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First of all, you need to make sure that the time zone is configured correctly on all computers in the domain and understand the way Group Policy Management works. The first section of this manual will help you in this.

The second section of this manual will help you to restrict the permissions for changing the time zone. You can jump right to the second section of the manual from the Table of contents above or via <u>this link</u>.

Configuring the time zone using tzutil

Open the Command Prompt (<u>how to open the Command Prompt</u>) and type the following command:

After executing it you will have the following list:

C:\WINDOWS\system32>tzutil /l (UTC-12:00) Линия перемены дат Dateline Standard Time
(UTC-11:00) Время в формате UTC -11 UTC-11
(UTC-10:00) Алеутские острова Aleutian Standard Time
(UTC-10:00) Гавайи Hawaiian Standard Time
(UTC-09:30) Маркизские острова Marquesas Standard Time
(UTC-09:00) Аляска Alaskan Standard Time
(UTC-09:00) Время в формате UTC -09 UTC-09
(UTC-08:00) Время в формате UTC -08 UTC-08
(UTC-08:00) Нижняя Калифорния Pacific Standard Time (Mexico)

You will need to copy the name of your desired time zone from the second line to later insert it in the Command Prompt.

The first line can be different depending on system language that's why you need to copy only the second line and insert it in the command:

For example if your desired time zone is: (UTC-10:00) Алеутские острова Aleutian Standard Time

Your command will look like:

This way you can change the time zone on each individual machine. But you can also adjust Group Policy to run this command upon computer startup.

Managing Group Policies

You will need to create a startup script. Startup scripts run before the boot process gets to the logon screen. Startup scripts can be stored as Group Policy Objects (GPO) thus removing the need to configure a network share. The advantage of using this type of script is that it is executed with the Administrators rights, which makes it possible to adjust the time zone on the workstation without any elevation of rights. Your script is the command for the Command Prompt from the previous step i.e.

First, prepare the script to set up and copy it to the domain controller. You can either copy and later paste it or keep it as a separate file.

To keep it as a separate file you can create a new text document using notepad, paste your command () in this text document and save it as .bat file.

In order to create a GPO you will need to access the Group Policy Management Console (GPMC). It is a built-in Windows administration tool that enables administrators to manage Group Policy in an Active Directory forest and obtain data for troubleshooting Group Policy. You can find the Group Policy Management Console in the Tools menu of Microsoft Windows Server Manager. It is not the best idea to use domain controllers for everyday management tasks, this is why you're better to install the Remote Server Administration Tools (RSAT) for your version of Windows.

Installing the Group Policy Management Console

If you are using Windows 10 version 1809 or later, you can install GPMC using the Settings app:

- 1. Open the Settings app by pressing **WIN+I**.
- 2. Click "Apps" under Windows Settings.

- 3. Click "Manage optional features".
- 4. Click "+ Add a feature".
- 5. Click "RSAT: Group Policy Management Tools" and then click "Install".

\leftarrow	Settings		_	×
命	Add a feature			
¢	RSAT: DNS Server Tools	1.29 MB		
¢	RSAT: Failover Clustering Tools	9.39 MB		
¢	RSAT: File Services Tools	5.10 MB		
<₿	RSAT: Group Policy Management Tools	4.08 MB		
	Group Policy Management Tools include Group Management Console, Group Policy Managem and Group Policy Starter GPO Editor.			
		Install		
¢	RSAT: IP Address Management (IPAM) Client	241 KB		
¢	RSAT: Network Controller Management Tools	172 KB		1
¢	RSAT: Network Load Balancing Tools	273 KB		
¢	RSAT: Remote Access Management Tools	6.72 MB		

If you are using an older version of Windows, you'll need to download the right version of RSAT from Microsoft's website.

Using the Group Policy Management Console

Every AD domain has two default GPOs:

- **Default Domain Policy**, that is linked to the domain
- Default Domain Controllers Policy, that is linked to the domain controller's OU

You can see all the GPOs in a domain by clicking the Group Policy Objects container in the left pane of GPMC.

oup Policy Management	ad co	ntoso.com							
Forest: ad.contoso.com			icy Objects Group Policy Inhe	ritance Del	enation				
Domains	Gluida								-
✓ jia ad.contoso.com		Link Order	GPO	Enforced	Link Enabled	GPO Status	WMI Filter	Modified	1
 Default Domain Policy Accounts 	金	1	🗊 Default Domain Policy	No	Yes	Enabled	None	7/26/201	. 7
Accounts Clients									
> Departments									
 Departments Domain Controllers 									
Default Domain Controllers Polic	, ₹								
> 📑 Group Policy Objects									
> 🚔 WMI Filters									
> 🛅 Starter GPOs									
🙀 Sites									
💱 Group Policy Modeling									
📸 Group Policy Results									

Creating a New Group Policy Object

Don't change the Default Domain Controllers Policy or the Default Domain Policy. The best way to add your own settings is to create a new GPO. There are two ways to execute that:

- Right-click the domain, site or OU to which you want to link the new GPO and select (right click) "Create a GPO in this domain", and "Link it here..." When you save the new GPO, it will be linked and enabled immediately.
- Right-click the Group Policy Objects container and select "**New**" from the menu. You will need to manually link the new GPO by right-click a domain, site or OU and selecting "**Link an Existing GPO**". You can do this at any time.

In the New GPO dialog you must name your GPO.

Editing a Group Policy Object

Editing a Group Policy Object - Adding the script - Option 1

To edit a GPO, right click it in GPMC and select "**Edit**" from the menu. The Active Directory Group Policy Management Editor will open in a separate window.

Group Policy Management Editor

File Action View Help

Computer Configuration	Policy	Policy Setting	
Policies	Access Credential Manager as a trusted caller	Not Defined	
> 🦳 Software Settings	Access this computer from the network	Not Defined	
✓ [™] Windows Settings	Act as part of the operating system	Not Defined	
> C Name Resolution Policy	Add workstations to domain	Not Defined	
Scripts (Startup/Shutdown)	Adjust memory quotas for a process	Not Defined	
> 🖶 Deployed Printers	allow log on locally	Not Defined	
Security Settings	Allow log on through Remote Desktop Services	Not Defined	
> 🛗 Account Policies	Back up files and directories	Not Defined	
V 📓 Local Policies	Bypass traverse checking	Not Defined	
> 📓 Audit Policy	Change the system time	Not Defined	
> 🗃 User Rights Assignment	Change the system time	Not Defined	
> 🗿 Security Options > 🗿 Event Log	Change the time zone	Not Defined	
> A Restricted Groups	Create a pagenie	Not Defined	
> System Services		Not Defined	
> 🔒 System Services	Create global objects		
> 🔁 File System	Create permanent shared objects	Not Defined	
The System Sy	🔯 Create symbolic links	Not Defined	
> Windows Firewall with Advanced Security	📖 Debug programs	Not Defined	
Network List Manager Policies	Deny access to this computer from the network	Not Defined	
Wireless Network (IEEE 802.11) Policies	📓 Deny log on as a batch job	Not Defined	
> Public Key Policies	Deny log on as a service	Not Defined	
Software Restriction Policies	📓 Deny log on locally	Not Defined	
> Application Control Policies	📓 Deny log on through Remote Desktop Services	Not Defined	
R IP Security Policies on Active Directory (AD.CONTOSO.COM)	📓 Enable computer and user accounts to be trusted for delega	Not Defined	
> 📋 Advanced Audit Policy Configuration	📓 Force shutdown from a remote system	Not Defined	
> In Policy-based QoS	Generate security audits	Not Defined	
Administrative Templates: Policy definitions (ADMX files) retrieved from 1	impersonate a client after authentication	Not Defined	
Preferences	📖 Increase a process working set	Not Defined	
User Configuration	📓 Increase scheduling priority	Not Defined	
Policies	🔯 Load and unload device drivers	Not Defined	
Preferences	Lock pages in memory	Not Defined	
¥	Log on as a batch job	Not Defined	

Under user configuration open "**Policies**" then expand "**Windows Settings**", click "**Scripts**", click twice on "**Logon**" and select "**Add**". Then add your script:

Editing a Group Policy Object - Adding the script - Option 2

Alternatively, you can create a shared folder on server storage and put the script in it. To do this, access your server management tool and use it to create a shared folder that will be accessible by all computers in the domain.

You can manage folder access rights by right clicking the folder, going to "**Properties**", then "**Access**".

Then open the text files editor of your choice, Notepad for example. Create a new text document.

Copy and paste your script () in the document you've created.

Click "File", "Save As", under "File type" select "All files" and save the text document with your script to the shared folder you have created in the previous step. Give it a name and extension .bat. You will need to write it in the "File name". Similar to the screenshot below.

– 0 ×

← → • ↑ 🗖	> This PC > Desktop	ٽ ~	Search Desktop		۶
Organize 👻 New	v folder				(
🖈 Quick access	Name	^	Date modified	Туре	
Desktop	A	No items match ye	our search.		
Downloads	*				
Documents	*				
Pictures	*				
This PC					
💣 Network					
	<				
					-
File name:	map.bat T				

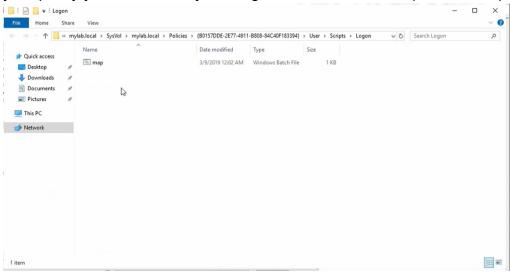
Save the **.bat** file to your shared folder.

Then get back to Group Policy Management, find your GPO, and edit it.

🕌 WS2K19 (FRESH-AD) [Running] - Oracle VM Virtua	IBox	and the second second
File Machine View Input Devices Help		
📓 Group Policy Management		
File Action View Window Help		
🗢 🔿 📶 🗳 🖬 😽 🥵		
Group Polic() Group Policy Management Edite A Forest: n ✓	or	- 0
	Logon Properties	? ×
 Map Network Drive Logon Scrip Map Network Drive Logon Scrip Map Network Drive Logon Scrip Policies Preferences 	Scripts PowerShell Scripts Logon Scripts for Map Network Drive Logon S	Script GPO
 Software Settings Software Settings Software Settings Software Settings Soripts (Logon/Ltc Socurity Settings Folder Redirectio Sites Sites Grou 	Name Parameters	Up Down Add Edit Remove
< >>	To view the script files stored in this Group Policy Object, p the button below. Show Nes OK Cancel Extended / Standard /	Apply
	Extended Standard	

Select "Show Files", it will take you to the location of your created policy.

Next, you need to find the **.bat** file you have created, copy it and paste to the folder of your policy you accessed by clicking **"Show Files"** in the previous step.



Find the **.bat** file from the file explorer, move it to the policy folder.

Updating Group Policies

Group policies of the computer and the user are updated by default every 90 minutes in the background (perhaps a random offset from 0 to 30 minutes). They are also updated every time the system starts. If you change group policies and want to apply the changes right away, not waiting for 90 minutes and not restarting the computer, update them manually using the commands described below.

PSEXEC

The command line from Windows SysInternals, PSExec. If you have experience of using SysInternals, you might already have it in your toolbox. To start, simply run the following command in a Command Prompt window:

Using PowerShell

Using PowerShell - Option 1

You can use PowerShell If your network has WinRM already configured in place and enter command:

This method works well. The only problem that can be encountered is when the GPUpdate session needs a "Yes" for restart. It occurs rarely, but can cause some trouble. If encountered, use a different method.

Using PowerShell - Option 2

Alternative command for PowerShell exists that uses built-in PowerShell tool, Invoke Update.

Using GPMC or RSAT

As an alternative to the command-line tools, you can force a Group Policy update using the Group Policy Management Console or Remote Server Administration Tools.

To force a GPO to be applied, take these simple steps:

- 1. Open the GPMC
- 2. Link the GPO to an OU.
- 3. Right-click the OU and choose the "Group Policy Update" option.
- 4. Confirm the action in the Force Group Policy Update dialog by clicking "Yes".

Configuring the time zone using registry and Group Policy

If you feel like you're not experienced in Group Policies and Group Policy management Console, you might want to consult **Installing the Group Policy Management Console** section of this manual.

The time zone configuration is stored in the Windows registry in the **HKEY_LOCAL_MACHINE** hive. You can access the registry by pressing **Windows+R** and typing **"regedit"**. Click **"Yes"** if you see User Account Control dialogue.

The exact registry key is:

StSec	∧ Name		The state of the s
	^ Name	Туре	Data
SystemInformation	(Default)	REG_SZ	(value not set)
SystemResources	3 ActiveTimeBias	REG_DWORD	0xfffff88 (4294967176)
TabletPC	Bias	REG_DWORD	0xffffffc4 (4294967236)
> Terminal Server	🕮 DaylightBias	REG_DWORD	0xffffffc4 (4294967236)
Ubpm	ab DaylightName	REG_SZ	@tzres.dll,-321
s - usb	🕮 DaylightStart	REG_BINARY	00 00 03 00 05 00 02 00 00 00 00 00 00 00 00 00 00
usbflags	B DynamicDaylightTimeDisabled	REG_DWORD	0x00000000 (0)
> usbstor	🕮 StandardBias	REG_DWORD	0x00000000 (0)
> VAN	ab StandardName	REG_SZ	@tzres.dll,-322
> Video	🕫 StandardStart	REG_BINARY	00 00 0a 00 05 00 03 00 00 00 00 00 00 00 00 00 00
WalletService	ab TimeZoneKeyName	REG SZ	W. Europe Standard Time

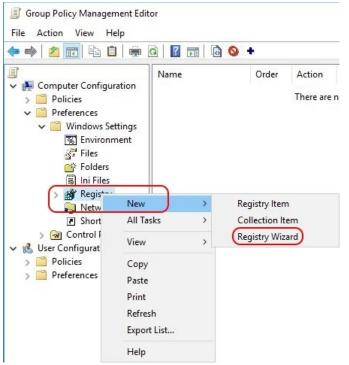
The time zone settings consist of multiple values (see below).

To find out the exact value for each registry entry, first set the time zone manually on your machine in the local Date and Time configuration. Then, you're just left to check the registry values mentioned above.

All available time zones are also listed in the registry key:

Open your Group Policy Management Console (GPMC.msc) and go to:

Since multiple values need to be imported, it's easier to use the registry wizard. Right click "**Registry**" select "**New**, **Registry Wizard**". Now that you have all the necessary information, you can set the correct time zone for the local machine. Use Group Policy Preference registry item because it is the easiest way.



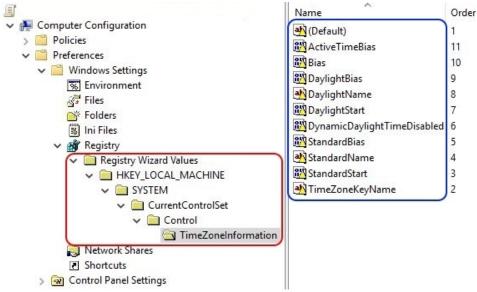
When you see the registry wizard window, select "**Local Computer**", and click "**Next**". Then, on the Registry Browser, navigate to the registry key:

Check the box of each registry value (see the image below). Scroll down through the list.

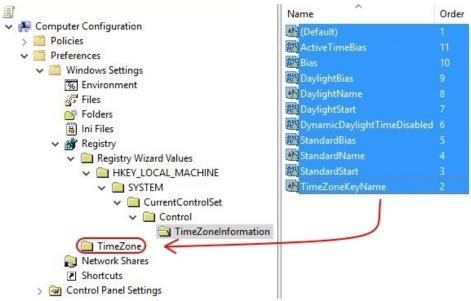
Select any registry ite	em by checking its	check box to the left	Š
	TabletPC Terminal Server TimeZoneInforma Ubpm usb usb usbflags usbstor	tion	~
Name	Туре	Data	^
Default)	REG_SZ REG_DWORD	0xffffff88 (4294967176)	
✓ ﷺ ActiveTimeBias ✓ ﷺ Bias	REG_DWORD	0xffffffc4 (4294967236)	~

Click "Finish". This will import the registry values.

If you want the registry items to look more tidy, you can move the individual settings (in the blue box) to a new collection item.



First, you will need to create a new collection item (a folder). Right click on "**Registry**", select "**New**", "**Collection Item**". Name the collection item, for example TimeZone. Now you can move all individual registry items to this new collection item, just drag-and-drop them.



When all the items are moved, you can delete the "Registry Wizard Values" folder with all underlying folders.

The registry item is now created and will be deployed to all machines to which the particular Group Policy applies.

After making any changes to group policies, <u>force gpupdate</u> for the changes to take effect.

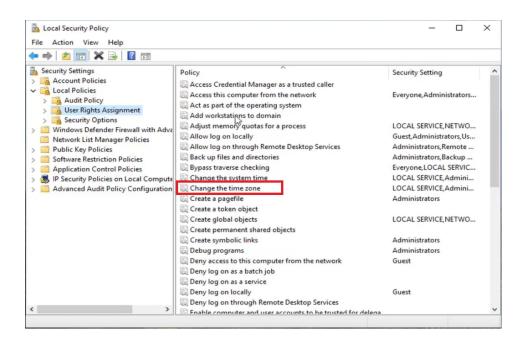
Restricting users in the domain from configuring time zone settings

Restricting users in the domain from configuring time zone settings - Option 1

Now that you're experienced in changing time zone settings you can prevent users in your domain from changing time zones themselves and keep this setting only to system administrators.

Access GPMC for your domain. Go to policy.

and find "Change the time zone"



Double click on the policy, a new window will appear.

	Local Security Setting Explain	
Security Settings Account Policies Cal Policies Audit Policy Security Options	Change the system time	Security Setting Everyone, Administrators.
Windows Defender Firewal Wetwork List Manager Poli Public Key Policies Software Restriction Policie Application Control Policie Application Control Policie Advanced Audit Policy Co	LOCAL SERVICE	LOCAL SERVICE, NETWO. Guest, Administrators, Us. Administrators, Remote. Administrators, Backup Everyone, LOCAL SERVIC. LOCAL SERVICE, Admini LOCAL SERVICE, Admini Administrators
	Add User or Group Remove	LOCAL SERVICE,NETWO. Administrators Administrators Guest
<	OK Cancel Apply	Guest

Select the users you <u>don't want</u> to have access to changing time zone from the list and click "**Remove**", and press OK.

If you want some other group to *have* access, follow the steps below:

Choose "Add User or Group".

In a new window click "Object Types".

	Select Users or Groups	×
Security Settings	Select this object type:	
V 🙀 Local Policies	Users or Built-in security principals	Object Types
> 📴 Audit Policy	From this location:	
 User Rights Assignmen Security Options 	DESKTOP-A2MTP70	Locations
> 🧾 Windows Defender Firewal	Enter the object names to select (examples):	
Network List Manager Poli		Check Names
> 🦳 Public Key Policies		Conservation -
> 🦳 Software Restriction Policie		
> 🦳 Application Control Policie		
> 🛃 IP Security Policies on Loca	Advanced OK	Cancel
Advanced Audit Policy Cou		11

Check all the boxes in the appeared window and click **OK**.

	animation of a second	
Security Settings Account Policies	Object Types	×
Local Policies Audit Policy User Rights Assignmen Security Options	Select the types of objects you want to find. Object types:	
 Windows Defender Firewal Network List Manager Poli Public Key Policies Software Restriction Policie Application Control Policie 	Chher objects Cher	
 IP Security Policies on Loca Advanced Audit Policy Col 		
		OK Cancel

You will be returned to the previous window. There you will need to click on **"Advanced"**.

♦ ♦ 2	Select Users or Groups	×
h Security Settings		
> Account Policies	Select this object type:	
V 🙀 Local Policies	Users, Groups, or Built-in security principals	Object Types
> 📑 Audit Policy	From this location:	
> 🔀 User Rights Assignmen	DESKTOP-A2MTP70	
> 🔀 Security Options	DESKTOP-AZMTP70	Locations
> 🧾 Windows Defender Firewal	Enter the object names to select (examples):	
Network List Manager Poli		Check Names
> 📔 Public Key Policies		Check Names
> 📋 Software Restriction Policie		
> Application Control Policie		
> 🔍 IP Security Policies on Loca	Advanced OK	Cancel
Advanced Audit Policy Cou		it.

Click on "**Find Now**", select the name of the <u>user or group</u> (for example "Everyone") you want to add, and click on **OK**.

♦ ♦ 2 m × 0 €	Select Users or Groups		×
Security Settings	Select Users or Groups ×		
Local Policies Audit Policy	Select this object type:		
> 🔀 User Rights Assignmen	Users, Groups, or Built-in security principa	als	Object Types
> 🛃 Security Options	From this location:		
> 🔛 Windows Defender Firewal	DESKTOP-A2MTP70		Locations
📋 Network List Manager Poli			
> 🧮 Public Key Policies	Common Queries		
> Software Restriction Policie	Name: Starts with ~		Columns
> Application Control Policie	Starts with		
> IP Security Policies on Loca Advanced Audit Policy Col	Description: Starts with \vee		Find Now
> Advanced Audit Policy Col -	Disabled accounts		Stop
	Non expiring password		
	Days since last logon: 🛛 🗸 🗸		P
	Search results:		OK Cancel
	Name	In Folder	^
	+	DESKTOP-A2M	
	Access Control Assistance Operators	DESKTOP-A2M	
<	Administrators	DESKTOP-A2M	
	ALL APPLICATION PACKAGES		

Click "**OK**" to add the selected items to the policy list.

Restricting users in the domain from configuring time zone settings - Option 2

You can also restrict time zone settings in a different way.

- 1. Access GPMC for your domain
- 2. Next, access
- 3. Find and double click policy "Prohibit access to Control Panel and PC settings"
- 4. Enable this policy on users in OU or default domain controller according to the instruction in <u>Option 1</u>.

After making any changes to group policies you will need to update the group policies by forcing **gpupdate** according to the instructions <u>given above</u>.

Restricting users in the domain from configuring time zone settings - Option 3

For this option you will need to download and setup the **ntrights.exe** from <u>Windows</u> 2003 Resource Kit.

Download and move the **ntrights.exe** file into your **C:\Windows\System32** folder, and click on **"Continue"** to approve.

Open Command Prompt with administrator privileges.

The ntrights tool allows you to grant or revoke user or user group privileges from the command prompt.

Privileges are *case sensitive*. To learn more about the supported privileges, type .

Using the commands given below you can:

Grant time zone changing privileges

OR

Revoke time zone changing privileges

Accessing Command Prompt with administrator privileges

Several times in the instruction it is required to access the Command Prompt. For information purposes Below is a quick guide on how to open the command prompt as administrator.

*Note: All commands that can be used in Command Prompt can be used in PowerShell as well.

Windows 8 and 10 - Accessing Command Prompt - Option one

You can use the Power Users menu.

In Windows 10 and 8 you can access the power users menu by pressing **Windows+X** or just right-clicking the **Start** button. On the Power Users menu, choose "**Command Prompt (Admin)**".

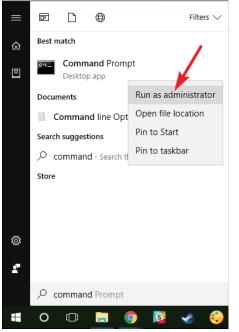
Dis <u>k</u> Management	
Computer Management	
<u>C</u> ommand Prompt	
Command Prompt (<u>A</u> dmin)	
<u>T</u> ask Manager	
Setti <u>ng</u> s	
File <u>E</u> xplorer	
<u>S</u> earch	
<u>R</u> un	
Sh <u>u</u> t down or sign out	
<u>D</u> esktop	

**Note: After Creators Update for Windows 10 you can see Windows PowerShell instead of Command Prompt there. PowerShell allows users to do all the commands

that Command Prompt does, and more. You can give PowerShell a try or use one of the other methods to access the Command prompt.

Windows 8 and 10 - Accessing Command Prompt - Option two.

In Windows 10 and you can type "**cmd**" or "**command**" in search and you'll see "**Command Prompt**" listed as the main result.



Right-click that result and choose "Run as administrator".

Any Windows version - Accessing Command Prompt - Option three

Another way to open Command Prompt is to use the Run box.

Press **Windows+R** to open the **"Run"** box. Type **"cmd"** into the box and then press **Ctrl+Shift+Enter** to run the command as an administrator.

/ Run	×		
	Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.		
<u>O</u> pen:	(cmd)		
	OK Cancel Browse		
	earch Windows	• • = =	9

Not all versions of windows support **Ctrl+Shift+Enter** in Run box. So you may need to type

to open Command Prompt as administrator.

You may need to type this command in the Run box for Windows 7 as well.



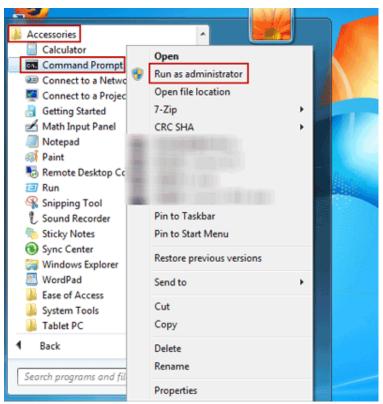
***Note:

When you launch the Command Prompt with administrator privileges, you'll likely see a "User Account Control" window asking for permission to continue. Go ahead and click **"Yes"**.

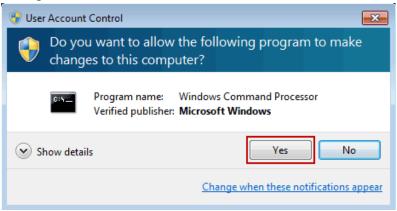
You'll also be asked to type in your administrator password to continue. Type it in and click **Enter**.

Windows 7 - Accessing Command Prompt - Option one

You can find Command Prompt in the Start menu. Go to **Start**, click "**All Programs**", unfold "**Accessories**", right-click "**Command Prompt**".



Select "**Run as administrator**" and click "**Yes**" on pop-up User Account Control dialog:



Windows 7 - Accessing Command Prompt - Option two

Click **Start** and enter "cmd" or "command" in the search box.

Press **Ctrl + Shift + Enter**, and if User Account Control dialog appears, click **"Yes"** button to run Command Prompt with administrative permissions.