

RBackup – Exchange Server 2010 Mailbox-Level Backup/Restore Agent

Applies to Rbackup V. 11.3.x and above

Beta Release 1 (Date: 11/07/2011)

UNEDITED BETA DOCUMENTATION

Public Beta (Date: 12/06/2011)

Introduction:

Rbackup client install includes a built-in agent to Backup/Restore Exchange Server 2010 at the mailbox-level. Users can select individual mailbox for backup and have capabilities to only select certain folders (like Inbox, Contacts, Calendar, etc) inside a mailbox as well. The agent uses 'Exchange 2010 Cmdlets' to export (backup) and import (restore) mailboxes from Exchange Server. The first time backup of an Exchange Item (Item here can be an entire Mailbox or individual folder inside a Mailbox, based on user selection) is a full backup, and then does Incremental backups based on the last backup timestamp of the Exchange Item. Point in time restores or complete restore of Mailbox/Folder item can be done using the Restore Interface. During Restore of Exchange 2010 Mailbox/Item, option to redirect/export the data to PST file format, instead of restoring the data to Exchange Server is available.

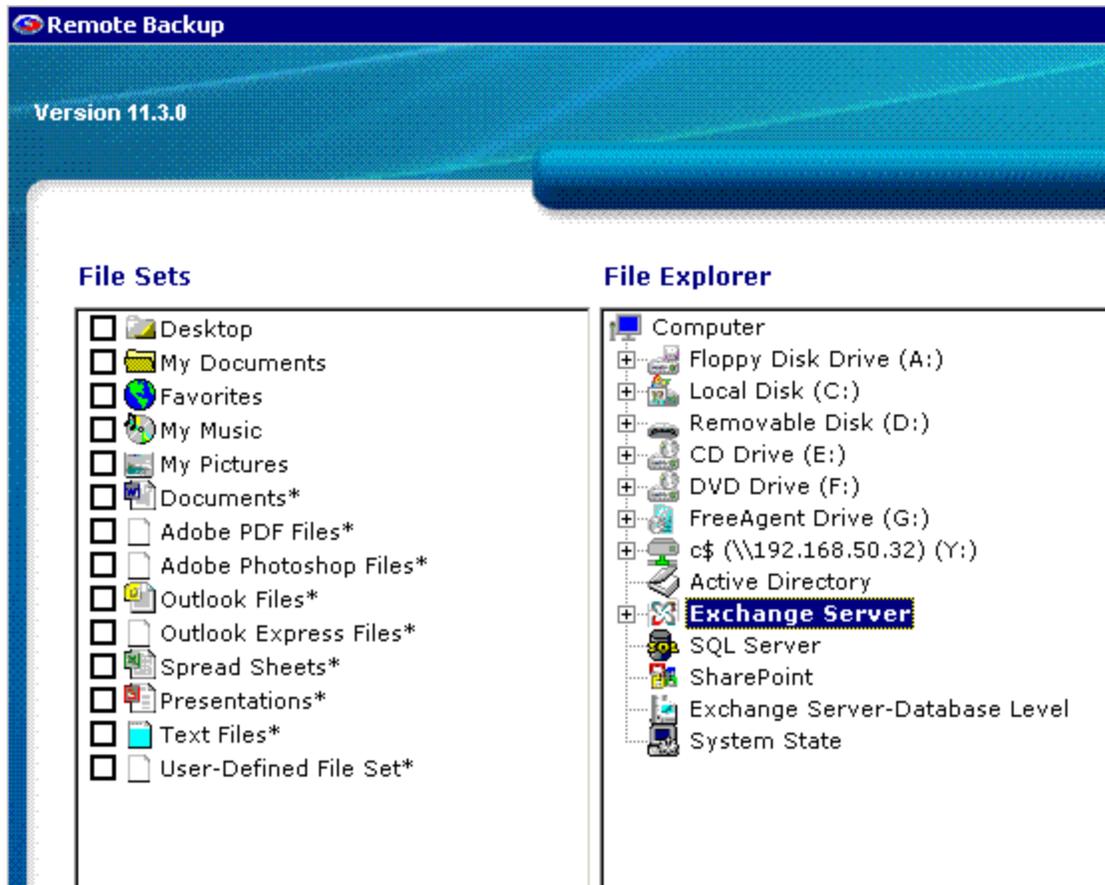
Notes about Release 1:

- Support for backup/restore of Address Lists and Public Folders not available with this release. This will part of a future release.
- Selection of individual folders (i.e. Inbox, Contacts, etc) Vs entire Mailbox increases processing time, though the size of the backup will be smaller.
- Folder Items (like Junk E-Mail, Deleted Items, etc) can be excluded globally across all mailboxes.
- Registry key override is available to force a Full backup, if needed.
- Requires 'local' temp space for temporarily copy of Exchange Data during backup and restores.

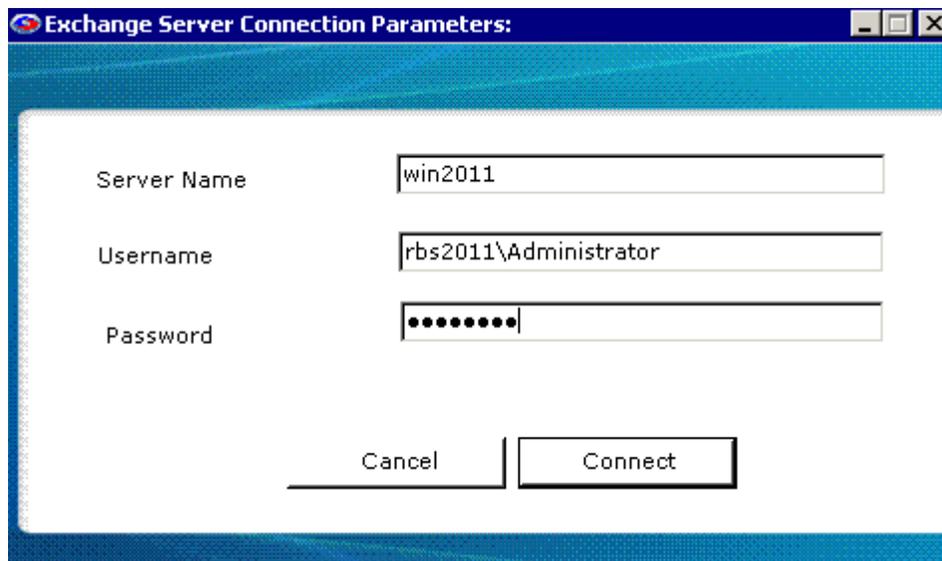
Exchange Data Selection:

Rbackup client automatically detects 'Exchange Server 2010' and shows up as 'Exchange Server' node in the File Selections interface (screen shot of Standard Interface shown below).

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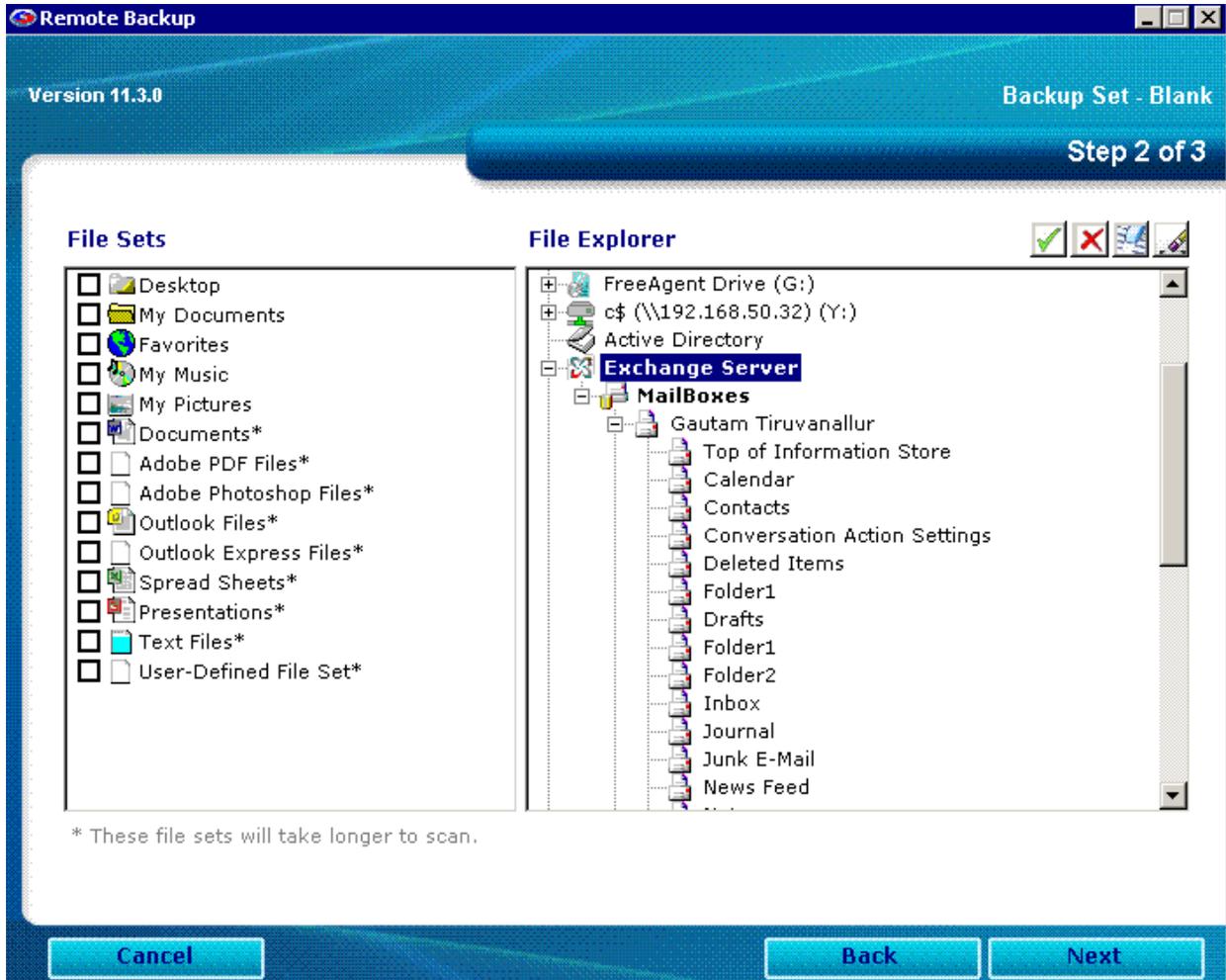


To connect to Exchange server - right-click (or click) on the Exchange Server node and select 'Connect to exchange server' option; to bring up the 'Exchange Server Connection Parameters' dialog box.



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Provide the Server's name, Username name (*DomainName\Username*, user account that has administrator privileges) and Password. Click on Connect to connect to Exchange Server. Once connected, individual Mailboxes (and Folder Items) will be displayed as shown below:



Include the Mailboxes (or Folder Items inside a Mailbox) that you need to backup, and Click Next to schedule and save your preferences.

Backup Process:

Exchange pre-processing is done as part of the Scanning phase during a backup. The first backup of Exchange Data will take time because it is a Full Backup of the Exchange Mailboxes/Items that you have selected for backup. Depending on the size of the Exchange Store, it might be better to do the first backup to a local disk/USB drive, using the Copy-To-Disk backup option.

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During exchange pre-processing, the built-in exchange agent issues commands to Exchange Shell to backup (or export) mailboxes to the client’s Temporary Location (default, C:\Temp\Rbackup\Exchange Server\). Once pre-processing is complete, the client then prepares the files under the Temp location, and transfers to server. After backup, the Temp Files are deleted.

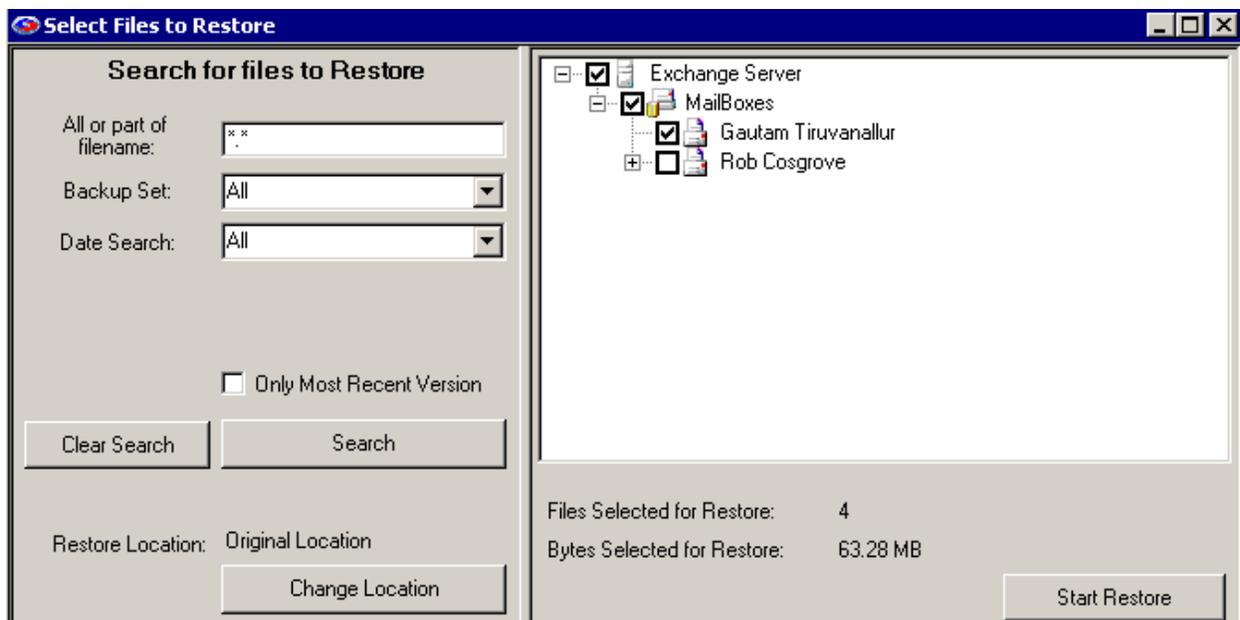
After a full backup, subsequent backups are always Incremental. Incremental backups are based on the last backup time stamp of a Mailbox/Exchange Item. So, only new data since last backup is selected for backup.

Backup Type:

It is best to choose ‘Incremental’ backup type for Exchange Server Mailbox level backup. It is not necessary to do first backup with “Full” backup type, the first backup with incremental will still be a Full.

Restore:

To restore a complete Exchange Mailbox/Item, search for Exchange Items without the ‘Only Most Recent Version’ option selected in the Restore interface.

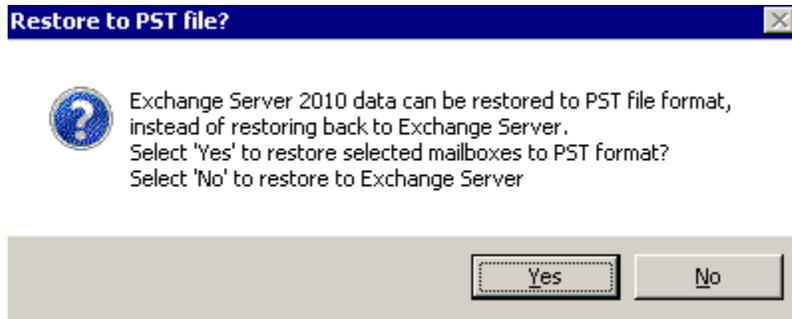


For point-in-time restores, use the ‘Date Search’ feature to select data that was backed up on a particular date or before/after or between two dates.

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Export to PST option:

Exchange data can be restored back to Exchange Server OR you can restore to PST file format. When you click on 'Start Restore', you will be prompted to choose between the two (as shown below):



If a redirected path is not already chosen for Restore, on selecting 'Yes' to the above dialog you will be prompted for a location PST files.

Select 'No' to the above prompt will restore Exchange Mailbox/Item back to the Exchange Server.

Registry Key/Options:

The registry branch for Exchange Server is:

HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Quantum Tech, Inc.\Remote Backup\Plugins\Exchange Server:

The following are the relevant keys for Exchange Server 2010 Mailbox-level agent:

“ForceFull” – REG_SZ – “True”

- (User Editable) Setting this key to True, will force the agent to do a full of Exchange Mailboxes/Items.

“ExcludeItems” – REG_SZ – “Junk E-Mail:Deleted Items”

- (User Editable) Use the 'ExcludeItems' key to exclude folders globally across all Mailboxes. Separate folder name with colon. Make sure the names of folder items here match exactly (case sensitive) with the names of the folder item in Exchange.

“ServerName” – REG_SZ – “xxxxxx”

- (Used internally, non editable) Stores the server name.

“Username” – REG_SZ – “xxxxxx”

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- (Used internally, non editable) Stores the username used to connect to exchange. Encrypted.

“Password” - Reg_SZ – “xxxxx”

- (Used internally, non editable) Stores the password used in encrypted format.

“exch2010” – REG_SZ – “True”

- (Used internally, non editable) Used internally, will be true for Exchange 2010.
-

Troubleshooting:

(For assistance and support, please contact the Technical Support department. Below are some of the common trouble-shooting steps and solutions.)

- **Service Pack 1 required for SBS 2011**
- **Error: ‘CommandNotFoundException’ or ‘ObjectNotFound error’:**

To resolve:

- 1) Launch Exchange powershell
- 2) Run “Add-psnapin microsoft*”
- 3) Run “install-CannedRbacRoles”
- 4) Run “Install-CannedRbacRoleAssignments”
- 5) Close powershell

- Role-assignment:

[Error] The term 'New-MailboxExportRequest' is not recognized as the name of a cmdlet, function, script file, or operable program. Check the spelling of the name, or if a path was included, verify that the path is correct and try again.

From Exchange Management Shell (run as administrator), assign new management role as follows:

```
[PS] C:\Windows\system32>new-managementroleassignment -role "Mailbox Import Export" -User "DomainName.local\Administrator"
```

Where, “DomainName.local” – is the domain name. Include ‘.local’ if domain name has ‘.local’ defined.

Ref: <http://technet.microsoft.com/en-us/library/ee633452.aspx>

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- **Enable PS-Remoting:** (ref: <http://technet.microsoft.com/en-us/library/dd819498.aspx>)

(When Errors are encountered when connecting to Exchange Server)

It is required to enable PS-Remoting for export/import requests.

Text copied from powershell window

```
[PS] C:\Windows\system32>enable-PSRemoting
```

WinRM Quick Configuration

Running command "Set-WSManQuickConfig" to enable this machine for remote management through WinRM service.

This includes:

1. Starting or restarting (if already started) the WinRM service
2. Setting the WinRM service type to auto start
3. Creating a listener to accept requests on any IP address
4. Enabling firewall exception for WS-Management traffic (for http only).

Do you want to continue?

[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help (default is "Y"): Y

WinRM already is set up to receive requests on this machine.

WinRM has been updated for remote management.

Created a WinRM listener on HTTP://* to accept WS-Man requests to any IP on this machine.

WinRM firewall exception enabled.

Confirm

Are you sure you want to perform this action?

Performing operation "Registering session configuration" on Target "Session configuration "Microsoft.PowerShell32" is

not found. Running command "Register-PSSessionConfiguration Microsoft.PowerShell32 -processorarchitecture x86 -force"

to create "Microsoft.PowerShell32" session configuration. This will restart WinRM service."

[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help (default is "Y"): Y

More info:

<http://blog.powershell.no/2010/03/04/enable-and-configure-windows-powershell-remoting-using-group-policy/>

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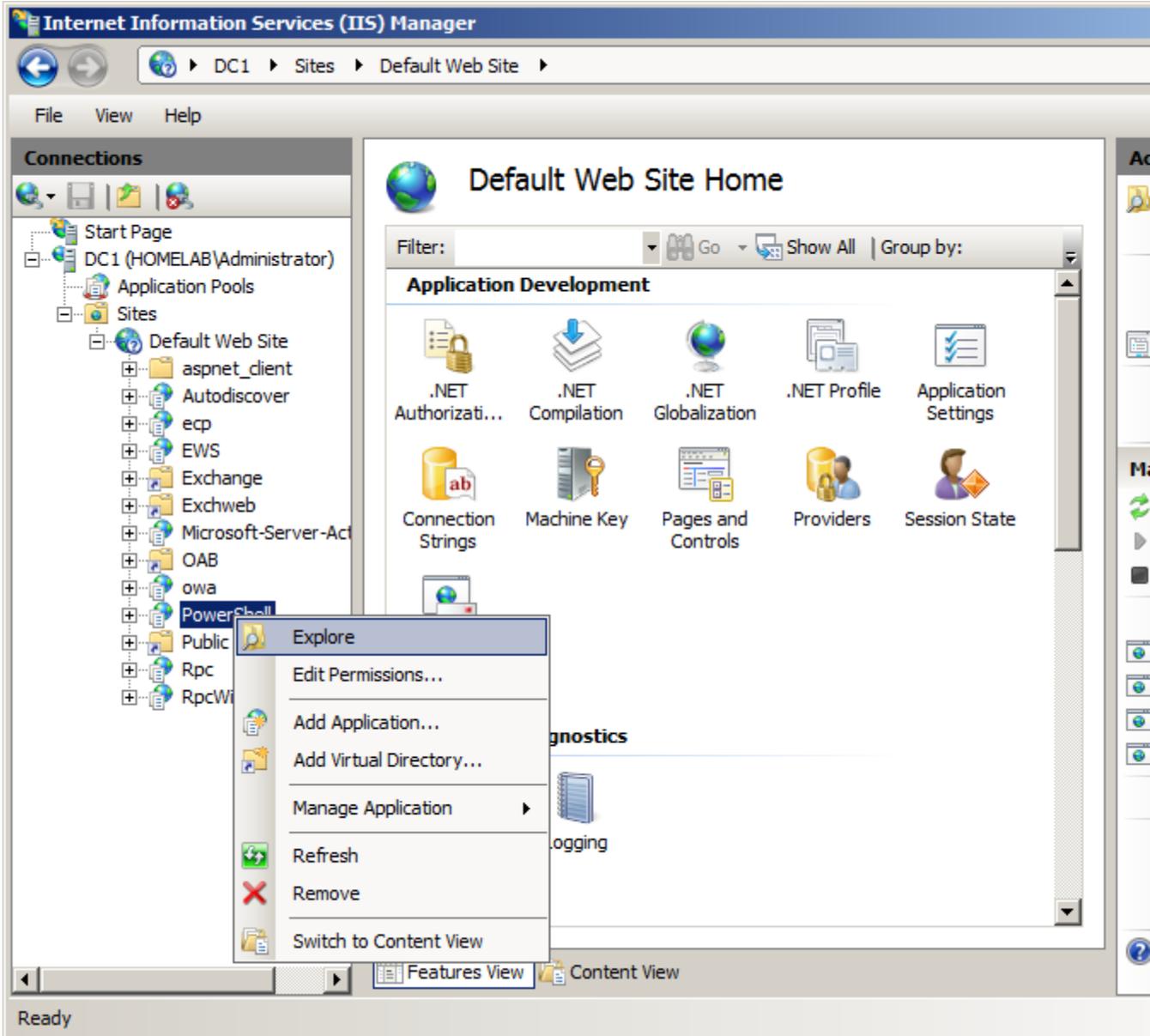
- **Errors during Incremental Backup:** (*Error: :Script block literals are not allowed in restricted language mode or a Data section*)

Description: We cannot run methods in restricted language mode. What does this mean? The Exchange configuration is locked down (restricted session). By default, only administrators can connect to the end point, but they are restricted as well. A few words on the LanguageMode property. There are three possible values: NoLanguage, RestrictedLanguage, and FullLanguage. In FullLanguage you can do whatever you want. In NoLanguage mode only commands that are using the Runspace APIs are allowed, and in RestrictedLanguage mode commands that contain scripts that need to be evaluated are not allowed.

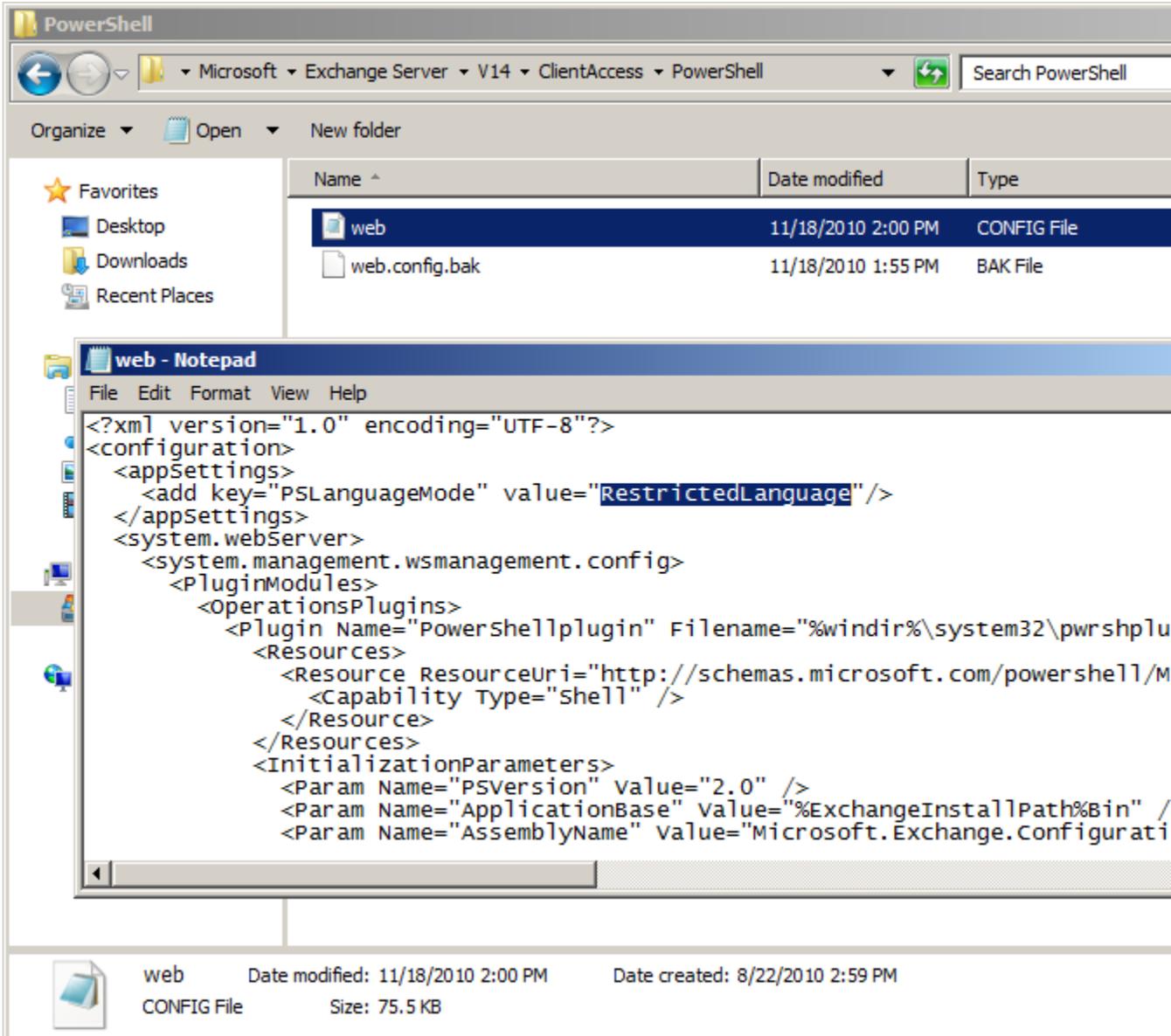
Fix:

We can change the language mode by opening the web.config file in the PowerShell virtual directory:

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The screenshot shows a Windows PowerShell console window with the address bar set to "Microsoft > Exchange Server > V14 > ClientAccess > PowerShell". Below the console is a File Explorer window showing a folder named "web" containing two files: "web" (CONFIG File, modified 11/18/2010 2:00 PM) and "web.config.bak" (BAK File, modified 11/18/2010 1:55 PM). A Notepad window titled "web - Notepad" is open, displaying the following XML configuration:

```
<?xml version="1.0" encoding="UTF-8"?>
<configuration>
  <appSettings>
    <add key="PSLanguageMode" value="RestrictedLanguage"/>
  </appSettings>
  <system.webServer>
    <system.management.wsmgmt.config>
      <PluginModules>
        <OperationsPlugins>
          <Plugin Name="Powershellplugin" Filename="%windir%\system32\pwrshplu
            <Resources>
              <Resource ResourceUri="http://schemas.microsoft.com/powershell/M
                <Capability Type="shell" />
            </Resource>
          </Resources>
          <InitializationParameters>
            <Param Name="PSVersion" value="2.0" />
            <Param Name="ApplicationBase" value="%ExchangeInstallPath%Bin" /
            <Param Name="AssemblyName" Value="Microsoft.Exchange.Configurati
```

- Change the language to 'FullLanguage' and save.
- Recycle the MExchangePowerShellAppPool application pool.