

Server Installation Settings Files

This document describes all the settings that can be adjusted by the reseller

1. Introduction

This document describes all the settings files available to the reseller that can be adjusted to the needs of the BackupAgent Server installation. The default settings are settings that are feasible to most situations, but that can be adjusted if the installation is having issues that might be resolved by adjusting these settings.

2. Settings files

2.1 MaintenanceService - MaintenanceService.exe.config

This file is used for the configuration of the MaintenanceService.

Adjustable settings:

```
<applicationSettings>
  -->
  <CloudBackup.MaintenanceService.Properties.Settings>
    <setting name="ThreadMaxCountPerStorage" serializeAs="String">
      <value>2</value>
    </setting>
    <setting name="ThreadMaxCount" serializeAs="String">
      <value>0</value>
    </setting>
  </CloudBackup.MaintenanceService.Properties.Settings>
</applicationSettings>
<!--
```

If you need to balance load on storages then use "ThreadMaxCountPerStorage" parameter.

In this case all users will be divided in groups by their storage locations and in each group will run ThreadMaxCountPerStorage threads.

In each group threads will be executed for users in alphabetical order.

Total amount of threads will be ThreadMaxCountPerStorage * CountOfStorageLocations.

Better performance will be in case if this parameter will be no bigger than total amount of CPU cores.

Value 0 for these parameters means that parameter is not used.

If you need to run exactly the same amount of maintenance threads, set parameter "ThreadMaxCount".

In this case threads will be executed for users in alphabetical order.

Better performance will be in case if this parameter will be equal to amount of total CPU cores.

2.2 Settings.xml (CloudBackupService)

This file is used to configure the CloudBackupService. All available parameters* are:

- 1 - Setting must be in the settings.xml, otherwise BackupAgent will say that the file miss settings
- 2 - Settings that are in setting.xml file after clean install of 5.0.2 version
- 3 - Settings that appears after complete Setup.aspx page

Setting Name	Settings*	Units	Values by default	Description
DBServer	1/2/3	string	CloudBackup	Path to the database server
DBName	1/2/-	string	CloudBackupService	Database name
Failover_DBServer	-/-/-	string		Additional server that will be user if the DBServer do not respond
DBUserName	1/2/-	string	CloudBackupService	Username to access an original and failover database

DBPassword	1/2/-	string	VoOHs8B5ceTQDg AEkf9/ww===	Password to access an original and failover database
MetaFileName	1/2/-	string	files.xml	Filename for a metadata file (Obsolete)
WebServiceURL	1/2/3	string	http://localhost/Cloud BackupService/Back upService.asmx	Web URL for the BackupService.asmxfile
WebServiceActivatio nURL	1/2/3	string	http://localhost/Mana gementConsole/Activ ateAccount.aspx	URL to the aspx page where user can activate his account
SmtpServerIP	1/2/3	string	[SmtpServerIP]	SMTP Mail Server IP
UsageLogging	1/2/-	bool	FALSE	Enable logging about file transfer process
LogErrorToEventLo g	1/2/-	bool	TRUE	Enable logging to the system event log
CertificateHash	1/2/-	string	8d-19-37-8d-c1-3c- 87-b0-18-6a-02-91- 53-15-b7-ee-98-2c- 81-24	Certificate hash that used to check security credentials for user
DigiNotarID	1/2/3	string	CompanyName	A DigiNotar certificate authorization key (Obsolete)
SubResellerLevel	1/2/-	int	3	Depth of sub resellers that are allowed to create
SessionDuration	1/2/-	minutes	120	Session duration time
DefaultTrialAccount Type	1/2/-	int	1	This is the account type a user obtains when signing up for a trial account
MaxBackupReportR ecords	1/2/-	int	250	Amount of backup reports that are saving to the database. Older are rewrites with a newer one
BackupAgentSession ManagerPort	1/2/-	port	16683	Port to initialize proxy connection
BackupAgentSession ManagerURL	1/2/-	string	tcp://127.0.0.1	URL to initialize proxy connection
BackupAgentSession ManagerURLFailove r		string		Failover to proxy connection

UserCanChangePassword	1/2/-	bool	TRUE	Verification that uses can change his password
UserCanChangeAccountInfo	1/2/-	bool	TRUE	Verification that uses can change his account information
ShowRegistrationLink	1/2/-	bool	TRUE	Verification that uses can see the registration link
UseHTTPS	1/2/3	bool	FALSE	Use HTTPS
UseActiveDirectory	1/2/3	bool	FALSE	Check if Active Directory is allowed, it is not recommended to change this setting
ActiveDirectoryDomainName	-/2/3	string		Active Directory domain name
ShowDownloadLink	-/-/-	bool		Verification that uses can see the download link
EnableTracing	-/-/-	bool		Check if tracing messages are enabled
CacheTimeout	-/-/-	minutes		Time that can user be in cache
ReplicationClientPort	1/2/-		16685	Not used in code logic
MaxReplicationTaskReports	1/2/-	Int	10	Max saved replication task reports count
AuthenticationCacheExpirationMinutes	1/2/-	minutes	15	Authentication cache expiration minutes
SendPurchaseLicenseUsage	1/2/-	bool	30	Report the license usage to the Backup Agent license server
SupportEmails	-/-/-	string		Addresses' to send support email
ErrorCodes2Skip	-/-/-	string		Error code that should not be sends to support in support email
IisMaxPoolSize	-/-/-	max connections count		IIS max pool size
ChecksumCalculation	-/-/-			Enable checksum calculation

ChecksumCalculationBufferSize	-/-/-	kBytes		Checksum calculation buffer size
ChecksumCalculationFileMinSize	-/-/-	kBytes		Checksum calculation min size
ADAccountDeletionPeriod	1/2/-	days	30	Mark user to delete at deletion period days
WebAccessDownloadFolderPath	1/2/-	string		The download path for files restored via the browser

These settings should be set as:

```
<parameter name="UseActiveDirectory" value="False" />
```

2.3 Web.config (CloudBackupService)

This file is to configure the web service behavior of the BackupAgent Server.

Setting that can be adjusted are:

```
<httpRuntime executionTimeout="900" />
```

In case of a slow server or slow server response you can increase this to a higher value.

```
<identity impersonate="false" userName=".\\CloudBackupServer" password="%PASSWORD%" />
```

In some cases it might be needed to change this from value false to value true to access your storage environment.

```
<bindings>
```

```
<netNamedPipeBinding>
```

```
<binding name="NetNamedPipeBinding_IMetadataService" closeTimeout="00:01:00"
openTimeout="00:05:00" receiveTimeout="00:10:00" sendTimeout="00:01:00"
transactionFlow="false" transferMode="Buffered" hostNameComparisonMode="StrongWildcard"
maxBufferPoolSize="524288000" maxReceivedMessageSize="524288000"
maxBufferSize="524288000">
```

```
<readerQuotas maxDepth="524288000" maxStringContentLength="524288000"  
maxArrayLength="524288000" maxBytesPerRead="524288000"  
maxNameTableCharCount="524288000" />
```

```
<security mode="None" />
```

```
</binding>
```

```
<binding name="NetNamedPipeBinding_IProcessingService" closeTimeout="00:01:00"  
openTimeout="00:05:00" receiveTimeout="00:10:00" sendTimeout="00:01:00"  
transactionFlow="false" transferMode="Buffered" transactionProtocol="OleTransactions"  
hostNameComparisonMode="StrongWildcard" maxBufferPoolSize="524288000"  
maxBufferSize="524288000" maxConnections="1000" maxReceivedMessageSize="524288000">
```

```
<readerQuotas maxDepth="524288000" maxStringContentLength="524288000"  
maxArrayLength="524288000" maxBytesPerRead="524288000"  
maxNameTableCharCount="524288000" />
```

```
<security mode="None" />
```

```
</binding>
```

```
</netNamedPipeBinding>
```

```
<wsHttpBinding>
```

```
<binding name="WSHttpBinding_IServer" closeTimeout="00:01:00" openTimeout="00:01:00"  
receiveTimeout="00:10:00" sendTimeout="00:01:00" bypassProxyOnLocal="false"  
transactionFlow="false" hostNameComparisonMode="StrongWildcard"  
maxBufferPoolSize="524288000" maxReceivedMessageSize="524288000" messageEncoding="Text"  
textEncoding="utf-8" useDefaultWebProxy="true" allowCookies="false">
```

```
<readerQuotas maxDepth="524288000" maxStringContentLength="524288000"  
maxArrayLength="524288000" maxBytesPerRead="524288000"  
maxNameTableCharCount="524288000" />
```

```
<security mode="None" />
```

```
</binding>
```

```
</wsHttpBinding>
```

```
</bindings>
```

In some cases it might be needed to change the timeout settings for these binding settings. Do not raise them above 10:00, if this would be needed, your storage environment is too slow to work with the BackupAgent Server software.

2.4 Web.config (managementconsole)

This file is used to configure the web service behavior of the BackupAgent Server.

Settings that can be adjusted are:

```
<httpRuntime executionTimeout="900" />
```

In case of a slow server or slow server response you can increase this to a higher value.

```
<identity impersonate="false" userName=".\\CloudBackupServer" password="%PASSWORD%" />
```

In some cases it might be needed to change this from value false to value true to access your storage environment.

These settings should be equal to the web.config settings from the CloudBackupService directory.

2.5 MetaDataManagementService.exe.config

This file is used to configure the behavior of the Metadata Management Service, used for reading and writing the metadata files from and to your storage.

Settings that can be adjusted are:

```
<bindings>
```

```
<netNamedPipeBinding>

  <binding name="netNamedPipeBinding_IMetadataService" closeTimeout="00:01:00"
openTimeout="00:05:00" receiveTimeout="00:10:00" sendTimeout="00:01:00"
transactionFlow="false" transferMode="Buffered" hostNameComparisonMode="StrongWildcard"
maxBufferPoolSize="524288000" maxReceivedMessageSize="524288000">

  <readerQuotas maxDepth="524288000" maxStringContentLength="524288000"
maxArrayLength="524288000" maxBytesPerRead="524288000"
maxNameTableCharCount="524288000" />

  <security mode="None" />

</binding>

</netNamedPipeBinding>

<wsHttpBinding>

  <binding name="WSHttpBinding_IServer" closeTimeout="00:01:00" openTimeout="00:01:00"
receiveTimeout="00:05:00" sendTimeout="00:01:00" bypassProxyOnLocal="false"
transactionFlow="false" hostNameComparisonMode="StrongWildcard" maxBufferPoolSize="524288"
maxReceivedMessageSize="65536" messageEncoding="Text" textEncoding="utf-8"
useDefaultWebProxy="true" allowCookies="false">

  <readerQuotas maxDepth="524288000" maxStringContentLength="524288000"
maxArrayLength="524288000" maxBytesPerRead="524288000"
maxNameTableCharCount="524288000" />

  <security mode="None" />

</binding>

</wsHttpBinding>

</bindings>
```


In some cases it might be needed to change the timeout settings for these binding settings. Do not raise them above 10:00, if this would be needed, your storage environment is too slow to work with the BackupAgent Server software.

Additionally, some caching settings can be adjusted:

```
<system.runtime.caching>
  <memoryCache>
    <namedCaches>
      <add name="default" cacheMemoryLimitMegabytes="500" physicalMemoryLimitPercentage="0"
pollingInterval="00:01:00" />
    </namedCaches>
  </memoryCache>
</system.runtime.caching>
```

See <http://msdn.microsoft.com/en-us/library/dd941874%28v=vs.110%29.aspx> for more info on the available parameters.

2.6 ProcessingService.exe.config

This file is used to configure the Processing Service that handles the asynchronous file checksum calculation and the asynchronous files and folders deletion from the storage location.

Settings that can be adjusted:

```
<bindings>
  <netNamedPipeBinding>
    <binding name="NetNamedPipeBinding_IMetadataService" closeTimeout="00:01:00"
openTimeout="00:05:00" receiveTimeout="00:10:00" sendTimeout="00:01:00"
transactionFlow="false" transferMode="Buffered" hostNameComparisonMode="StrongWildcard"
maxBufferPoolSize="524288000" maxBufferSize="524288000"
maxReceivedMessageSize="524288000">
```

```

    <readerQuotas maxDepth="524288000" maxStringContentLength="524288000"
maxArrayLength="524288000" maxBytesPerRead="524288000"
maxNameTableCharCount="524288000" />

    <security mode="None" />

</binding>

</netNamedPipeBinding>

<wsHttpBinding>

    <binding name="WSHttpBinding_IServer" closeTimeout="00:01:00" openTimeout="00:01:00"
receiveTimeout="00:10:00" sendTimeout="00:01:00" bypassProxyOnLocal="false"
transactionFlow="false" hostNameComparisonMode="StrongWildcard"
maxBufferPoolSize="524288000" maxReceivedMessageSize="524288000" messageEncoding="Text"
textEncoding="utf-8" useDefaultWebProxy="true" allowCookies="false">

        <readerQuotas maxDepth="524288000" maxStringContentLength="524288000"
maxArrayLength="524288000" maxBytesPerRead="524288000"
maxNameTableCharCount="524288000" />

        <security mode="None" />

    </binding>

</wsHttpBinding>

</bindings>

```

In some cases it might be needed to change the timeout settings for these binding settings. Do not raise them above 10:00, if this would be needed, your storage environment is too slow to work with the BackupAgentServer software.

Additionally, the total amount of concurrent calls and sessions can be tweaked based on load requirements, by changing the ServiceThrottling settings:

```

<serviceBehaviors>
  <behavior name="ProcessingServiceBehavior">
    <dataContractSerializer maxItemsInObjectGraph="2147483647" />
    <serviceMetadata />
    <serviceDebug includeExceptionDetailInFaults="True" />
    <serviceThrottling maxConcurrentCalls="64" maxConcurrentSessions="64"
maxConcurrentInstances="1" />
  </behavior>
</serviceBehaviors>

```

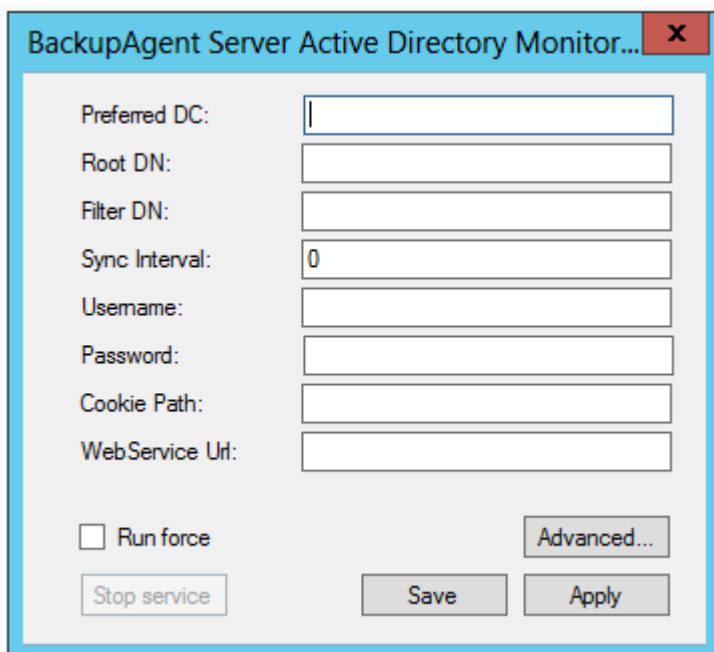
See <http://msdn.microsoft.com/en-us/library/ms731379%28v=vs.110%29.aspx> for more information.

2.7 Other settings

2.7.1 AD Synchronization

In case of AD integration, you can also change the AD synchronization settings. These settings should be changed using the ActiveDirectoryMonitorController.exe application.

All the settings from the screenshot can be adjusted to your environment needs.



2.7.2 IIS Application pool settings

In ISS you can also adjust some settings, like the number of Worker threads or the amount of memory per worker thread on the CloudBackupService Application pool.

You can find these settings by entering the Internet Information Service (IIS) manager, click on the Application Pools settings and right click on the CloudBackupService application pool to select the advanced settings. Here you will find the above settings.

For instance you can change the maximum work processes to 4 instead of 8, this all depends on the number of servers you have running and of course the number of connections per server.

Rules for the worker processes:

Connection handling per CPU:

General rule of thumb for connection handling can be applied:

Every cpu core has 8 worker processes (= w3wp.exe) running

1 worker process can handle 30 active connections (an active connection is a client that is performing a backup or a restore)

1 worker process is used by the Managementconsole itself

Example:

one 3 Ghz DualCore has: 2 cores = $2 \times 8 = 16$ workerprocesses - 1 (for the managementconsole)
 $\times 30$ connections = 450 active connections

Please note that the cpu will then be 100% used.