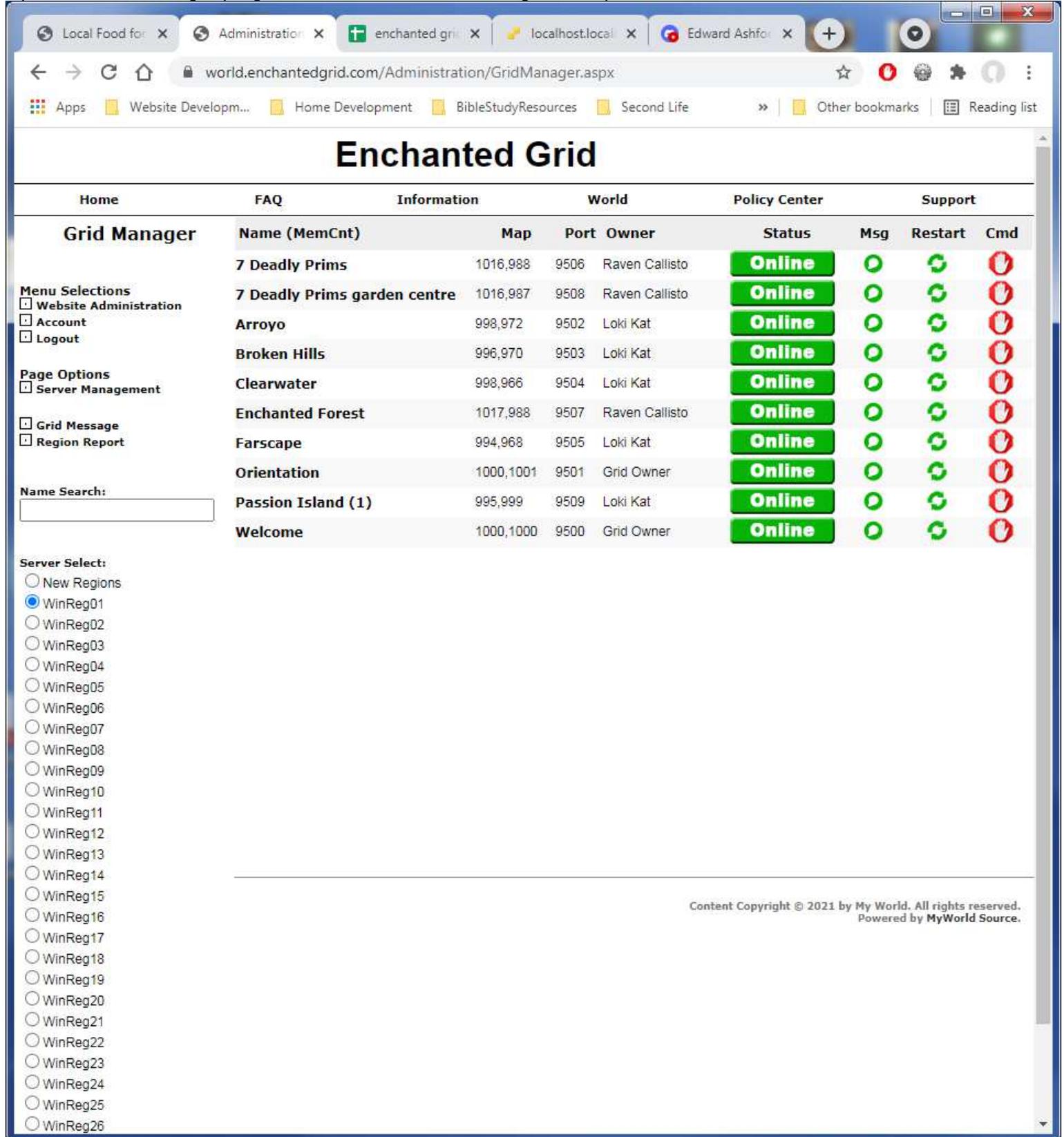
Then answer Y to the pending question to close it.



Close the Aperture window if it is still open.

Close the Remote Desktop window - DO NOT log out of the GridManager account. It stays active all of the time from here on out unless the grid is being serviced and it must have all regions closed and logged out for a server restart.

The last step is putting the server into the website Administrator logon for the Grid Manager Servers list. This action requires the Grid Owner account logon to the website or allowed Administrator access on your own logon. Open the Grid Manager program. Select the Server Management option in the left side menu.



**Enchanted Grid**

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**Grid Manager**

Name (MemCnt)	Map	Port	Owner	Status	Msg	Restart	Cmd
7 Deadly Prims	1016,988	9506	Raven Callisto	Online			
7 Deadly Prims garden centre	1016,987	9508	Raven Callisto	Online			
Arroyo	998,972	9502	Loki Kat	Online			
Broken Hills	996,970	9503	Loki Kat	Online			
Clearwater	998,966	9504	Loki Kat	Online			
Enchanted Forest	1017,988	9507	Raven Callisto	Online			
Farscape	994,968	9505	Loki Kat	Online			
Orientation	1000,1001	9501	Grid Owner	Online			
Passion Island (1)	995,999	9509	Loki Kat	Online			
Welcome	1000,1000	9500	Grid Owner	Online			

**Menu Selections**

- Website Administration
- Account
- Logout

**Page Options**

- Server Management
- Grid Message
- Region Report

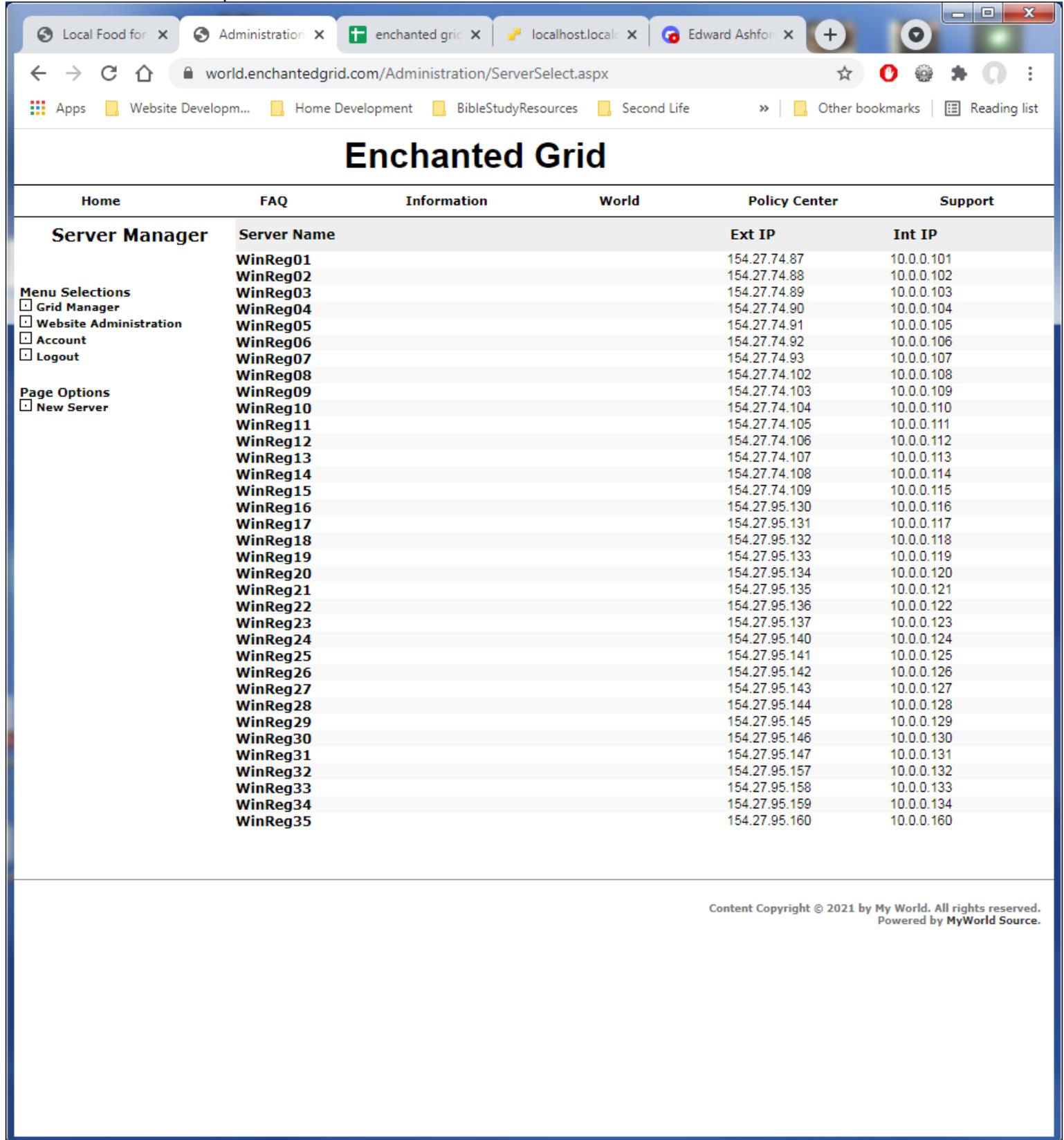
Name Search:

**Server Select:**

- New Regions
- WinReg01
- WinReg02
- WinReg03
- WinReg04
- WinReg05
- WinReg06
- WinReg07
- WinReg08
- WinReg09
- WinReg10
- WinReg11
- WinReg12
- WinReg13
- WinReg14
- WinReg15
- WinReg16
- WinReg17
- WinReg18
- WinReg19
- WinReg20
- WinReg21
- WinReg22
- WinReg23
- WinReg24
- WinReg25
- WinReg26

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Select the New Server option:



Local Food for x Administration x enchanted grid x localhost.local x Edward Ashfor x

world.enchantedgrid.com/Administration/ServerSelect.aspx

Apps Website Developm... Home Development BibleStudyResources Second Life Other bookmarks Reading list

# Enchanted Grid

Home FAQ Information World Policy Center Support

## Server Manager

Server Name	Ext IP	Int IP
WinReg01	154.27.74.87	10.0.0.101
WinReg02	154.27.74.88	10.0.0.102
WinReg03	154.27.74.89	10.0.0.103
WinReg04	154.27.74.90	10.0.0.104
WinReg05	154.27.74.91	10.0.0.105
WinReg06	154.27.74.92	10.0.0.106
WinReg07	154.27.74.93	10.0.0.107
WinReg08	154.27.74.102	10.0.0.108
WinReg09	154.27.74.103	10.0.0.109
WinReg10	154.27.74.104	10.0.0.110
WinReg11	154.27.74.105	10.0.0.111
WinReg12	154.27.74.106	10.0.0.112
WinReg13	154.27.74.107	10.0.0.113
WinReg14	154.27.74.108	10.0.0.114
WinReg15	154.27.74.109	10.0.0.115
WinReg16	154.27.95.130	10.0.0.116
WinReg17	154.27.95.131	10.0.0.117
WinReg18	154.27.95.132	10.0.0.118
WinReg19	154.27.95.133	10.0.0.119
WinReg20	154.27.95.134	10.0.0.120
WinReg21	154.27.95.135	10.0.0.121
WinReg22	154.27.95.136	10.0.0.122
WinReg23	154.27.95.137	10.0.0.123
WinReg24	154.27.95.140	10.0.0.124
WinReg25	154.27.95.141	10.0.0.125
WinReg26	154.27.95.142	10.0.0.126
WinReg27	154.27.95.143	10.0.0.127
WinReg28	154.27.95.144	10.0.0.128
WinReg29	154.27.95.145	10.0.0.129
WinReg30	154.27.95.146	10.0.0.130
WinReg31	154.27.95.147	10.0.0.131
WinReg32	154.27.95.157	10.0.0.132
WinReg33	154.27.95.158	10.0.0.133
WinReg34	154.27.95.159	10.0.0.134
WinReg35	154.27.95.160	10.0.0.160

Menu Selections

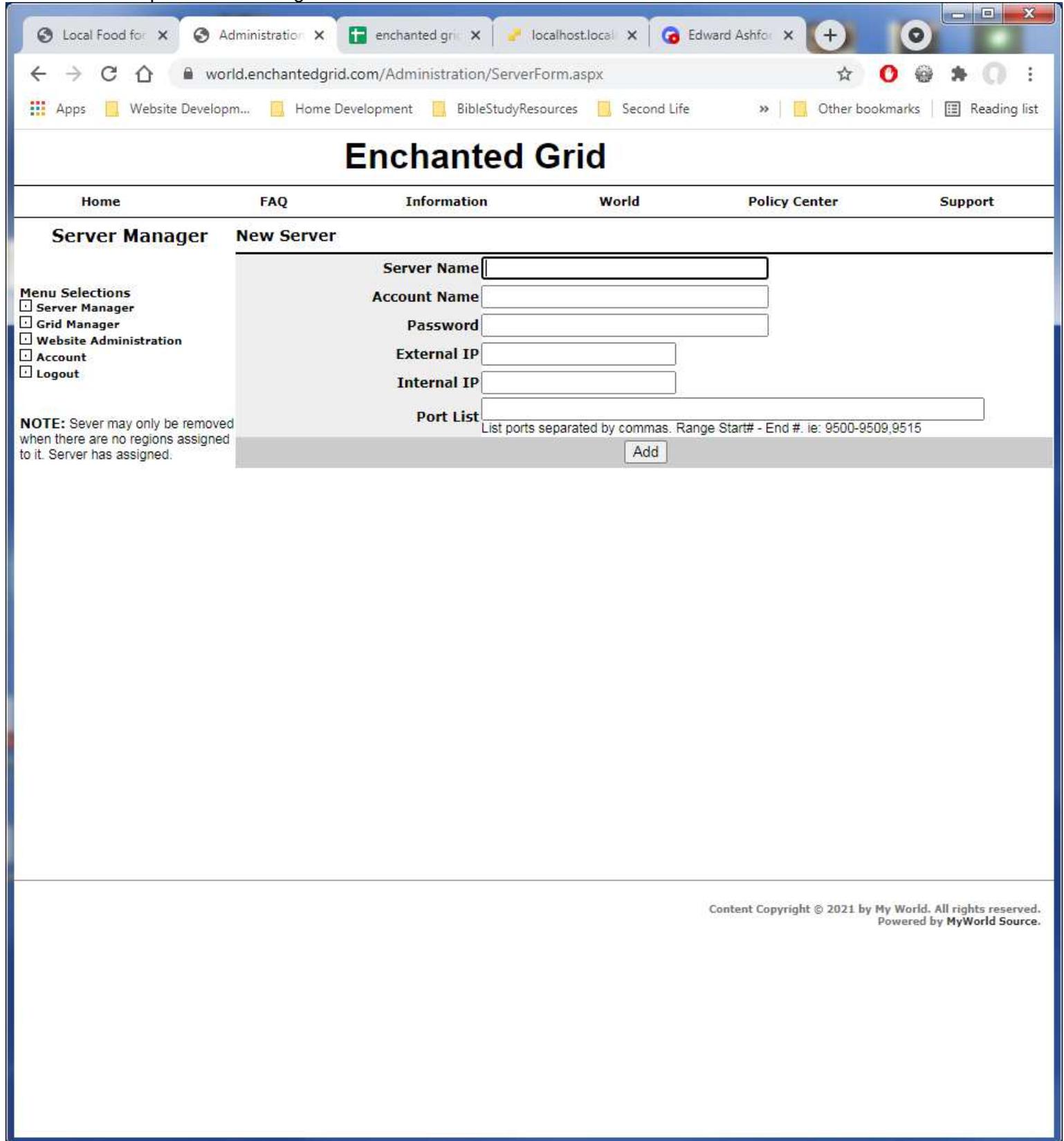
- Grid Manager
- Website Administration
- Account
- Logout

Page Options

- New Server

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Fill in the information for the server. The Account Name is GridManger and its password. Put in the rest of the server information and port number range. Add when its done.



Local Food for x Administration x enchanted grid x localhost.local x Edward Ashfor x

world.enchantedgrid.com/Administration/ServerForm.aspx

# Enchanted Grid

Home FAQ Information World Policy Center Support

## Server Manager New Server

Menu Selections

- Server Manager
- Grid Manager
- Website Administration
- Account
- Logout

NOTE: Sever may only be removed when there are no regions assigned to it. Server has assigned.

Server Name

Account Name

Password

External IP

Internal IP

Port List

List ports separated by commas. Range Start# - End #: ie: 9500-9509,9515

Add

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Server is now operational to have regions assigned to its port number list.

Repeat process for each VM server you have set up.

## Sea Region Host Setup:

This variant is done to allow more than 10 regions to be put into one host which are limited ocean/straits type. These limited regions take less system resources so may allow more of them to be run in one VM. As long as these regions do not contain any content in them, there may be up to 30 put in one VM host server. If they will have some content put in, they will consume more memory and that becomes the limiting factor which may reduce the number to 20 that may be hosted.

On Page 20 the MakeGrid.bat is described how to use it to create the port number named folders. This is to be repeated for the assigned port numbers in 10 entry increments. The MakeGrid batch program will create 10 folders at a time 0-9 so each port number prefix used must be the next block of 10 you want to create. So the example is to set up ports 10400-10429 is a 30 port range. It requires running MakeGrid 3 times using:

```
MakeGrid 1040 9
MakeGrid 1041 9
MakeGrid 1042 9
```

The MakeGrid parms are:

Port number prefix - means the numbers from the 10's column and up from there.

How many iterations to process from 0 to 9 where 0 will make one folder and 9 is the last one, to make all 10.

Edit the Update.bat file in Programmer's Notepad as instructed in the next step on page 22. Then copy the line 5 two more times below it like this:

```
@for /L %%i in (0,1,9) Do call :Update %1 1040%%i
@for /L %%i in (0,1,9) Do call :Update %1 1041%%i
@for /L %%i in (0,1,9) Do call :Update %1 1042%%i
```

Changing the port prefix numbers on each line to match the ones used in the MakeGrid commands. Now the Update process will update all 30 of the simulator folders created. Save and close Update.

Proceed with the remaining instructions for server setup until you get to the step for the desktop icons on page 43. After pasting the files in the folder, Create a folder named RegionIcons.

Copy the 10 numbered files to the folder. Continue with the rename and properties updates for all 10 of them.

Repeat the copy of the 10 numbered files one more time and continue with the rename and properties update.

Move the 10 numbered files to the RegionIcons folder as this will be the last set of them. Continue with the rename and properties update.

Return to the parent folder. You may change the RegionIcons folder icon image at this point using its Properties if you wish.

Edit the AutoStart and StartRegions batch files in Programmer's Notepad.

Update the line

```
@for /L %%i in (0,1,9) Do call :Process 950%%i
with the port number prefix          ^^^
```

Copy the line two more times under it and update their portnumber prefix for each block of 10 to be processed. Save and close each file after making the changes.

Continue with the remaining instructions on page 44.

End of Server Setup documentation.