

# Refinitiv Management Classes Version 2.2.0

## INSTALLATION GUIDE

Document Version: 2.2.0  
Date of issue: December 2020  
Document ID: RMC220IP.200



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# 1 Preface

## 1.1 Scope

This manual provides all instructions necessary to install the Refinitiv Management Classes.

This manual is directed towards engineers and system administrators who should have, at a minimum, a degree of familiarity with the Refinitiv Real-Time Distribution System and a working knowledge of C++.

## 1.2 Organization of Manual

- Section 2 – Product Description: Briefly describes the purpose of the Refinitiv Management Classes and identifies hardware/software requirements for running the Refinitiv Management Classes.
- Section 3 – Software Installation: Provides instructions for loading the Refinitiv Management Classes software.

## 1.3 Conventions Used in this Manual

Various text font styles have been employed to clarify information presented in this manual.

- A user entry appears in this manual in a bold font as follows: **User entry appears in this style.**
- Variables (i.e., information that must be supplied by the user) are indicated in italics. In the following example, *DEVICE* is variable whose value must be determine and set by the user:

```
tar -xvf DEVICE
```

- Directory names and file names usually appear in a bold italic font as follows: ***/etc/passwd***

## 1.4 Glossary

ACRONYM / TERM	DEFINITION
Managed Application	A management-enabled application whose role is mainly, but not limited to, that of a Publisher.
Managing Application	A management-enabled application whose role is mainly, but not limited to, that of a Consumer.
Node	A device connected to a network cable. This usually refers to a server or a workstation. The node may be directly or indirectly attached to the Refinitiv Real-Time Distribution System.
Refinitiv Real-Time Distribution System Node	A workstation or device executing any of the Refinitiv Real-Time Distribution System software components such as the Refinitiv Real-Time Advanced Data Hub or Refinitiv Real-Time Advanced Distribution Server.
Server	Refinitiv Real-Time Distribution System is based on a server/client model. A server is typically a process (or several coordinating processes) running on a node.

**Table 1: Glossary**

## 1.5 Associated Documentation

The following list includes references for the Refinitiv Management Classes product. Each installer should be familiar with the manuals specific to the type of system being installed on.

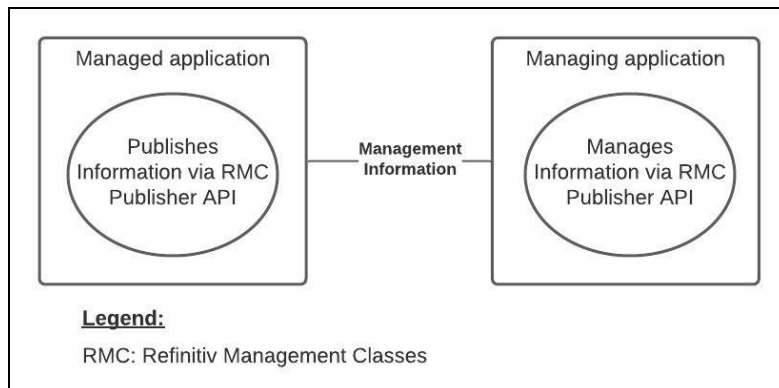
1. Refinitiv Management Classes Developer's Guide
2. Refinitiv Management Classes Class Reference Manual
3. Refinitiv Management Classes Tutorial Guide

## 2 Product Description

### 2.1 Overview

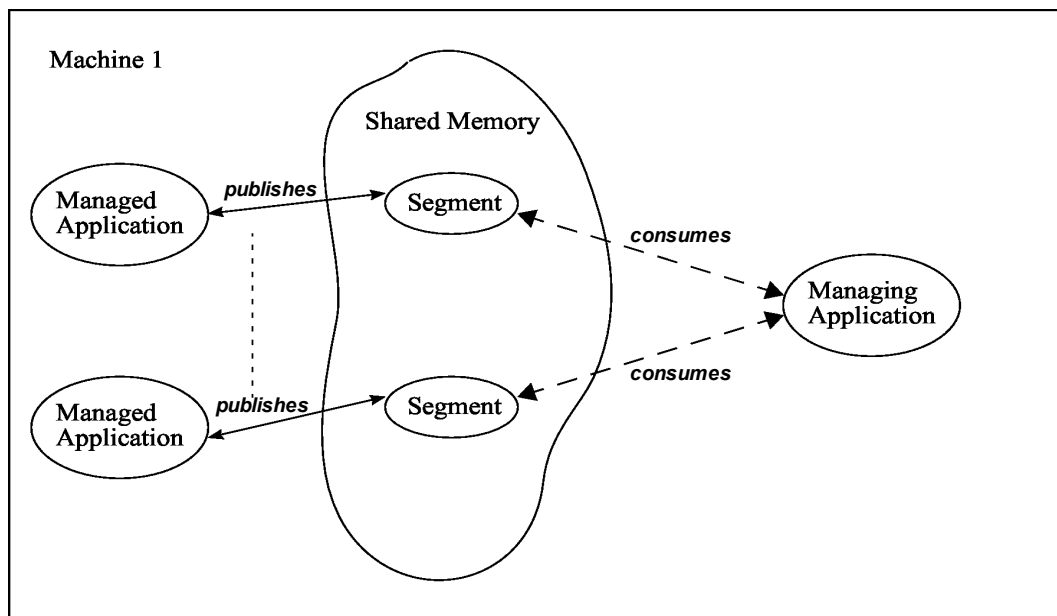
This document describes the method for installing and configuring the Refinitiv Management Classes library components. Refinitiv Real-Time Distribution Systems Infrastructure are instrumented with Refinitiv Management Classes.

Refinitiv Management Classes is an API that allows (1) managed application to publish statistics into shared memory segment and (2) managing application to monitor managed application and its statistical data.



**Figure 1. Refinitiv Management Classes Publisher and Consumer API**

Refinitiv Real-Time Distribution Systems components publish managed variables and managed objects using Refinitiv Management Classes Publisher API into shared memory on the same node, in which the managed application(s) resides. Refinitiv Management Classes Consumer API provides abilities to monitor and alter these managed objects/variables, which are being published by the managed applications.



**Figure 2. Refinitiv Management Classes Infrastructure**

The Infrastructure components (e.g., Refinitiv Real-Time Advanced Distribution Server or Refinitiv Real-Time Advanced Data Hub) and the Refinitiv Management Classes Translators (e.g., Refinitiv Reliable Control Protocol Translator, Refinitiv Data Access Control System Station Translator, and Time-series for Intraday Content Translator) publish management data into shared memory segment using Refinitiv Management Classes Publisher API. These data can be monitored and managed via the Refinitiv Management Classes Consumer API.

## 2.2 Packaging

The Refinitiv Management Classes software package is divided into different sets of components (for details, refer to Section 3.2.1). Included are the C++ class libraries and associated header files, *Class Reference Manual*, *Developer's Guide* and *Tutorial Guide*.

## 2.3 Hardware and Software System Requirements

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**NOTE:** Refer to the latest **README** accompanying the software for the most current hardware and software requirements information.

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The current hardware and software versions supported are:

- Intel/Windows – Microsoft Visual Studio 9 (32-bit)
- Intel/Windows – Microsoft Visual Studio 9 (64-bit)
- Intel/Windows – Microsoft Visual Studio 10 (32-bit)
- Intel/Windows – Microsoft Visual Studio 10 (64-bit)
- Intel/Red Hat AS 4.0 (32-bit) – GCC 3.4.3
- Intel/Red Hat AS 4.0 (64-bit) – GCC 3.4.3
- Intel/Red Hat AS 5.0 (32-bit) – GCC 4.1.2
- Intel/Red Hat AS 5.0 (64-bit) – GCC 4.1.2
- Intel/Red Hat AS 6.0 (32-bit) – GCC 4.4.4
- Intel/Red Hat AS 6.0 (64-bit) – GCC 4.4.4

## 3 Software Installation

### 3.1 Overview

The steps for installing and configuring the Refinitiv Management Classes are listed below. Use this as a checklist to ensure that all the necessary procedures are completed.

1. Unload the software into the software repository (see Section 3.2).
2. Install the Refinitiv Management Classes library components (copy the files to the correct directories) on the target host.

### 3.2 Extracting the Refinitiv Management Classes Software from Load Media

#### 3.2.1 Linux

Create a software repository directory. There is no restriction on the location or the name of this directory. The environment variable, **DISTRIBUTION\_SW**, defines the location of the software repository and is used by the configuration utilities. **DISTRIBUTION\_SW** does not have a default; it must be defined at the site. Normally, it will be a subdirectory under a system administration login. Be sure the chosen directory has ample disk space to support the repository.

Unload the software into the software repository. The software repository is available from **\$DISTRIBUTION\_SW**. Change to this directory and read in the package using tar as follows:

```
cd $DISTRIBUTION_SW
uncompress DEVICE
tar -xvf DEVICE
```

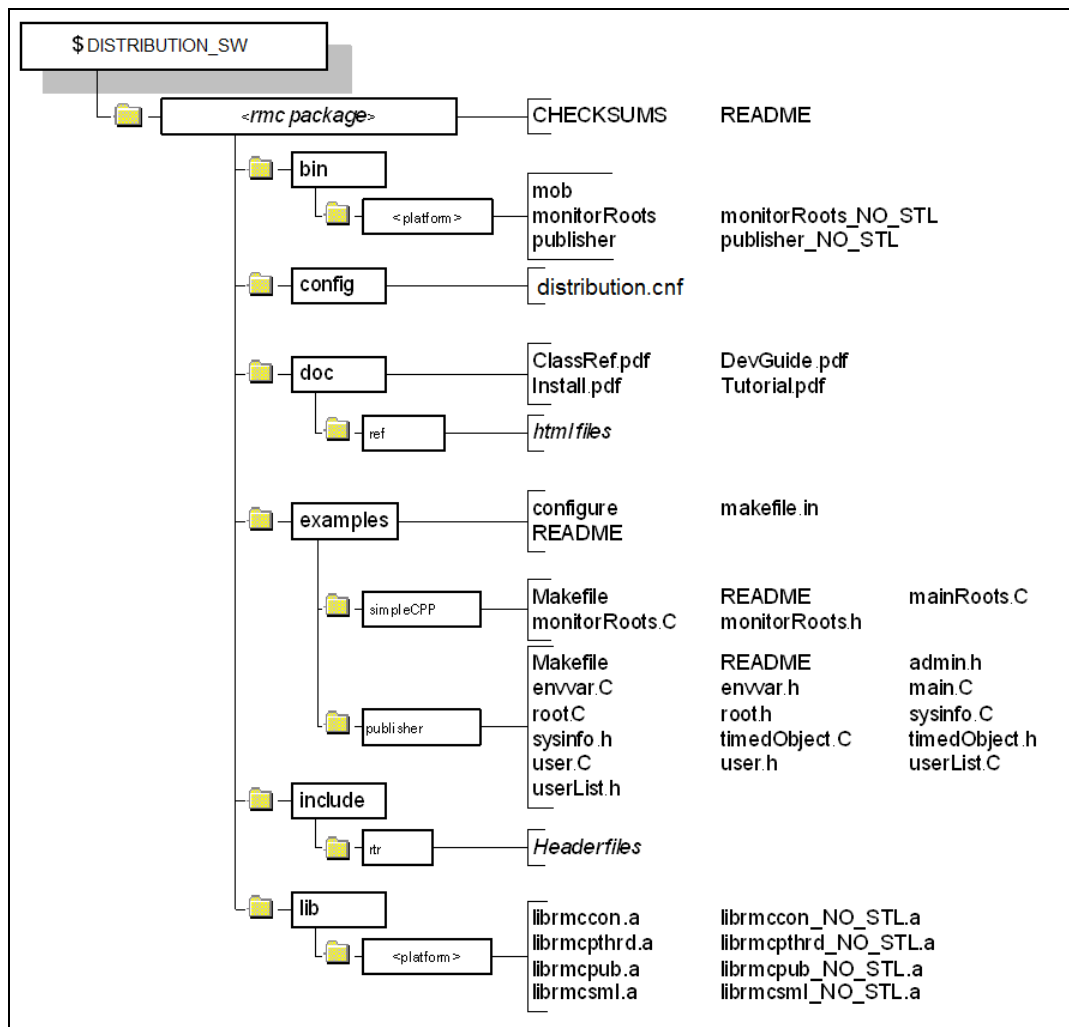
Where ***DEVICE*** is the name of an input device specific to your workstation.

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**NOTE:** For more information about the software repository and the environment variable **DISTRIBUTION\_SW**, refer to the Refinitiv Real-Time Distribution Systems Advanced Data Hub Software Installation Manual (and Supplements)

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### 3.2.1.1 Linux Directory Structure



### 3.2.1.2 Installed Directories and Files

DIRECTORY	DESCRIPTION
Root (package directory)	Contains <b>CHECKSUMS</b> and <b>README</b> files.
bin/platforms	<p><b>platforms</b> is the corresponding platform name.</p> <p>Contains examples of executables, which are <b>mob</b>, <b>monitorRoots</b>, <b>monitorRoots_NO_STL</b>, <b>publisher</b>, and <b>publisher_NO_STL</b>.</p> <p><b>NOTE:</b> <b>NO_STL</b> executables are built from the libraries whose internal dependency on STL has been removed.</p>

Table 2: Installed Directories and Files

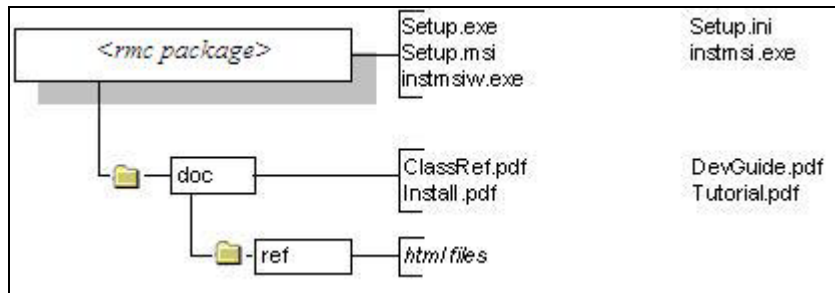


DIRECTORY	DESCRIPTION
lib/ <i>platforms</i>	<p><b>platforms</b> is the corresponding platform name.</p> <p>Contains Refinitiv Management Classes API libraries, which are required for creating managed/managing application.</p> <p>Libraries consist of</p> <ul style="list-style-type: none"> <li>• librmccon.a, librmccon_NO_STL.a,</li> <li>• librmcpthrd.a, librmcpthrd_NO_STL.a,</li> <li>• librmcpub.a, librmcpub_NO_STL.a,</li> <li>• librmcsml.a, and librmcsml_NO_STL.a</li> </ul> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>• <b>librmccon.a</b> is needed by any application developer that wants to write Refinitiv Management Classes managing application.</li> <li>• <b>librmcpub.a</b> is needed by any application developer that wants to write Refinitiv Management Classes managed application.</li> <li>• <b>librmcpthrd.a</b> contains an implementation of the threading library.</li> <li>• <b>librmcsml.a</b> contains an implementation of the main loop library based upon the <b>select()</b> system call.</li> <li>• <b>NO_STL</b> libraries are the libraries whose internal dependency on STL has been removed.</li> </ul>
include/rtr	Contains the C++ header files.
examples	Contains Refinitiv Management Classes example applications ( <b>simpleCPP</b> and <b>publisher_NO_STL</b> ). Refer to the corresponding <b>README</b> files for explanation on building the applications and on their functionality.
config	Contains configuration file for publisher executable. ( <b>distribution.cnf</b> )
doc	<p>Contains the following Refinitiv Management Classes documentation in Adobe Acrobat PDF format:</p> <ul style="list-style-type: none"> <li>• <b>ClassRef.pdf</b>: Refinitiv Management Classes Class Reference Manual</li> <li>• <b>DevGuide.pdf</b>: Refinitiv Management Classes Developer's Guide</li> <li>• <b>Install.pdf</b>: Refinitiv Management Classes Software Installation Manual</li> <li>• <b>Tutorial.pdf</b>: Refinitiv Management Classes Tutorial Guide</li> </ul>
doc/ref	<p>Contains the Refinitiv Management Classes documentation in HTML format:</p> <p><b>index.html</b>: Refinitiv Management Classes Class Reference Manual</p>

Table 2: Installed Directories and Files (Continued)

### 3.2.2 Windows XP/Windows Server 2008/Windows 7

Use WinZip to uncompress and extract the load file. The Windows load has the following directory structure.



**Figure 3. Figure 3.3 Windows (XP/2008/7) Load Directory Structure**

1. Copy the following five files into a temporary directory (e.g. **C:\temp**) on the local hard drive.

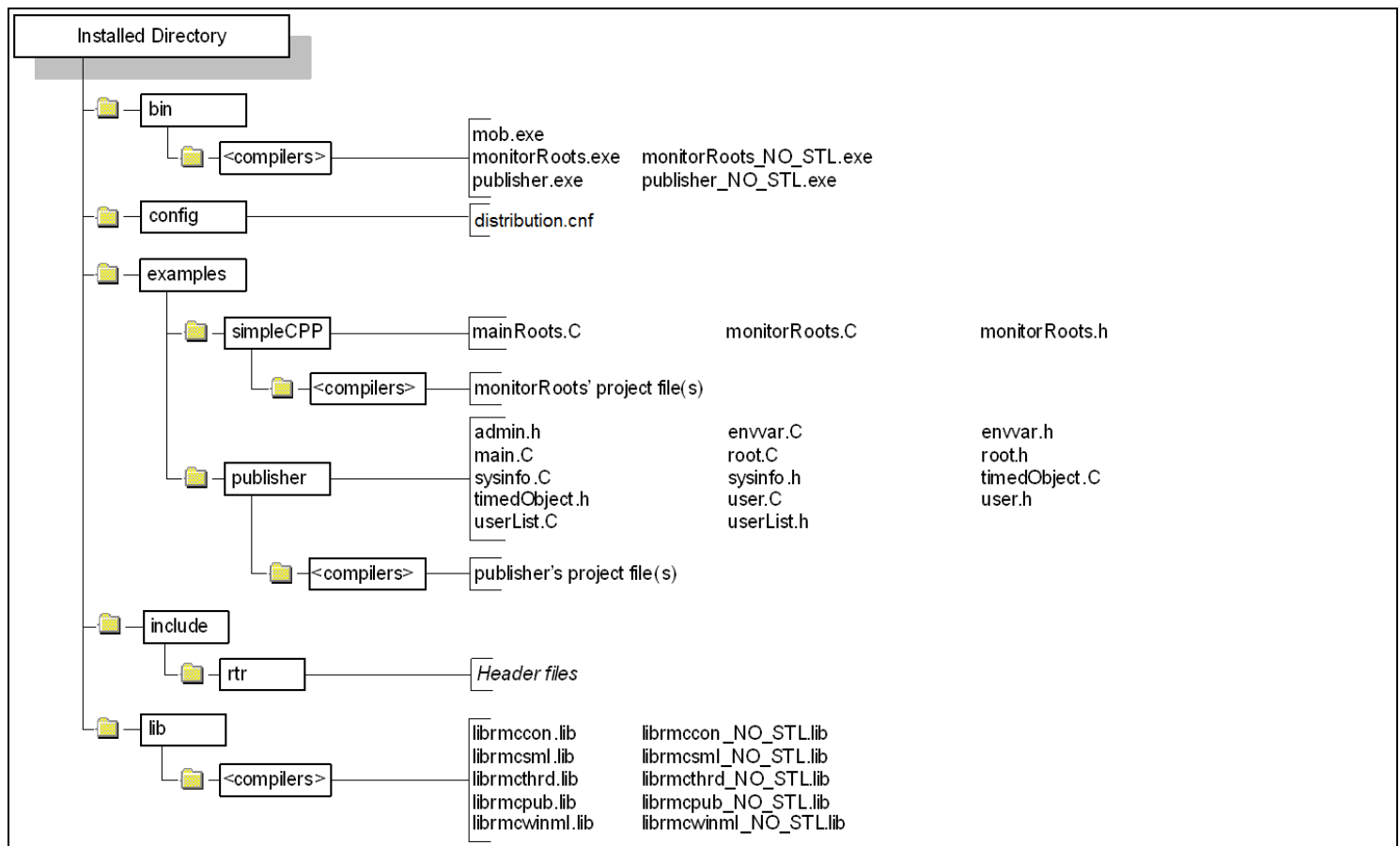
These files are located in the software repository (**Setup.msi**, **Setup.exe**, **Setup.ini**, **instmsi.exe**, **instmsiw.exe**).

2. Run the **Setup.exe** program to install the Refinitiv Management Classes software.

This assumes the Windows Installer is not present. If it is, running **Setup.msi** will not attempt to install it first. The default location of the Refinitiv Management Classes software is **C:\refinitiv\rmc**; the rest of this procedure assumes the default location was used.

#### 3.2.2.1 Directory Structure (Windows)

Figure 3.4 illustrates the directory structure when Refinitiv Management Classes is installed into the default directory (**C:\refinitiv\rmc**).



**Figure 4. Windows Installed File/Directory Structure**

DIRECTORY	DESCRIPTION
bin/<compilers>	<p><b>compilers</b> is either <b>vc90</b> (for Microsoft Visual C++ 9.0) or <b>vc100</b> (for Microsoft Visual C++ 10.0).</p> <p>Contains example executables, which are <b>mob.exe</b>, <b>monitorRoots.exe</b>, <b>monitorRoots_NO_STL.exe</b>, <b>publisher</b>, and <b>publisher_NO_STL.exe</b>.</p>
lib/<compilers>	<p><b>compilers</b> is either <b>vc90</b> (for Microsoft Visual C++ 9.0) or <b>vc100</b> (for Microsoft Visual C++ 10.0).</p> <p>Contains Refinitiv Management Classes API libraries, which are required for creating managed/managing application. Libraries are comprised <b>librmccon.lib</b>, <b>librmcpub.lib</b>, <b>librmcpthrd.lib</b>, <b>librmcsml.lib</b> and <b>librmcwinml.lib</b>.</p> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>• <b>librmccon.lib</b> is needed by any application developer that wants to write Refinitiv Management Classes managing application.</li> <li>• <b>librmcpub.lib</b> is needed by any application developer that wants to write Refinitiv Management Classes managed application.</li> <li>• <b>librmcpthrd.lib</b> contains an implementation of the threading library.</li> <li>• <b>librmcsml.lib</b> contains an implementation of the main loop library based upon the <b>select()</b> system call.</li> <li>• <b>librmwinml.lib</b> contains an implementation of the Windows main loop libraries.</li> <li>• <b>NO_STL</b> libraries are the libraries whose internal dependency on STL has been removed.</li> </ul>
include/rtr	Contains the C++ header files.
examples	Contains Refinitiv Management Classes example applications. ( <b>simpleCPP</b> , and <b>publisher</b> ). Refer to the corresponding Microsoft Developer Studio Project ( <b>VCPROJ</b> for VC9.0 and <b>VCXPROJ</b> for VC10.0) files for building the application.
config	Contains configuration file for publisher executable ( <b>distribution.cnf</b> ).
doc	<p>Contains the following Refinitiv Management Classes documentation in Adobe Acrobat PDF format:</p> <ul style="list-style-type: none"> <li>• <b>ClassRef.pdf</b>: Refinitiv Management Classes Class Reference Manual</li> <li>• <b>DevGuide.pdf</b>: Refinitiv Management Classes Developer's Guide</li> <li>• <b>Install.pdf</b>: Refinitiv Management Classes Software Installation Manual</li> <li>• <b>Tutorial.pdf</b>: Refinitiv Management Classes Tutorial Guide</li> </ul>
doc/ref	Contains the Refinitiv Management Classes Class Reference Manual in HTML format: <b>index.html</b> .

**Table 3:** Refinitiv Management Classes **Windows Directory Structure**

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Document ID: RMC220IP.200

Date of issue: December 2020

