

SQL Server Installation Guide

For On-Prem Servers:

- Check with infra team for Disk configuration.
 - All drives should be Thick Provisioning, Eager Zero.
- Check if the Disk allocation Unit is set to 64 kb.

Administrator: Command Prompt

```
C:\Windows\system32>chkdsk E:
The type of the file system is NTFS.
Volume label is New Volume.

WARNING! /F parameter not specified.
Running CHKDSK in read-only mode.

Stage 1: Examining basic file system structure ...
  64 file records processed.
File verification completed.
  0 large file records processed.
  0 bad file records processed.

Stage 2: Examining file name linkage ...
  86 index entries processed.
Index verification completed.
  0 unindexed files scanned.
  0 unindexed files recovered to lost and found.

Stage 3: Examining security descriptors ...
Security descriptor verification completed.
  12 data files processed.
CHKDSK is verifying Usn Journal...
  10112 USN bytes processed.
Usn Journal verification completed.

Windows has scanned the file system and found no problems.
No further action is required.

104854527 KB total disk space.
  40576 KB in 14 files.
   192 KB in 13 indexes.
    0 KB in bad sectors.
  74815 KB in use by the system.
  65536 KB occupied by the log file.
104738944 KB available on disk.

    65536 bytes in each allocation unit.
  1638351 total allocation units on disk.
  1636546 allocation units available on disk.
```

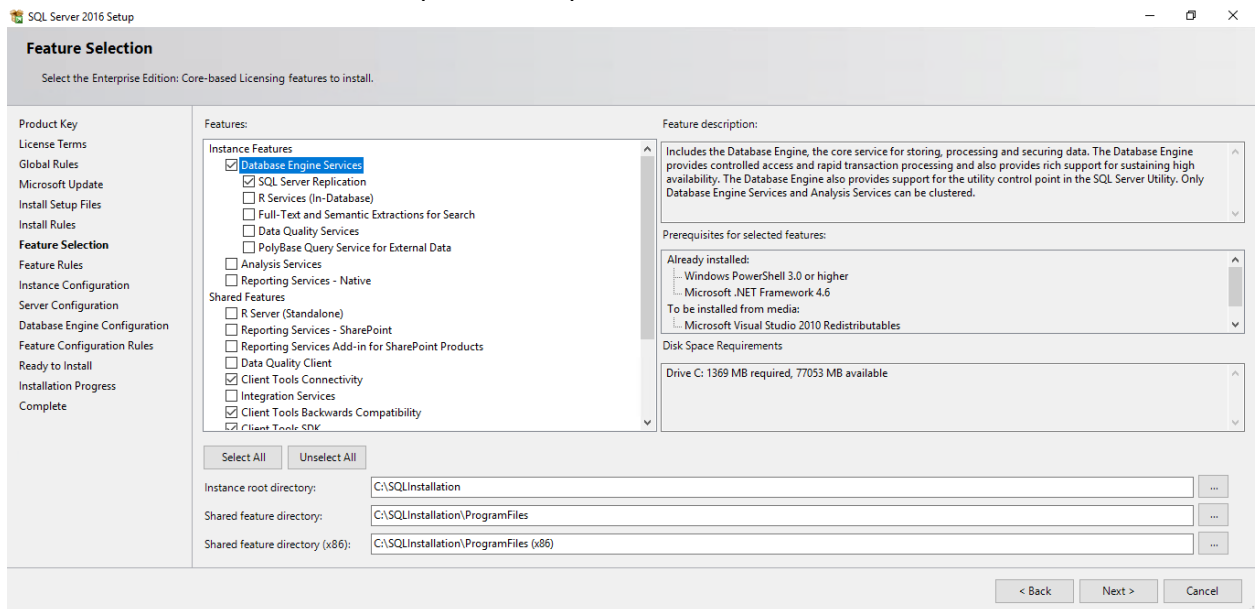
For Azure Servers:

- Check with infra team about Disk Configuration.(Premium SSD,HDD etc)
- Provide Disk Caching details as per best practice.
<https://docs.microsoft.com/en-us/azure/azure-sql/virtual-machines/windows/performance-guidelines-best-practices#disks-guidance>
- Provide Port list in case of AlwaysOn/SQL Replication configuration from Azure VM to On-Prem VM.

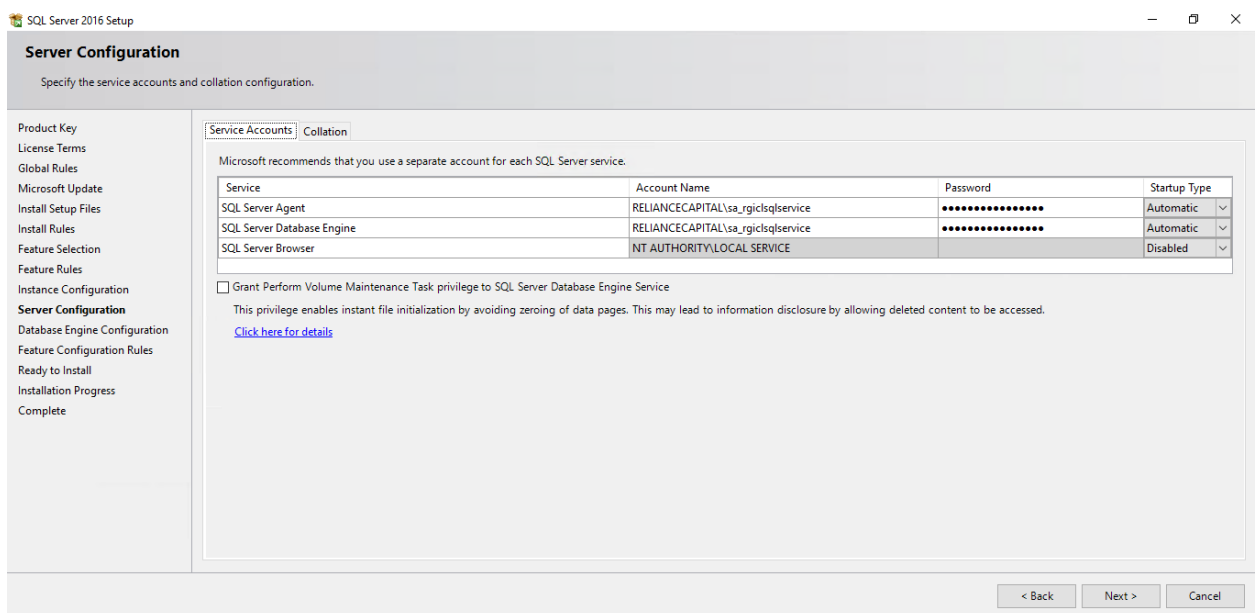
SQL Installation

- Add reliancecapital\sa_rgiclsqservice on following local security policies
 - Adjust Memory Quotas for a Process.
 - Backup Files and Directories.
 - Bypass Traverse Checking.
 - Debug Programs.
 - Log on as a Service.
 - Manage Auditing and Security Logs.
 - Perform Volume Maintenance Tasks.
 - Replace a Process Level Token.
- Create following Folders and give reliancecapital\sa_rgiclsqservice full rights on these folders
 - SQLDataFiles(For User Data Files)
 - SQLLogFiles(For User Log Files)
 - SQLTempDB(For SQL System Database TempDB)
 - SQLBackup(For SQL Database Backup)

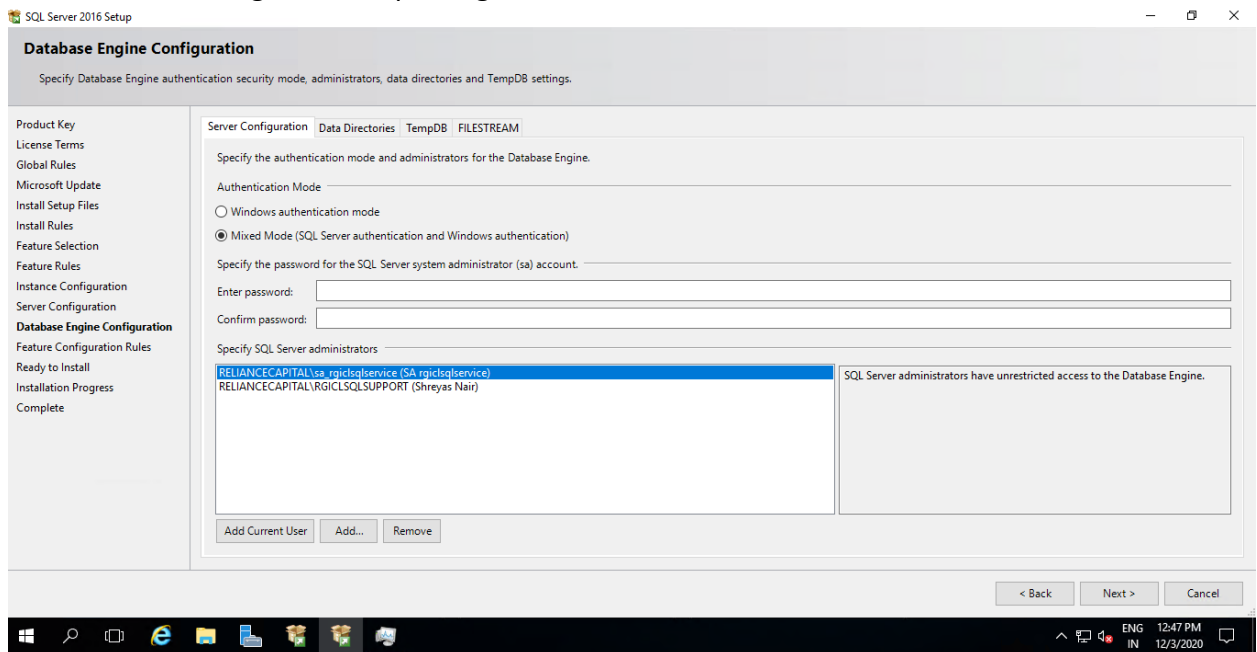
- Select correct features and components as per ticket raised.



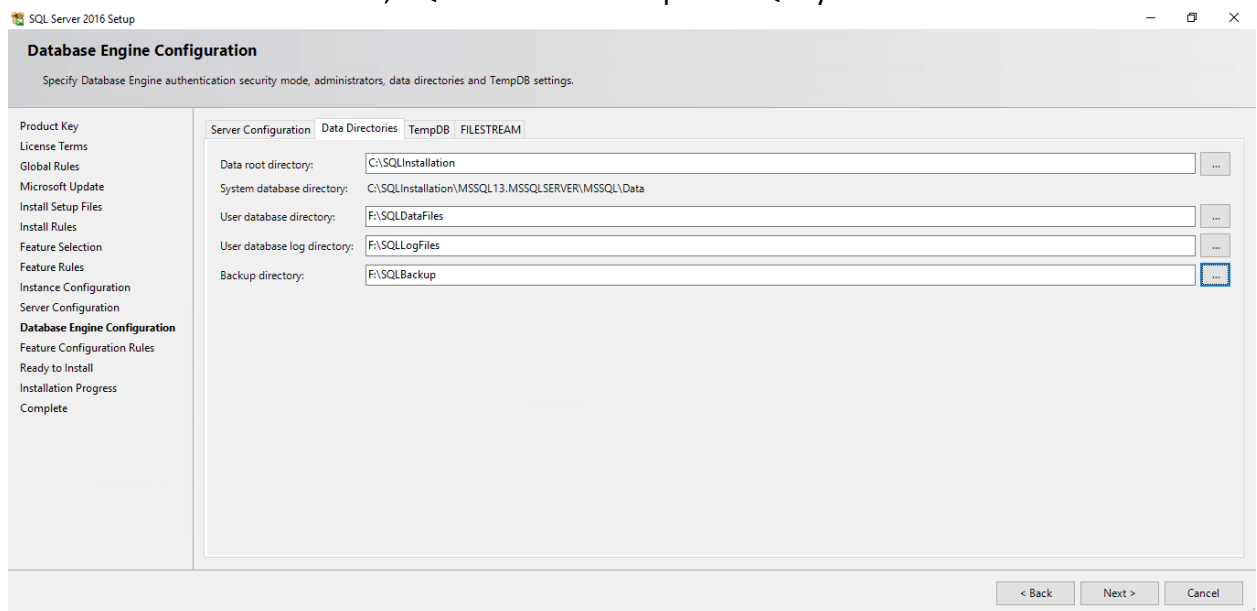
- Enter SQL Service Account and Passwords. Keep Startup type as automatic as per Screenshot.



- Choose Domain Logins for SA privileges. SQL Server Authentication Mode: Mixed mode.

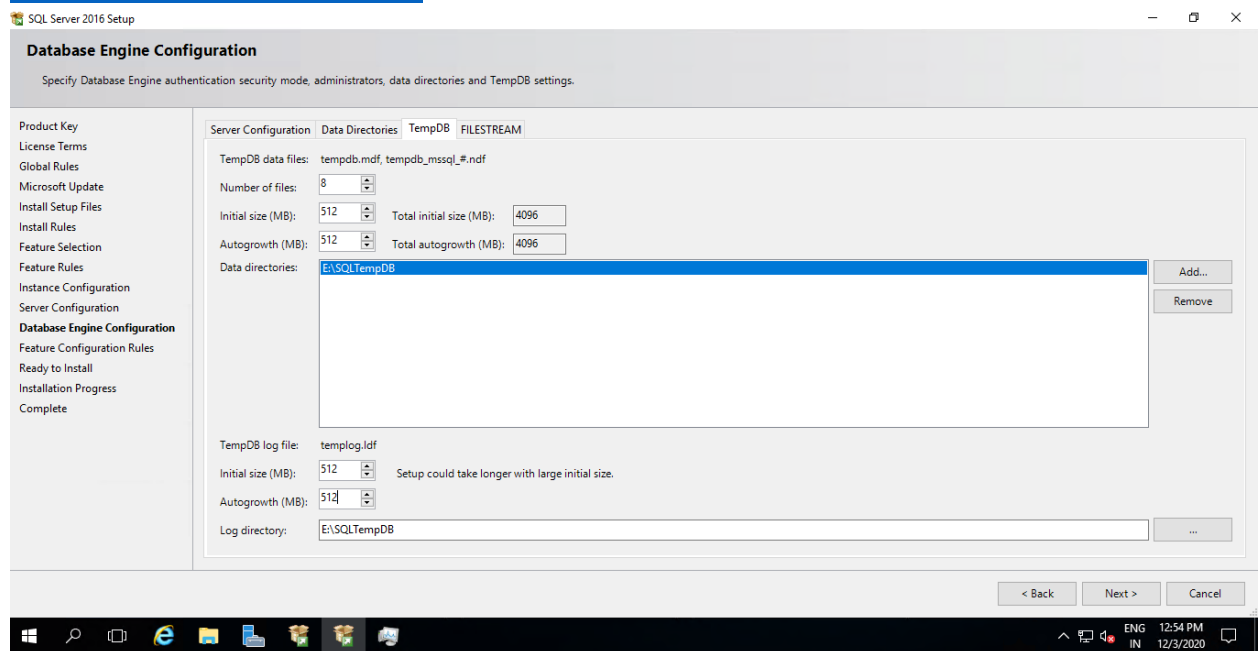


- Directories for Database files, SQL Database Backup and SQL System Databases:



- Set SQL TempDB location, number of files, Size and its Auto growth details.
<https://docs.microsoft.com/en-us/sql/relational-databases/databases/tempdb->

[database?view=sql-server-2016](#)



- Install Latest Cumulative Update on the server.
- Install SQL Server Management Studio.
- Set Port for SQL Server to 7359.
- Create SQL User 'dbateam' and provide SysAdmin rights to the user.
- Disable SQL Login 'sa'.
- Set configuration 'OLE Automation Procedures' to 1.
- Set configuration 'xp_cmdshell' to 1.
- Set configuration 'Database Mail XP's' to 1.
- Set configuration 'Backup Compression' to 1.
- Set configuration 'Max Server Memory (MB)' to 70% of total Main Memory installed on Server.
- Set configuration 'fill factor (%)' to 80.
- Enable 'Hide Instance' option.
- Create DBA Database DBAAdmin.
- Create Linked Server [RGISQL,7359] for Alert purpose. Use SQL Login mailuser.
- Create all DBA specific SQL Jobs.
 - DBA_Alert_tempdb_Above_25GB.
 - DBA_Daily_Report_new.
 - DBA_deadlock.
 - DBA_Diskspace_alert.
 - DBA_HighCPU_Utilization.
 - DBA_logspaceCheck.
 - DBA_SHRINK_LOGFILE.
 - DBA_SQL_Restart.

- DBA_SQL_UPTIME_ALERT.
 - DBA_Temp_Db_Shrink.
 - DBA_Trac_Tempdb.
 - DBA_TraceFlag.
- Create SIEM Audit on server. (Refer any PROD Server)
- Create App SQL Logins as per team Calldesk ticket details approved by Nilesh Dhavare.
- Add user databases in backup policy as per team's calldesk request in Veritas Net backup client (**On-Prem VM**), Azure Recovery Service Vault (**Azure VM**).