Service Pack Installation

1. **Download SQL Server 2012 SP1.**
2. **Development environments:**
    1. Get the approval from Business users
    2. Issue a full backup of all user and system databases including the Resource database.
    3. Take note of all the Startup parameters, Memory Usage, CPU Usage etc.
    4. Install the service pack on development SQL Servers.
    5. Create a backup and restore plan with the steps for "**What to do if application is not working properly after installing the new Service Pack?**"
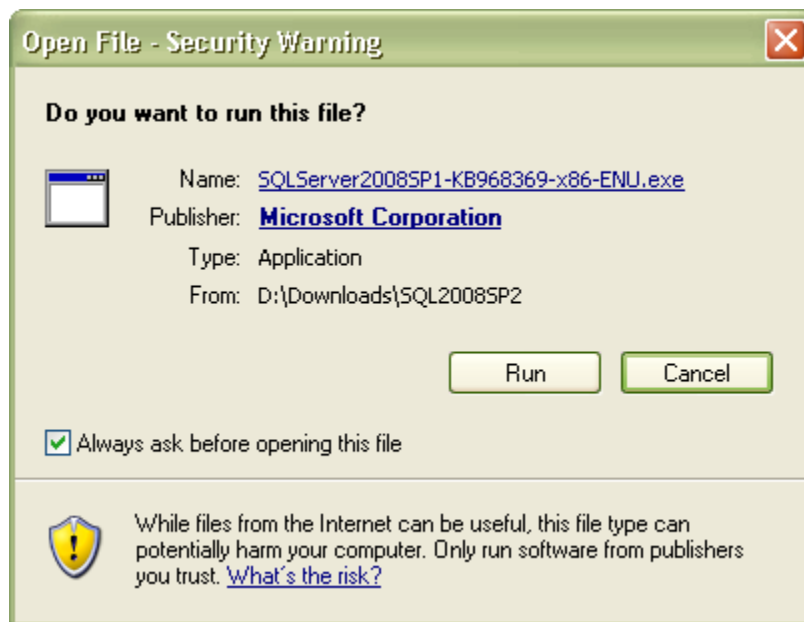3. **Test environments:**
    1. Get the approval from Business users
    2. Issue a full backup of all user and system databases including the Resource database.
    3. Take note of all the Startup parameters, Memory Usage, CPU Usage etc
    4. Install the service pack on test SQL Servers.
    5. Conduct testing for administrative process as well as coordinate testing with the Development and QA Teams to ensure the application is performing as expected.
    6. Test the rollback plan.
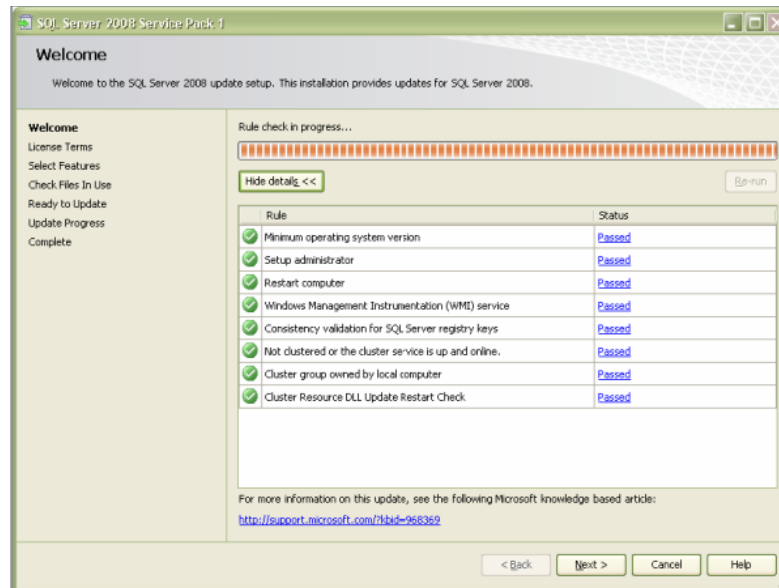4. **Production environments:**
    1. Plan for a scheduled downtime on the Production Servers as it takes approximately 40 minutes to apply the service pack on SQL Server 2012.
    2. Get the approval from Business users
    3. Issue a full backup of all user and system databases including the Resource database.
    4. Take note of all the Startup parameters, Memory Usage, CPU Usage etc
    5. Install the service pack on Production SQL Servers.
    6. Validate the application is working properly.

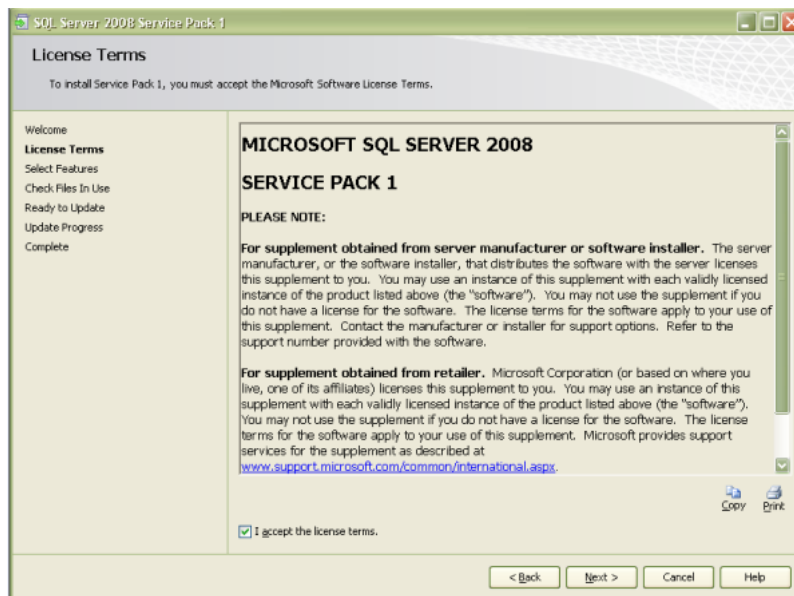**Steps to Install SQL Server 2012 Service Pack 1 (SP1)**

1. Double Click **Setup.exe** to extract the Service Pack installation files from the setup.

3. Once setup files are extracted go to the folder where the files are extracted and click **Setup.exe**. This will open up SQL Server 2012 Service Pack 1 screen as shown in the snippet below. In the **Welcome** screen the SQL Server 2012 Setup program will check for few rules before applying the Service Packs. If any of the rules are failing, the installation will not continue further. Hence, you need to fix those issues before continuing with the installation.
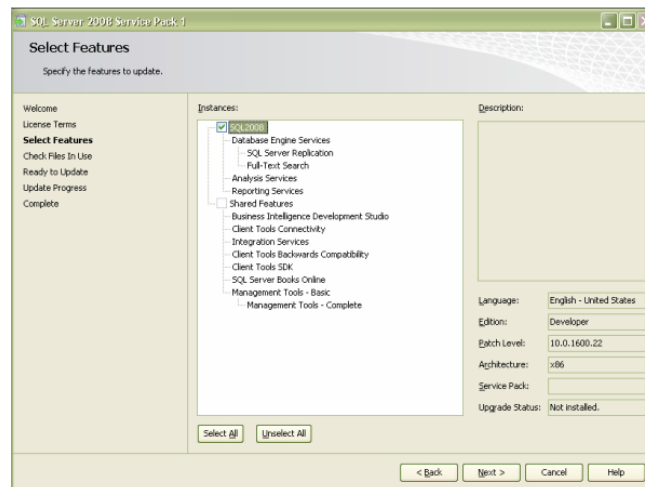

4. In **License Terms** screen, read the license agreement and then select the check box at the bottom of the page to accept the licensing terms and conditions of the product. Click Next to continue with the installation.

5. In **Select Features** screen, select the SQL Server Instance and select the features of SQL Server 2012 which need to be upgraded. A brief description about each feature is shown in the right side panel along with the **Language**,**Edition**, **Patch Level**, **Architecture**, **Service Pack** and **Upgrade Status** when each
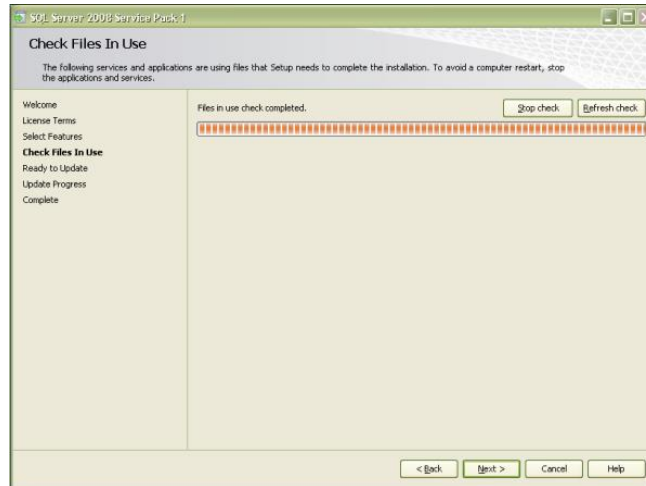
of the features is selected. The different components which are available for upgrade within SQL Server 2012 are mentioned below:

Database Engine Services
    SQL Server Replication
    Full-Text Replication
Analysis Services
Reporting Services
Shared Features
    Business Intelligence Development Studio
    Client Tools Connectivity
    Integration Services
    Client Tools Backwards Compatibility
    Client Tools SDK
    SQL Server Books Online
    Management Tools - Basic
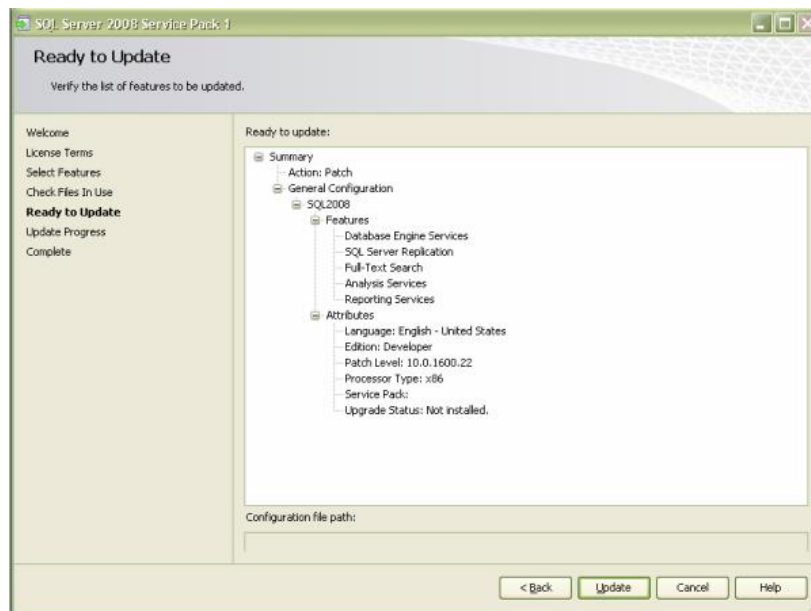   Management Tools - Complete

Once all the features are selected click Next to continue with the SQL Server 2012 Service Pack 1 (SP1) installation.
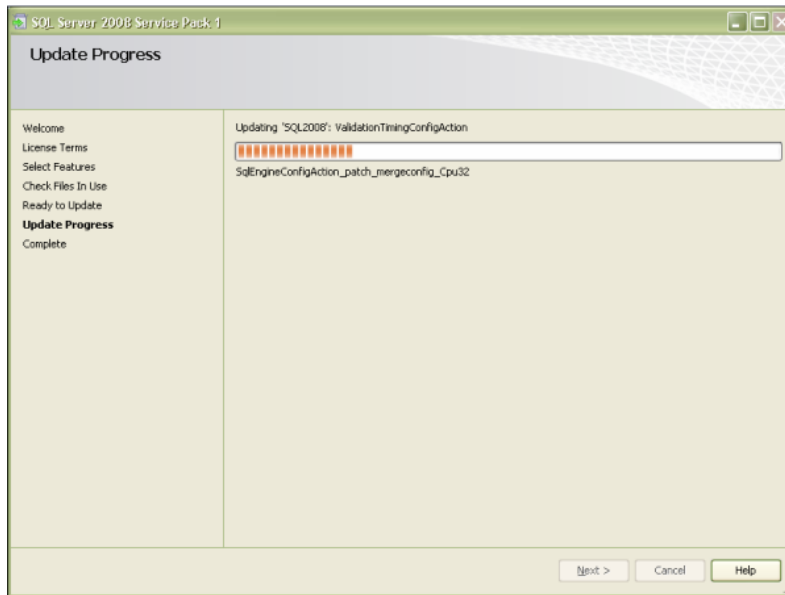
6. In **Check Files In Use** screen the setup will check for SQL Server related files which are currently being used. If there are any such files then they need to be released before performing the Service Pack installation. Click Next to continue with the installation.
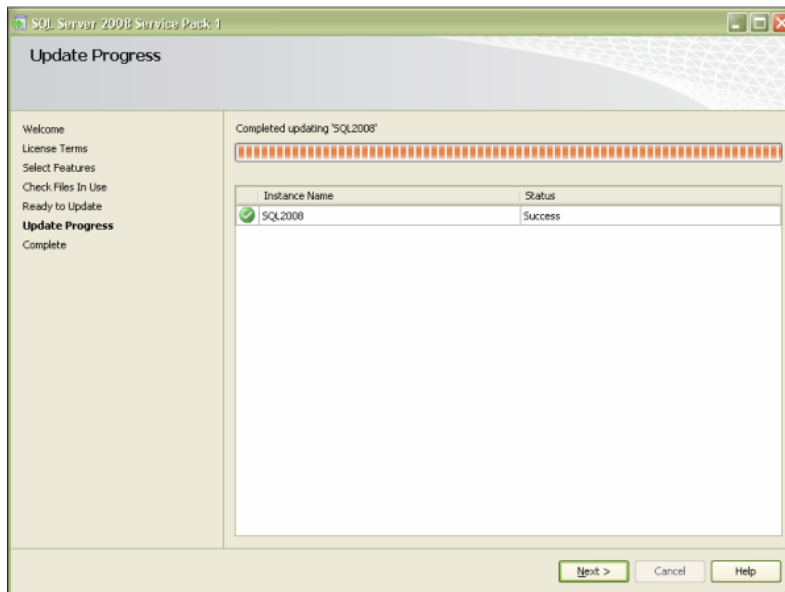
7. In **Ready to Upgrade** screen you can verify the list of features which will be upgraded during the installation. If you are fine with the list of features, then click **Upgrade** to perform the actual Service Pack installation.
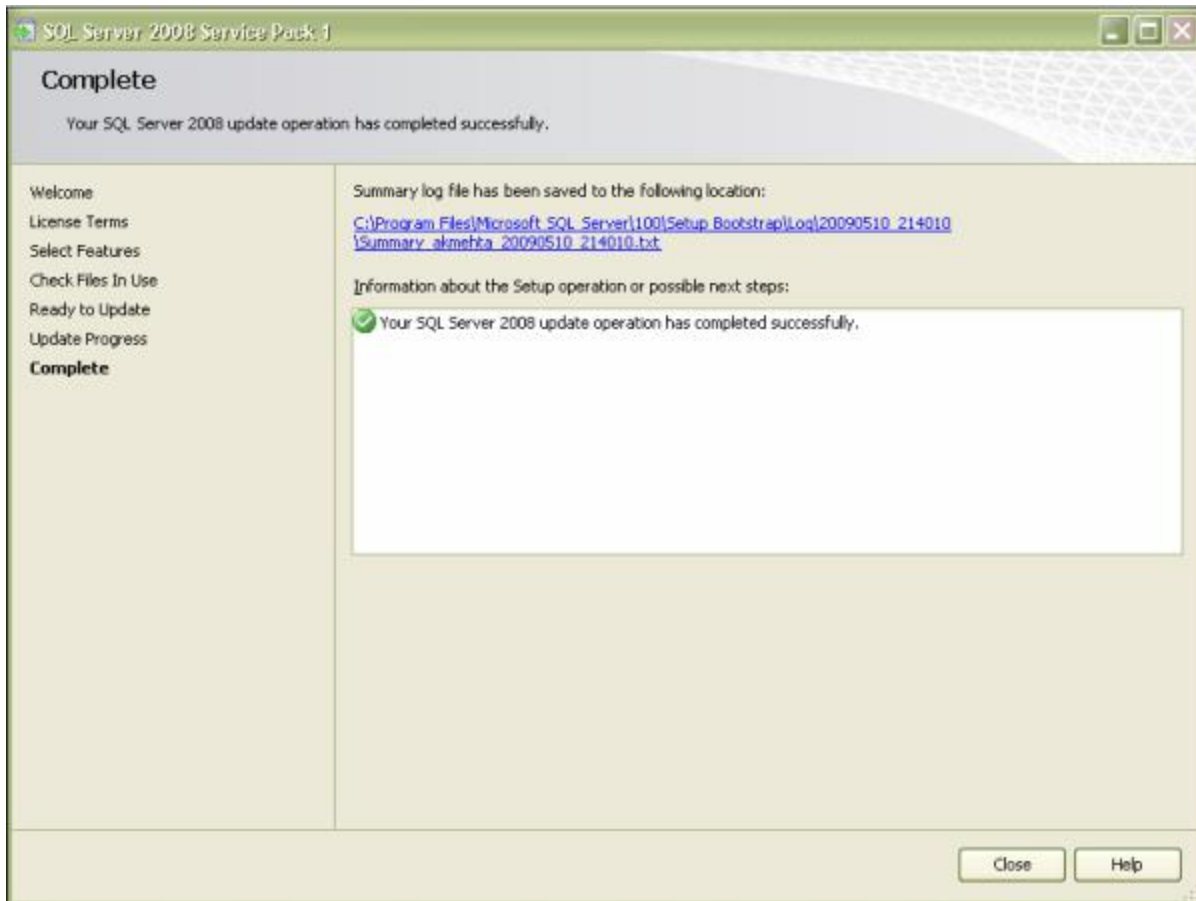

8. In **Upgrade Progress** screen you will be able to see the installation progress. It will approximately take 30 minutes to complete the installation. The installation time varies depending upon the hardware configuration.

9. Once the Service Pack installation is successful you will be able to see the **Success** message as shown in the snippet below.

10. On the **Complete** screen you will be able to see "**Your SQL Server 2012 update operation has completed successfully**" message. Click Close to end the installation setup.

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11. You can verify the SQL Server 2012 Service Pack 1 (SP1) installation by executing the query below in SQL Server Management Studio (SSMS).

```
SELECT
SERVERPROPERTY('Edition') AS 'Edition',
SERVERPROPERTY('ProductVersion') AS 'ProductVersion',
SERVERPROPERTY('ProductLevel') AS 'ProductLevel',
SERVERPROPERTY('ResourceLastUpdateDateTime') AS 'ResourceLastUpdateDateTime',
SERVERPROPERTY('ResourceVersion') AS 'ResourceVersion'
GO
```

	Edition	ProductVersion	ProductLevel	ResourceLastUpdateDateTime	ResourceVersion
1	Developer Edition	10.0.2531.0	SP1	2009-03-29 12:30:27.077	10.00.2531

Note:

Service pack roll back is not possible in 2005 and possible from 2008 and above versions