

## Microsoft Azure Service Fabric 6.4 Sixth Refresh Release Notes

This release includes the bug fixes and features described in this document. This release includes runtime, SDKs and Windows Server Standalone deployments to run on-premises.

The following packages and versions are part of this release

<b>Service Fabric Runtime</b>	Ubuntu	<i>6.4.653.1</i>
	Windows	<i>6.4.658.9590</i>
<b>Service Fabric for Windows Server</b>	Service Fabric Standalone Installer Package	<i>6.4.658.9590</i>
<b>.NET SDK</b>	Windows .NET SDK	<i>3.3.658</i>
	Microsoft.ServiceFabric	<i>6.4.658</i>
	Reliable Services and Reliable Actors	<i>3.3.658</i>
	ASP.NET Core Service Fabric integration	<i>3.3.658</i>
<b>Java SDK</b>	Java for Linux SDK	<i>1.0.4</i>
<b>Service Fabric PowerShell and CLI</b>	AzureRM PowerShell Module	<i>0.3.15</i>
	SFCTL	<i>7.1.0</i>
	Visual Studio Tooling	<i>2.4.11116.1</i>
	Eclipse Tooling	<i>2.0.7</i>

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## Service Fabric Common Bug Fixes

Versions	Description	Resolution
<b>Windows</b> 6.4.658.9590	Support legitimate 410, 503, 404 responses from the service and return it back to the client.	<p><b>Impact:</b> Today reverse proxy re-resolves for 404 (without X-ServiceFabric=NotFound), 410 and 503. Eventually the request fails with a 504 (timeout).</p> <p><b>Fix:</b> If the header X-ServiceFabric=NoRetry is set in the service response, reverse proxy will not re-resolve and retry for 404, 410, 503 response status codes from the service. It will continue to support the X-ServiceFabric=NotFound header for legitimate 404 response code.</p> <p><b>GitHub link:</b> <a href="https://github.com/microsoft/service-fabric-aspnetcore/issues/70">https://github.com/microsoft/service-fabric-aspnetcore/issues/70</a> <a href="https://github.com/Azure/service-fabric-issues/issues/230">https://github.com/Azure/service-fabric-issues/issues/230</a></p>

## Service Fabric .NET SDK

Versions	Issue Type	Description	Resolution
<b>Reliable Services 3.3.658</b>	<b>Bug</b>	A deleted key in primary replica causes quorum loss	<p><b>Impact:</b> Deleted key can reappear on the replica that was primary – this may cause quorum loss if an attempt to remove the key again occurs. A deleted key can reappear if the following occurs in order:</p> <ol style="list-style-type: none"> <li>1. Initial State: Key has been checkpointed</li> <li>2. First Transaction: Key removed then same key added</li> <li>3. Second Transaction: Same key removed</li> <li>4. Another checkpoint occurs</li> <li>5. Replica restarts</li> </ol> <p><b>Fix:</b> Deleted key does is removed and does not reappear to prevent quorum loss.</p> <p><b>Workaround:</b> Regression was introduced in 6.4. Before this release, you can work-around the issue by replacing 'Remove-Then-Add' in a single transaction with just a single update.</p> <p><b>Doc:</b> <a href="#">Reliable Services API</a></p>
<b>Windows .NET SDK 3.3.658</b>	<b>Bug</b>	When Service Fabric SDK is upgraded on a developer machine while the cluster is already running, the prompt to shutdown the local cluster is hidden behind the cluster installation/ upgrade prompt.	<p><b>Impact:</b> Bad user experience as it takes some time for the developer to realize there is a blocking prompt hidden behind.</p> <p><b>Fix:</b> The prompt to shutdown the cluster is no longer hidden behind now.</p> <p><b>Workaround:</b> Minimize/ move other dialogs to see the hidden prompt and act upon.</p> <p><b>GitHub link:</b>  <a href="https://github.com/Microsoft/service-fabric/issues/265">https://github.com/Microsoft/service-fabric/issues/265</a></p>

## Service Fabric Java SDK

Versions	Issue Type	Description	Resolution
JAVA SDK 1.0.4	Bug	Java App crashes intermittently with the JNI Assert - Method	<b>Impact:</b> ReliableHashMap.putAsync crashes intermittently with an assert if the store api happens to complete asynchronously. Java stateful workloads using ReliableCollectionsStateProvider. <b>Fix:</b> Fixed the code for ReliableHashMap.putAsync api causing the crash of asynchronous path.

## Repositories and Download Links

The table below is an overview of the direct links to the packages associated with this release.

Follow this guidance for setting up your developer environment:

- Linux: <https://docs.microsoft.com/en-us/azure/service-fabric/service-fabric-get-started-linux>
- Mac: <https://docs.microsoft.com/en-us/azure/service-fabric/service-fabric-get-started-mac>
- Windows: <https://docs.microsoft.com/en-us/azure/service-fabric/service-fabric-get-started>

Area	Package	Version	Repository	Direct Download Link
<b>Service Fabric Runtime</b>	Ubuntu Developer Set-up	6.4.653.1	N/A	Cluster Runtime: <a href="https://apt.mo.trafficmanager.net/repos/servicefabric/pool/main/s/servicefabric">https://apt-mo.trafficmanager.net/repos/servicefabric/pool/main/s/servicefabric</a>  Service Fabric SDK for local cluster setup: <a href="https://apt.mo.trafficmanager.net/repos/servicefabric/pool/main/s/servicefabric/sdkcommunication/">https://apt-mo.trafficmanager.net/repos/servicefabric/pool/main/s/servicefabric/sdkcommunication/</a>  Container image: <a href="https://hub.docker.com/r/microsoft/service-fabric-onebox/">https://hub.docker.com/r/microsoft/service-fabric-onebox/</a>

Area	Package	Version	Repository	Direct Download Link
	Red Hat Developer Set-up	6.1.189.1	N/A	Cluster Runtime: <a href="https://packages.microsoft.com/yumrepos/microsoft-rhel7.4-prod/">https://packages.microsoft.com/yumrepos/microsoft-rhel7.4-prod/</a>  Service Fabric SDK for local cluster setup: <a href="https://packages.microsoft.com/yumrepos/microsoft-rhel7.4-prod/servicefabric_sdkcommon_1.1.2.rpm">https://packages.microsoft.com/yumrepos/microsoft-rhel7.4-prod/servicefabric_sdkcommon_1.1.2.rpm</a>
	Windows Developer Set-up	6.4.658.9590	N/A	<a href="https://download.microsoft.com/download/2/5/0/2502146A-D7AA-4D14-B2C2-10081B2F5853/MicrosoftServiceFabric.6.4.658.9590.exe">https://download.microsoft.com/download/2/5/0/2502146A-D7AA-4D14-B2C2-10081B2F5853/MicrosoftServiceFabric.6.4.658.9590.exe</a>
<b>Service Fabric for Windows Server</b>	Service Fabric Standalone Installer Package	6.4.658.9590	N/A	<a href="https://download.microsoft.com/download/8/3/6/836E3E99-A300-4714-8278-96BC3E8B5528/6.4.658.9590/Microsoft.Azure.ServiceFabric.WindowsServer.6.4.658.9590.zip">https://download.microsoft.com/download/8/3/6/836E3E99-A300-4714-8278-96BC3E8B5528/6.4.658.9590/Microsoft.Azure.ServiceFabric.WindowsServer.6.4.658.9590.zip</a>
	Service Fabric Standalone Runtime	6.4.658.9590	N/A	<a href="https://download.microsoft.com/download/B/0/B/B0BCCAC5-65AA-4BE3-AB13-D5FF5890F4B5/6.4.658.9590/MicrosoftAzureServiceFabric.6.4.658.9590.cab">https://download.microsoft.com/download/B/0/B/B0BCCAC5-65AA-4BE3-AB13-D5FF5890F4B5/6.4.658.9590/MicrosoftAzureServiceFabric.6.4.658.9590.cab</a>

Area	Package	Version	Repository	Direct Download Link
.NET SDK	Windows .NET SDK	3.3.658	N/A	<a href="https://download.microsoft.com/download/2/5/0/2502146A-D7AA-4D14-B2C2-10081B2F5853/MicrosoftServiceFabricSDK.3.3.658.msi">https://download.microsoft.com/download/2/5/0/2502146A-D7AA-4D14-B2C2-10081B2F5853/MicrosoftServiceFabricSDK.3.3.658.msi</a>
	Microsoft.ServiceFabric	6.4.658	N/A	<a href="https://www.nuget.org">https://www.nuget.org</a>
	Reliable Services and Reliable Actors <ul style="list-style-type: none"> <li>Microsoft.ServiceFabric.Services</li> <li>Microsoft.ServiceFabric.Services.Remoting</li> <li>Microsoft.ServiceFabric.Services.Wcf</li> <li>Microsoft.ServiceFabric.Actors</li> <li>Microsoft.ServiceFabric.Actors.Wcf</li> </ul>	3.3.658	<a href="https://github.com/Azure/service-fabric-services-and-actors-dotnet">https://github.com/Azure/service-fabric-services-and-actors-dotnet</a>	<a href="https://www.nuget.org">https://www.nuget.org</a>
	ASP.NET Core Service Fabric integration <ul style="list-style-type: none"> <li>Microsoft.ServiceFabric.Services.AspNetCore.*</li> </ul>	3.3.658	<a href="https://github.com/Azure/service-fabric-aspnetcore">https://github.com/Azure/service-fabric-aspnetcore</a>	<a href="https://www.nuget.org">https://www.nuget.org</a>
	Data, Diagnostics and Fabric transport <ul style="list-style-type: none"> <li>Microsoft.ServiceFabric.Data</li> <li>Microsoft.ServiceFabric.Data.Interfaces</li> <li>Microsoft.ServiceFabric.Diagnostics.Internal</li> <li>Microsoft.ServiceFabric.FabricTransport.Internal</li> </ul>	3.3.658	N/A	<a href="https://www.nuget.org">https://www.nuget.org</a>



Area	Package	Version	Repository	Direct Download Link
	Microsoft.ServiceFabric.Data.Extensions	1.4.658	N/A	<a href="https://www.nuget.org">https://www.nuget.org</a>
<b>Java SDK</b>	Java SDK	1.0.4	N/A	<a href="https://mvnrepository.com/artifact/com.microsoft.servicefabric/sf-actors/1.0.4">https://mvnrepository.com/artifact/com.microsoft.servicefabric/sf-actors/1.0.4</a>
<b>Visual Studio</b>	Visual Studio 2017 Tools for Service Fabric	2.4.11024.1	N/A	Included in Visual Studio 2017 Update 7 (15.7) and above
	Visual Studio 2015 Tools for Service Fabric	2.4.11116.1	N/A	See localized download links below
<b>Eclipse</b>	Service Fabric plug-in for Eclipse	2.0.7	N/A	N/A
<b>Yeoman</b>	Azure Service Fabric Java generator	1.0.7	<a href="https://github.com/Azure/generator-azuresfjava">https://github.com/Azure/generator-azuresfjava</a>	N/A
	Azure Service Fabric C# generator	1.0.9	<a href="https://github.com/Azure/generator-azuresfcsharp">https://github.com/Azure/generator-azuresfcsharp</a>	N/A
	Azure Service Fabric guest executables generator	1.0.1	<a href="https://github.com/Azure/generator-azuresfguest">https://github.com/Azure/generator-azuresfguest</a>	N/A
	Azure Service Fabric Container generators	1.0.1	<a href="https://github.com/Azure/generator-azuresfcontainer">https://github.com/Azure/generator-azuresfcontainer</a>	N/A
<b>CLI</b>	Service Fabric CLI	7.1.0	<a href="https://github.com/Azure/service-fabric-cli">https://github.com/Azure/service-fabric-cli</a>	<a href="https://pypi.python.org/pypi/sfctl">https://pypi.python.org/pypi/sfctl</a>
<b>PowerShell</b>	AzureRM.ServiceFabric	0.3.15	<a href="https://github.com/Azure/azure-powershell/tree/preview/src/ResourceManager/ServiceFabric">https://github.com/Azure/azure-powershell/tree/preview/src/ResourceManager/ServiceFabric</a>	<a href="https://www.powershellgallery.com/packages/AzureRM.ServiceFabric/0.3.15">https://www.powershellgallery.com/packages/AzureRM.ServiceFabric/0.3.15</a>

### Visual Studio 2015 Tool for Service Fabric – localized download links

**NOTE:** The below download links are for the 2.4.11116.1 release of Visual Studio 2015 Tools for Service Fabric.

<https://download.microsoft.com/download/2/5/0/2502146A-D7AA-4D14-B2C2-10081B2F5853/MicrosoftAzureServiceFabricTools.VS140.de-de.msi>

<https://download.microsoft.com/download/2/5/0/2502146A-D7AA-4D14-B2C2-10081B2F5853/MicrosoftAzureServiceFabricTools.VS140.en-us.msi>

<https://download.microsoft.com/download/2/5/0/2502146A-D7AA-4D14-B2C2-10081B2F5853/MicrosoftAzureServiceFabricTools.VS140.es-es.msi>

<https://download.microsoft.com/download/2/5/0/2502146A-D7AA-4D14-B2C2-10081B2F5853/MicrosoftAzureServiceFabricTools.VS140.fr-fr.msi>

<https://download.microsoft.com/download/2/5/0/2502146A-D7AA-4D14-B2C2-10081B2F5853/MicrosoftAzureServiceFabricTools.VS140.it-it.msi>

<https://download.microsoft.com/download/2/5/0/2502146A-D7AA-4D14-B2C2-10081B2F5853/MicrosoftAzureServiceFabricTools.VS140.ja-jp.msi>

<https://download.microsoft.com/download/2/5/0/2502146A-D7AA-4D14-B2C2-10081B2F5853/MicrosoftAzureServiceFabricTools.VS140.ko-kr.msi>

<https://download.microsoft.com/download/2/5/0/2502146A-D7AA-4D14-B2C2-10081B2F5853/MicrosoftAzureServiceFabricTools.VS140.ru-ru.msi>

<https://download.microsoft.com/download/2/5/0/2502146A-D7AA-4D14-B2C2-10081B2F5853/MicrosoftAzureServiceFabricTools.VS140.zh-cn.msi>

<https://download.microsoft.com/download/2/5/0/2502146A-D7AA-4D14-B2C2-10081B2F5853/MicrosoftAzureServiceFabricTools.VS140.zh-tw.msi>