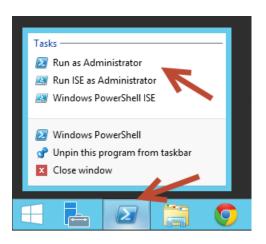
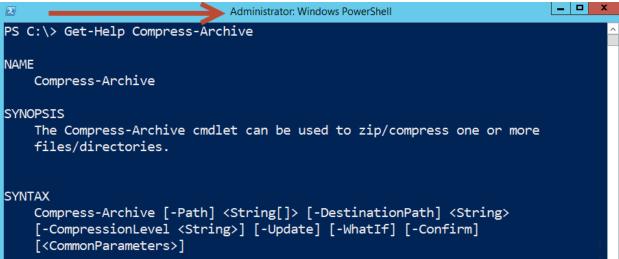
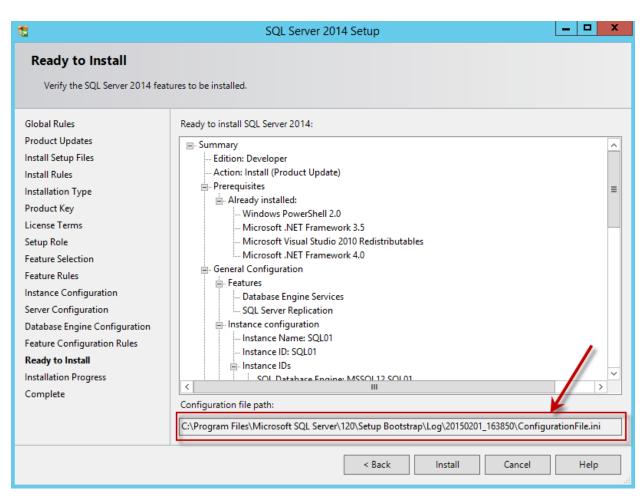
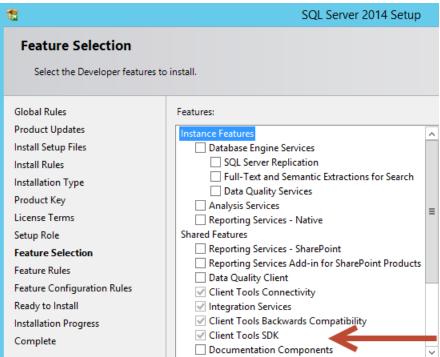
Chapter 1: Getting Started with SQL Server and PowerShell





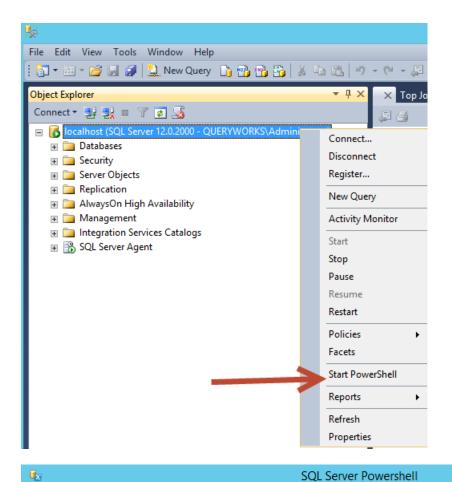
```
_ | D | X
                               Administrator: Windows PowerShell
PS C:\> PowerShell -Version 2
Windows PowerShell
Copyright (C) 2009 Microsoft Corporation. All rights reserved.
PS C:\> $PSVersionTable
                                Value
Name
CLRVersion
                                2.0.50727.8009
BuildVersion
                                6.1.7600.16385
PSVersion
                                2.0
WSManStackVersion
                                2.0
PSCompatibleVersions
                                {1.0, 2.0}
SerializationVersion
                                1.1.0.1
PSRemotingProtocolVersion
                                2.1
```





Local Disk (C;) ▶ Program Files (x86) ▶ Microsoft SQL Server ▶ 120 ▶ SDK ▶ Assemblies ▶

Name	Date modified
Microsoft.SqlServer.DTSPipelineWrap.dll	2/21/2014 4:27 AM
Microsoft.SQLServer.DTSRuntimeWrap.dll	2/21/2014 4:27 AM
Microsoft.SQLServer.ManagedDTS.dll	2/21/2014 4:27 AM
Microsoft.SqlServer.Management.Collector.dll	2/21/2014 5:27 AM
Microsoft.SqlServer.Management.CollectorEnum.dll	2/21/2014 5:27 AM
Microsoft.SqlServer.Management.Sdk.Sfc.dll	2/20/2014 8:44 PM
Microsoft.SqlServer.Management.Utility.dll	2/21/2014 5:26 AM
Microsoft.SqlServer.Management.UtilityEnum.dll	2/21/2014 5:26 AM
Microsoft.SqlServer.Management.XEvent.dll	2/21/2014 5:26 AM
Microsoft.SqlServer.Management.XEventDbScoped.dll	2/21/2014 5:26 AM
Microsoft.SqlServer.Management.XEventDbScopedEnum.dll	2/21/2014 5:26 AM
Microsoft.SqlServer.Management.XEventEnum.dll	2/21/2014 5:26 AM
Microsoft.SqlServer.OlapEnum.dll	2/21/2014 4:26 AM
Microsoft.SqlServer.PipelineHost.dll	2/21/2014 4:26 AM
Microsoft.SqlServer.PolicyEnum.dll	2/20/2014 8:44 PM
Microsoft.SqlServer.RegSvrEnum.dll	2/21/2014 5:26 AM
Microsoft.SqlServer.Rmo.dll	2/21/2014 5:26 AM
Microsoft.SqlServer.ServiceBrokerEnum.dll	2/20/2014 8:44 PM
Microsoft.SqlServer.Smo.dll	2/20/2014 8:44 PM
Microsoft.SqlServer.SmoExtended.dll	2/21/2014 5:26 AM
Microsoft.SqlServer.SqlEnum.dll	2/20/2014 8:44 PM
Microsoft.SqlServer.SQLTaskConnectionsWrap.dll	2/21/2014 4:26 AM
Microsoft.SqlServer.SqlWmiManagement.dll	2/21/2014 5:26 AM
Microsoft.SqlServer.SString.dll	2/21/2014 5:27 AM
Microsoft.SqlServer.TransactSql.ScriptDom.dll	2/21/2014 4:26 AM
Microsoft.SqlServer.Types.dll	2/21/2014 4:28 AM
Microsoft.SqlServer.WmiEnum.dll	2/21/2014 5:26 AM



PS SQLSERVER:\SQL\ROGUE\DEFAULT> _

PS SQLSERVER:\SQL\ROGUE\DEFAULT> dir

Audits

AvailabilityGroups

BackupDevices

Credentials

CryptographicProviders

Databases

Endpoints

JobServer

Languages

LinkedServers

Logins

Mail

ResourceGovernor

Roles

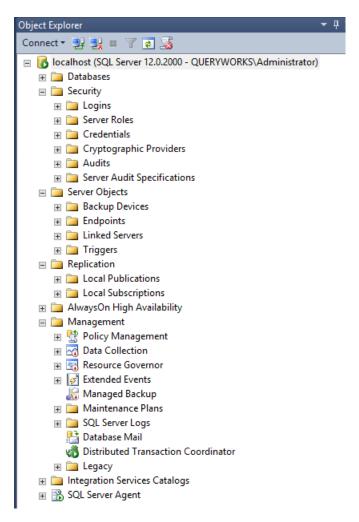
ServerAuditSpecifications

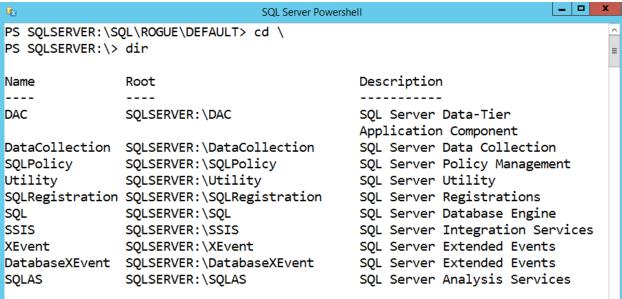
SystemDataTypes

SystemMessages

Triggers

UserDefinedMessages





SQL Server Powershell

PS SQLSERVER:\SQL\ROGUE\DEFAULT\Databases\AdventureWorks2014>

SQL Server Powershell

PS SQLSERVER:\SQL\ROGUE\DEFAULT\Databases\AdventureWorks2014> dir

ApplicationRoles

Assemblies

AsymmetricKeys

Certificates

DatabaseAuditSpecifications

Defaults

ExtendedProperties

ExtendedStoredProcedures

Federations

FileGroups

FullTextCatalogs

FullTextStopLists

LogFiles

PartitionFunctions

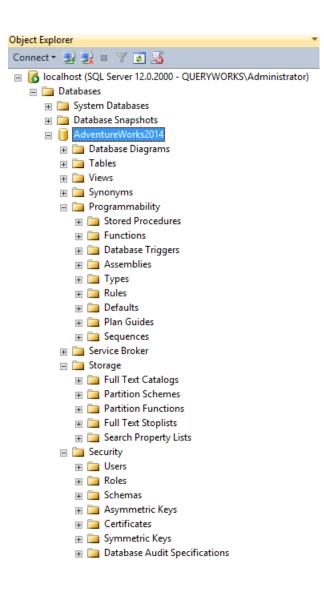
PartitionSchemes

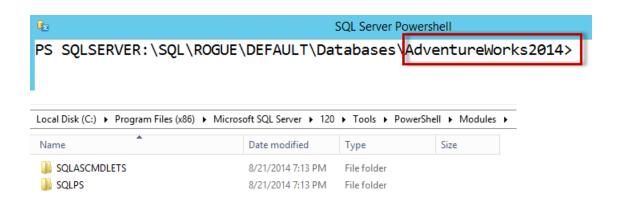
PlanGuides

Roles

Rules

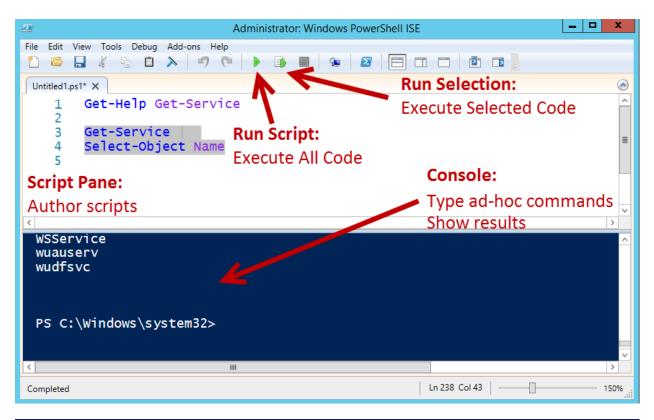
Schemas



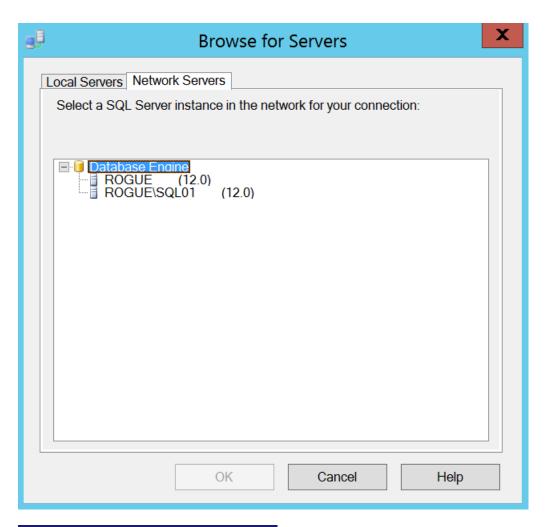


```
FullName
------
microsoft.SqlServer.Smo, Version=12.0.0.0, Culture=neutral, PublicKeyToken=89845dcd8080cc91
microsoft.SqlServer.Omf, Version=12.0.0.0, Culture=neutral, PublicKeyToken=89845dcd8080cc91
microsoft.SqlServer.SqlWmiManagement, Version=12.0.0.0, Culture=neutral, PublicKeyToken=89845dcd8080cc91
microsoft.SqlServer.ConnectionInfo, Version=12.0.0.0, Culture=neutral, PublicKeyToken=89845dcd8080cc91
microsoft.SqlServer.SmoExtended, Version=12.0.0.0, Culture=neutral, PublicKeyToken=89845dcd8080cc91
microsoft.SqlServer.Management.RegisteredServers, Version=12.0.0.0, Culture=neutral, PublicKeyToken=88...
microsoft.SqlServer.Management.Sdk.Sfc, Version=12.0.0.0, Culture=neutral, PublicKeyToken=8845dcd808...
microsoft.SqlServer.SqlEnum, Version=12.0.0.0, Culture=neutral, PublicKeyToken=89845dcd8080cc91
microsoft.SqlServer.Mersion=12.0.0.0, Culture=neutral, PublicKeyToken=89845dcd8080cc91
microsoft.SqlServer.WmiEnum, Version=12.0.0.0, Culture=neutral, PublicKeyToken=89845dcd8080cc91
microsoft.SqlServer.Mersion=12.0.0.0, Culture=neutral, PublicKeyToken=89845dcd8080cc91
microsoft.SqlServer.Management.Collector.Version=12.0.0.0, Culture=neutral, PublicKeyToken=89845dcd8080...
microsoft.SqlServer.Management.CollectorEnum, Version=12.0.0.0, Culture=neutral, PublicKeyToken=89845dcd808...
microsoft.SqlServer.Management.Utility, Version=12.0.0.0, Culture=neutral, PublicKeyToken=89845dcd808...
microsoft.SqlServer.Management.HadrDMF, Version=12.0.0.0, Culture=neutral, PublicKeyToken=89845dcd808...
microsoft.SqlServer.Management.PSSnapins, Version=12.0.0.0, Culture=neutral, PublicKeyToken=89845dcd8080cc
```

Chapter 2: SQL Server and PowerShell Basic Tasks



ServerProtocols: {Np, Sm, Tcp}
Parent: Microsoft.SqlServer.Management.Smo.Wmi.ManagedComputer
Urn: ManagedComputer[@Name='localhost']/ServerInstance[@Name='MSSQLSERVER'] MSSQLSERVER {} Name Properties UserData : Existing State {Np, Sm, Tcp}
Microsoft.SqlServer.Management.Smo.Wmi.ManagedComputer
ManagedComputer[@Name='localhost']/ServerInstance[@Name='SQL01'] ServerProtocols: Parent Urn SQL01 Name **Properties** UserData State **Existing**



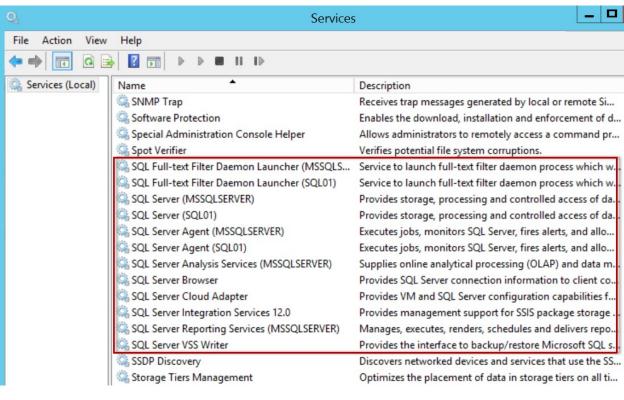
Name : MSSQL\$SQL01 : Existing : SqlServer State Type StartMode : Auto ProcessId: 1620

Name : MSSQLSERVER State : Existing Type : SqlServer StartMode : Auto

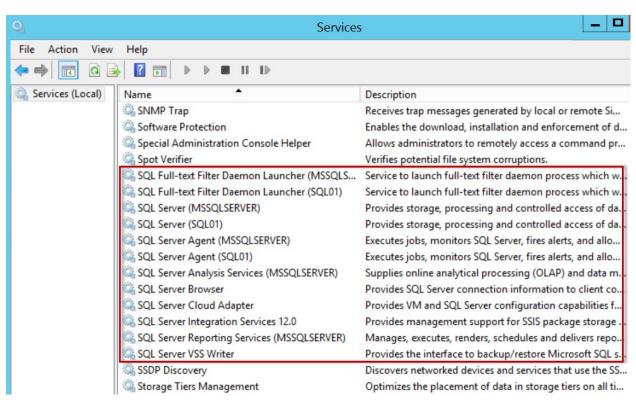
ProcessId: 1956

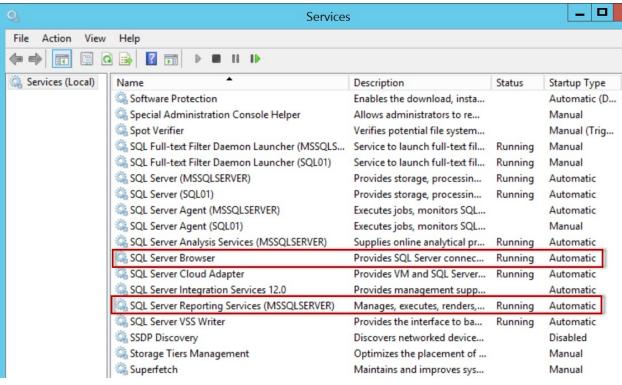
```
ServiceName DisplayName
                                     SQLServiceType
MSSQL$SQL01 SQL Server (SQL01)
MSSQLSERVER SQL Server (MSSQLSERVER)
```

ServerName	InstanceName	IsClustered	Version
ROGUE		No	12.0.2000.8
ROGUE	SQL01	No	12.0.2000.8



Name	Туре	ServiceState	DisplayName
MsDtsServer120 MsSQL\$SQL01 MsSQLFDLauncher MSSQLFDLauncher\$sQL01 MSSQLSERVER MSSQLSERVER MSSQLSErverOLAPService ReportServer SQLAgent\$SQL01 SQLBrowser SQLSERVERAGENT	SqlServerIntegrationService SqlServer 9 SqlServer AnalysisServer ReportServer SqlAgent SqlBrowser SqlAgent	Running Running Running Running Stopped Stopped Running	SQL Server Integration Services 12.0 SQL Server (SQL01) SQL Full-text Filter Daemon Launcher (MSSQLSERVER) SQL Full-text Filter Daemon Launcher (SQL01) SQL Server (MSSQLSERVER) SQL Server Analysis Services (MSSQLSERVER) SQL Server Reporting Services (MSSQLSERVER) SQL Server Agent (SQL01) SQL Server Browser SQL Server Agent (MSSQLSERVER)





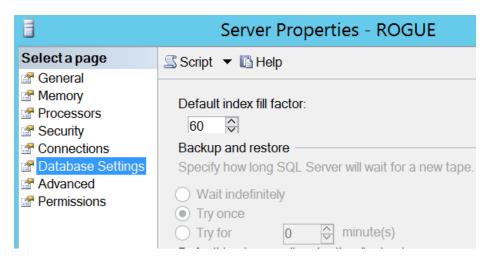
ıme
et-Service
ew-Service
w-WebServiceProxy
estart-Service
sume-Service
et-Service
art-Service
cop-Service
spend-Service

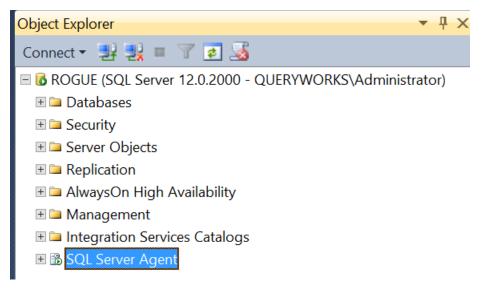
Name	Value
BuildNumber Edition ErrorLogPath HasNullSaPassword	2000 Developer Edition (64-bit) C:\Program Files\Microsoft SQL Server\MSSQL12.MSSQLSERVER\MSSQL\Log
IsCaseSensitive IsFullTextInstalled IsXTPSupported Language	False True True English (United States)
MasterDBLogPath MasterDBPath MaxPrecision	C:\Program Files\Microsoft SQL Server\MSSQL12.MSSQLSERVER\MSSQL\DATA C:\Program Files\Microsoft SQL Server\MSSQL12.MSSQLSERVER\MSSQL\DATA 38
NetName OSVersion PhysicalMemory Platform	ROGUE 6.3 (9600) 10999 NT x64
Processors Product RootDirectory VersionMajor	4 Microsoft SQL Server C:\Program Files\Microsoft SQL Server\MSSQL12.MSSQLSERVER\MSSQL 12
VersionMinor VersionString Collation	12 0 12.0.2000.8 SQL_Latin1_General_CP1_CI_AS
EngineEdition IsClustered IsSingleUser ProductLevel	3 False False RTM
BuildClrVersionString	v4.0.30319

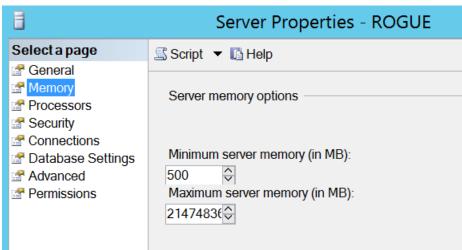
Name	Value
AuditLevel	 All
BackupDirectory	C:\Temp
DefaultFile	C:\Program Files\Microsoft SQL Server\MSSQL12.MSSQLSERVER\MSSQL\DATA\
DefaultLog	:\Program Files\Microsoft SQL Server\MSSQL12.MSSQLSERVER\MSSQL\DATA\
LoginMode	Integrated
MailProfile	
NumberOfLogFiles	-1
PerfMonMode	None
TapeLoadWaitTime	-1

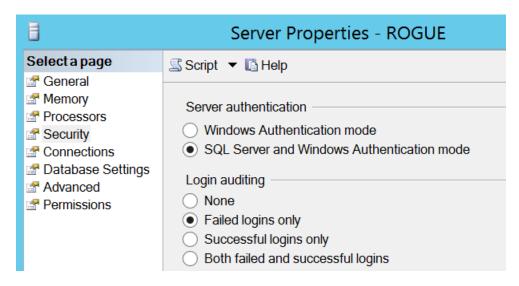
Name	Value
AbortOnArithmeticErrors	False
AbortTransactionOnError	False
AnsiNullDefaultOff	False
AnsiNullDefaultOn	False
AnsiNulls	False
AnsiPadding	False
AnsiWarnings	False
ConcatenateNullYieldsNull	False
CursorCloseOnCommit	False
DisableDefaultConstraintCheck	False
IgnoreArithmeticErrors	False
ImplicitTransactions	False
NoCount	False
NumericRoundAbort	False
QuotedIdentifier	False

DisplayName	RunValue C	onfigValue
recovery interval (min)	0	0
allow updates	0	0
user connections	0	0
locks	0	0
open objects	0	0
fill factor (%)	0	0
disallow results from triggers	0	0
nested triggers	1 1	0 1 1 1
server trigger recursion	1	1
remote access	1	1
default language	0	0
cross db ownership chaining	0	0
max worker threads	0	0
network packet size (B)	4096	4096
show advanced options	0	0
remote proc trans	0	0
c2 audit mode	0	0
default full-text language	1033	1033
two digit year cutoff	2049	2049
index create memory (KB)	0	0
priority boost		10
remote login timeout (s)	10 600	
remote query timeout (s)		600 -1
cursor threshold	-1 0	-1
set working set size	0	0
user options affinity mask	0	0
max text repl size (B)	65536	65536









1 sp_configure

100 9	% ▼ <				
⊞ R	esults 🔒 Messages				
	name	minimum	maximum	config_value	run_value
1	allow updates	0	1	0	0
2	backup checksum default	0	1	0	0
3	backup compression default	0	1	0	0
4	clr enabled	0	1	0	0
5	contained database authentication	0	1	0	0
6	cross db ownership chaining	0	1	0	0
7	default language	0	9999	0	0
8	filestream access level	0	2	2	2
9	max text repl size (B)	-1	2147483647	65536	65536
10	nested triggers	0	1	1	1
11	remote access	0	1	1	1
12	remote admin connections	0	1	0	0
13	remote login timeout (s)	0	2147483647	10	10
14	remote proc trans	0	1	0	0
15	remote query timeout (s)	0	2147483647	600	600
16	server trigger recursion	0	1	1	1
17	show advanced options	0	1	0	0

ObjectType ObjectName
----Schemas Production

StoredProcedures uspGetWhereUsedProductID

Tables Product

Tables ProductCategory
Tables ProductCostHistory
Tables ProductDescription
Tables ProductDocument
Tables ProductInventory

Tables ProductListPriceHistory

Tables ProductModel

Tables ProductModelIllustration

Tables ProductModelProductDescriptionCulture

Tables ProductPhoto

Tables ProductProductPhoto

Tables ProductReview
Tables ProductSubcategory
Tables ProductVendor

Tables SpecialOfferProduct

UserDefinedFunctions ufnGetProductDealerPrice
UserDefinedFunctions ufnGetProductListPrice
UserDefinedFunctions ufnGetProductStandardCost
Views vProductAndDescription

Views vProductModelCatalogDescription

Views vProductModelInstructions

XmlSchemaCollections ProductDescriptionSchemaCollection

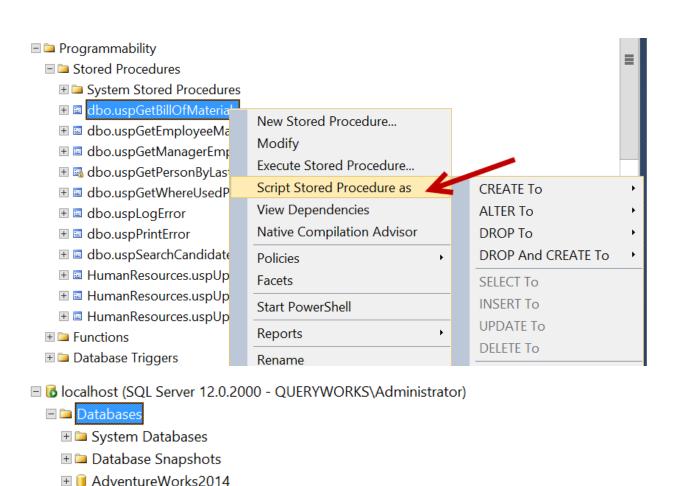
 ⊞ ■ HumanResources.uspUpdateEmployeeHireInfo

 Ⅲ ■ HumanResources.uspUpdateEmployeeLogin

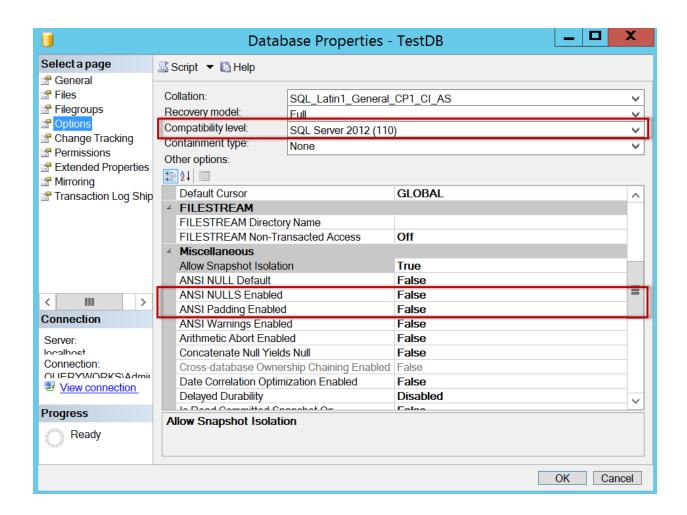
■ ■ HumanResources.uspUpdateEmployeePersonalInfo

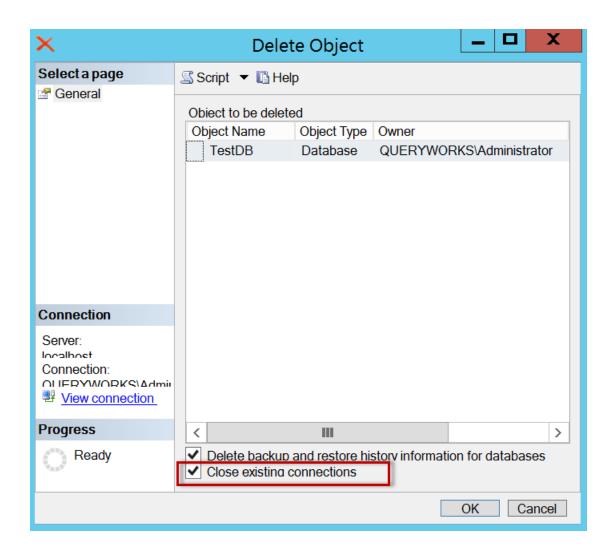
Local Disk (C:) ▶ DATA

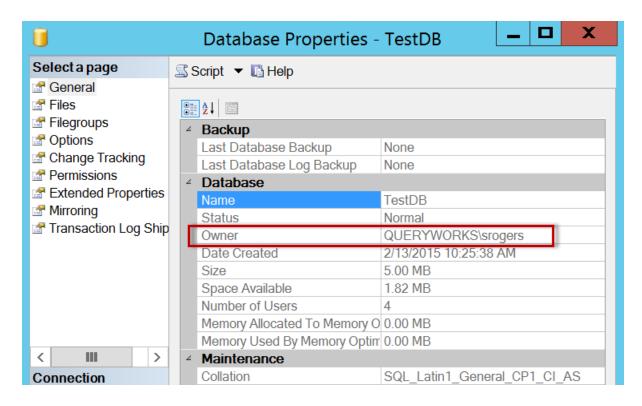
AdventureWorks2014_uspGetBillOfMaterials.sql AdventureWorks2014_uspGetEmployeeManagers.sql AdventureWorks2014_uspGetManagerEmployees.sql AdventureWorks2014_uspGetWhereUsedProductID.sql AdventureWorks2014_uspLogError.sql AdventureWorks2014_uspPrintError.sql AdventureWorks2014_uspSearchCandidateResumes.sql AdventureWorks2014_uspUpdateEmployeeHireInfo.sql AdventureWorks2014_uspUpdateEmployeeLogin.sql AdventureWorks2014_uspUpdateEmployeePersonalInfo.sql



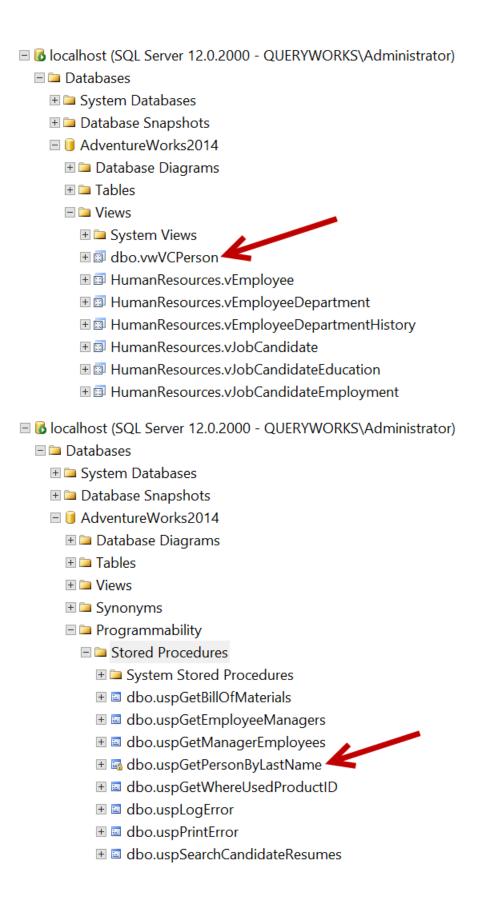
⊞ I AdventureWorksLT2012

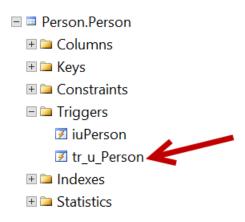






- ■ dbo.Student
 - □ □ Columns
 - StudentID (PK, int, not null)
 - FName (varchar(50), null)
 - LName (varchar(50), not null)
 - DateOfBirth (datetime, null)
 - Age (Computed, int, null)
 - - PK_Student_StudentID
 - □ □ Constraints
 - IDF Student DateOfBirth
 - I DF_Student_LName
 - **Triggers**
 - Indexes
 - PK Student StudentID (Clustered)





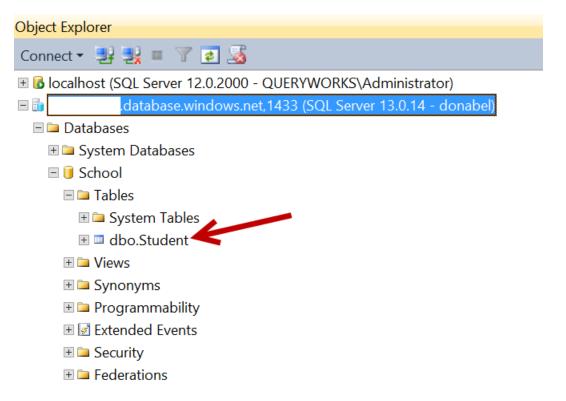
UpdatedOn	UpdatedBy	NewLastName	NewFirstName	oldLastName	oldFirstName
2/14/2015 10:07:20 PM	QUERYWORKS\Administrator	Zhang	Frankk	Zhang	Frank

- Person.Person
 - **⊞ □** Columns

 - **⊞ □** Constraints

 - Indexes
 - AK_Person_rowguid (Unique, Non-Clustered)
 - idxLastNameFirstName (Non-Unique, Non-Clustered)
 - ii IX_Person_LastName_FirstName_MiddleName (Non-Unique, Non-Clustered)
 - PK_Person_BusinessEntityID (Clustered)
 - A PXML_Person_AddContact (Primary XML)
 - ♣ PXML_Person_Demographics (Primary XML)
 - * XMLPATH_Person_Demographics (Secondary XML, Path)
 - ** XMLPROPERTY_Person_Demographics (Secondary XML, Property)
 - **⊞ i** Statistics

Name : master **CollationName** : SQL_Latin1_General_CP1_CI_AS Edition System **MaxSizeGB** MaxSizeBytes 5368709120 ServiceObjectiveName System2 ServiceObjectiveAssignmentStateDescription : CreationDate 2/21/2015 8:50:41 AM RecoveryPeriodStartDate : School CollationName : SQL_Latin1_General_CP1_CI_AS Edition : Standard MaxSizeGB 250 MaxSizeBytes 268435456000 ServiceObjectiveName : ServiceObjectiveAssignmentStateDescription : S₀ 2/21/2015 8:52:30 AM CreationDate : 2/21/2015 8:58:07 AM RecoveryPeriodStartDate



Chapter 3: Basic Administration

```
TypeName: Microsoft.SqlServer.Management.Smo.Server
                                                                                                                  MemberType Definition
  Name
                                                                                                                                                            Definition
-----
Microsoft.SqlServer.Management.Smo.ServerActiveDirectory ActiveDirectory {get;}
Microsoft.SqlServer.Management.Smo.AffinityInfo AffinityInfo {get;}
Microsoft.SqlServer.Management.Smo.AuditLevel AuditLevel {get;set;}
Microsoft.SqlServer.Management.Smo.AuditCollection AuditS {get;}
Microsoft.SqlServer.Management.Smo.AvailabilityGroupCollection AvailabilityGroupS
Microsoft.SqlServer.Management.Smo.BackupDeviceCollection BackupDeviceS {get;}
string BackupDirectory {get;set;}
string BrowserServiceAccount {get;}
Microsoft.SqlServer.Management.Smo.ServiceStartMode BrowserStartMode {get;}
version BuildclrVersion {get;}
string BuildclrVersionString {get;}
int BuildNumber {get;}
string ClusterName {get;}
Microsoft.SqlServer.Management.Smo.ClusterQuorumState ClusterQuorumType {get;}
string Collation {get;}
int CollationID {get;}
int ComparisonStyle {get;}
string ComputerNamePhysicalNetBIOS {get;}
Microsoft.SqlServer.Management.Smo.Configuration Configuration {get;}
Microsoft.SqlServer.Management.Smo.Configuration ConnectionContext {get;}
Microsoft.SqlServer.Management.Smo.Configuration ConnectionContext {get;}
 ActiveDirectory
AffinityInfo
                                                                                                                  Property
Property
  AuditLevel
                                                                                                                    Property
                                                                                                                   Property
Property
 Audits
AvailabilityGroups
 BackupDevices
BackupDirectory
BrowserServiceAccount
                                                                                                                    Propertý
                                                                                                                   Property
Property
BrowserSerViceAccount
BrowserStartMode
BuildClrVersion
BuildClrVersionString
BuildNumber
                                                                                                                   Property
Property
                                                                                                                    Property
                                                                                                                   Property
                                                                                                                   Property
Property
 clusterName
 ClusterQuorumState
ClusterQuorumType Property
Collation Property
CollationID Property
ComparisonStyle Property
ComputerNamePhysicalNetBIOS Property
Configuration Property
 Configuration
 ConnectionContext
                                                                                                                    Property
```

1	Name	Value
2	ActiveDirectory	
3	AffinityInfo	Microsoft.SqlServer.Management.Smo.AffinityInfo
4	AuditLevel	All
5	Audits	
6	AvailabilityGroups	
7	BackupDevices	
8	BackupDirectory	C:\Temp
9	BrowserServiceAccount	NT AUTHORITY\LOCALSERVICE
10	BrowserStartMode	Auto
11	BuildClrVersion	4.0.30319
12	BuildClrVersionString	v4.0.30319
13	BuildNumber	
14	ClusterName	
15	ClusterQuorumState	NotApplicable
16	ClusterQuorumType	NotApplicable
17	Collation	SQL_Latin1_General_CP1_CI_AS
18	CollationID	
19	ComparisonStyle	
20	ComputerNamePhysicalNetBIOS	ROGUE
21	Configuration	Microsoft.SqlServer.Management.Smo.Configuration

4	A	
103	Triggers	
104	Urn	Server[@Name='ROGUE']
105	UserData	
106	UserDefinedMessages	
07	UserOptions	Microsoft.SqlServer.Management.Smo.UserOptions
108	Version	12.0.2000
09	VersionMajor	
110	VersionMinor	
11	VersionString	12.0.2000.8
12	Job: Agent history clean up: distribution	Last run: 02/26/2015 08:40:00 (Succeeded)
13	Job: Backup Database	Last run: 10/23/2014 12:35:28 (Succeeded)
14	Job: Distribution clean up: distribution	Last run: 02/26/2015 08:35:00 (Succeeded)
15	Job: Expired subscription clean up	Last run: 02/26/2015 01:00:00 (Succeeded)
16	Job: Export Client Data	Last run: 10/23/2014 12:34:39 (Failed)
17	Job: Reinitialize subscriptions having data validation failures	Last run: 01/01/0001 00:00:00 (Unknown)
18	Job: Replication agents checkup	Last run: 02/26/2015 08:40:00 (Succeeded)
19	Job: Replication monitoring refresher for distribution.	Last run: 01/01/0001 00:00:00 (Unknown)
20	Job: ROGUE-Registration-1	Last run: 11/28/2014 09:02:39 (Failed)
21	Job: ROGUE-Registration-Registration-1	Last run: 10/25/2014 12:24:01 (Succeeded)
22	Job: ROGUE-Registration-Registration-ROGUE\SQL2014-3	Last run: 11/28/2014 09:02:39 (Failed)
23	Job: syspolicy_purge_history	Last run: 02/26/2015 02:00:00 (Succeeded)
	Job: Test Job	Last run: 11/28/2014 10:24:25 (Failed)

	Α	В	С	D	E
1	DatabaseName	CreateDate	Owner	RecoveryModel	SizeMB
2	AdventureWorks2014	9/6/2014 2:01:44 PM	QUERYWORKS\Administrator	Simple	303.25
3	AdventureWorksLT2012	9/6/2014 2:03:14 PM	QUERYWORKS\Administrator	Simple	9.0625
4	Chinook	10/20/2014 9:42:09 PM	QUERYWORKS\Administrator	Full	6
5	distribution	10/25/2014 12:21:58 PM	sa	Simple	8.25
6	master	4/8/2003 9:13:36 AM	sa	Simple	6.25
7	model	4/8/2003 9:13:36 AM	sa	Full	3.9375
8	msdb	2/20/2014 8:49:38 PM	sa	Simple	16.3125
9	pubs	9/6/2014 1:58:12 PM	QUERYWORKS\Administrator	Full	4
10	Registration	10/20/2014 3:59:33 PM	QUERYWORKS\Administrator	Full	19
11	tempdb	2/27/2015 6:28:51 AM	sa	Simple	8.75
12	TestDB	2/13/2015 10:25:38 AM	QUERYWORKS\srogers	Full	16.25

Name	Spid	Command	Status	Login	Database	BlockingSpid
1	1	UNKNOWN TOKEN	background	sa	master	0
2	2	UNKNOWN TOKEN	background	sa	master	0
2	3	UNKNOWN TOKEN	background	sa	master	0
4	4	LOG WRITER	background	sa	master	0
5	5	LAZY WRITER	background	sa	master	0
6	6	RECOVERY WRITER	background	sa	master	0
7	7	SIGNAL HANDLER	background	sa	master	0
8	8	XTP_THREAD_POOL	background	sa	master	0
9	9	TASK MANAGER	sleeping	sa	master	0
10	10	XTP_CKPT_AGENT	background	sa	master	0
11	11	LOCK MONITOR	background	sa	master	0
12	12	TASK MANAGER	sleeping	sa	master	0
13	13	TRACE QUEUE TASK	background	sa	master	0
14	14	SYSTEM_HEALTH_MONITOR	background	sa	master	0
15	15	RECEIVE	background	sa	master	0
16	16	UNKNOWN TOKEN	background	sa	master	0
17	17	TASK MANAGER	sleeping	sa	master	0
18	18	TASK MANAGER	background	sa	master	0
19	19	CHECKPOINT	background	sa	master	0
20	20	BRKR TASK	background	sa	master	0
21	21	TASK MANAGER	sleeping	sa	master	0
22	22	TASK MANAGER	sleeping	sa	master	0
23	23	TASK MANAGER	sleeping	sa	master	0
24	24	TASK MANAGER	sleeping	sa	master	0
25	25	TASK MANAGER	sleeping	sa	master	0
26	26	TASK MANAGER	sleeping	sa	master	0
28	28	TASK MANAGER	sleeping	sa	master	0

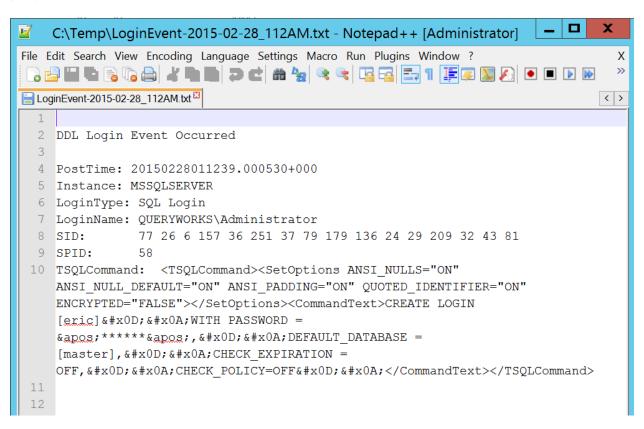
Name	Spid	Command	Status	Login	Database	BlockingSpid
55		SELECT		QUERYWORKS\Administrator	AdventureWorks2014	54

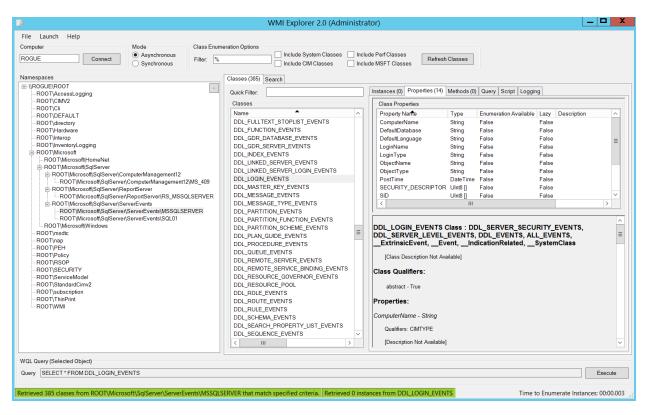
Name DeviceType	SizeGB	FreeSpaceGB	FreeSpacePercent
C:\ Local Disk D:\ Compact Disk	120.00 2.43	95.15 0.00	79 % 0 %

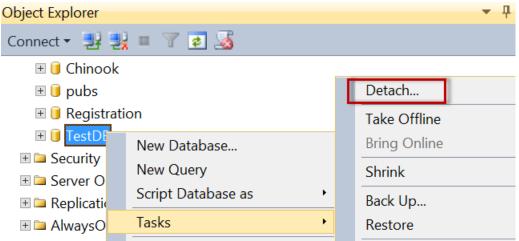
⊞ R∈	esults 🔓 Messages		
	is_broker_enabled	name	database_id
1	0	AdventureWorks2014	7
2	0	AdventureWorksLT2012	8
3	0	Chinook	6
4	1	distribution	10
5	0	master	1
6	0	model	3
7	1	msdb	4
8	1	pubs	5
9	0	Registration	9
10	1	tempdb	2
11	0	TestDB	11

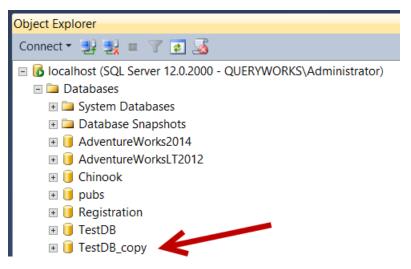
Id	Name	PSJobTypeName	State	HasMoreData	Location	Command
2	SQLLoginEvent		NotStarted	False		

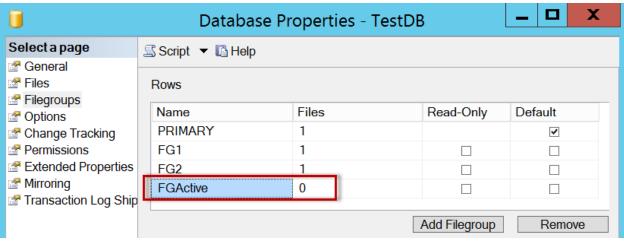






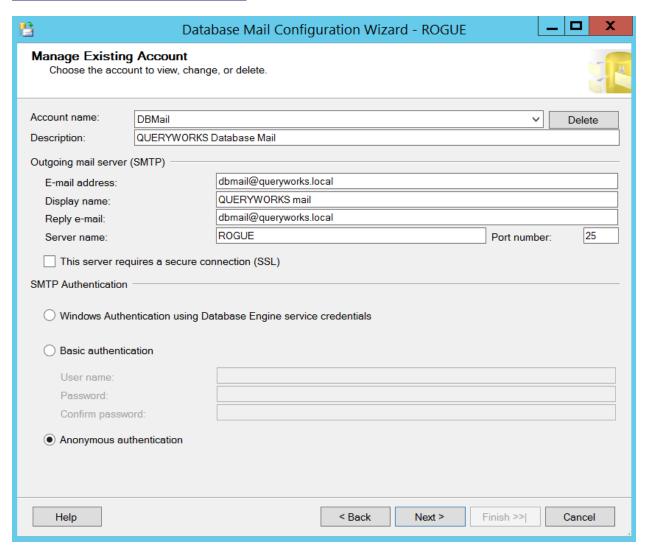


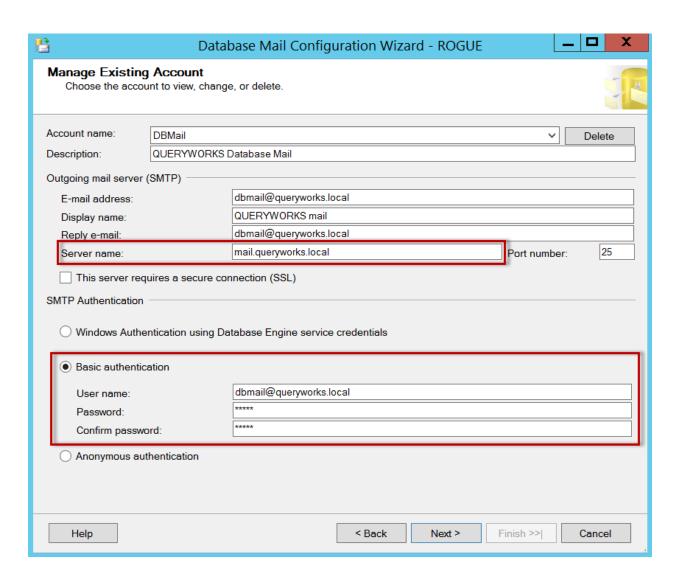


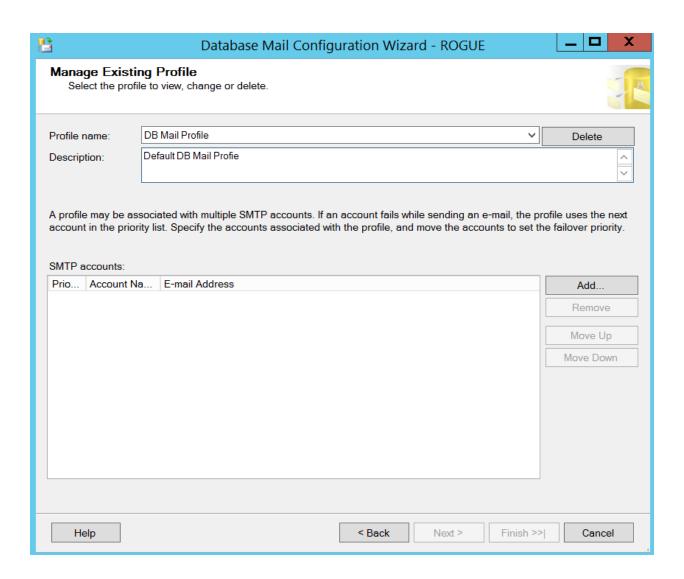


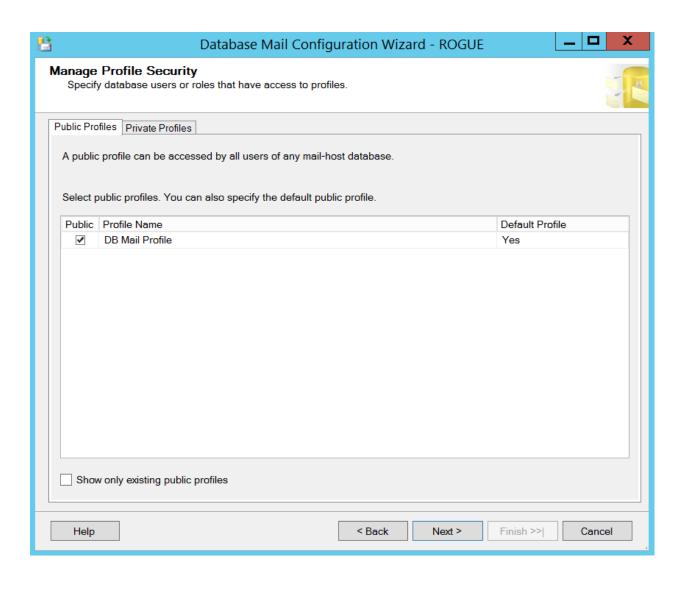
Index_Name	Index_Type	Pages	AvgFragmentation
AK_Person_rowguid		65	0.0000
idxLastNameFirstName		146	0.0000
<pre>IX_Person_LastName_FirstName_MiddleName</pre>		108	8.3333
PK_Person_BusinessEntityID		3809	0.1838
PK_Person_BusinessEntityID			0.0000
PK_Person_BusinessEntityID		1	0.0000
PXML_Person_AddContact			0.0000
PXML_Person_Demographics		2152	0.0000
XMLPATH_Person_Demographics		1389	0.9359
XMLPATH_Person_Demographics		1	0.0000
XMLPROPERTY_Person_Demographics		1391	1.0784
XMLPROPERTY_Person_Demographics			0.0000
XMLVALUE_Person_Demographics		1389	1.0799
XMLVALUE_Person_Demographics		1	0.0000

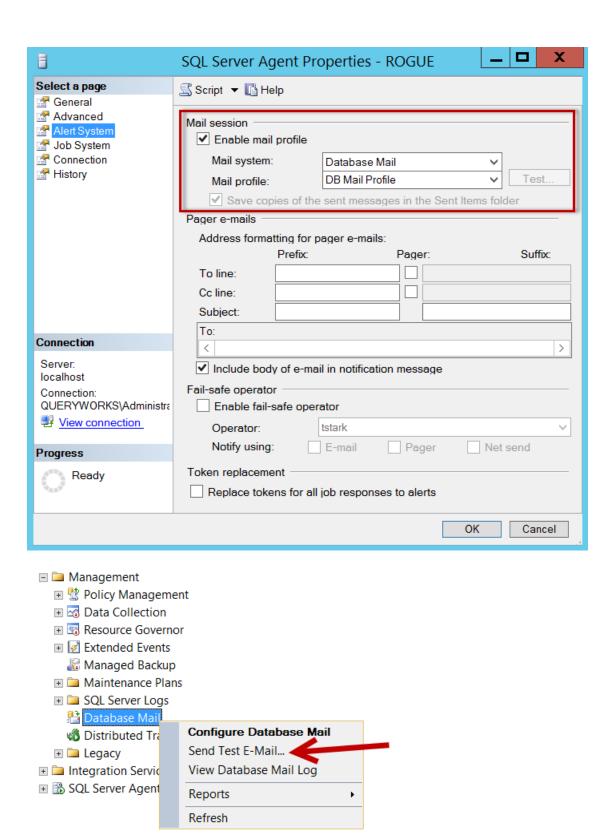
Index_Name
Index_ID
Depth
Pages
Rows
MinimumRecordSize
MaximumRecordSize
AverageRecordSize
ForwardedRecords
AveragePageDensity
IndexType
PartitionNumber
GhostRows
VersionGhostRows
AverageFragmentation

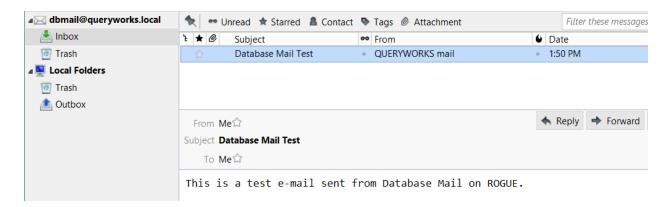








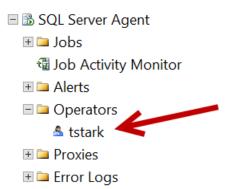


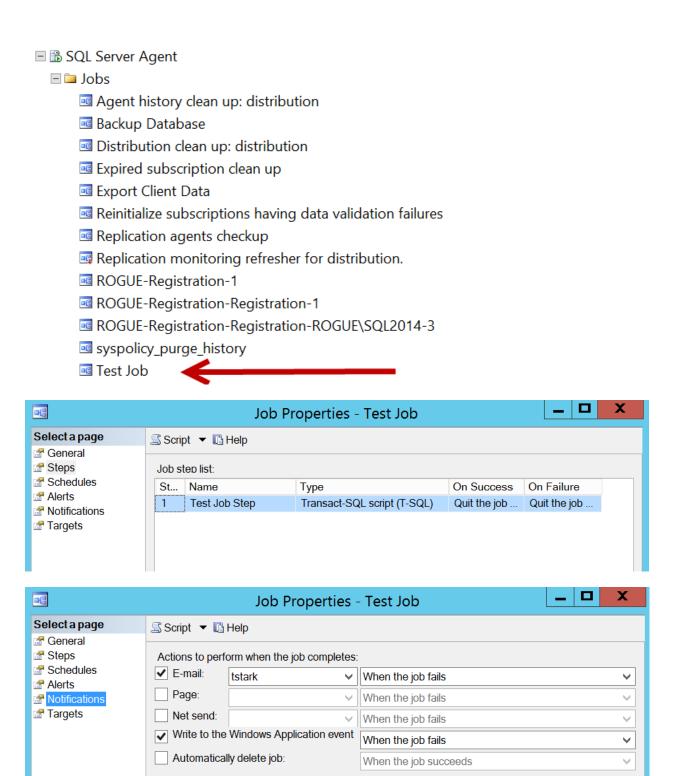


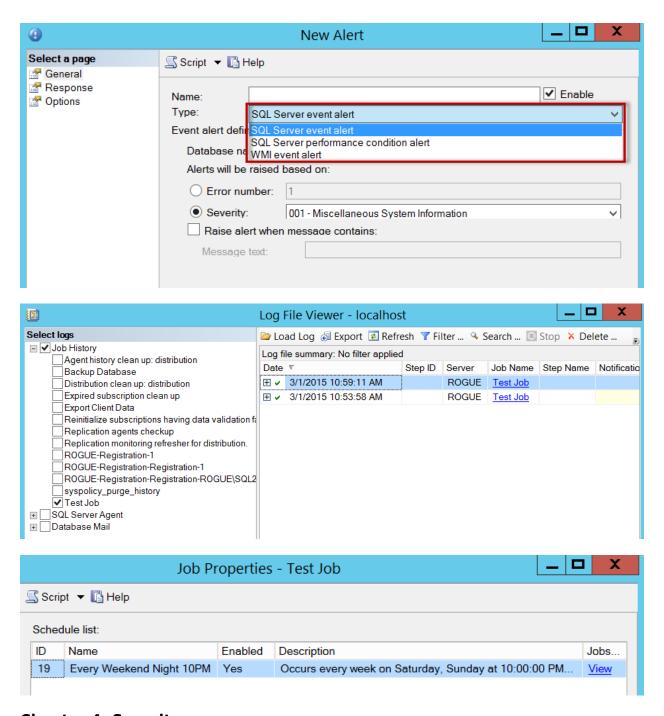
□ B SQL Server Agent

- 🖃 🗀 Jobs
 - Agent history clean up: distribution
 - Backup Database
 - Distribution clean up: distribution
 - Expired subscription clean up
 - Export Client Data
 - Reinitialize subscriptions having data validation failures
 - Replication agents checkup
 - Replication monitoring refresher for distribution.
 - ROGUE-Registration-1
 - ROGUE-Registration-Registration-1
 - ROGUE-Registration-Registration-ROGUE\SQL2014-3
 - syspolicy_purge_history
 - Test Job
 - ⅓ Job Activity Monitor

Parent [ROGUE] [Uncategorized (Local)] Category CategoryType CurrentRunRetryAttempt : 0 CurrentRunStatus : Idle : 0 (unknown) CurrentRunStep : 10/23/2014 12:32:02 PM DateCreated DateLastModified : 10/23/2014 12:35:23 PM DeleteLevel : Never Description : No description available. EmailLevel | : Never EventLogLevel | : Never HasSchedule True HasServer : True : True HasStep **IsEnabled** : True JobID : 5f8cdd39-4072-4da0-8ff4-c8187bf220c2 : Local JobType LastRunDate : 10/23/2014 12:35:28 PM LastRunOutcome : Succeeded NetSendLevel : Never : 3/1/2015 4:00:00 AM NextRunDate : 18 NextRunScheduleID OperatorToEmail OperatorToNetSend OperatorToPage OriginatingServer : ROGUE OwnerLoginName : QUERYWORKS\Administrator Never PageLevel 1 StartStepID VersionNumber : Backup Database Name CategoryID JobSteps {Step 1} JobSchedules {Every night}



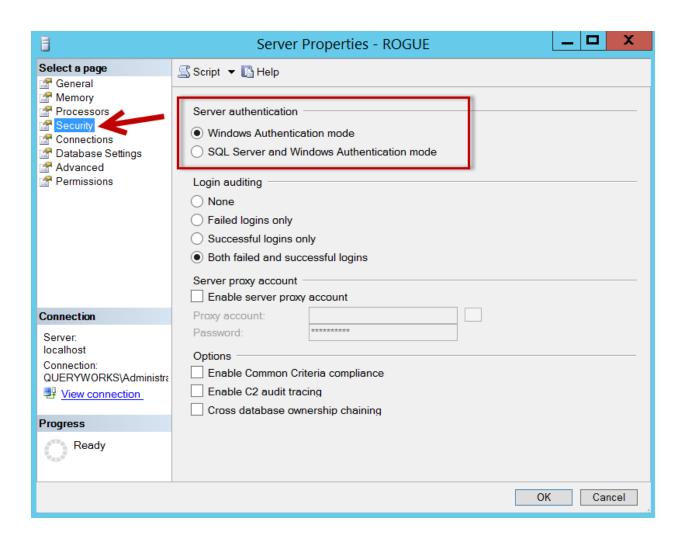


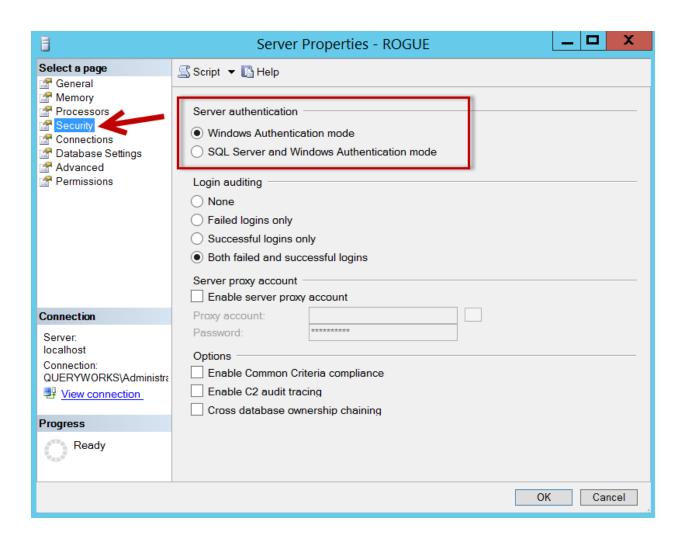


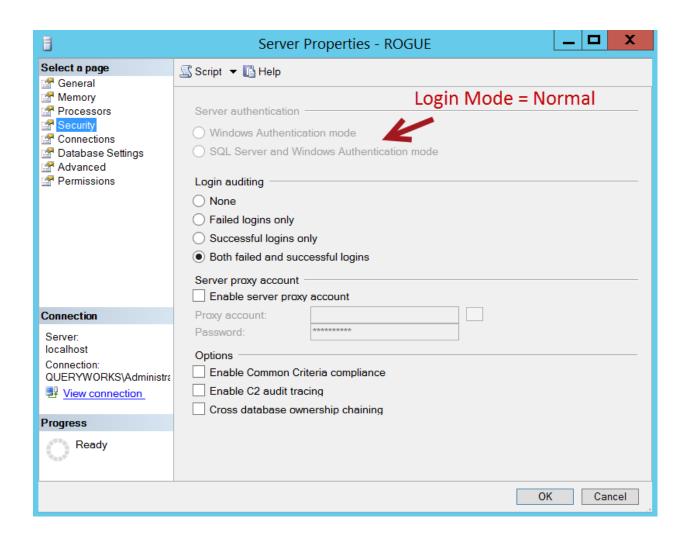
Chapter 4: Security

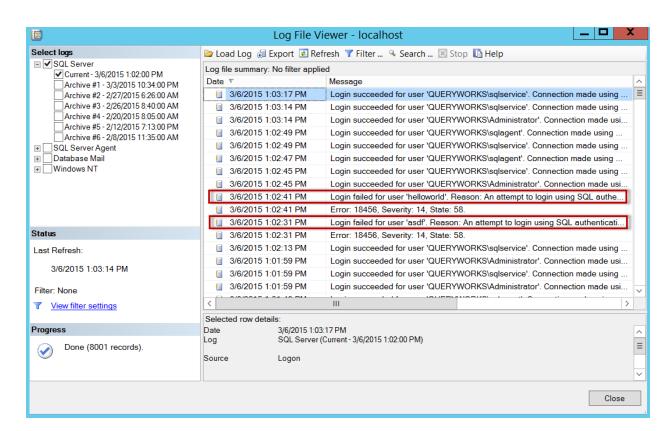
Name	ServiceAccount	ServiceState
MsDtsServer120	QUERYWORKS\sqlservice	Stopped
MSSQL\$SQL01	NT Service\MSSQL\$SQL01	Running
MSSQLFDLauncher	NT Service\MSSQLFDLauncher	Running
MSSQLFDLauncher\$SQL01	NT Service\MSSQLFDLauncher\$SQL01	Running
MSSQLSERVER	QUERYWORKS\sqlservice	Running
MSSQLServerOLAPService		Running
ReportServer	QUERYWORKS\sqlservice	Running
SQLAgent\$SQL01	NT Service\SQLAgent\$SQL01	Stopped
SQLBrowser	NT AUTHORITY\LOCALSERVICE	Running
SQLSERVERAGENT	QUERYWORKS\sqlservice	Running



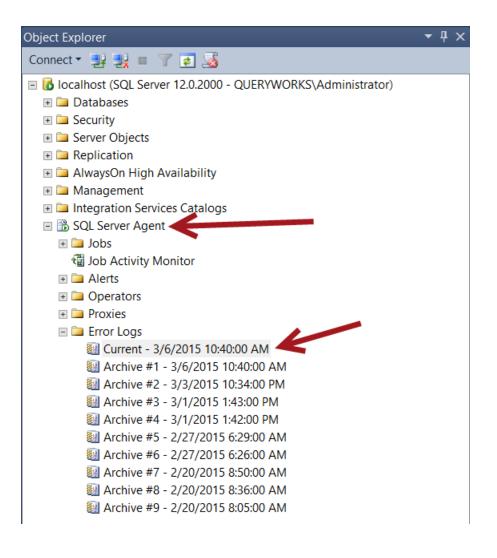


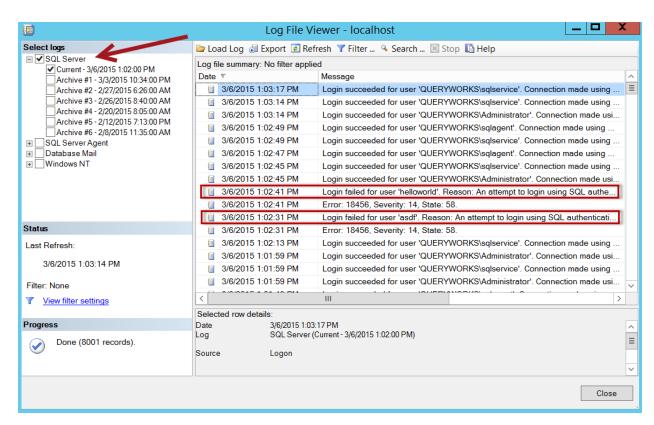


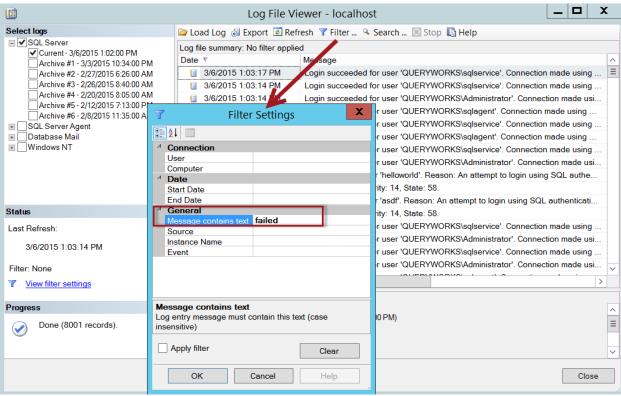




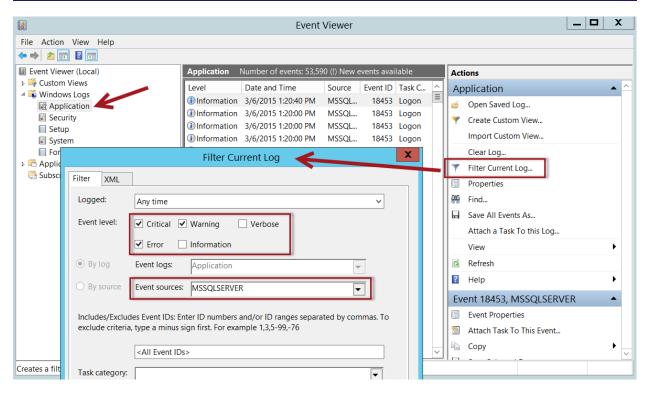
LogDate ProcessInfo Text
-----3/6/2015 1:02:31 PM Logon Login failed for user 'asdf'. Reason: An attempt to login failed for user 'helloworld'. Reason: An attempt to



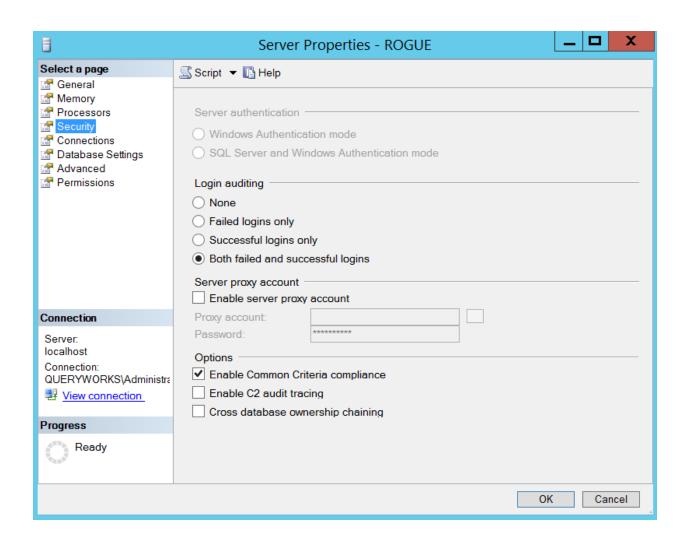


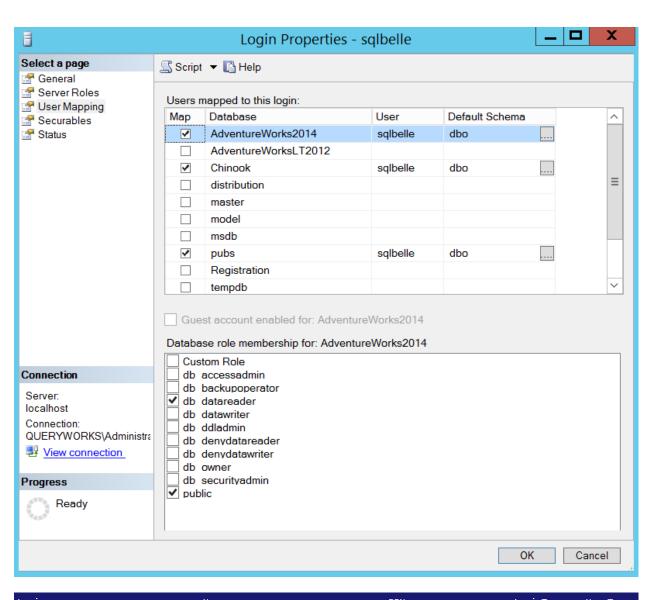


Index Time	EntryType	Source	InstanceID	Message
209410 Mar 01 11:56 206745 Feb 28 08:23 206702 Feb 28 07:58	Error	MSSQLSERVER MSSQLSERVER MSSQLSERVER	3221226385	<pre>c:\\Temp\\datafile1.ndf: Could not find database Could not find database</pre>



LogDate ProcessInfo Text
------ 3/6/2015 1:02:31 PM Logon Login failed for user 'asdf'. Reason: An attempt to login 3/6/2015 1:02:41 PM Logon Login failed for user 'helloworld'. Reason: An attempt to





Login	User	DBName	LoginType	UserType
QUERYWORKS\killua	QUERYWORKS\killua	AdventureWorks2014	WindowsUser	SqlLogin
NT AUTHORITY\NETWORK SERVICE	NT AUTHORITY\NETWORK SERVICE	AdventureWorksLT2012		SqlLogin
QUERYWORKS\gon	QUERYWORKS\gon	AdventureWorksLT2012	WindowsUser	SqlLogin
kurapika	kurapika	Chinook	SqlLogin	SqlLogin
QUERYWORKS\gon	QUERYWORKS\gon	Chinook	WindowsUser	SqlLogin
QUERYWORKS\killua	QUERYWORKS\killua	Chinook	WindowsUser	SqlLogin
sqlbelle	sqlbelle	Chinook	SqlLogin	SqlLogin
##MS_AgentSigningCertificate##	##MS_AgentSigningCertificate##	master	Certificate	Certificate
##MS_PolicyEventProcessingLogin##	##MS_PolicyEventProcessingLogin##	master	SqlLogin	SqlLogin
##MS_PolicyEventProcessingLogin##		msdb	SqlLogin	SqlLogin
##MS_PolicyTsqlExecutionLogin##	##MS_PolicyTsqlExecutionLogin##	msdb	SqlLogin	SqlLogin
	MS_DataCollectorInternalUser	msdb	SqlLogin	NoLogin
QUERYWORKS\killua	QUERYWORKS\killua	pubs	WindowsUser	SqlLogin
sqlbelle	sqlbelle	pubs	SqlLogin	SqlLogin
	wolverine	pubs	SqlLogin	NoLogin
sqlservice	sqlservice	Registration	SqlLogin	SqlLogin

Name	Login Type	Created
<pre>##MS_PolicyEventProcessingLogin## ##MS_PolicyTsqlExecutionLogin##</pre>	SqlLogin SqlLogin	2/20/2014 8:49 PM 2/20/2014 8:49 PM
distributor_admin	SqlLogin	10/25/2014 12:21 PM
eric	SqlLogin	2/28/2015 1:12 AM
kurapika	SqlLogin	10/23/2014 6:48 AM
NT AUTHORITY\SYSTEM	WindowsUser	8/21/2014 7:15 PM
NT SERVICE\MSSQLSERVER NT SERVICE\SQLSERVERAGENT	WindowsUser WindowsUser	8/21/2014 7:15 PM 8/21/2014 7:15 PM 8/21/2014 7:15 PM
NT SERVICE\SQLWriter	WindowsUser	8/21/2014 7:15 PM
NT SERVICE\Winmgmt	WindowsUser	8/21/2014 7:15 PM
QUERYWORKS\Administrator	WindowsUser	8/21/2014 7:15 PM
QUERYWORKS\gon	WindowsUser	10/20/2014 12:04 PM
QUERYWORKS\killua	WindowsUser	10/20/2014 12:04 PM
QUERYWORKS\sqlagent	WindowsUser	3/6/2015 10:36 AM
QUERYWORKS\srogers	WindowsUser	2/13/2015 10:26 AM
QUERYWORKS\todinson	WindowsUser	2/13/2015 10:27 AM
QUERYWORKS\tstark	WindowsUser	2/13/2015 10:27 AM

account name : QUERYWORKS\Administrator

type : user privilege : admin

mapped Togin name : QUERYWORKS\Administrator

permission path :

account name : QUERYWORKS\sqlagent

type : user privilege : admin

mapped login name : QUERYWORKS\sqlagent

permission path :

account name : QUERYWORKS\srogers

type : user privilege : admin

mapped login name : QUERYWORKS\srogers

permission path :

Login	DBUser	DBName	DBRoles	Object	Permission
QUERYWORKS\tstark QUERYWORKS\tstark	QUERYWORKS\tstark QUERYWORKS\tstark	AdventureWorks2014 AdventureWorks2014 AdventureWorks2014	{db_datawriter} {db_datawriter} {db_datawriter} {db_datareader}	vEmployeeDepartment vEmployeeDepartmentHistory vJobCandidate	SELECT SELECT VIEW DEFINITION VIEW DEFINITION EXECUTE VIEW DEFINITION

Login : QUERYWORKS\tstark
DBUser : QUERYWORKS\tstark
DBName : AdventureWorks2014
DBRoles : {db_datawriter}
Object : vJobCandidate

Permission: VIEW DEFINITION

Login : sqlbelle DBUser : sqlbelle

DBName : AdventureWorks2014
DBRoles : {db_datareader}

Object : uspGetBillOfMaterials

Permission: EXECUTE

Login : sqlbelle DBUser : sqlbelle

DBName : AdventureWorks2014
DBRoles : {db_datareader}

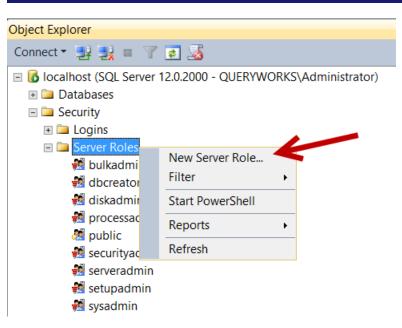
Object : uspGetEmployeeManagers

Permission: VIEW DEFINITION

 Name
 Fixed Role
 Created
 Owner
 Modified

 impersonator
 False
 3/7/2015 11:17 PM
 QUERYWORKS\Administrator
 3/7/2015 11:17 PM

 public
 False
 4/13/2009 12:59 PM
 sa
 4/13/2009 12:59 PM



[Microsoft.SqlServer.Management.Smo.ServerPermission]::

AdministerBulkOperations

AlterAnyAvailabilityGroup

AlterAnyConnection

AlterAnyCredential

AlterAnyDatabase

AlterAnyEndpoint

AlterAnyEventNotification

AlterAnyEventSession

AlterAnyLinkedServer

Memberships:
setupadmin
dbcreator

Grantee PermissionType PermissionState
----eric ALTER ANY DATABASE Grant
eric ALTER SETTINGS Grant
eric CONNECT SQL Grant

PermissionState PermissionType Grantee
----Grant ALTER eric
Grant CONNECT eric
Grant CREATE TABLE eric

PermissionState PermissionType ObjectName Grantee
-----Grant ALTER AdventureWorks2014 Custom Role
Grant CREATE TABLE AdventureWorks2014 Custom Role

Parent : [AdventureWorks2014]

Name : baymax

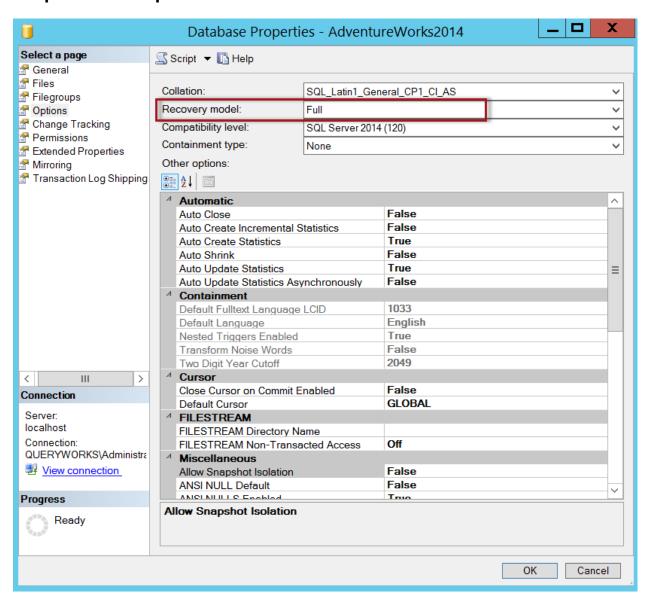
Login :

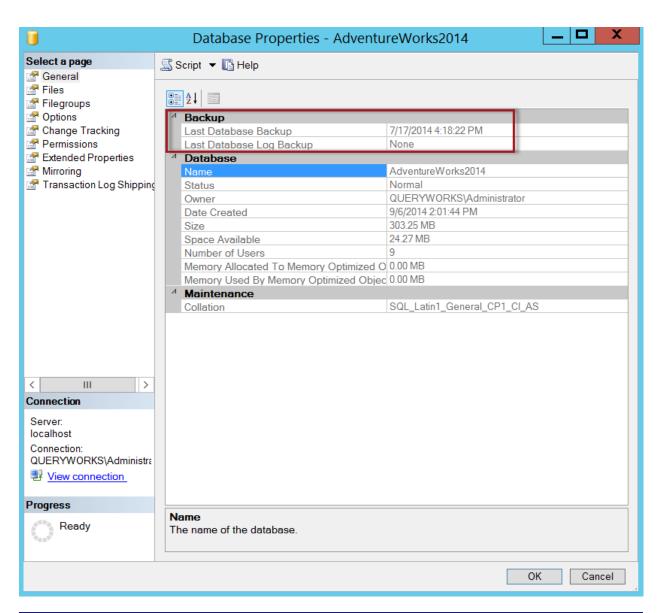
LoginType : SqlLogin UserType : NoLogin Parent : [AdventureWorks2014]

Name : baymax
Login : baymax
LoginType : SqlLogin
UserType : SqlLogin

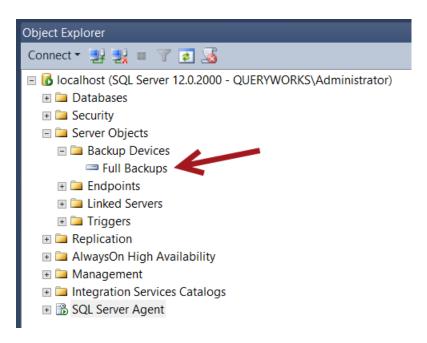
Credential Identity Subsystems Proxy [REPL][QUERYWORKS\Administ... QUERYWORKS\Administrator [REPL][QUERYWORKS\Administ... QUERYWORKS\Administrator [REPL][QUERYWORKS\Administrator QUERYWORKS\Administrator QUER [REPL][QUERYWORKS\Administ... [REPL][QUERYWORKS\Administ... [REPL][QUERYWORKS\Administ... LogReader Snapshot Distribution CmdExec, PowerShell CmdExec, SSIS filemanagercredential QUERYWORKS\filemanager filemanagerproxy sharedfileuser sharedfileuser ROGUE\sharedfileuser

Chapter 5: Backup and Restore





Name	RecoveryModel	LastBackupDate	LastDifferentialBackupDate	LastLogBackupDate
AdventureWorks2014		7/17/2014 4:18:22 PM	1/1/0001 12:00:00 AM	1/1/0001 12:00:00 AM
AdventureWorksLT2012 Chinook		1/1/0001 12:00:00 AM 10/24/2014 10:11:11 AM	1/1/0001 12:00:00 AM 10/24/2014 10:11:11 AM	1/1/0001 12:00:00 AM 10/23/2014 11:58:41 PM
distribution master		1/1/0001 12:00:00 AM 1/1/0001 12:00:00 AM	1/1/0001 12:00:00 AM 1/1/0001 12:00:00 AM	1/1/0001 12:00:00 AM 1/1/0001 12:00:00 AM
model	Full	1/1/0001 12:00:00 AM	1/1/0001 12:00:00 AM	1/1/0001 12:00:00 AM
msdb pubs		1/1/0001 12:00:00 AM 1/1/0001 12:00:00 AM	1/1/0001 12:00:00 AM 1/1/0001 12:00:00 AM	1/1/0001 12:00:00 AM 1/1/0001 12:00:00 AM
Registration	Full	1/1/0001 12:00:00 AM	1/1/0001 12:00:00 AM 1/1/0001 12:00:00 AM	1/1/0001 12:00:00 AM 1/1/0001 12:00:00 AM
tempdb TestDB		1/1/0001 12:00:00 AM 1/1/0001 12:00:00 AM	1/1/0001 12:00:00 AM 1/1/0001 12:00:00 AM	1/1/0001 12:00:00 AM 1/1/0001 12:00:00 AM
TestDB_copy	Full	1/1/0001 12:00:00 AM	1/1/0001 12:00:00 AM	1/1/0001 12:00:00 AM



AdventureWorks2014-Full Database Backup BackupName BackupDescription BackupType 1 ExpirationDate 0 Compressed Position 1 DeviceType UserName QUERYWORKS\Administrator **ROGUE** ServerName AdventureWorks2014 DatabaseName DatabaseVersion 782 9/6/2014 2:01:44 PM DatabaseCreationDate BackupSize 222394368 75000000044700111 FirstLSN 75000000049400001 LastLSN CheckpointLSN 75000000044700111 44000000084000074 DatabaseBackupLSN 3/14/2015 8:59:24 AM BackupStartDate BackupFinishDate 3/14/2015 8:59:35 AM SortOrder 52 0 CodePage UnicodeLocaleId 1033 UnicodeComparisonStyle 196609 120 CompatibilityLevel SoftwareVendorId 4608 SoftwareVersionMajor 12 SoftwareVersionMinor 0 SoftwareVersionBuild 2000 Machi neName ROGUE

```
AdventureWorks2014_Data
 _ogicalName
                          \hbox{C:\Program Files\Microsoft SQL Server\MSSQL12.MSSQLSERVER\MSSQL\DATA\AdventureWorks2014\_Data.mdf D } \\
PhysicalName
Type
FileGroupName
                         PRIMARY
248774656
35184372080640
Size
MaxSize
FileId
CreateLSN
DropLSN
UniqueId
                         fbf02ee2-5f78-44b2-972f-df53a8fe35ee
ReadOnlyLSN
ReadWriteLSN
BackupSizeInBytes
                        : 222167040
: 512
SourceBlockSize
FileGroupId
LogGroupGUID :
DifferentialBaseLSN :
DifferentialBaseGUID :
                         44000000084000074
                         0ac27e09-66d5-4054-b7e5-db56b879912b
                       : False
: True
IsReadOnly
IsPresent
TDEThumbprint
LogicalName
                       PhysicalName
Type
FileGroupName
Size
MaxSize
FileId
                         69206016
                         2199023255552
2
0
0
CreateLSN
DropLSN
                          1ef63d26-36ae-4d8f-92ae-662d78b25805
UniqueId
ReadOnlyLSN
```

<

Backing up (Database: 'AdventureWorks2014'; Server: 'ROGUE'; Action = 'Database') . 50% complete.

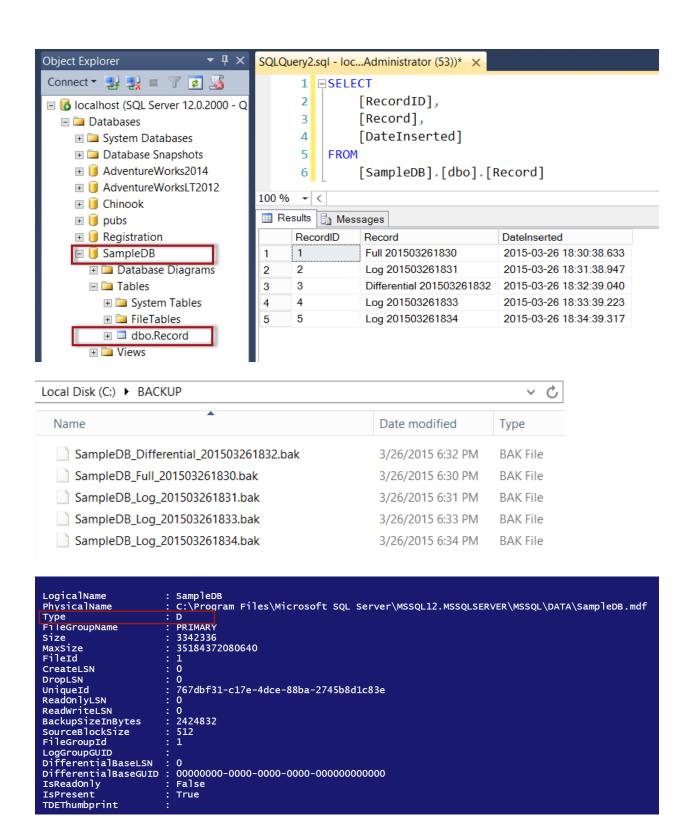
```
NAME
Backup-SqlDatabase

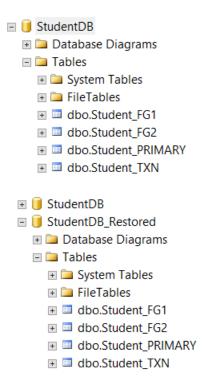
SYNOPSIS
The Backup-SqlDatabase cmdlet performs backup operations on a SQL Server database.

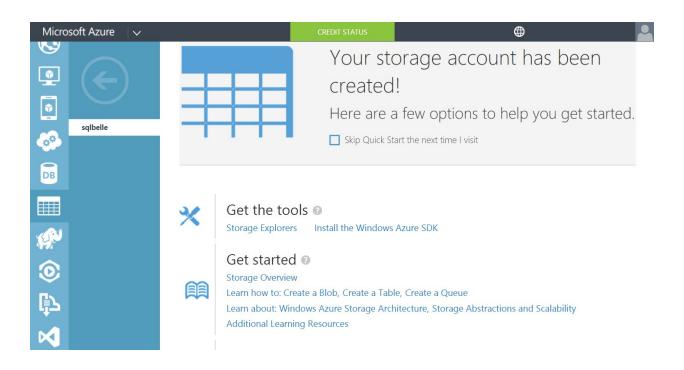
SYNTAX
Backup-SqlDatabase [-Database] < String> [-BackupFile] < String[]> [-BackupAction < BackupActionType>] [-BackupContainer < String>] [-BackupDevice < Backup-SqlDatabase] < String>] [-BackupSetDatabase] < String>] [-BackupSetDatabase] [-CompressionOption < Backup-SqlDatabaseFileGroup < String[]>] [-DatabaseFileGroup < String[]>] [-MactinabaseFileGroup < String[]>] [-Mactinabase < String>] [-Mactinabase < String] [-
```

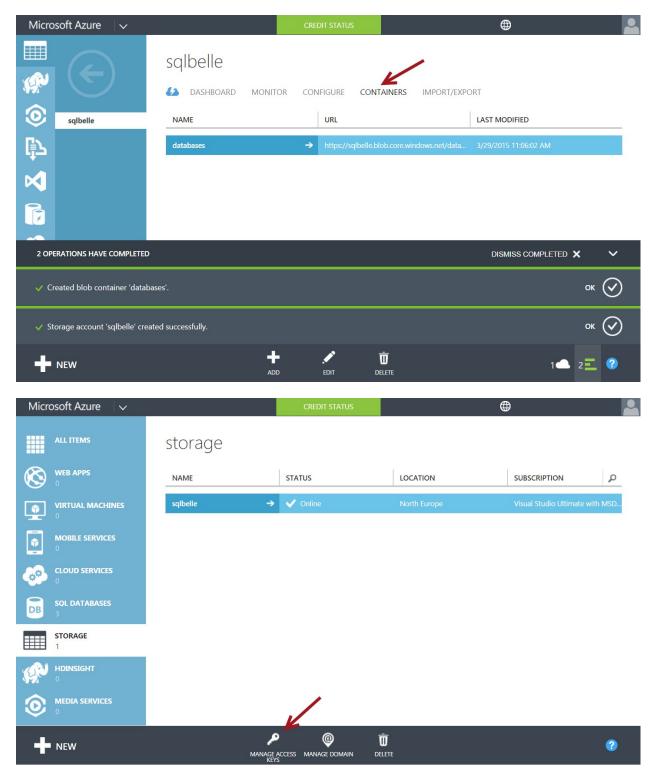
-CompressionLevel



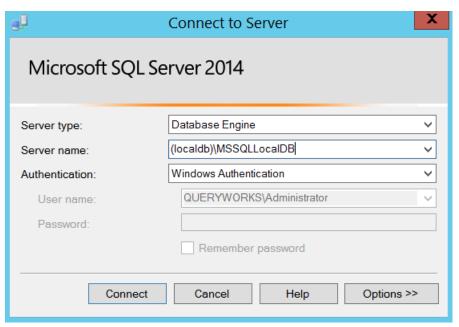


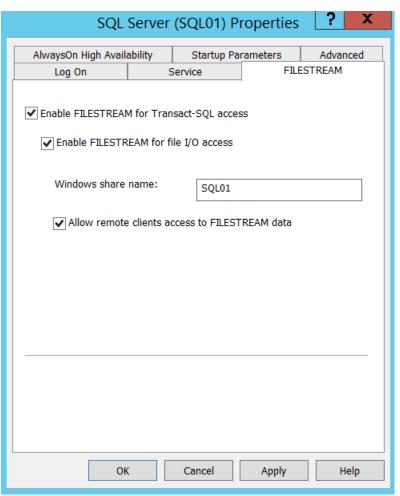


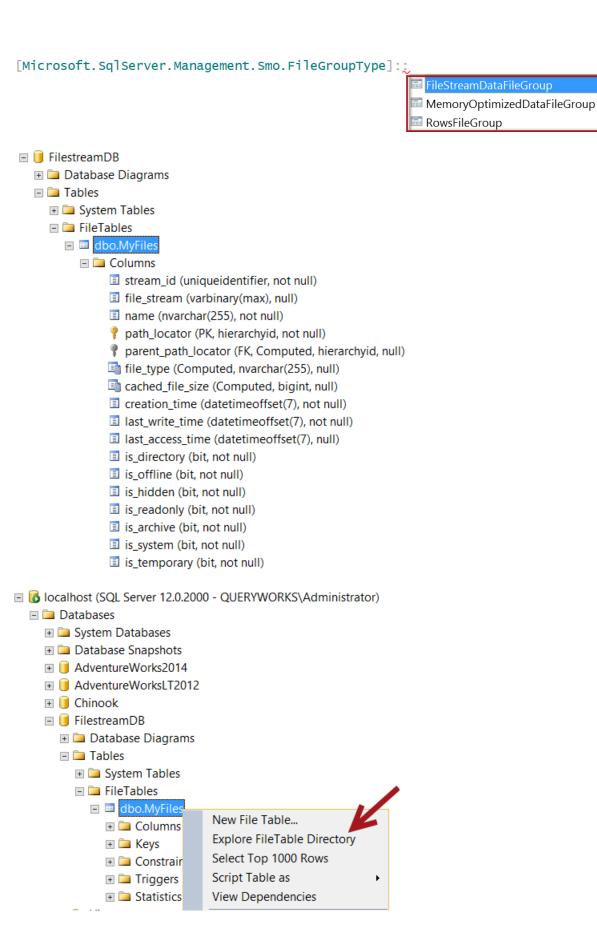




Chapter 6: Advanced Administration







This folder is empty.

[master] ActiveForServiceBrokerDialog ExpirationDate False 4/10/2017 12:00:00 AM 261 ID This is a test certificate. 1/1/0001 12:00:00 AM Issuer LastBackupDate dbo
Password

1a 55 d9 87 97 fe 8a 96 4f cd 6d 09 f6 b7 le bb
{1, 6, 0, 0...}
4/10/2015 12:00:00 AM
This is a test certificate.
{119, 109, 104, 211...}
Microsoft.SqlServer.Management.Smo.CertificateEvents
Test Certificate
Server[@Name='ROGUE']/Database[@Name='master']/Certificate[@Name='Test Certificate']
{Name=ActiveForServiceBrokerDialog/Type=System.Boolean/Writable=True/Value=False,
Name=ExpirationDate/Type=System.DateTime/Writable=True/Value=04/10/2017 00:00:00,
Name=ID/Type=System.Int32/Writable=False/Value=261,
Name=Issuer/Type=System.String/Writable=False/Value=This is a test certificate....} PrivateKeyEncryptionType Serial Sid StartDate Subject Thumbprint Events Name Urn Properties UserData IsDesignMode False

4/16/2015 11:41:07 PM 4/16/2015 11:41:07 PM DateLastModified IsEncryptedByServer True False [TestDB] **IsOpen** Parent Server[@Name='ROGUE']/Database[@Name='TestDB']/MasterKey
{Name=CreateDate/Type=System.DateTime/Writable=False/Value=04/16/2015 23:41:07,
Name=DateLastModified/Type=System.DateTime/Writable=False/Value=04/16/2015 23:41:07,
Name=IsEncryptedByServer/Type=System.Boolean/Writable=False/Value=True,
Name=IsOpen/Type=System.Boolean/Writable=False/Value=False} Urn **Properties** UserData

State

Existing IsDesignMode False

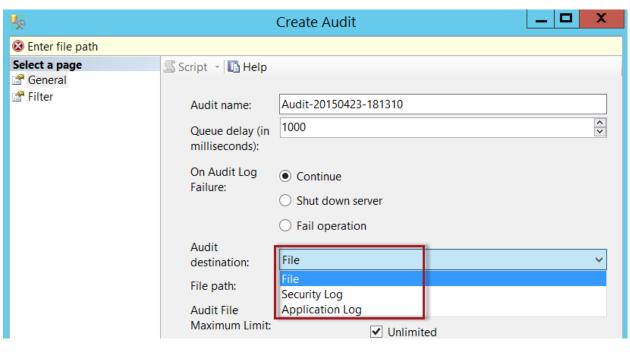
Encryption

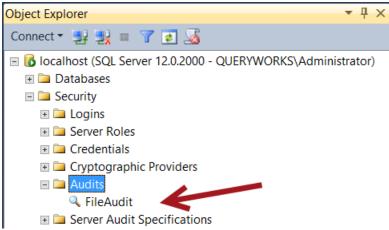
CreateDate

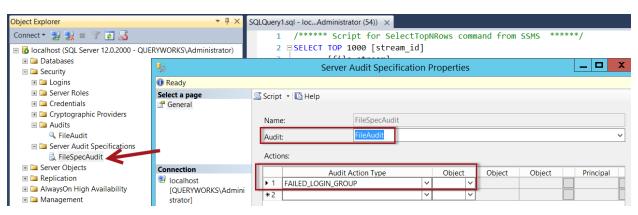
Name : EncryptionAsymmetricKey Name : EncryptionSymmetricKey

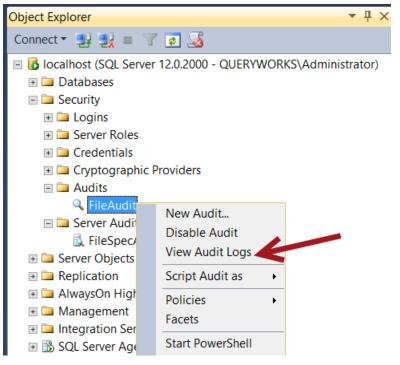
	name	is_encrypted	encryption_state	percent_complete	key_algorithm	key_length
1	AdventureWorks2014	0	NULL	NULL	NULL	NULL
2	AdventureWorksLT2012	0	NULL	NULL	NULL	NULL
3	Chinook	0	NULL	NULL	NULL	NULL
4	distribution	0	NULL	NULL	NULL	NULL
5	FileTableDB	0	NULL	NULL	NULL	NULL
6	FullTextCatalogDB	0	NULL	NULL	NULL	NULL
7	master	0	NULL	NULL	NULL	NULL
8	model	0	NULL	NULL	NULL	NULL
9	msdb	0	NULL	NULL	NULL	NULL
10	pubs	0	NULL	NULL	NULL	NULL
11	Registration	0	NULL	NULL	NULL	NULL
12	SnapshotDB	0	NULL	NULL	NULL	NULL
13	SnapshotDB_SS	0	NULL	NULL	NULL	NULL
14	tempdb	0	3	0	AES	256
15	TestDB	1	3	0	AES	256

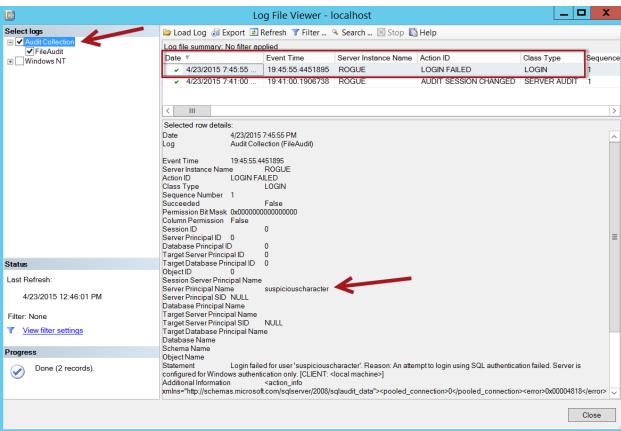
Chapter 7: Audit and Policies



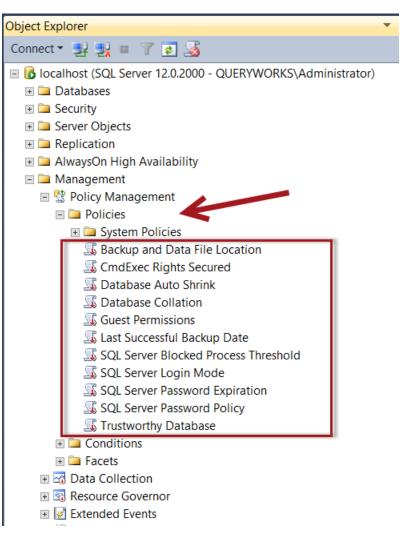








Name	PropertyName	PropertyType
ApplicationRole	CreateDate	System.DateTime
ApplicationRole	DateLastModified	System.DateTime
ApplicationRole	ID	System.Int32
ApplicationRole	DefaultSchema	System.String
ApplicationRole	Name	System.String
AsymmetricKey	ID	System.Int32
AsymmetricKey	KeyEncryptionAlgorithm	Microsoft.SqlServer.Management
AsymmetricKey	KeyLength	System.Int32
AsymmetricKey	Owner	System.String
AsymmetricKey	PrivateKeyEncryptionType	Microsoft.SqlServer.Management
AsymmetricKey	PublicKey	System.Byte[]
AsymmetricKey	Sid	System.Byte[]
AsymmetricKey	Thumbprint	System.Byte[]
AsymmetricKey	ProviderName	System.String
AsymmetricKey	Name	System.String
Audit	CreateDate	System.DateTime
Audit	DateLastModified	System.DateTime
Audit	DestinationType	Microsoft.SqlServer.Management
Audit	Enabled	System.Boolean
Audit	FileName	System.String
Audit	FilePath	System.String
Audit	Guid	System.Guid -
Audit	ID	System.Int32
Audit	MaximumFileSize	System.Int32
Audit	MaximumFileSizeUnit	Microsoft.SqlServer.Management
Audit	MaximumRolloverFiles	System.Int64



Name : CmdExec Rights Secured CreateDate : 10/25/2014 9:14:45 PM

Condition : CmdExec Rights for sysadmins Only ObjectSet : CmdExec Rights Secured_ObjectSet

Enabled : False

Name : Database Auto Shrink CreateDate : 10/25/2014 9:14:45 PM Condition : Auto Shrink Disabled

ObjectSet : Database Auto Shrink_ObjectSet

Enabled : False

Name : Database Collation CreateDate : 10/25/2014 9:14:45 PM

Condition : Collation Matches master or model

ObjectSet : Database Collation_ObjectSet

Enabled : False

Name : Guest Permissions

CreateDate: 10/25/2014 9:14:45 PM Condition: Has No Database Access

ObjectSet : Guest Permissions_ObjectSet

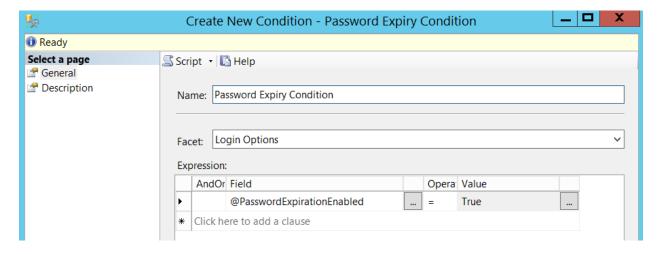
Enabled : False

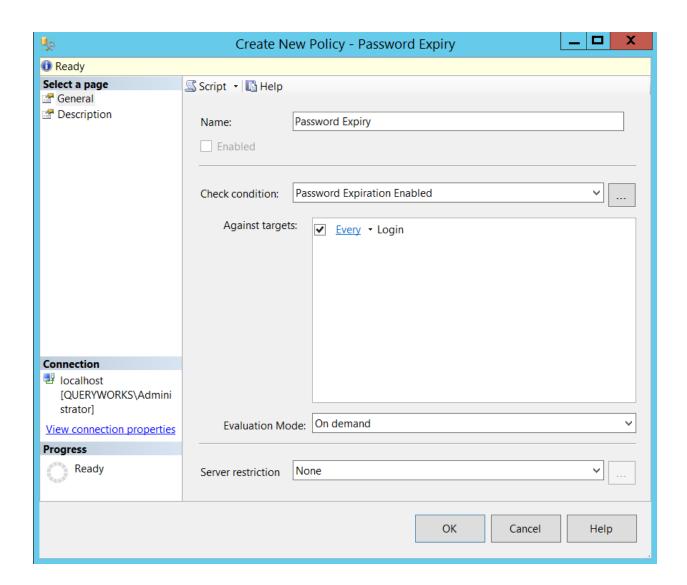
Name : Last Successful Backup Date

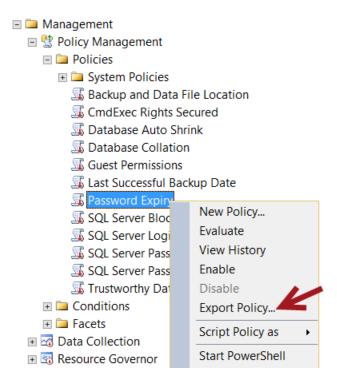
CreateDate: 10/25/2014 9:14:45 PM Condition: Safe Last Backup Date

ObjectSet : Last Successful Backup Date_ObjectSet

Enabled : False

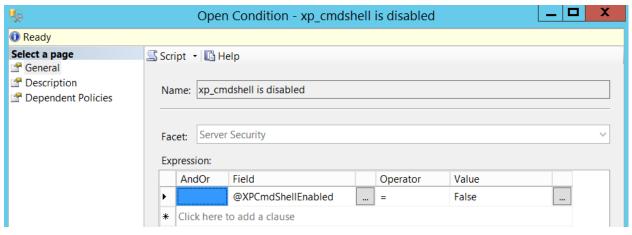






Name : xp_cmdshell is disabled Facet : IServerSecurityFacet ExpressionNode : @XPCmdShellEnabled = False()





```
Evaluation Histories

ID Policy Name Result Start Date End Date Messages

9 xp_cmdshell must be disabled False 4/12/2015 7:34 PM 4/12/2015 7:34 PM
10 xp_cmdshell must be disabled False 4/12/2015 7:34 PM 4/12/2015 7:35 PM
11 xp_cmdshell must be disabled False 4/12/2015 7:35 PM 4/12/2015 7:35 PM
12 xp_cmdshell must be disabled False 4/12/2015 7:36 PM 4/12/2015 7:36 PM
13 xp_cmdshell must be disabled False 4/12/2015 7:36 PM 4/12/2015 7:36 PM
14 xp_cmdshell must be disabled False 4/12/2015 7:36 PM 4/12/2015 7:36 PM
17 xp_cmdshell must be disabled False 4/12/2015 7:36 PM 4/12/2015 7:36 PM

18 xp_cmdshell must be disabled False 4/12/2015 7:36 PM 4/12/2015 7:36 PM

19 xp_cmdshell must be disabled False 4/12/2015 7:36 PM 4/12/2015 7:36 PM

10 xp_cmdshell must be disabled False 4/12/2015 7:36 PM 4/12/2015 7:36 PM
```

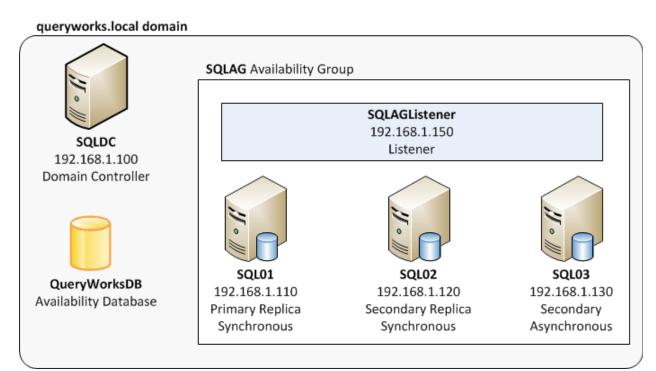
```
StartTime
                  : 04/16/2015 22:17:20
CPU
Reads
EventClass
                  : ExistingConnection
Duration
NTUserName
                  : Administrator
                  : 51
SPID
Writes
                   -- network protocol: LPC
set quoted_identifier on
TextData
                    set arithabort off
                    set numeric_roundabort off
                    set ansi_warnings on
                    set ansi_padding on
                    set ansi_nulls on
                    set concat_null_yields_null on
                    set cursor_close_on_commit off
set implicit_transactions off
                    set language us_english
                    set dateformat mdy
                    set datefirst 7
                    set transaction isolation level read committed
EndTime
ApplicationName: SQL Server Profiler - 27a6f38a-d0bc-49fd-b806-3f4570642be5
LoginName
                    QUERYWORKS\Administrator
ClientProcessID :
                    3632
```

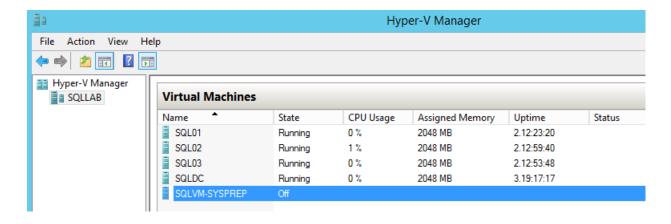
```
$hashtable = $null;
    $hashtable = @{
    "EventClass"="SQL:BatchStarting"
    "TextData"=" set quoted_identifier off "
    "ApplicationName"="SQLAgent - Job Manager"
    "NTUserName"="sqlagent"
    "LoginName"="QUERYWORKS\sqlagent"
    "CPU"=""
    "Reads"=""
    "Writes"=""
    "Duration"=""
    "ClientProcessID"="3032"
    "SPID"="63"
    "StartTime"="09/20/2015 10:32:55"
    "EndTime"=""
}
```

```
: 04/16/2015 22:35:16
StartTime
                 : 16
CPU
                 : 64
Reads
EventClass
                 : SQL:BatchCompleted
Duration
                 : 11084
                 : Administrator
NTUserName
                 : 55
SPID
Writes
                 : 0
TextData
                 : SELECT
                   SCHEMA_NAME(tt.schema_id) AS [Schema],
                   tt.name AS [Name]
                   FROM
                   sys.table_types AS tt
                   INNER JOIN sys.schemas AS stt ON stt.schema_id = tt.schema_id
                   ORDER BY
                   [Schema] ASC, [Name] ASC
EndTime : 04/16/2015 22:35:16
ApplicationName : Microsoft SQL Server Management Studio - Transact-SQL IntelliSense
                 : QUERYWORKS\Administrator
LoginName
ClientProcessID: 4624
```

```
$hashtable = $null;
    $hashtable = @{
    "EventClass"="SQL:BatchStarting"
    "TextData"=" set quoted_identifier off "
    "ApplicationName"="SQLAgent - Job Manager"
    "NTUserName"="sqlagent"
    "LoginName"="QUERYWORKS\sqlagent"
    "CPU"=""
    "Reads"=""
    "Writes"=""
    "Duration"=""
    "ClientProcessID"="3032"
    "SPID"="63"
    "StartTime"="09/20/2015 10:32:55"
    "EndTime"=""
}
```

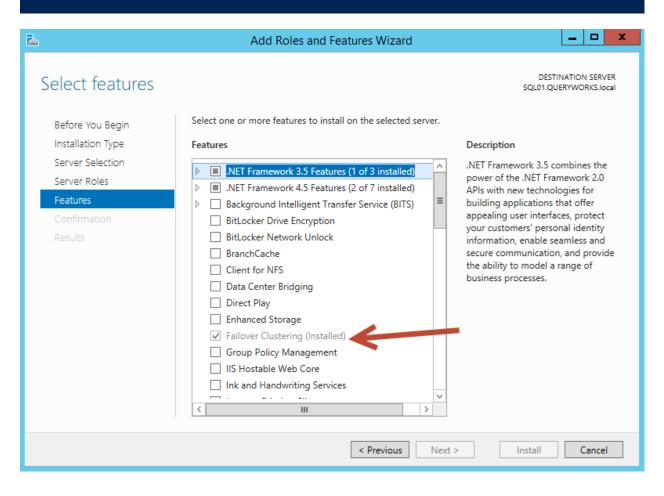
Chapter 8: High Availability with AlwaysOn

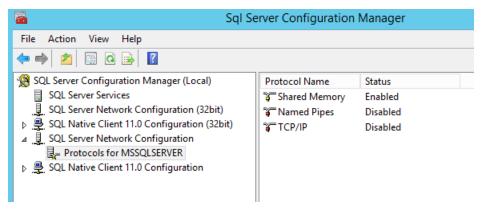


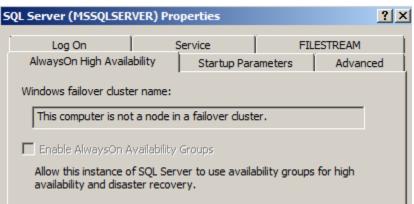


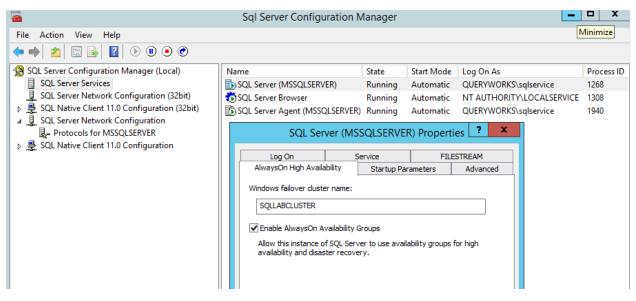
PS SQLSERVER:\> C:\Users\Administrator.QUERYWORKS\Documents\Check Failover Cluster.ps1

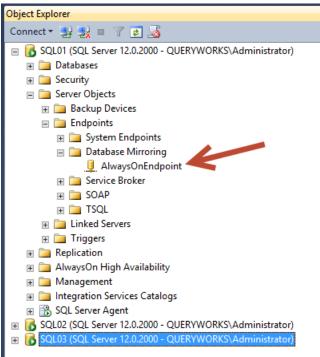
Display Name Name Install State
----[X] Failover Clustering Failover-Clustering Installed

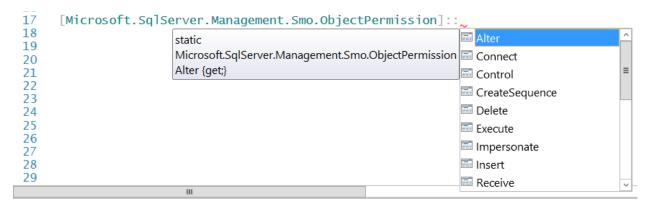


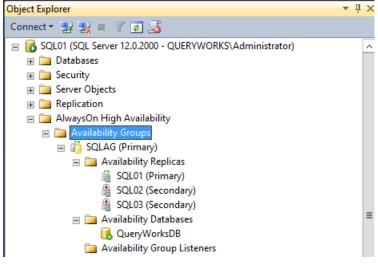


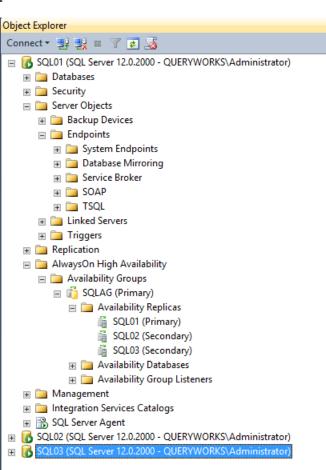


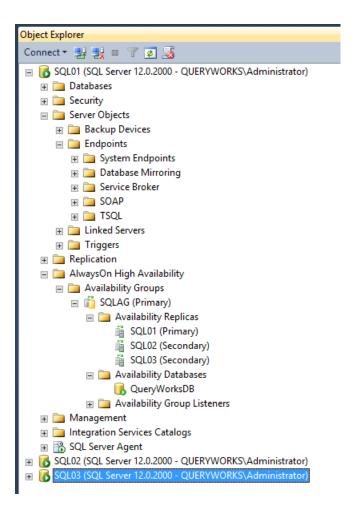


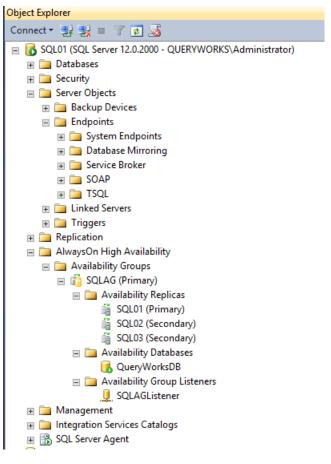


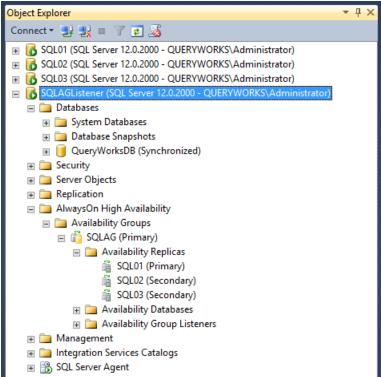


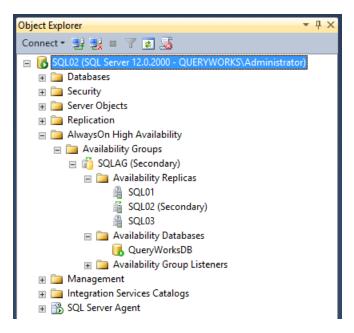


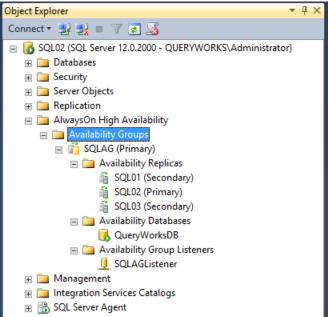


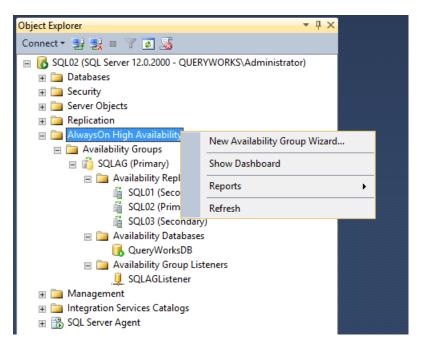


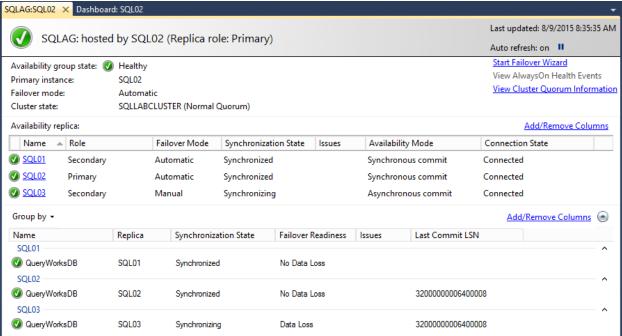


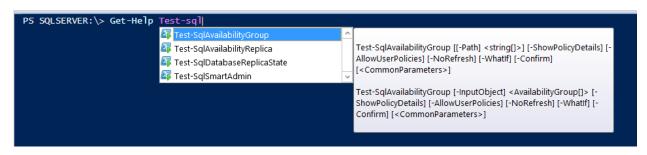












PS SQLSERVER:\> Test-SqlAvailabilityGroup -Path \$AGPath

HealthState Name Healthy **SOLAG**

Parent [SQL01] AutomatedBackupPreference Secondary

OnCriticalServerErrors FailureConditionLevel

HealthCheckTimeout 30000 ID 65537 LocalReplicaRole Primary

PrimaryReplicaServerName SQL01

4053832c-64ab-4ad5-96e1-3e2b6a7f4389 UniqueId

{SQL01, SQL02, SQL03} AvailabilityReplicas AvailabilityDatabases {QueryWorksDB}

DatabaseReplicaStates {SQLAG, SQLAG, SQLAG} {SQLAGListener}

AvailabilityGroupListeners:

SQLAG Name

HealthState AvailabilityGroup Name Healthy **SQLAG** SOL 01

Parent [SQLAG]

SynchronousCommit 50 AvailabilityMode

BackupPriority

ConnectionModeInPrimaryRole AllowAllConnections ConnectionModeInSecondaryRole AllowNoConnections ConnectionState Connected

CreateDate 8/3/2015 11:32:36 PM 8/3/2015 11:32:36 PM DateLastModified TCP://SQL01:5022 EndpointUr1

FailoverMode Automatic

JoinState JoinedStandaloneInstance

LastConnectErrorDescription LastConnectErrorNumber

1/1/1900 12:00:00 AM LastConnectErrorTimestamp

MemberState **Online** OperationalState **Online**

Owner QUERYWORKS\Administrator

QuorumVoteCount

ReadonlyRoutingConnectionUrl

Role Primary

RollupRecoveryState RollupSynchronizationState Online | Synchronized

SessionTimeout

UniqueId 3477fd9e-9b6c-4f25-b96c-860ffa3d1afe

ReadonlyRoutingList {} SOL01 Name

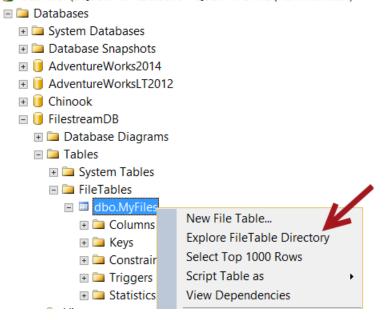
HealthState	AvailabilityGroup	AvailabilityReplica	Name
Healthy	SQLAG	SQL01	QueryWorksDB
Healthy	SQLAG	SQL02	QueryWorksDB
Healthy	SQLAG	SQL03	QueryWorksDB

```
Parent
                                  : [SQLAG]
AvailabilityDateabaseId
AvailabilityGroupId
AvailabilityGroupName
                                  : 6cf05ca7-45ad-49f2-af4d-02a34d898cdc
                                  : 4053832c-64ab-4ad5-96e1-3e2b6a7f4389
                                  : SQLAG
AvailabilityReplicaId
                                  : 3477fd9e-9b6c-4f25-b96c-860ffa3d1afe
DatabaseId
EndOfLogLSN
                                  : 3200000011200001
EstimatedDataLoss
                                  : 0
EstimatedRecoveryTime
                                  : -1
FileStreamSendRate
                                  : -1
IsFailoverReady
                                  : True
IsJoined
                                  : True
IsLocal
                                  : True
IsSuspended
                                 : False
                                 : 31000000042400001
: 8/3/2015 9:55:13 PM
LastCommitLSN
LastCommitTime
                                 : 3200000012000001
LastHardenedLSN
                                 : 1/1/1900 12:00:00 AM
: 0
: 1/1/1900 12:00:00 AM
: 0
LastHardenedTime
LastReceivedLSN
LastReceivedTime
LastRedoneLSN
LastRedoneTime
                                 : 1/1/1900 12:00:00 AM
LastSentLSN
                                 : 0
LastSentTime
                                  : 1/1/1900 12:00:00 AM
LogSendQueueSize
LogSendRate
RecoveryLSN
                                  : 4294967295429496729500001
RedoQueueSize
                                  : -1
RedoRate
ReplicaAvailabilityMode
ReplicaRole
                                  : SynchronousCommit
                                  : Primary
                                  : NotAppĺicable
SuspendReason
SynchronizationPerformance
SynchronizationState
                                  : -1
                                  : Synchronized
TruncationLSN : 320000
AvailabilityReplicaServerName : SQL01
                                  : 32000000006400001
AvailabilityDatabaseName : QueryWorksDB
```

Chapter 9: SQL Server Development

```
1 172-32-1176|White|Johnson|408 496-7223|10932 Bigge Rd.|Menlo Park|CA|USA
2 213-46-8915|Green|Marjorie|415 986-7020|309 63rd St. #411|Oakland|CA|USA
3 238-95-7766|Carson|Cheryl|415 548-7723|589 Darwin Ln.|Berkeley|CA|USA
4 267-41-2394|0'Leary|Michael|408 286-2428|22 Cleveland Av. #14|San Jose|CA|USA
5 274-80-9391|Straight|Dean|415 834-2919|5420 College Av.|Oakland|CA|USA
6 341-22-1782|Smith|Meander|913 843-0462|10 Mississippi Dr.|Lawrence|KS|USA
7 409-56-7008|Bennet|Abraham|415 658-9932|6223 Bateman St.|Berkeley|CA|USA
   427-17-2319|Dull|Ann|415 836-7128|3410 Blonde St.|Palo Alto|CA|USA
9 472-27-2349|Gringlesby|Burt|707 938-6445|PO Box 792|Covelo|CA|USA
10 486-29-1786|Locksley|Charlene|415 585-4620|18 Broadway Ay.|San Francisco|CA|USA
11 527-72-3246|Greene|Morningstar|615 297-2723|22 Graybar House Rd.|Nashville|TN|USA
12 648-92-1872|Blotchet-Halls|Reginald|503 745-6402|55 Hillsdale Bl.|Corvallis|OR|USA
13 672-71-3249|Xokomoto|Akiko|415 935-4228|3 Silver Ct.|Walnut Creek|CA|USA
   712-45-1867|del Castillo|Innes|615 996-8275|2286 Cram Pl. #86|Ann Arbor|MI|USA
15 722-51-5454|DeFrance|Michel|219 547-9982|3 Balding Pl.|Gary|IN|USA
16 724-08-9931|Stringer|Dirk|415 843-2991|5420 Telegraph Av. |Oakland|CA|USA
   724-80-9391|MacFeather|Stearns|415 354-7128|44 Upland Hts.|Oakland|CA|USA
18 756-30-7391 | Karsen | Livia | 415 534-9219 | 5720 McAuley St. | Oakland | CA | USA
19 807-91-6654|Panteley|Sylvia|301 946-8853|1956 Arlington Pl.|Rockville|MD|USA
20 846-92-7186|Hunter|Sheryl|415 836-7128|3410 Blonde St.|Palo Alto|CA|USA
21 893-72-1158 | McBadden | Heather | 707 448-4982 | 301 Putnam | Vacaville | CA | USA
22 899-46-2035|Ringer|Anne|801 826-0752|67 Seventh Av.|Salt Lake City|UT|USA
23 998-72-3567|Ringer|Albert|801 826-0752|67 Seventh Av.|Salt Lake City|UT|USA
```





```
/***** Script for SelectTopNRows command from SSMS ******/
      2 ⊟SELECT TOP 1000 [ID]
               ,[FileName]
     3
     4
                ,[InsertedDate]
     5
               ,[InsertedBy]
               ,[XMLStuff]
     6
      7
               ,[FileExtension]
      8
           FROM [SampleDB].[dbo].[SampleXML]
100 % - <
Results hessages
    ID FileName
                      InsertedDate
                                        InsertedBy
                                                              XMI Stuff
                                                                                                    FileExtensi
    1 books.xml
                      2015-05-10 19:02:58.823 QUERYWORKS\Administrator <catalog><book id="bk101"><author>Gambardella, M...
     2 sqlmusings_rss.xml 2015-05-10 19:02:58.857 QUERYWORKS\Administrator <a href="mailto:sqs:smlns:content="http://purl.org/rss/1.0/modules/co..."><a href="mailto:smlns:sml">sss:smlns:content="http://purl.org/rss/1.0/modules/co...</a>
    This PC → Local Disk (C:) → XML Files → XML 2015-May-10-0712PM
                                               Date modified
 Name
                                                                    Type
 books.xml
                                               5/10/2015 7:12 PM
                                                                    XML File
 sqlmusings_rss.xml
                                               5/10/2015 7:12 PM
                                                                    XML File
🔚 rss_2015-May-10-0723PM.xml 🔼
  1
      <?xml version="1.0" encoding="UTF-8"?>
  3
    ⊢ <channel>
  4
          <title><![CDATA[QueryWorks Latest News]]></title>
  5
          <atom:link href="http://www.queryworks.ca/rss.xml" rel="self" type="application/xss+xml" />
          <link>http://www.queryworks.ca/rss.xml</link>
  6
          <description><![CDATA[What's new in the world of QueryWorks]]></description>
  8
          <pubDate>Sun, 10 May 2015 19:23:07 GMT</pubDate>
  9
          <lastBuildDate>Sun, 10 May 2015 19:23:07 GMT</lastBuildDate>
 10
          <managingEditor>info@gueryworks.ca</managingEditor>
 11
          <generator>SQL Server 2014 XML and PowerShell/generator>
 12
          <docs>http://www.queryworks.ca/rss.xml</docs>
 13 🖨
          <item>
 14
            <title>master</title>
            <description>SQL Latin1 General CP1 CI AS</description>
            <quid isPermaLink="false">http://www.queryworks.ca/?p=1
 17
          </item>
 18
          <item>
 19
            <title>tempdb</title>
             <description>SQL_Latin1_General_CP1_CI_AS</description>
            <guid isPermaLink="false">http://www.queryworks.ca/?p=2/guid>
          </item>
          <item>
 24
             <title>model</title>
 25
            <description>SQL_Latin1_General_CP1_CI_AS</description>
 26
            <guid isPermaLink="false">http://www.queryworks.ca/?p=3
 27
          </item>
 28
          <item>
 29
            <title>msdb</title>
 30
            <description>SQL_Latin1_General_CP1_CI_AS</description>
            <guid isPermaLink="false">http://www.queryworks.ca/?p=4
           </item>
 32
```

Congratulations!

```
This is a valid RSS feed.
```

```
<item>
    <title>master</title>
    <description>SQL_Latin1_General_CP1_CI_AS</description>
    <quid isPermaLink="false">http://www.queryworks.ca/?p=1</quid>
</item>
    <itle>tempdb</title>
    <description>SQL_Latin1_General_CP1_CI_AS</description>
    <quid isPermaLink="false">http://www.queryworks.ca/?p=2</quid>
</item>
```



QueryWorks Latest News

What's new in the world of QueryWorks

```
master
SQL_Latin1_General_CP1_CI_AS
tempdb
SQL_Latin1_General_CP1_CI_AS
model
SQL_Latin1_General_CP1_CI_AS
msdb
SQL_Latin1_General_CP1_CI_AS
SampleDB
SQL_Latin1_General_CP1_CI_AS
```

```
🗎 rss_style.xsl 🗵
 5 \not=<head>
 6 d <style type="text/css">
      body {
 8
        font-family: Verdana, "sans-serif";
 9
 10
      h2 a, h2 a:link
 11
       {
        text-decoration:none;
color: #990000;
 12
 13
14
      }
15
      .channeldescrip
16
       {
      background-color: #FFCC66;
17
18
       }
19
       </style>
20 -</head>
 22 div id="rssheader">
23 申
         <h2>
         <xsl:element name="a">
 24 🛱
 25 卓
           <xsl:attribute name="href">
               <xsl:value-of select="channel/link" />
26
27
             </xsl:attribute>
             <xsl:value-of select="channel/title" />
28
 29
           </xsl:element>
30 -
31 -
32 =
33 =
34 =
 30
           </h2>
       </div>
       <div class="rsscontents" style="border-width:0; background-color:#FFF; margin:1em">
         <div class="channeldescrip">
          <h3>
          <xsl:value-of select="channel/description" />
35
36
          </div>
37
```

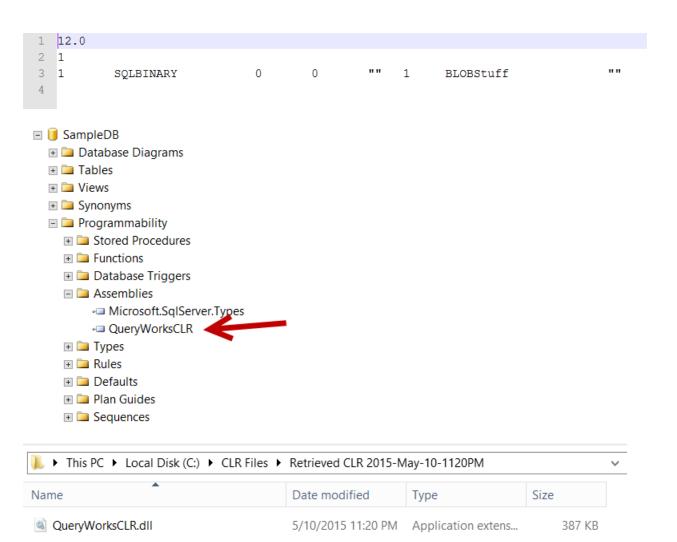
```
1
 3
             "RowError": "",
 4
             "RowState": 1,
             "Table": "",
 5
 6
             "ItemArray": "172-32-1176 White Johnson 408 496-7223
                                                                             10932 Bigge Rd. Menlo Park CA
             "HasErrors": false,
 7
 8
             "CustomerID": "172-32-1176",
             "LastName": "White",
 9
             "FirstName": "Johnson",
             "Phone": "408 496-7223
             "AddressLine": "10932 Bigge Rd.",
             "City": "Menlo Park",
             "State": "CA ",
14
             "Country": "USA"
15
16
        },
             "RowError": "",
18
19
             "RowState": 1,
             "Table": "",
             "ItemArray": "213-46-8915 Green Marjorie 415 986-7020
                                                                            309 63rd St. #411 Oakland CA
21
                                                                                                               USA",
             "HasErrors": false,
             "CustomerID": "213-46-8915",
23
             "LastName": "Green",
24
             "FirstName": "Marjorie",
26
             "Phone": "415 986-7020
             "AddressLine": "309 63rd St. #411",
27
             "City": "Oakland",
28
             "State": "CA ",
29
             "Country": "USA"
        /****** Script for SelectTopNRows command from SSMS ******/
     2 □SELECT TOP 1000 [ID]
              ,[FileName]
     4
               ,[InsertedDate]
     5
               ,[InsertedBy]
     6
               ,[BLOBStuff]
               ,[FileExtension]
           FROM [SampleDB].[dbo].[SampleBLOB]
100 % - <
Results 🔓 Messages
    ID FileName
                          InsertedDate
                                             InsertedBy
                                                                  BLOBStuff
                                                                                                             FileExtensi
    1 Hello SQLSaturday 114.docx 2015-05-10 20:19:28:293 QUERYWORKS\Administrator 0x504B030414000600080000021009E1CDC9A8E010000C20...
    2 speakerevals.jpg
                           2015-05-10 20:19:30.343 QUERYWORKS\Administrator 0xFFD8FFE000104A46494600010001004800480000FFFE001...
2
                                                                                                              .jpg
    3 sqlsat108.png
                           2015-05-10 20:19:32 413 OUFRYWORKS\Administrator 0x89504F470D0A1A0A000000D49484452000002040000021
3
   4 SSRS CheatSheet.pdf
                           2015-05-10 20:19:34.443 QUERYWORKS\Administrator 0x255044462D312E340A25C7EC8FA20A352030206F626A0A...
     This PC ➤ Local Disk (C:) ➤ BLOB Files ➤ Retrieved BLOB 2015-May-10-0840PM
 Name
                                                   Date modified
                                                                          Type
                                                                                                 Size
  Hello SQLSaturday 114.docx
                                                   5/10/2015 8:40 PM
                                                                         Office Open XML ...
                                                                                                       292 KB
  speakerevals.jpg
                                                   5/10/2015 8:40 PM
                                                                        JPEG image
                                                                                                        73 KB
  sqlsat108.png
                                                   5/10/2015 8:40 PM
                                                                        PNG image
                                                                                                        92 KB
```

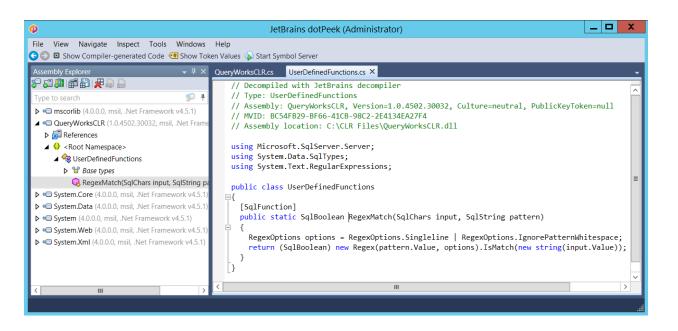
5/10/2015 8:40 PM

PDF File

45 KB

SSRS CheatSheet.pdf





Chapter 10: Business Intelligence

Name	TypeName	Path	CreationDate
Customer Reports Customer List Customer Sales Data Sources AdventureWorks2014	Folder Report Report Folder DataSource	/Customer Reports /Customer Reports/Customer List /Customer Reports/Customer Sales /Data Sources /Data Sources/AdventureWorks2014	5/31/2015 9:24:56 PM 5/31/2015 9:21:59 PM

ID : 7078384d-066f-40f4-ae58-f23b2c06f2a6

Name : Customer List

Path : /Customer Reports/Customer List

VirtualPath :

TypeName : Report
Size : 11320
SizeSpecified : True

Description :

Hidden : False HiddenSpecified : False

CreationDate : 5/31/2015 9:22:00 PM

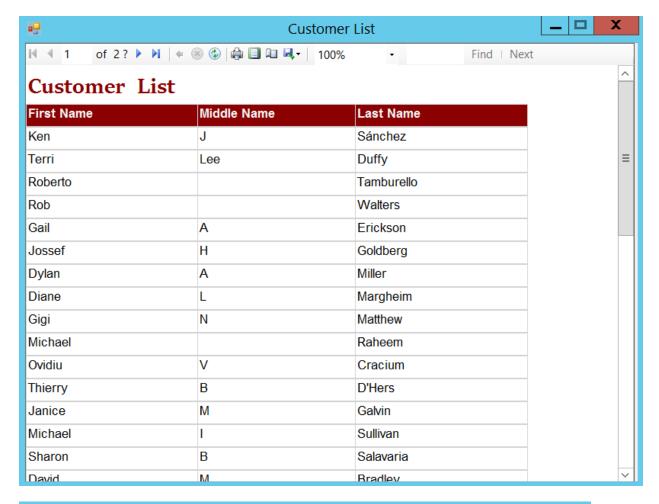
CreationDateSpecified: True

ModifiedDate : 5/31/2015 9:24:56 PM

ModifiedDateSpecified : True

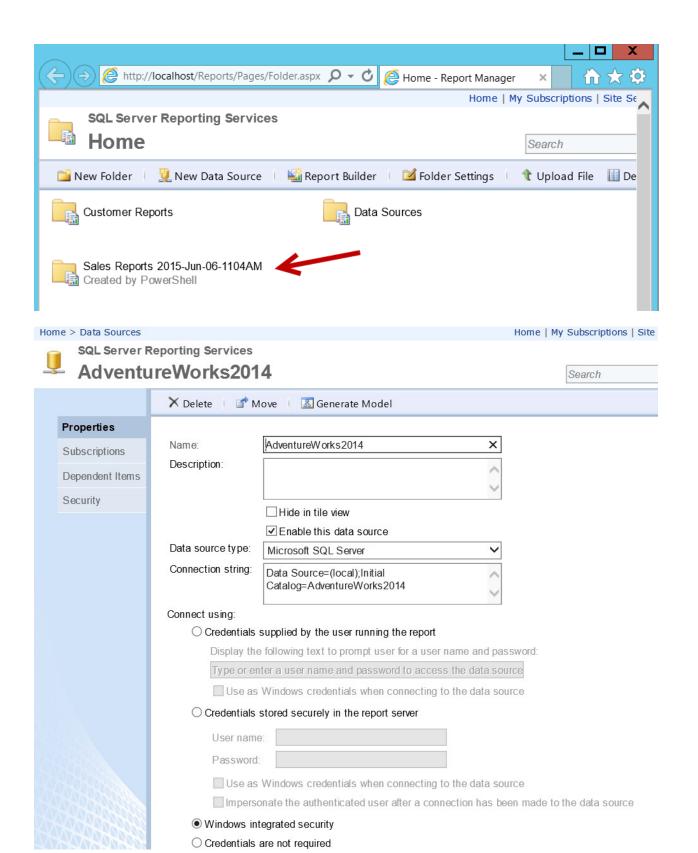
CreatedBy : QUERYWORKS\Administrator ModifiedBy : QUERYWORKS\Administrator

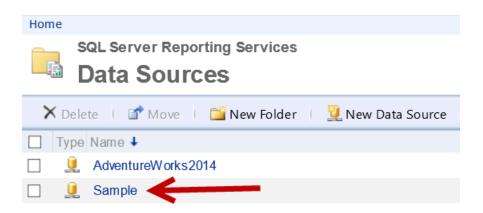
ItemMetadata : {}

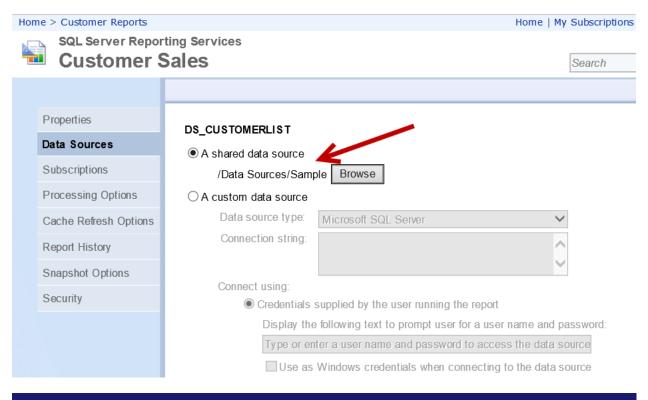


assembly

Assembly Name	Version	Cu	Public Key Token	Proce
ﷺ Microsoft.ReportViewer.WebDesign	12.0.0.0		89845dcd8080cc91	MSIL
Microsoft.ReportViewer.WebForms	12.0.0.0	89845dcd8080cc91		MSIL
Microsoft.ReportViewer.WebForms	10.0.0.0		b03f5f7f11d50a3a	MSIL
Microsoft.ReportViewer.WinForms	12.0.0.0		89845dcd8080cc91	MSIL
■ Microsoft.ReportViewer.WinForms	10.0.0.0		b03f5f7f11d50a3a	MSIL
Microsoft.ServiceHosting.Tools.Develop	1.0.0.0		31bf3856ad364e35	MSIL
id Microsoft.SqlServer.BatchParser	12.0.0.0		89845dcd8080cc91	x86
id Microsoft.SqlServer.BatchParser	11.0.0.0		89845dcd8080cc91	x86







Mode LastWriteTime Length Name

d---- 6/6/2015 2:55 PM Customer Reports

VERBOSE: Saving C:\SSRS\RDL Files 2015-Jun-06-0255PM\Customer Reports\Customer Contact List.rdl

VERBOSE: Saving C:\SSRS\RDL Files 2015-Jun-06-0255PM\Customer Reports\Customer List.rdl

VERBOSE: Saving C:\SSRS\RDL Files 2015-Jun-06-0255PM\Customer Reports\Customer Sales.rdl

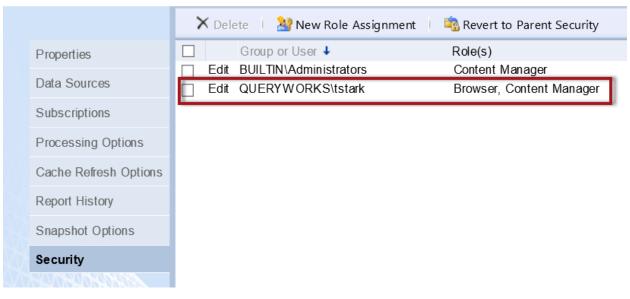
VERBOSE: Done downloading your RDL files to C:\SSRS\RDL Files 2015-Jun-06-0255PM

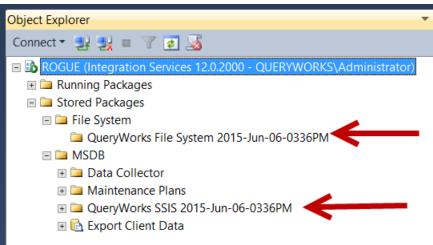
Home > Customer Reports

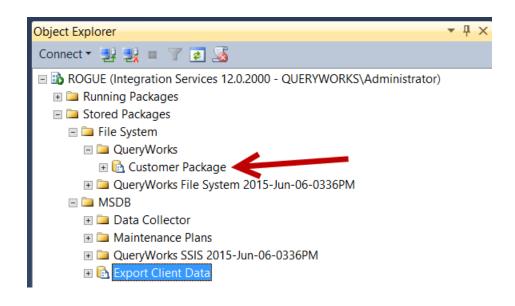


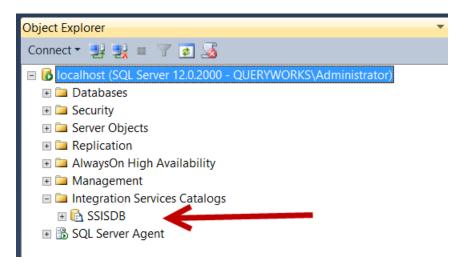
SQL Server Reporting Services

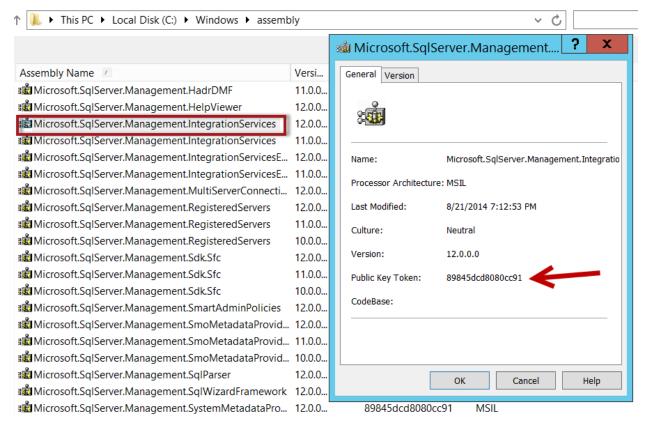
Customer List

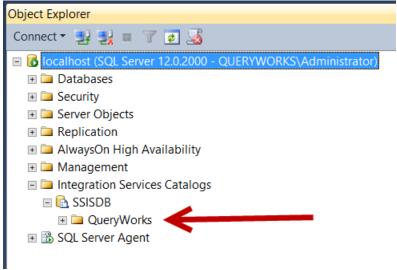


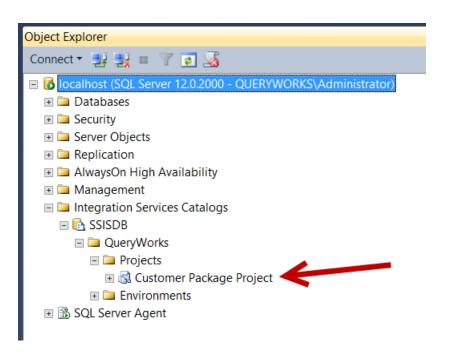


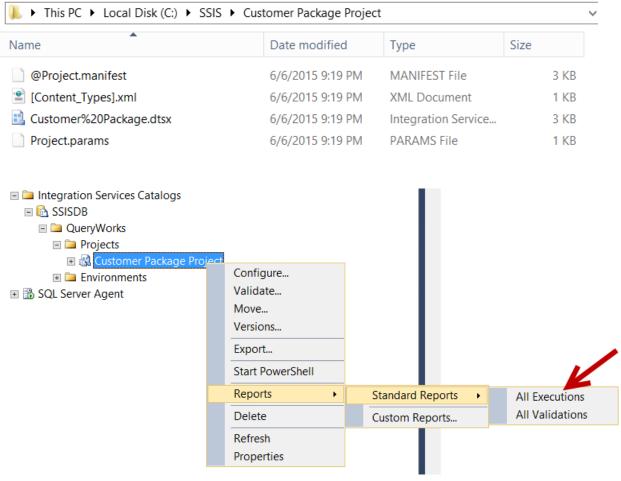


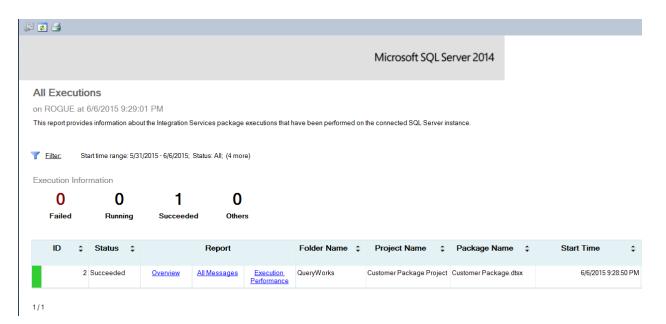








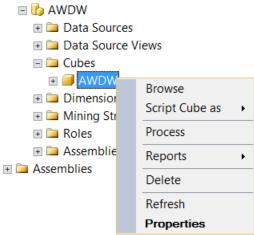


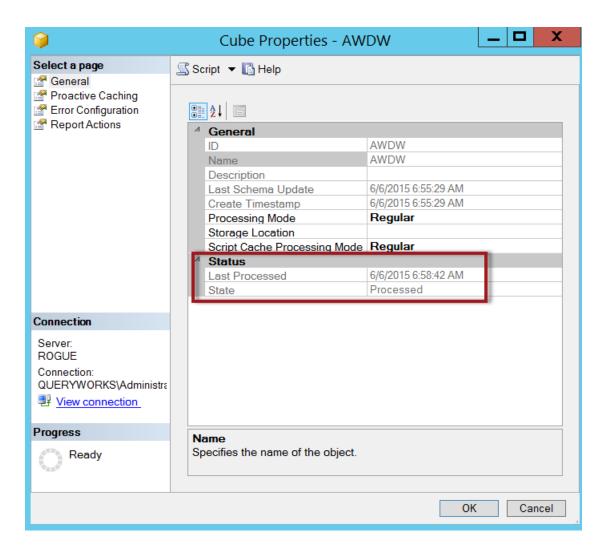


CommandType	Name	Version	Source
Cmdlet	Add-RoleMember	1.0	SQLASCmdlets
Cmdlet	Backup-ASDatabase	1.0	SQLASCmdlets
Cmdlet	Invoke-ASCmd	1.0	SQLASCmdlets
Cmdlet	Invoke-ProcessCube	1.0	SQLASCmdlets
Cmdlet	Invoke-ProcessDimension	1.0	SQLASCmdlets
Cmdlet	Invoke-ProcessPartition	1.0	SQLASCmdlets
Cmdlet	Merge-Partition	1.0	SQLASCmdlets
Cmdlet	New-RestoreFolder	1.0	SQLASCmdlets
Cmdlet	New-RestoreLocation	1.0	SQLASCmdlets
Cmdlet	Remove-RoleMember	1.0	SQLASCmdlets
Cmdlet	Restore-ASDatabase	1.0	SQLASCmdlets

```
ConnectionString
                                localhost
ConnectionInfo
                                Microsoft.AnalysisServices.ConnectionInfo
                                778FE4F2-49B7-4E7D-ABE1-D329A4F94B9A
SessionID
                                False
CaptureXml
CaptureLog
                                {}
Connected
                                True
SessionTrace
                                Microsoft.AnalysisServices.SessionTrace
Version
                                12.0.2000.8
Edition
                                Developer64
                                2176971986
EditionID
ProductLevel |
                                RTM
                                {}
{System, EXCELXLINTERNAL, VBAMDXINTERNAL, VBAMDX...}
{FlightRecorder}
{Administrators}
Databases
Assemblies |
Traces
Roles
                                {DataDir, TempDir, LogDir, BackupDir...}
Microsoft SQL Server Analysis Services
ServerProperties
ProductName
                                Multidimensional
ServerMode
DefaultCompatibilityLevel
                                1100
ServerLocation
                                OnPremise
IsLoaded
                                True
                                6/4/2015 9:52:35 AM
CreatedTimestamp
                                6/4/2015 9:52:35 AM
LastSchemaUpdate
Description
Annotations
                                ROGUE
ID
Name
                                ROGUE
```







Chapter 11: Helpful PowerShell Snippets

Saturday, May 23, 2015 11:51:31 AM

```
Sort-Object: Exception getting "StartTime": "Access is denied"

At line:6 char:1
+ Sort-Object -Property StartTime -Descending |
+ CategoryInfo : InvalidResult: (System.Diagnostics.Process (Idle):PSobject) [Sort-Object] ception
+ FullyQualifiedErrorId: ExpressionEvaluation,Microsoft.PowerShell.Commands.SortObjectCommand
```

VERBOSE: & "C:\Program Files\7-Zip\7z.exe" a -tzip "C:\Temp\new archive.zip" "C:\Temp\old"

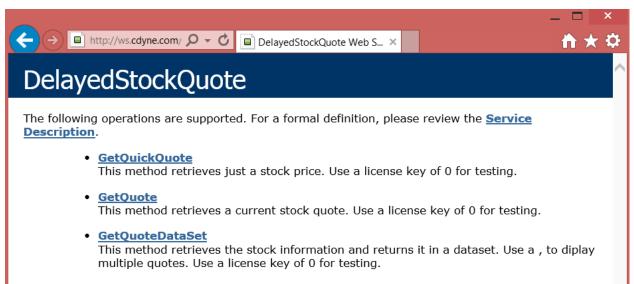


Name	Status
AeLookupSvc	Stopped
ALG	Stopped
AppIDSvc	Stopped
Appinfo	Stopped
AppMgmt	Stopped
AppReadiness	Stopped
AppXSvc	Stopped
AudioEndpointBuilder	Stopped
Audiosrv	Stopped
BFE	Running
BITS	Running
BrokerInfrastructure	Running
Browser	Stopped
CertPropSvc	Running
COMSysApp	Running
CryptSvc	Running
DcomLaunch	Running
defragsvc	Stopped

```
<?xml version="1.0" encoding="UTF-8"?>

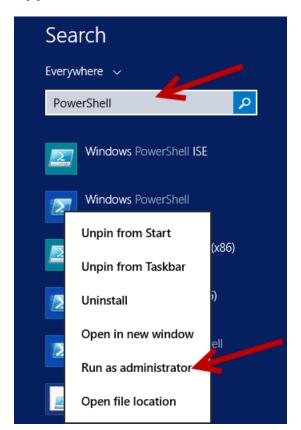
    <cli>dimatedata

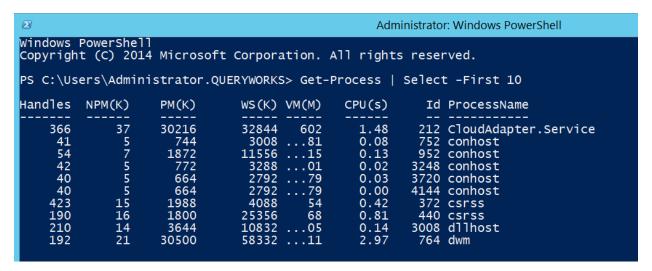
 xsd:schemaLocation="http://www.climate.weatheroffice.gc.ca/climateData/bulkxml/bulkschema.xsd"
 xmlns:xsd="http://www.w3.org/TR/xmlschema-1/">
     <lang>ENG</lang>
     <stationinformation>
         <name>VANCOUVER INT'L A</name>
         province>BRITISH COLUMBIA
         <latitude>49.20</latitude>
         <longitude>-123.18</longitude>
         <elevation>4.30</elevation>
         <cli>dentifier>1108447</climate identifier>
         <wmo_identifier/>
         <tc identifier>YVR</tc identifier>
     </stationinformation>
   + < legend>
     <stationdata year="2012" month="1" day="1">
         <maxtemp units="oC" description="Maximum Temperature">6.4</maxtemp>
         <mintemp units="oC" description="Minimum Temperature">1.3</mintemp>
         <meantemp units="oC" description="Mean Temperature">3.9/meantemp>
         <heatdegdays units="oC" description="Heating Degree Days">14.1</heatdegdays>
<cooldegdays units="oC" description="Cooling Degree Days">0.0</cooldegdays>
         <totalrain units="mm" description="Total Rain">0.2</totalrain>
         <totalsnow units="cm" description="Total Snow">0.0</totalsnow>
         <totalprecipitation units="mm" description="Total Precipitation">0.2</totalprecipitation>
         <snowonground units="cm" description="Snow on Ground">0</snowonground>
         <dirofmaxgust units="10s Deg" description="Direction of Maximum Gust"/>
<speedofmaxgust units="km/h" description="Speed of Maximum Gust"><31</speedofmaxgust>
     </stationdata>
```

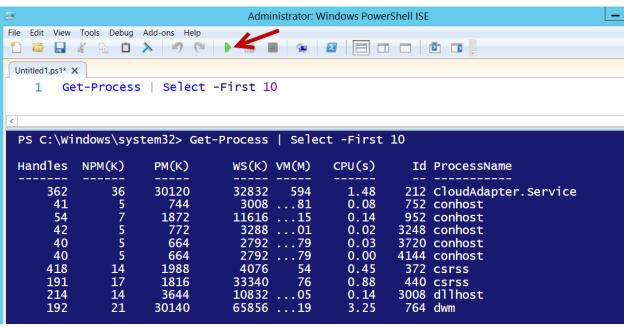


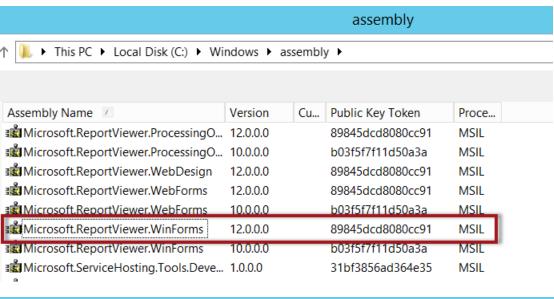
```
http://ws.cdyne.com/ \bigcirc \rightarrow \bigcirc
                                 ws.cdyne.com
  <?xml version="1.0" encoding="UTF-8"?>
 <QuoteData xmlns="http://ws.cdyne.com/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
 instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
     <StockSymbol>MSFT</StockSymbol>
     <LastTradeAmount>47.42</LastTradeAmount>
     <LastTradeDateTime>2015-05-21T16:00:00</LastTradeDateTime>
     <StockChange>-0.16</StockChange>
     <OpenAmount>47.27/OpenAmount>
     <DayHigh>47.60</DayHigh>
     <DayLow>47.01</DayLow>
     <StockVolume>22410698</StockVolume>
     <PrevCls>47.58</PrevCls>
     <ChangePercent>-0.34%</ChangePercent>
     <FiftyTwoWeekRange>39.81 - 50.05/FiftyTwoWeekRange>
     <EarnPerShare>2.41</EarnPerShare>
     <PE>19.68</PE>
     <CompanyName>Microsoft Corporation</CompanyName>
     <QuoteError>false</QuoteError>
  </QuoteData>
```

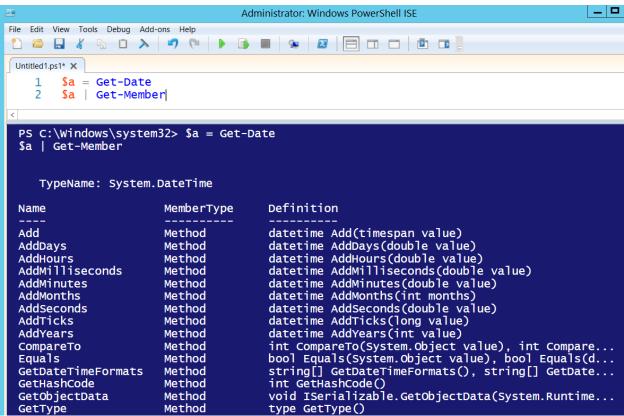
Appendix A: PowerShell Primer

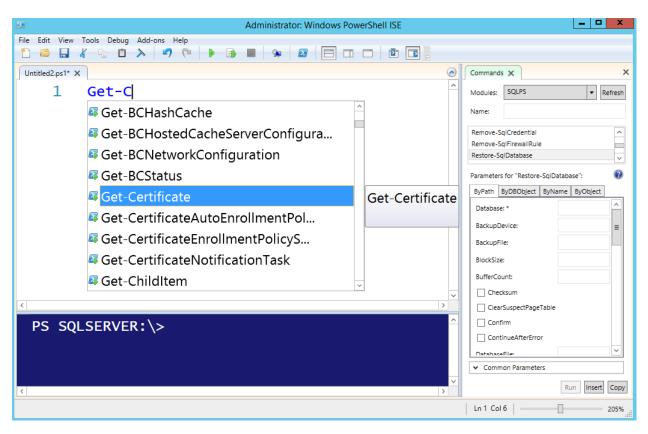


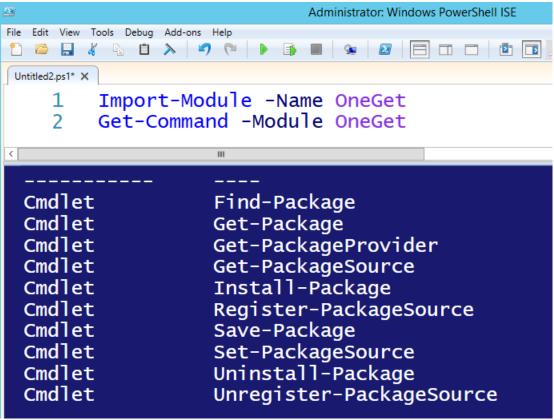


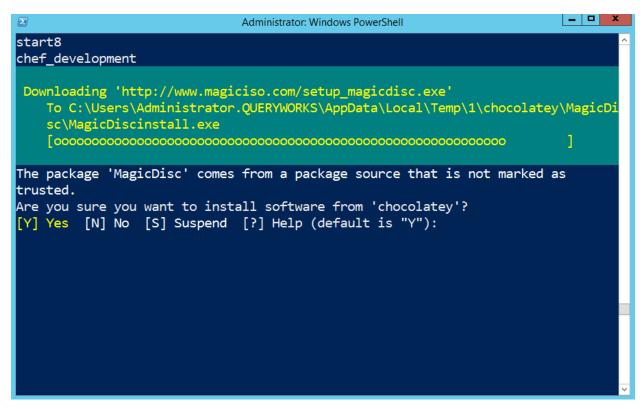


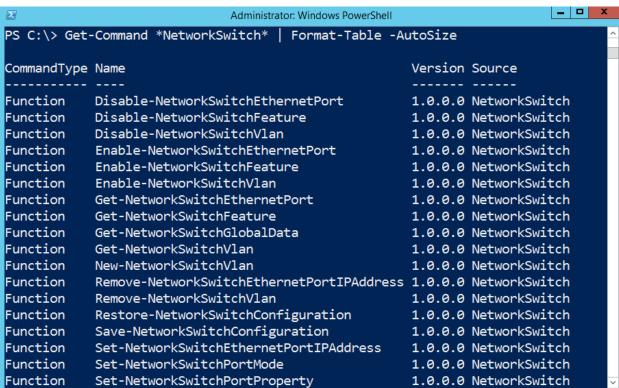


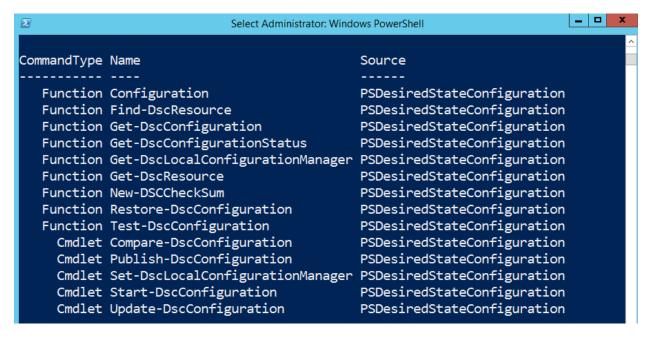












Appendix B: Creating a SQL Server VM

